An Integrated Matrix Personnel System

for M. O. S. S. T.

I. M. P. S.

Original Concept by: R. E. Laliberté, D. P. Smallman

Written by: R. E. Laliberté



Ministry of State

Science and Technology Ministère d'État

Sciences et Technologie

JL 111 5623

AN INTEGRATED MATRIX PERSONNEL SYSTEM FOR M.O.S.S.T.

1 8

32001

I.M.P.S.

ORIGINAL CONCEPT BY: R.E. LALIBERTE, D.P. SMALLMAN

WRITTEN BY: R.E. LALIBERTE MINISTER A STATE

SCIENCE AND T CHINOLOGY SCIENCES ET TECHNOLOGIE © Copyright, Minister of State for Science and Technology 1976 All Rights Reserved.

No part of this manuscript may be reproduced, stored in a retrieval system, or transmitted, in any form by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the Minister of State for Science and Technology. This report sets forth an integrated approach for the provision of Classification, Staffing, Staff Relations, Classification Audit, Human Resources Planning and related Personnel and management services within the context of a functional project matrix organization in the Federal Public Service. The development, refinement and utilization of this integrated approach would not have been possible without the advice, assistance and consultation of the following individuals:

> Mr. André Bolduc - Personnel Operations Mr. Léo-Paul Brousseau - Staffing, Staff Training and Development Mr. D. Michael Francis - Computer Services Mr. Gérard Goulet - Classification, Staff Relations Mr. Paul Malloch - Human Resources Planning Mr. Donald P. Smallman - Personnel Policy and Audit

> > R.E. LALIBERTE, June, 1976

TABLE OF CONTENTS

p.p. I-1 - I-7

PART ONE

INTRODUCTORY REMARKS

3

PART TWO

SYS	TEMS DEFINITIONS & T	ERMINOLOGY	p.p. II-1 - II-167
(A)	WORK DEFINITIONS		p.p. II-1 - II-16
	- Projects	1-6	
	- Sub-Projects	6-6	
	- Phases	6-10	
	- Segments	10-18	
(B)	CLASSIFICATION CHARACTERISTICS		p.p. II-19 - II-68
	General Comments	19-24	
	SX-Group	24-32	
	AS-Group	32-50	
	ES-Group	50-68	
(C)	RESOURCE ABILITY CHARACTERISTICS		p.p. II-69 - II-93
	General Comments	69-72	
		72-76	
	AS-Group	77-83	
	ES-Group	83-93	
(D)	OTHER TERMINOLOGY		p.p. II-94 - II-103
	Classification	94-99	
	Staff Relations	99–99	
	Human Resources		
	Planning	99-100	
	Staffing	100-100	
	DLarring		
	Matrix	101-102	

(E) POSITION PROFILES

General C	Comments	104
SX-Group	105-	117
AS-Group	118-	142
ES-Group	143-	167

PART THREE

- -----

	STEM UTILIZATION - INSTRU	
IL	LUSTRATIONS AND INTERPRET	ATIONS
1.	General Comments	1
2.	Classification Use of I.M.P.S.	1-3
3.	Classification Audit	
4.	Use of I.M.P.S. Staff Relations	4-5 5-6
5.	Human Resources	6-8
6.	Planning Staffing	6-8 8
7.	Management	8-10

PART FOUR

SYSTEM GRAPH MATERIALS

l.	General Comments	1
2.	General Graph Materials	
	Explanation	1-3
3.	Specific Graph Materials	
	Explanation	3-4
4.	General Graphs	
	(A) Role Potentials	6-19
0	(B) Resource	
		20-35
5.	Detailed Graph	
	Materials	36-39

p.p. II-104 - II-167

p.p. III-l - III-l0

pp. IV-1 - IV- 39

PART I

INTRODUCTORY REMARKS

l

1

I

I

The primary objective of this report is to set forth a total system defining an optimal, integrated approach for the provision of Personnel Services to the functional matrix project organization of the Ministry of State for Science and Technology specifically, and, in more general terms, to matrix project organizations within the environment of the Federal Public Service. The Federal Public Service utilizes comprehensive systems for the provision of Classification, Staffing, Human Resources Planning and Classification and Staffing Audit, and It will be the primary task of this report to utilize these systems in such a manner that both the unique requirements for providing Personnel Services to a matrix project organization and for meeting stipulated processes, regualtory and other requirements upon which Personnel Systems are based, will be fulfilled.

There are several reasons why an integrated approach to the provision of personnel services to a project matrix is required even though there are a number of systems in existence to handle all aspects of personnel. These reasons fall primarily into two major categories. First, there are inherent difficulties in utilizing existing personnel systems when applied to areas where work being performed is not continuing in nature, nor hierarchical in structure. Secondly, there are problems inherent in the use of a matrix project operations approach in areas such as definition of work, allocation of resources, allocation of work and utilization of resources in various work situations, when the matrix project approach must take into account the legitimate requirements of Personnel Systems and processes, as they now exist.

The first problem inherent in the use of existing Personnel Systems and processes in a matrix project environment is involved with the fact that existing systems were devised on the premise that Classification, Staffing, Human Resources Planning and various types of Audit, would take place in relation to well defined, continuing responsibilities which would exist for a relatively long period of time. In Classification, for example, position descriptions could be assumed to be valid for up to two years and accordingly, rating processes which developed were complex and comprehensive and took into account theoretical Standards, job relativities, organization contexts, and other materials. Further, it was assumed that work evaluated (and paid for) would remain substantially unchanged (e.g. not requiring classification action) for the same period.

A similar situation existed in Staffing insofar as persons selected to fill various positions would have to have qualifications necessary to undertake comprehensively documented jobs and accordingly, could be selected with a high degree of accuracy and certainty that their qualifications would be applicable on a more or less continuous basis. The same premise influenced the development of Human Resources Planning systems insofar as it was assumed that individuals could be trained and developed within set responsibility areas both to improve specific job performance, and to develop the basic requirements for longer term development of individuals in career paths. The Audit of Classification and Staffing actions could also take place with relative ease to ensure that positions were not being under or overutilized in relation to defined responsibilities.

The utilization of a matrix project approach requires that responsibilities be defined in terms of specific projects, rather than in terms of continuing work and related organizational objectives. Accordingly, the first premise upon which Personnel Systems were based, becomes invalid to the extent that the frequency of responsibility and role change is far higher than expected and therefore, systems become extremely difficult to utilize fully.

To follow the existing Classification system processes, for example, requires the development of formal position descriptions, organization materials, evaluation materials and final Group and Level outputs and explanations, each time a position changes its substantive roles and responsibilities. Under a matrix project operations organization, this process would have to be followed for each project allocation of resources when resource positions are to be utilized differently than in the former project context. Further, audit of classification decisions would become virtually impossible to undertake if positions had to be reclassified and verified each time projects utilized positions differently. Staffing would fall victim to the same difficulties as Classification (assuming that positions had changed qualifications requirements or involved new staffing actions). Staff Relations would become extremely difficult due to the increase in potential staff assignments, grievances, redundancies, and related actions. In general, all existing personnel systems, if utilized as constituted, would become overloaded and ineffective.

The second basic premise upon which Personnel Services were based was that of work differentiation as defined by various role/ responsibility interfaces within continuing areas of work. These are defined in turn, by variables of placement (both vertical and horizontal), authority, organization and principles of division of responsibility. In other words, the basis of work differentiation implies (under existing Personnel Systems) a specific organizational context, related division of work variables (hierarchical ranking), role interfaces within division of work parameters (e.g. the leadership role apparant in the hierarchical organization principles) and set horizontal and vertical responsibility areas to match organizational, division of work and other principles, all on an integrated basis.

The effect of this method of work differentiation within personnel boundaries is evident when, for example, the Classification evaluation process is examined. Variables used in evaluation include assessment of organization context, assessment of situated leadership or participation roles, assessment of freedom of action (determined by closeness of direction which in turn is determined in part by organization location), etc. As long as the basis of

 work differentiation does not change, no problem will exist with use of personnel systems.

The utilization of a functional matrix project operations approach does affect the method and basis of work differentiation, insofar as roles are not defined on a continuing basis, by organizational, hierarchical premises for division of work, and accordingly, work can only be defined and differentiated by specific project parameters. The utilization of existing personnel services' processes and methods within this environment is still possible of course, because work can be determined on a "given point in time" basis. The problems which result from use of existing methods and approaches, however, are the same ones which occur as a result of the invalidation of continuing responsibility premises outlined above.

The third basic premise upon which existing personnel services were developed was that there would be relative ease of application in terms of both service provision and control activities, due to the fact that positions, as defined, would be relatively stable (in role and responsibility fields) over lengthy periods of time. This meant that systems which were developed could be complex and services could be provided to management on a high plane because of the long periods of time involved with position existence.

The utilization of a functional project matrix approach and organization to work invalidates this premise insofar as the utilization, balance and mix of control and services processes in Personnel Systems cannot be undertaken on the high frequency basis required for matrix operations. The high frequency requirements for services in personnel result from constant changes in position location, role and responsibilities. The complex processes utilized in both control and services fields require long periods of time for their full utilization. The resolution of this particular problem will require either the committment of massive personnel resources to meet System requirements or, the reduction of process requirements. In these situations, if no change in either the functional project matrix approach or the Personnel Systems, can be made, then either Personnel Systems will overload, or, the matrix project organization will lose its operational flexibility and efficiency, attempting to meet Personnel requirements.

In general, the problems outlined for the invalidation of basic personnel Services premises, illustrate the inherent difficulties in utilizing existing systems where work is not continuing, nor hierarchical in nature, where work must be defined on a different basis than any used previously, where existing service and control processes remain unchanged, and where work does not meet inherent systems principles.

If the utilization of a functional matrix project operations approach causes problems for the operation of existing Personnel Systems and processes utilized in the Federal Public Service, then it is equally evident that use of such Personnel Systems and processes causes problems for the utilization of a functional matrix project approach, particularly in terms of work definition, allocation of work, resource utilization, resource use flexibility and allocation of resources, under variable work situations inherent in matrix project operations.

The primary reason for utilizing a project matrix operations approach is to increase resource use flexibilities and efficiencies, particularly in situations where overall resources are scarce. The utilization of Personnel Systems and processes within the Federal Public Service requires, however, the clear delineation of What Is Being Done, Who Is Doing It and at What Level is it Being Done, all on a continuing basis, in order to effectively control resource use, allocation, development and other areas. The definition of Who, What and What Level, using existing Systems parameters is time consuming and complex. If the rate of resource use (in different role/responsibility areas) in projects is high, then the potential for meeting the complex Systems requirements in Personnel is reduced, or, if complex requirements are met, then the flexibility and other returns envisioned in the operation of a functional project matrix, are reduced.

The utilization of a functional project matrix operations approach also implies that resources be utilized on a vertical and horizontally differentiated basis (in actual organization movement terms) as far as various roles and responsibilities are concerned, depending upon the type of project work being undertaken and the specific capacities, experience and capabilities of individuals (not positions) in relation to that work. This provides for optimal resource use flexibility and efficiency. The Federal Public Service Personnel Systems (in particular, Classification) do not utilize this basis of resource use or allocation. Rather, they utilize a specific area/role definition basis in positions which does not allow for changing vertical and horizontal useage of positions. As well, the Classification System does not utilize the individual as a basis for work allocations, but rather, utilizes different formal Positions. Again, resource use flexibility and efficiency in the project operations must be reduced to meet personnel systems requirements.

The resolution of both sets of problems (Personnel System induced and Functional Project Matrix induced), will require that several assumptions be made and adhered to. First, existing Personnel Systems and processes must be maintained to meet regulatory requirements stipulated in various Acts and Regulations (e.g. F.A. Act Section 7). Secondly, some method of increasing resource use flexibility potentials through new approaches to position definition, must be utilized while maintaining adherence to Personnel System requirements. Thirdly, some method of increasing vertical and horizontal position utilization must be developed to replace that lost because individuals are not the basis of work and related allocations, in formal Personnel System terms. Fourthly, some method of reducing the frequency of complex submissions to personnel must

I-4

be developed to avoid the problems of Personnel System overload and, alternatively, reduced matrix project system flexibility. Next, some method of work definition must be utilized which will satisfy both Personnel Systems and the functional project matrix operations system, in terms of resource allocation, utilization and flexibility. Further, some method of integrating work, resource and level definition must be utilized to define resource allocation, useage and control parameters in a manner suitable for both Personnel Systems and functional project matrix operations management. Lastly, some method of outlining the parameters of effective resourcing, selection of resources, development of resources and assessment of resources must be utilized which is complementary to both sets of systems requirements.

The resolution of the problems outlined for both Personnel Systems and the functional matrix project operations approach, will require the development of a multi-faceted system which takes into account the assumptions listed above. The development and use of functional job profiles will resolve problems in work delineation and allocation as well as in terms of role/responsibility interfaces. The clear delineation of types of work and components of work available under matrix operations will provide the basis for functional work profiles and allocation. The delineation of formal Personnel System Classification Characteristics will provide specific parameters within which profiles and work definitions can fit. The definition of Resource Ability Characteristics at each level of work, will provide parameters necessary for effective allocation and selection of resources. The integration of Work, Classification and Resource Characteristics will provide the overall general parameters of work insofar as the theoretical abilities, work situations and functional roles and responsibilities for persons will be effectively integrated with the result that management can utilize resources on a highly flexible basis as described in classified profiles. The problems with frequency of submissions, and the horizontal and vertical use of positions (and their incumbents) can be resolved through the use of functional Job Profiles within the generally defined work areas.

In general, the system which is developed will follow the formal Personnel System requirements (through use of formal system components), while reducing frequency of input to Personnel (through use of functional Profiles backed up by extensive work/resource/ classification interface data) and meeting, as much as possible, the flexibility of resource use and allocation required by management, (through use of general allocation and role potential graphs which are supported by extensive definitions and which, if followed, will allow wide horizontal and vertical resource use under different work, role and responsibility parameters while at the same time, meeting all formal personnel system requirements).

As well, the individual components of the System can be utilized by various Personnel Areas. Classification will utilize the Job Profiles and Graphs, as well as the specific Classification Characteristics. Staffing will utilize the Resource Ability Characteristics and Graphs, Job Profiles and various evaluation procedures (not required by this system but which affect overall system use). Human Resources Planning will utilize the General and Detailed Graphs and Resource Ability Definitions in comparison with work performance indicators to determine training, development and other requirements of resources. Staff Relations will utilize the same data as Classification and Staffing. Detailed useage parameters will be defined within the system itself.

The system utilizes a series of Work, Classification, Resource Ability and other definitions and characteristics as well as their integration in Job Profiles and Graphs. Definitions include Projects, Sub-Projects, Phases, Segments, Classification Characteristics, as well as other terminology appropriate to the system. The utilization of these definitions, graphs and other materials will provide a concise and comprehensive method of determining what work, requires what level of resourcing and what personnel qualifications, within a defined functional matrix project environment, all of which can be selectively utilized to meet both management and Personnel Systems requirements in relation to the overall operation of the matrix program areas of MOSST.

PART II

SYSTEMS DEFINITIONS

I

I

AND TERMINOLOGY

A. WORK DEFINITIONS

I PROJECTS

In general terms, a project may be defined as follows:

"....a group of constituent activities with a definite time frame, which are concerned with the meeting of defined goals, objectives and requirements within a stipulated subject matter, policy or program area, as delineated and controlled by an authoritative body...."

Inherent in this theoretical definition are the theoretical parameters of projects. Projects will require resources, a control agent, a definitive plan, priorities, aims, authoritative boundaries, operational methods, management systems and co-ordinated approaches, to achieve their aims. It is further evident, that projects are subject to differences in priorities, time frames, resources, aims and other variables which will mean that there will be different types of projects to be defined and operated. Further, it is evident that management, operation and control of projects will have to take place on a basis of differentiation of project components if definitive plans, approaches and methods of operation are to be successful. Such components could include Sub Projects, major Phases, work segments and activities. Lastly, it is also evident that with differing work requirements, responsibilities and outputs, some method of assigning resources at appropriate work levels and ability levels will have to be utilized, both for good management as well as to meet authoritative requirements within existing personnel fields.

These requirements would have to be met under any project operations approach, whether hierarchical or matrixed. As long as the basis of projects is non-continuing and primarily nonrecurring, project definitions, work definitions, resource definitions and their integrations will be required. The impact of the matrix structure approach is significant only in relation to requirements for optimal resource definition flexibility and optimal resource allocation flexibility on a cross-structure basis. In other words, the matrixing of the organization leads to wider field use of resources and associated requirements for resource co-ordination and control. The use of a project basis for operations leads to requirements for differential work definitions, flexible management systems and flexible personnel control systems.

The following project definitions are applicable to project operations in general, as well as those of MOSST in particular. The context of the definitions is one for MOSST but this does not affect the general application potential for other areas utilizing project approaches within a matrix organizational structure. Within the Ministry of State for Science and Technology (MOSST) a project would be defined as follows:

"...a group of constituent activities with a definite time frame (beginning and end) concerned with the meeting of Science and Technology goals, aims and objectives (Governmental, MOSST or Branch) within various subject matter, policy and program fields, which are assessed, developed, planned for and controlled by the MOSST Project Management System (composed of the Project Management Committee, the Project Management Committee Secretariate and Assistant Secretaries)...."

As was mentioned previously, there will be requirements for different types of projects, as well as for different operational and work capacities within projects. Such project components are Phases, Segments and activities, each with varying scopes, depths, complexities and other parameters. Projects themselves will vary greatly depending upon their priority, importance, size, scope, resource use, and other variables.

Within the MOSST context, there are four definite types of projects. For the most part, these are also applicable under generalized project organizations and operations, with minor context adjustments. The four types of projects will be identified as A, B, C, or D, depending upon the interaction and presence of various work aspects, outputs and operational parameters.

I (A) TYPE A PROJECTS

TYPE A Projects are characterized by some or all of the following input, Output and work characteristics:

"....multidisciplinary or total Sector-wide subject matter content; involvement of more than one MOSST Branch or of one MOSST Branch and several external areas; highest project priority assignment (from the PMS): impact on a Government or Sector (i.e. Canadian Industry, Universities or Government)wide basis; largest size and related MOSST resource committment; greatest economic, social, political or other field sensitivity; most complex, creative and original work required; involvement of other Departments, Agencies or External Areas required for the successful completion of projects; cabinet initiated; high impact; involvement of most senior government or private sector officials; major policy statements and outputs as end products; senior executive leadership; etc...."

In general terms, TYPE A Projects are the most complex, important, highest priority and largest output projects with which the Ministry is involved. As such, they represent the top level of work available within the Ministry and will, in effect, define the upper most boundary for personnel resource requirements. They will further define the upper-most abilities required of resources within the Ministry to undertake, lead or participate in

II-2

the whole of a project or any of its components. In other words, for project operation work, the TYPE A Project is the top level of involvement for project resources. Above this level of work, continuing Branch wide and Ministry management roles are required and accordingly, project definitions will not apply to that work or the personnel resources involved with the work.

I (B) TYPE B PROJECTS

TYPE B Projects are characterized by some or all of the following input, output and work characteristics:

"....single discipline and specific Sector area subject matter content; involvement of one MOSST Branch or one Branch and limited external areas (i.e. one or two departments or agencies); secondary project priority assignment; impact on a major policy field within a Sector; significant Branch resource committment and large size; political, economic or social field sensitivity is apparent; complex and significantly original work required; may involve a requirement for an external area input for successful completion of work; senior MOSST originated or originated by central agencies; may be a significant part of a TYPE A Project (as a separate sub project); requires executive leadership for project duration; major single field policy initiatives, strategies, papers and recommendations will be final outputs, etc...."

In general terms, Type B projects are significant in terms of resources, workload and outputs, important in terms of Sector and MOSST objectives and are high priority in terms of their policy implications and outputs. In the long run, it is likely that they will be the most common type of project with which MOSST will be concerned.

Both Type A and Type B projects are policy output oriented. The differences between the two lie primarily in the time, resourcing, priority, scope, creativity and overall objectives attainment potentials inherent in the projects. Type A represents the first order with Type B representing the remaining vital policy issues and concerns.

To differentiate Type A and B from the remaining types of projects can be simplified to the extent of indicating that C and D type projects are non-policy projects. C and D type projects are program or information oriented rather than policy oriented.

I (C) TYPE C PROJECTS

TYPE C Projects are characterized by some or all of the following input, output and work characteristics:

"....specialized area within a single discipline and subject matter area, involvement of only one MOSST Branch; external area involvement may be required but only during initial input stages and/or co-ordinated assessment of project results; usually related to prior projects with status as revision, update, refinement or ammendment projects; some originality in work through program development, or refinement and development of new approaches for problem resolution; may be Sub-Projects of Types A or B Projects; usually not high priority; requires senior executive leadership for initial Phase only (if at all); may be long term in duration; limited resource committment, size and scope; complex analyses, information and program recommendations are usually final project outputs; etc...."

In general, TYPE C Projects are the highest level of nonpolicy Projects. They are important by virtue of their program input and information development potentials and can have significant effect on the success of various policy recommendations made under TYPE A and B Projects. This effect on policy Project outputs comes primarily from the fact that much of the policy analysis and recommendation work will be dependent upon the groundwork information developed under TYPE C Projects (either directly or as a Sub-Project). These Projects will usually be run within the Branch and will not usually be monitored by the PMC or PMCS unless some key data or analysis is to be undertaken within a specialized area of some subject matter or discipline. Accordingly, they will usually be led by senior operational staff (Policy Advisors) and as such, represent a significant departure from policy output projects where Senior Executive leadership is required. TYPE C Projects will therefore represent a significant part of the leadership capacity of Policy Advisory personnel as far as overall project management is concerned and accordingly will be important in terms of resource development within the project matrix operations areas.

I (D) TYPE D PROJECTS

TYPE D Projects are characterized by some or all of the following input, output and work characteristics:

"...usually short term in duration; single program oriented; usually information collection, collation and development is the primary focus; external involvement is discussion and information oriented; no senior executive leadership is required; low priority; small resource committment within a Branch; projects not monitored by PMC; usually a Sub-Project of TYPES A, B or C; originated as an update, clarification or addition to previous projects; usual outputs are analysis and information for utilization in relation to other area or

II-4

project activities, but program inputs may result on occasion; may require senior operational leadership for project duration, but usually only for initial phase of projects; etc...."

TYPE D Projects are basically the "catch-all" informationrelated projects which must be undertaken to develop specific area information. These types of projects, while minor in terms of output impacts, will be collectively important to overall project operations and will probably be quite numerous in the long run as updates or ammendments become more important to the successful long term utilization of Project materials, data and recommendations.

To this point in the report, the four primary types of Projects have been defined and the basic parameters for their leadership and management have been outlined. It is evident that the management for TYPE A and B Projects will be bicephalous in nature - that is, that projects will be managed by both the PMS and, in specific terms, by various senior executive Project Directors. The PMS management officials will not be subject to the restraints contained within IMPS by virtue of the fact that the PMS contains the most senior officials of the Ministry (Secretary, Assistant Secretaries, etc.). The Senior Executive Project Directors will however be subject to the resource allocation, assignment, development and other parameters of To delineate this dual control situation, TYPES A and B Projects IMPS. will be designated as Monitored Projects (i.e. under the constant evaluation, assessment and input of the PMS).

As was noted previously however, all Projects, to be Projects, must meet the basic parameters of "control by an authoritative body". In TYPE C and TYPE D Projects, the authoritative body will be the Assistant-Secretary of the Branch or the General-Director of the Project Division (both PMC members in all cases). The primary differentiation is that the PMS (as a MOSST whole) will not be involved with TYPE D or C Projects, but specific parts of the PMS will be required to provide authoritative approval and output utilization control inputs. TYPES C and D Projects will usually not be Monitored Projects, with the reservation that any project, may at anytime, be controlled at will by the overall PMS if its resource utilization, task orientations, objectives or outputs are determined by the PMS as warranting its attention.

It should also be pointed out that TYPE A, B, C and D Projects have an inherent ranking principle for resource utilization, allocation and assignment purposes. At any point in time, resources may be subject to authoritative shifts from the lower level projects to higher level projects as determined by the PMS based on priority, importance and other criteria. It is equally important to note however, that this shifting of resources will be subject to role differentiation as defined by existing Classification, Staffing and other systems integrated within this System. In its simplest form, any resource will be required to play qualitatively different roles for each type of project regardless of the priority assignment of any project. For example, the utilization of an AS-7 Policy Advisor as the Director of a TYPE B Project would be incorrect and untenable in relation to Classification requirements, even though that same AS-7 Advisor could lead a Type C or Type D Project. The "Role Differentiation" principles are also inherent in the differentiation of Projects and must be followed even though the ranking and related resource acquisition principles will be evident when resources are scarce and must be utilized in a number of areas concurrently. In short, in order for various project resources to be utilized correctly, the principle of Role Differentiation must take precedence over various resource allocation principles unless personnel action (i.e. promotion) is taken to correct inconsistencies between the two sets of requirements.

To express the role differentiation and other qualitative resource allocation, selection, development and utilization requirements of various Projects will require finer definitions than the broad Project Characteristics. Accordingly, definitions for Sub-Projects, Phases and Segments will be utilized in conjunction with other variables.

II SUB-PROJECTS

"....Sub-Projects are constituent groups of activities under various Projects (as previously defined), which have definite goals and objectives directly relating to the goals and objectives of overall Projects from which the constituent Sub-Group of activities is derived, with such Sub-Projects being planned, managed, approved or monitored through the PMS or authoritative parts thereof...."

For all necessary purposes, Sub-Projects may be defined as Projects of the B, C, or D Type. The primary reason for differentiation, between Projects and Sub-Projects is to allow for the effective designation, by the PMS, of the relationship between different operations, when such operations are separated only for effective organization, planning, analysis, management and so forth but are connected by subject matter, policy field, co-ordinated input formulation, co-ordinated output formulation and like relationships.

For all resourcing, classification, selection and human resources planning activities, Sub-Projects will be treated as Projects of Type B, C, or D. Type A Projects may have Sub-Projects of Type B, C or D. Type B Projects may have Sub-Projects of Type C or D. Type C Projects may have Sub-Projects of Type D. Type D Projects will have no Sub-Projects.

III PROJECT PHASES

Each Project and Sub-Project will be composed of three major Phases in most cases. These Phases of Project operations are the "Primary Phase", the "Analytical Phase" and the "Formulation Phase". In some cases, usually for Type A and Type B Projects, a fourth phase may exist, namely, the "Implementation Phase". A Phase of a Project is basically a group of activities (segments) which have a definite stop point and require definite, identifiable action for transfer from one group of activities to the next. Phases are also identifiable by virtue of the fact that each phase has a definitive output. As well, any project can be discontinued on a basis of evaluation of phase outputs in relation to various planned objectives. Further, the phases of projects are utilized not only as planning and evaluation tools, but also, as management indicators of progress throughout the project.

III (A) PRIMARY PHASE:

The Primary Phase of each Project will be comprised of the following segments and activities:

"....problem identification and definition (initiation of project idea); initial project approach planning (basic approaches to meet project planning requirements); Project approval: resourcing operations; operational approach development; and, work segmentation...."

Unlike the remaining Project Phases which may or may not require input from the MOSST PMS, this Phase of Projects will have to have PMS input for purposes such as approval of the Project, delineation of Project Type and priority, definition of resource requirements and so forth. The remaining Project Phases will not require total PMS involvement if they are part of Type C or D Projects.

This Phase of Projects involves inputs from MOSST staff, project officers, the Project Management Committee, the Project Managment Committee Secretariate and Corporate Services Branch personnel, and encompasses activities both prior to the actual formal determination of a Project, and, as part of the actual Project after it is defined, approved and resourced.

The type of work being done in the Primary Phase (planning) is fundamentaly different from that being done in the Analytical Phase which represents the first work step toward the production of final outputs through various analysis, evaluation and development activities.

III ('B) ANALYTICAL PHASE:

The Analytical Phase of each Project will be comprised of the following segments and activities:

"....initial contact with other areas and officials engaged in the project; initial information development; primary analysis of information, research and data; refinement of materials; follow-up contact and discussion; and, working paper development...." This Phase will involve the first work inputs from external areas, project staff and senior MOSST personnel, after the development and planning of project ideas and approaches. It will encompass all activities required for the comprehensive development of analytical materials and related working papers. This Phase is different qualitatively from the Formulation Phase which follows, by virtue of the fact that it is the group of activities required for primary and refined materials development. It is these materials which are the basis for latter output formulation activities. If the Primary materials developed do not indicate sufficient cause for further output and policy formulation, then the PMS can cancel the project at this stage.

III (C) FORMULATION PHASE:

The Formulation Phase of each Project will be comprised of the following segments and activities:

"....the development and formulation of primary outputs; analysis and discussion (both internal and external) of primary outputs; formulation of formal outputs; development of final recommendations; and, presentation of recommendations..."

This Phase of each project is concerned with all activities necessary for the formulation and presentation of outputs. It will involve inputs from all areas involved with the Project and may involve the discontinuation of the Project if agreement upon final, formal outputs cannot be reached. This Phase will see the attainment of specific MOSST objectives in Science and Technology fields through the formulation and presentation of outputs (policies, programs and recommendations).

As was previously mentioned, a fourth Phase may exist for Projects which is involved with the direct or indirect implementation of the Project outputs. This Phase is qualitatively different from the Formulation Phase in so far as it is not concerned with the actual development of materials, but rather, is concerned with their use.

III (D) IMPLEMENTATION PHASE:

The Implementation Phase of each Project will involve all activities necessary to ensure the proper utilization of Project outputs in various policy and program fields. Proper utilization is basically "that utilization of formal outputs which will meet the benefits and returns envisioned in the outputs as developed and which will usually be achieved through use of materials under the formal guidelines and constraints developed along with the actual policy and program outputs". All Projects will involve implementation activities. However, only these Projects which will require a significant resource committment (man years, money or time) for the implementation of outputs should formally utilize this Phase in project planning and management schemes. For example, Type D Projects will require normal follow-up activities to ensure that information outputs are effectively utilized, but both quantitatively and qualitatively will not require the same resource committment as A, B or C Type Projects where policy and program implementation initiatives are required.

III (E) FURTHER COMMENTS REGARDING PROJECT PHASES and PROJECT MANAGMENT

As has been illustrated by Project Phase definitions, there are specific resourcing requirements and implications for each phase of projects. In general, projects should be resourced on a Phase basis in order to allow for the necessary flexibility and utilization efficiency of staff resources, particularly senior resources. For example, there is no reason for utilizing a Senior Executive resource for the duration of a Type C or D Project, when at best, that level of resource is required for the Primary Phase (if at all for D Type Projects). General Role Potentials and Work Allocations parameter graphs are attached in PART IV of the Report.

Phases, as mentioned previously, are definitive groups of activities which are specifically identifiable and separate. However, there must be connecting routes from one Phase of a Project to the next. These connecting links will be called Transition Segments and to ensure that project planning and resourcing can be effectively treated, these segments should be pointed out. Between the Primary Phase and the Analytical Phase, the transition activities are "Work Segmentation" and "Initial Contact". Any resource may be utilized between the first and second Phase without having to be fully utilized during the whole of the second phase. This will allow for the smooth transition from the first phase to the second phase, the effective transfer of work from one resource to the next (if required) and, the most efficient utilization of resources throughout the Project. For example, an SX-1 in a C Type Project may undertake initial contacts with another senior operational resource, but will not have to be utilized during any other segment or activity. Resourcing of an SX for the Primary Phase would therefore be sufficient.

Between the Analytical Phase and the Formulation Phase the transitional segments are "Working Paper Formulation" and "Primary Output Formulation". For resourcing purposes and smoothness of operations, these can be treated as one Transition Segment as was the case for links between Phases 1 and 2.

It is apparent that within any project operations organization, there will be both "Continuing" and "Project Responsibilities" for

each of the resources within the organization. Both Phase and the related Segment operations are to be treated as strictly Project Responsibilities when project resourcing is being planned. This must be the case even though each position will have continuing responsibilities (e.g. project idea development) which will become part of the actual projects (particularly during the Primary These types of responsibilities are not to be considered Phase). when determining resource requirements for projects. For example, Project Directors have continuing responsibilities in administrative fields (such as staff assessment), in overall work evaluations, in determination of project capacities, in evaluation of overall project efficiency and effectiveness and in assessment of outputs of various projects (as the approving authority). In general, these "Continuing Responsibilities" should not be formally resourced under various project plans, but rather, should be handled as part of normal planning and management responsibilities inherent in various positions, regardless of the projects involved. A more detailed indication of resourcing requirements will be illustrated in the section on Project Segments.

As has been noted in several areas, Phases of Projects and Projects themselves, will involve a number of Segments. The delineation of Segments in the following Section of the Report will provide the basic system unit for determining various resource allocation potentials and resource role potentials.

IV PROJECT SEGMENTS

Each Project will be composed of a number of Segments which can be basically defined as:

"....a group of functionally similar and related activities with stipulated activity goals and objectives which will require conscious planning by project officers for their successful completion and which can be identified as having a definite start and finish point...."

Groups of work Segments will, of course, comprise various Project Phases, while the total number of Segments will comprise a Project. Segments are inter-related and interconnected by their specific goal orientation and must, for successful Phase and Project completion, be effectively planned in relation to one another as well as in relation to the overall Phase and Project goals. Most projects will involve 14 identifiable Segments, although in Type C and Type D Projects, their definite identification and utilization may not be required for the achievement of overall Phase or Project objectives or for effective project resourcing (primarily because of the limited resource utilization parameters in C and D Projects in these specific cases).

IV (A) INITIATION SEGMENT

The Initiation Segment of Projects is that group of activities involved with the development of project ideas which may or may not be accepted for utilization within the Ministry project operations. This segment of projects appears only after the selection of the project and its formal approval. Obviously, only those Projects which are to be undertaken can have an "after the fact" Initiation Segment as their start point. This segment of projects will not require resourcing due to the fact that it is the responsibility (continuing) of all MOSST personnel to conceive and initiate project ideas and proposals for projects.

IV (B) PLANNING SEGMENT

The Planning Segment of Projects is that group of activities which encompasses the development of basic Project Plans prior to their evaluation by the PMS. As was the case with the Initiation Segment, this segment appears only after the fact of Project approval. In general, this segment is necessary for the development of initial project ideas into concrete project proposals and basic format plans necessary for PMS analysis. There will be no Project Resourcing required for this segment for the same reasons outlined for the Initiation Segment. The project plan becomes a continuing responsibility of various project system officers, depending upon the type of project involved.

IV (C) OPERATIONAL APPROACH DEVELOPMENT SEGMENT

The Operational Approach Development Segment is that group of activities concerned with problem identification and delineation, analysis of possible approaches to problem evaluation and resolution, selection of operational approaches to be utilized in Sub-Projects, Phases and Segments, etc. This segment represents the first group of activities to be undertaken after the approval of project proposals, the Typing of projects and the delineation of potential resources required to undertake projects (and, it may be somewhat involved in the actual approval and related processes of the PMS by virtue of the fact that PMS approval will be somewhat dependent upon determination of various capabilities of resources and the Ministry to actually undertake the project proposed). This Segment should be resourced.

IV (D) WORK SEGMENTATION and DISTRIBUTION SEGMENT

The Work Segmentations and Distribution Segment is that group of activities concerned with delineating specific stages of operations and related resources to handle these operations, discussions regarding work allocation, methods of meeting work requirements given various work allocations, actual distribution of work and work plans (including time frames, delineation of depth, scope, complexity required, and other variables), etc. This segment represents the final formal planning stage and the transition to the production of outputs related to various goals and objectives of the Project.

These first four Segments, taken together, comprise the Primary Phase of Projects. The fourth Segment is the transition point (along with the fifth Segment) to the next phase of projects, the Analytical Phase, comprised of the next six segments.

IV (E) INITIAL CONTACT SEGMENT

The Initial Contact Segment is that group of activities concerned with: undertaking primary discussions with internal involvement areas at the highest levels required by the project; developing necessary committee, working group or task force components; setting up necessary communication and liaison links between areas involved with the projects; developing co-ordinated plans with external areas; providing explanations and justification of project work; developing co-operation in meeting project requirements; etc. This segment is a Project Responsibility and should be resourced in project plans.

Generally, this is the first segment concerned with the development of plans into actual work relationships and activities. It is the transition stage from planning and discussion of project ideas to the development of production outputs. Although discussions will obviously have to be undertaken with external areas prior to this Segment (for Type A and B Projects), those discussions would be concerned with hypothetical evaluations of potential returns, requirements, costs and other variables of projects. The discussions held at this stage are concerned with organizing and constituting various methods and approaches to meet previously agreed upon responsibilities and objectives.

IV (F) INITIAL INFORMATION DEVELOPMENT SEGMENT

The Initial Information Development Segment is that group of activities concerned with: information collection, screening, collation and assessment; determination of information needs after primary collection and assessment; discussions with various information sources; development of co-operation with other areas for the development and exchange of information; liaison with all potential information sources; development of cooperation in meeting full project information requirements; providing information and data to other areas when projects involve external areas; development of basic information packages to meet primary project requirements; etc.

In general this segment is concerned with the development of the basic project information and data base and will utilize both internal and external communication for information access and development. Information and data developed at this stage of projects may be either fed directly into the next segment (Primary Analysis) or may be utilized in both the next segment and in general information storage activities. The development of this primary information will be distinct from the first analysis activities of projects, but will be directly related to the next segment by virtue of the fact that the Initial Information Development parameters will be defined by the estimated requirements for Primary Analysis. The Initial Information Development Segment is a Project Responsibility and must be resourced under project plans.

IV (G) PRIMARY ANALYSIS SEGMENT

The Primary Analysis Segment is that group of activities concerned with: the development of basic approaches, methods and responses to stipulated project problems and associated objectives; the complex manipulation and utilization of primary information and data; development of alternative approaches to problem resolution; determination and development of basic solution to problems; assessment of optimal approaches to the utilization of primary analysis outputs; etc.

In general, this segment is the one in which the first crude approaches to the meeting of Project objectives are developed as well as the one in which the first basic analytical materials and outputs are developed. This segment leads to the next stage in the development of useable materials and outputs, the Refinement Segment. The Primary Analysis Segment must be resourced under Project plans.

IV (H) REFINEMENT SEGMENT

The Refinement Segment is that group of activities concerned with the development of original, unique and complex methods for meeting project problems; the design of integrated approaches, both to fit with work previously done (on this project or prior projects) and to fit with work done independently by external areas; the development of ammended and highly refined information and useages thereof; etc.

In general this segment involves all activities concerned with the development of comprehensive, effective and efficient approaches and responses to project problems and with the development of final stage information and related base output potentials to be utilized within the project under the various methods and approaches developed for the resolution of problems and attainment of objectives. Both this segment and the Primary Analysis Segment can, and often do, involve original, unique and complex research and development work. The Refinement Segment fits in with the next segment insofar as the outputs of the Refinement Segment are the basis of the Follow-Up Contact and Discussion which occurs as the next stage of projects. The Refinement Segment is a Project Responsibility and must be resourced under project plans.

IV (I) FOLLOW-UP CONTACT AND DISCUSSION SEGMENT

The Follow-Up Contact and Discussion Segment is that group of activities concerned with: verifying refined approaches and information through detailed discussions; discussion of useage parameters of information, data and related output materials; the integration of all refined information and approaches; discussion of possible alternative solutions to problems (once all refined materials have been analyzed); development of approaches to the utilization of materials in the formulation of alternate workable outputs; etc.

In general, this segment is concerned with the necessary discussion and agreed upon integration of materials into workable options, solutions and outputs (of a more sophisticated nature than those existing through previous segments but not yet at the formal output formulation stage) from which the highly sophisticated outputs can be derived in later project stages. This Segment is a Project Responsibility and should be resourced.

This Segment relates directly to the next Segment (Working Paper Development), insofar as the conceptions, conclusions and materials of this segment are the primary inputs required for the production of various working papers.

IV (J) WORKING PAPER DEVELOPMENT SEGMENT

The Working Paper Development Segment is that group of activities concerned with all operations required for the development of all papers outlining the work performed to this stage of the project, the information and approaches utilized, the potential uses and limitations of materials developed, recommendations concerning the analysis, discussions and other work performed, etc.

In general, this segment is concerned with the development of comprehensive working papers upon which Formal Outputs may be formulated. It is a Project Responsibility and should be resourced under project plans.

The six segments beginning with Initial Contact Segment and ending with the Working Paper Development Segment, comprise the Analytical Phase of Projects. The Working Paper Development Segment is the transition segment between the Analytical Phase and the Formulation Phase. It is directly related to the Primary Output Formulation Segment which is dependent upon the materials and recommendations contained in various working papers and anlysis, for the formulation of the first outputs. Qualitatively, the Working Paper Development Segment differs greatly from the first segment of the Formulation Phase, due to the fact that the work in all remining segments of the Project will be directly concerned with the development of, and use of, outputs rather than with the development of analytical materials.

IV (K) PRIMARY OUTPUT FORMULATION SEGMENT

The Primary Output Formulation Segment is that group of activities concerned with: co-operative output development; developing output alternatives; selection of alternative outputs; etc., all in relation to the primary objective of formulating the first formal project outputs in areas such as policy and program initiatives, strategies, initiatives, position papers and related materials.

This segment of the Project will involve formal discussions with various project and external areas required for the development of the first formal outputs. Accordingly, it leads directly to the next segment of activities, the Evaluation and Discussion of Outputs, which is different from Primary Output Formulation, by virtue of the fact that the discussion is concerned with refinement or evaluation of outputs rather than their actual development. The Primary Output Formulation Phase is a Project Responsibility and should be resourced under formal project plans.

IV (L) EVALUATION AND DISCUSSION OF OUTPUTS SEGMENT

The Evaluation and Discussion of Outputs Segment is that group of activities concerned with the assessment of primary outputs, and discussion concerning their suitability in relation to Project goals and objectives. Activities involved in this segment will include extensive liaison and advisory operations (both external and internal), formal analysis of outputs, minor output refinement resulting from discussions, etc.

This segment is distinct from, but related to the next segment of activities, that of Formal Output Formulation. The evaluations made during this segment will be the basis upon which formal outputs are developed in their final form. The Evaluation and Discussion of Outputs Segment is a Project Responsibility and should be resourced under project plans.

IV (M) FORMAL OUTPUT FORMULATION SEGMENT

The Formal Output Formulation Segment is that group of activities concerned with the formulation of final, formal, authoritative Project outputs. Activities involved in this segment will include consolidating all inputs, preparing and editing final papers encompassing outputs, examining and obtaining approval of reports and related outputs, etc. This segment is closely related to the final segment of the Formulation Phase of Projects, that of the Development of Final Recommendations. The primary difference lies in the fact of involvement of non-project personnel (e.g. PMC) in the latter segment, with such involvement taking place as a discussion and approval operation rather than in the preparation of the recommendations. The Formal Output Formulation Segment is a Project Responsibility and should be resourced under project plans.

IV (N) DEVELOPMENT OF FINAL RECOMMENDATIONS SEGMENT

The Development of Final Recommendations Segment is that group of activities concerned with developing final recommendations and proposals resulting from all project work and the assessment of formal, final outputs. Activities will include discussion of outputs with senior MOSST management, preparing policy and program proposals, examining in detail the proposals and obtaining approval for their use from the PMC or other senior MOSST management, preparing project review and completion reports, etc. In many cases, this will be the final segment of projects, due to the fact that many projects will not require the fourth Phase, that of Implementation of Outputs. Accordingly, when no Implementation Phase is required, this will be the final Project Responsibility and the last segment to be resourced under project plans.

The four segments beginning with Primary Output Formulation and ending with the Development of Final Recommendations, constitute the Formulation Phase of Projects.

As was mentioned previously, a fourth Phase can exist for various Projects, that of Implementation of Project outputs and recommendations. In most cases, there will be no segment required for this final Phase because it will consist primarily of one activity, that of liaison with areas utilizing the policy and program recommendations resulting from Projects.

In certain cases however, there will be further activities involved such as monitoring (short, intermediate and long term) the implementation and useage of policies and programs and recommending necessary useage adjustments or ammendments. In such cases, particularly when there is a long term monitoring requirement, the "Implementation Phase" should in fact become a Sub-Project or Project unto itself rather than being dealt with as a Phase. Where implementation is limited to liaison and advice concerning the use of, and implementation of, outputs, and, where this is short term and follows immediately upon the completion of the Formulation Phase, it should be treated as a single segment Phase and be resourced accordingly (i.e. either as a Continuing Responsibility of the Project Director, or as a Project Responsibility of a senior officer).

To this point in the report, Work Definitions have been developed, their resourcing requirements mapped out, their interrelationships described and their relative Project roles and implications defined. As was mentioned previously, the differentiated work requirements are basic to the successful utilization of the system by virtue of the fact that formal resource allocation and utilization parameters, as well as basic resource ability parameters, will be inter-related to, and based upon, these definitions.

The management of the actual Projects does not require the extensiveness, complexity or degree of definitions of work presented here for the effective control of projects. Rather, the control of, use of, and mobility of, resources utilized, in relation to one another, under differentiated work situations make this degree of Work Definition mandatory. If the differentiation of work in relation to resource potentials and control requirements is not sufficient, then the demand for work differentiation input, on a constant basis, from management, will be required. Given the number of projects to be undertaken and the complexities and depth of work differentiation information required by existing classification and related work and selection control systems, the resourcing of projects would become hopelessly bogged down. By defining the work to be carried out, to the degree illustrated, and by integrating these definitions with equally clear classification and resource ability definitions, a ready-made allocation picture can be presented to management which will meet all legitimate, authoritative Personnel Systems requirements under all potential work situations. The selection of varying resource allocation "pictures" for different assignments will be all that is required of management or, alternatively, the continued use of a resource under the same work conditions for each project can be maintained by simply illustrating that resource's involvement levels from one type of project to another. In the latter resource allocation, the defined involvement areas, by level, from one type of project to another will also be available.

The key requirement for the utilization of an integrated matrix personnel system, is that the total spectrum of work, resource and control requirements be effectively defined and explained. The integration points, upon which the system's authoritative validity rests, are directly the result of clearly defined characteristics of work and resources. Without these definitions, and their effective, continued use, the system becomes invalid and the existing personnel system will have to come into effect, with all the consequences for project resourcing, operations and control that this implies.

This section has indicated the theoretical work to be done, on a qualitatively and quantitatively differentiated basis. It has not illustrated, or defined, the actual types of work which will be undertaken. This would be impossible because it would require an activity base as the primary work input unit. The multitude of types of activities would be both impossible to define (i.e. all types of research or analysis on a work differentiated basis as only one activity parameter) and impractical to utilize (because existing systems will not meet these activity parameters and because of the massive data base which would have to be used to assess the work to be done in relation to the activity parameters). In general terms, this section defines the work to be done in terms of project definitions, groups of activities and types of outputs, all of which is sufficient for comparative integration, assessment and allocation of resources. Later sections will define parameters for resource development, selection, control and other variables.

At the beginning of the report, it was indicated that one of the primary difficulties within the utilization of a project matrix approach to work, is in determining What is Being Done, Who is Doing It and at What Level is it Being Done, all on a continuing basis. This section on Work Definitions has given the primary data for What is Being done. The next section, Classification Characteristics, will provide the primary data for the area of, at What Level is Work Being Done. The section on Resource Ability Characteristics will provide data in relation to the area of Who Is Doing the Work (in theoretical terms).

B. CLASSIFICATION CHARACTERISTICS

I GENERAL CHARACTERISTICS

Classification Characteristics are basically defined as:

"....that group of requirements outlining the differential level characteristics of work in terms of various capacities inherent in work, including areas such as Decision Capacity, Contact Capacity, Knowledge Capacity, Management Capacity, Initiation Capacity, Planning Capacity, Analytical Capacity, Development Capacity and Advisory Capacity, as well as in terms of inherent effects of work and relationships with external variables as illustrated by areas such as Scope for Action, Impact of Activities, and Reporting Relationships, all of which, when taken as an integrated whole, in relation to various types of work, will provide a total differentiated work level requirement definition which is useable in relation to formal Federal Public Service Classification System requirements...."

The Classification Characteristics will, therefore, vary according to level of work being performed, and, will have to be primarily related to the theoretical work differentiation and comparison variables outlined in the Classification System Standards of the Public Service. Once the general characteristic areas are determined, then, these can be related to the types of work being undertaken, and can be illustrated for system useage in terms of MOSST Project work. The specific level characteristics outlined in this Section, and the Job Profiles utilized for Classification purposes, are the direct result of the integration of theoretical requirements in work and theoretical differentiation capacities fields.

For purposes of work capacity differentiation, the system will utilize 12 Classification Characteristics. These twelve characteristics, related to theoretical work requirements, will define the level requirements which must be met for a resource to be classified at a specific level in terms of the Public Service Classification System. These twelve characteristics are outlined below.

(A) KNOWLEDGE CAPACITY

The Knowledge Capacity variable will include primarily those requirements for formal education, number of disciplines and subject matter comprehension, study and analysis activities, and experience parameters. Basically, it will define the overall capacity required of a position, in various knowledge terms, to perform functions required at a pre-defined Classification level. The Knowledge Capacity will be derived from the formal Classification System definitions and inherent project requirements in relation to potential roles to be played by a position.

(B) DECISION CAPACITY

The Decision Capacity variable will include primarily those characteristics of work which comprise the decision making and decision taking capabilities and functions of a position and will include variables such as degree of judgement and initiative, degrees of planning for decisions, degree of problem solving, inputs to overall project decisions as well as for segments and phases, decision making environment and areas of decision making and taking. Wherever possible, the Decision Capacity will be related to Work Definitions as outlined in the IMP System. The variables illustrated in the Decision Capacity characteristic are also derived from the formal Classification System of the Public Service.

(C) CONTACT CAPACITY

The Contact Capacity variable will include primarily those characteristics of work which comprise the communication process for each position at each level and will include parameters such as areas of contact, levels of contact, purpose of contacts, types of contacts, formal roles and representations requirements, and possible contact outputs. Whenever possible, the Contact Capacity will be related to various work definitions and fields. The parameter illustrated in the Contact Capacity characteristics are derived from the theoretical requirements outlined in the formal Classification System of the Public Service.

(D) MANAGEMENT CAPACITY

The Management Capacity variable will include primarily those characteristics of work required for the management of the work or resources of a Project or various Phases and Segments thereof and will involve parameters such as requirements for planning of project or phases activities, organizing of work, managing of project resources, levels of resources managed and development of approaches to work for use by other resources. Wherever possible, the Management Capacity will be related to various work requirements as outlined in Work Definitions. The Management Capacity characteristics are derived from the theoretical requirements outlined in the formal Classifications System of the Public Service.

(E) PLANNING CAPACITY

The Planning Capacity variable will include primarily those characteristics of work which comprise the total work orientation, development and operations planning activities and processes required for the effective operation of projects and their constituent parts. This capacity will include variables such as methods development for project, phase and segment operations, work segmentation approaches, management approach development, evaluation approaches development, research and development approaches development, output development and utilization approaches formulation and methods of meeting changing environment conditions in projects. Wherever possible, the Planning Capacity will be related to various IMPS Work Definitions. The Planning Capacity characteristics are derived from theoretical requirements outlined in the formal Classification System of the Public Service.

(F) INITIATION CAPACITY

The Initiation Capacity variable of Classification Characteristics will include primarily those characteristics of work which comprise the organization requirements of a position at a given level, in relation to various work requirements. This variable will include parameters such as identification of problem and opportunity areas, project proposals development, analysis methods development, development of primary and final outputs, and the development of recommendations. Wherever possible, the Initiation Capacity will be related to IMPS Work Definitions. The Initiation Capacity Characteristics are derived from the theoretical requirements outlined in the formal Classifications System of the Public Service.

(G) ANALYTICAL CAPACITY

The Analytical Capacity variable will include primarily those characteristics of work which comprise the overall analysis requirements, activities and processes under various projects, and will involve parameters such as the development of new analysis methods and procedures, the use of analysis tools, fields of analysis, the design of creative, integrated approaches to analysis problem resolution, and the actual resolution of problems within various disciplines and subject matter fields. Wherever possible, the Analytical Capacity variable will be related to IMPS Work Definitions. The Analytical Capacity characteristics are derived from theoretical requirements outlined in the Formal Classification System of the Public Service.

(H) DEVELOPMENT CAPACITY

The Developmental Capacity variable will include primarily those characteristics of work which comprise the overall development aspects and requirements of work at various levels within projects and will involve parameters such as the development of plans, proposals, work approaches, problem solving approaches, research plans and other materials. Wherever possible, the Developmental Capacity variable will be related to IMPS Work Definitions. The Developmental Capacity characteristics are derived from theoretical requirements outlined in the formal Classification System of the Public Service.

(I) ADVISORY CAPACITY

The Advisory Capacity variable will include primarily those characteristics of work which comprise the overall requirements and activities concerned with the provision of advice and consultation within various disciplines, subject matter areas, policy and program fields and work areas. The Advisory Capacity characteristics are derived from theoretical requirements outlined in the formal Classification System of the Public Service. Wherever possible, the Advisory Capacity variable will be related to IMPS Work Definitions.

(J) REPORTING RELATIONSHIPS

The Reporting Relationship variable of Classification Characteristics, is concerned with the actual, organizational context required for various levels of positions within the actual projects. This variable will be more or less constant on the administrative end, but for projects duration, there will be important variations to be noted for each level of position. These reporting relationships will be directly related to the Work Definitions under the specific group and level delineation of Classification Characteristics.

(K) SCOPE FOR ACTIVITIES

The Scope For Activities variable of Classification Characteristics is concerned with the room for or freedom of, actions for each level of positions under variable work conditions. This variable is concerned with requirements to undertake activities, the conditions under which they are performed and the requirements to meet various objectives within these variable contexts. The Scope For Activities variable will be directly related to the IMPS work definitions. The allowable Scope For Activities of each level has been derived from the Formal Classification System of the Public Service.

(L) IMPACT OF ACTIVITIES

The Impact of Activities variable of Classification Characteristics is concerned primarily with the overall effect of activities undertaken by each level of position, within various Project contexts. In general terms, it is concerned with the effect of outputs of all types, on other activities of the Project, on the Project itself, on the attainment of Project goals and objectives and on external variables such as existing or related policy and programs. The Impact of Activities will be directly related to Work Definitions of IMPS for each level of position. The allowable Impact of Activities of each level has been derived from the Formal Classification System of the Public Service.

The twelve variables outlined above comprise the overall Classification Characteristics field. Each of these variables will be of use in determining at What Level Work is Being Done within the Project and related activities context of MOSST. These characteristics will be utilized within the Job Profiles (outlined in a later Section), within the Integrated Graphs Section and within the Section of the report outlining the specific Group and Level Classification Characteristics.

The Classification Characteristics will of course be utilized to a variable degree in each of the above mentioned contexts. Within the Job Profiles, these characteristics are not illustrated under a specific defined context, although they are inherent in the Profiles within the Duties and Distinguishing Characteristics as developed. Within the Integration Graphs, the Characteristics will all be present in title form, but not all of them will be utilized in each graph where they are present. For example, variables such as Knowledge and Reporting Relationships do not have to be utilized to illustrate specific roles played under varying Project Types, and accordingly, will not have integration points on the Graphs. All Classification Characteristics will however, be utilized, in full, in the next Section of the Report, that of Group and Level Classification Characteristics.

II SPECIFIC GROUP AND LEVEL CLASSIFICATION CHARACTERISTICS

This Section of the report will utilize the defined Classification Characteristics within the context of Specific Classification Groups and Levels. It will define the parameters of work in relation to the Classification System as required within the SX, AS and ES Groups, and Levels within these Groups. Although the parameters developed will be specific in terms of the Groups utilized, they could just as easily fit under a totally different categorization. Rather than say SX (Senior Executive, levels 1 and 2), one could say Project Director (Generalist, levels 1 and 2). For AS (Administrative Services, levels 7, 6, 5 and 4), the categorizations of Policy Advisor (Generalist) and Policy Analyst (Generalist) could be utilized. For the ES (Professional Economist, Sociologist or Statistitian, levels 5,4, 3 and 2) one could utilize Project Director (Professional Specialist) Policy Advisor (Specialist) Policy Analyst (Specialist).

The Groups utilized in this Section of the Report were selected on the basis of their width of inclusion, their range of role potentials, the Executive/Specialist/Generalist mix which could be developed, and their utilization potential within the Ministry, as well as to illustrate the application potential of the Classification Criteria and Characteristics developed for the system for a diverse group set-up, with differing evaluation, level limits, criteria and selection parameters. The utilization of an Executive, a Professional and an Administrative Group also covers the three Classification Categories (Executive, Scientific and Professional and Administration and Foreign Service) most likely to be utilized within the federal Public Service for Project Work. As well, the Groups utilized show a large range of equivalencies and accordingly, other Groups can be utilized on an "Equivalents" basis without having to do detailed Graphic Integration or related

work to ensure appropriate classification and resource allocation, selection or utilization.

In general, given the detail of definition which will be available, the wide application potential of the data, and the existence of concrete, substantive inter-relationships between Groups within the Public Service in terms of level characteristics and determinants, the Classification Characteristics outlined should provide a comprehensive, generally applicable set of criteria which can be utilized for other Groups without having to delineate the inclusion of those Groups within IMPS.

II (A) CLASSIFICATION CHARACTERISTICS - SX-2 - MAJOR PROJECT DIRECTORS

(a) KNOWLEDGE CAPACITY

Project Directors at the SX-2 level will require comprehensive knowledge within all fields of a specific Science and Technology Sector (Government, Industry or Universities) as well as knowledge of inter-relationships and interdependencies among Sectors. As well, they will require knowledge of the capabilities, capacities and potentials of a number of disciplines within Science and Technology fields, of the policies and programs of Science and Technology in Canada and elsewhere and of trends and developments in Science and Technology as related to major Science and Technology policy, program and activity fields. Experience in managing large, TYPE A Projects, the resources of projects and the conduct of specific operations under Projects is also required. Experience in all aspects of R&D, the management of R&D and the utilization of R&D outputs with major Sector and national implications is also required. In general, a comprehensive grasp of all Sector and related Science and Technology requirements, problems, policies and objectives is required.

(b) DECISION CAPACITY

Project Directors at the SX-2 level will be required to formulate decisions and recommendations requiring the highest degrees of initiative, discretion and judgement in relation to multi-Sector and national policies and programs as envisioned in Type A Projects. Decisions will involve authoritative, original and highly creative contributions to policy planning, research and policy development, the authoritative management of large multidisciplinary project resources of the Department and elsewhere, and the development of overall project plans, problem resolution approaches and responses to changing conditions within Type A Project parameters. Decisions will be made to ensure the effective leadership, management, control and operation of projects (Type A) as well as for the effective development of policy and program recommendations relating directly to national Science and Technology objectives.

(c) CONTACT CAPACITY

Project Directors at the SX-2 level will be required to initiate extensive contacts at the most senior levels within and outside of the Public Service, as well as internationally. Such contacts are required to co-ordinate extensive liaison, advisory, negotiation and project activities and services on a national, international and government-wide basis, to ensure effective TYPE A Project management, policy development, and communication activities. Representation roles, as the formal Canadian Government representative, will also be required at international and national conferences and committees. Contacts with external areas in relation to Project operations will usually take place as the Head of co-ordinated Projects involving other Departments, other levels of government and the private Sector.

(d) MANAGEMENT CAPACITY

Project Directors at the SX-2 level will be required to manage TYPE A Projects. Accordingly, these positions will require comprehensive management activities in relation to project resources, project planning, project development and project organization, all of which takes place on a multi-Branch, interdepartmental or national scale required for the conduct of TYPE A Projects. Resources managed will include all levels of operational personnel, and on a very occasional basis, Senior Executive personnel engaged in specific Sub-Projects under a very large TYPE A Project.

(e) PLANNING CAPACITY

Project Directors at the SX-2 level will be required to formulate comprehensive, co-ordinated plans for the successful operation of TYPE A Projects. Such plans will require the determination of, and allowance for, Project approach development, methodology development, work segmentation, project team management, liaison and advisory services development, evaluation methodology development, output formulation and presentation methods and materials development, etc. Invariably, the planning of TYPE A Projects involves extensive, complex, determination problems, due to the fact that the effects, or implications of, projects are unknown. The planning activities of SX-2 Project Directors are vital to the successful completion of TYPE A Projects and the attainment of national objectives through the development of planned policies and programs.

(f) INITIATION CAPACITY

Project Directors at the SX-2 level will be required to initiate project ideas and concepts, solutions to Science and Technology problems, methods for attaining Science and Technology objectives under TYPE A Project parameters, methods of operating, managing and co-ordinating TYPE A Projects, recommendations for major national and international Science and Technology policy initiatives, strategies and materials and developments in various analysis, research and methodologies fields. Such initiation activities and outputs will not be the result of external directives or inputs, but rather will be the results of actions originated by the positions themselves. The initiation activities of these positions will be vital to the success with which MOSST meets general and specific Science and Technology objectives and goals, as well as being vital to the overall capacity of the Ministry to provide creative, sophisticated and effective policy and program outputs to focus Science and Technology activities in Canada.

(g) ANALYTICAL CAPACITY

Project Directors at the SX-2 level will not normally be directly involved with the conduct of analysis as participants, but will be required to provide overall analysis initiatives, approaches, methods and evaluation of outputs. The leadership for analysis, provided by the SX-2 Project Director, will cover all Sector fields and disciplines and will involve authoritatively resolving extremely complex problems through the initiation of highly creative methods and approaches for problem resolution.

(h) DEVELOPMENT CAPACITY

Project Directors at the SX-2 level will be required to develop project ideas, concepts, proposals and plans for TYPE A and extremely important TYPE B Projects. They will also be required to develop strategies and approaches for the attainment of TYPE A Project objectives as well as to develop overall management plans for Project operations. The work will also require the development of comprehensive R&D plans, methods and approaches, the development of total communications and liaison plans, the development of co-ordinated, effective policy and program recommendations affecting Science and Technology in Canada and Internationally, and the development of comprehensive, co-ordinated presentations and recommendation for implementation of outputs.

(i) ADVISORY CAPACITY

Project Directors at the SX-2 level will be required to provide authoritative, comprehensive and effective advisory services and consultation concerning major Sector Science and Technology policy and program options, problems, initiatives and recommendations, the co-ordination and operation of TYPE A Projects, the resolution of substantive, wide-ranging policy problems in a number of Sector Science and Technology fields, and the utilization of TYPE A Project outputs. Advisory and Consultation services will be provided to DM's, ADM's and very senior officials throughout the Government and Private Sector, as well as to other levels of government and internationally. Such services would be provided as the Ministry and Government authority, or as a formal representative of the Government of Canada and MOSST.

(j) REPORTING RELATIONSHIPS

Project Directors at the SX-2 level will report to the Assistant-Secretary of the Home Branch. Reporting will take place under the general direction of the Assistant-Secretary.

(k) SCOPE FOR ACTIVITIES

Project Directors at the SX-2 level will be required to direct and undertake activities and operations involving the meeting of Ministry, Government and National Science and Technology objectives and goals, with continually changing inter-relationships, interdependencies and conditions affecting the potential for achieving such goals and objectives. The directing of activities and the achieving of objectives will take place in an environment of very generally defined parameters for activities, and will require extensive originality and creativity for successful completion of work. The work will take place in a number of Sector areas (policy and program) having national and international implication, priority and scope. These positions will have a substantive degree of freedom of action and virtually complete freedom in the management, decision making and development parameters of projects.

(1) IMPACT OF ACTIVITIES

Decisions and recommendations made by SX-2 level Project Directors, will affect the successful completion of TYPE A Projects, the management of project resources, the development of national and international policy and program initiatives, strategies and recommendations, the effectiveness of the Ministry in meeting its national Science and Technology objectives, the successful utilization and implementation of Science and Technology policies and programs, the activities, resources and policy of other government and private sector areas, the development of effective, co-ordinated Science and Technology policies for Canada and the utilization of billions of dollars in Science and Technology fields in Canada. Indirectly, decisions and recommendations will have a substantial impact on the economy of Canada through the use of Science and Technology policies and resources, as determined by MOSST initiatives, strategies and co-ordinated inputs to Science and Technology activities in Canada.

In order for Project Directors to be classified at the SX-2 level, the general parameters and characteristics outlined above must be fully met for each project allocation. In other words, SX-2 Project Directors cannot be utilized in project work which does not have these defined knowledge, decision, management, planning, impact and other variables. Generally, the only work which requires the capacities outlined, is that of directing TYPE A Projects, and accordingly, any other allocation of an SX-2 Project Director would be incorrect in Classification terms. The possible exception occurs with an extremely large TYPE B Project which might meet the majority of requirements in Classification In such rare cases, the clear delineation of Project, fields. Sub-Project and other work requirements must be evident for the effective and appropriate allocation and utilization of an SX-2

II (B) CLASSIFICATION CHARACETERISTICS - SX-1 - PROJECT DIRECTORS

classification, for the Project Director.

(a) KNOWLEDGE CAPACITY

Project Directors at the SX-1 level will require a knowledge capacity similar to that for Project Directors at the SX-2 level. The primary difference between the SX-1 and SX-2 levels lies in the experience parameters, and in the scope of knowledge utilization at any given time. Experience will be required in managing TYPE B Projects and the primary phase of TYPE C Projects, in managing the resources of Projects and in controlling the conduct of specific operations under Projects. The TYPE B Projects will not have as large a scale as TYPE B Projects nor as complex an inter-relationships and interdependences comprehension requirement. Experience in all aspects of R&D, the management of R&D and the utilization of R&D outputs with substantive Ministry and Sector objectives achievement implications, is also required. In general, as was the case for the SX-2 Project Director, a comprehensive grasp of all Sector and related Science and Technology requirements, policies, problems and objectives is required, but will not be utilized on as large or co-ordinated a basis, per project, as is the case for SX-2 Project Directors.

(b) DECISION CAPACITY

Project Directors at the SX-1 level will be required to formulate decisions and recommendations in relation to Sectorwide, inter-Sector and national policies and programs as envisioned in TYPE B Projects. Decisions will require a high degree of initiative, tact and discretion, and will require authoritative, innovative contributions to policy research, development, planning and co-ordination, the management of significant Departmental and inter-Departmental project teams and resources, the development of project plans, priorities, strategies and approaches, and the development of solutions to problems encountered in TYPE B Projects. Decisions will be made, in general, to ensure the effective leadership, management, control and operation of TYPE B Projects as well as for the effective development of policy and program recommendations relating to MOSST and Government Science and Technology objectives.

(c) CONTACT CAPACITY

Project Directors at the SX-1 level will require the same contact capacity as SX-2 Project Directors, with the exceptions that contracts will be made to ensure effective TYPE B Project control, managment, policy development and communications activities, and that on co-ordinated, inter-departmental Projects, SX-1 Project Directors will not necessarily be the Head of (such inter-departmental) co-ordinative committees and groups.

(d) MANAGEMENT CAPACITY

Project Directors at the SX-1 level will be required to manage TYPE B Projects. Accordingly, these positions will involve comprehensive management activities in relation to overall project resources, planning, development and organization, which takes place on an inter-Branch, or, on an inter-departmental basis. Resources managed include all levels of operational personnel (AS-7 down, ES-3 down), as utilized within TYPE B Projects.

(e) PLANNING CAPACITY

Project Directors at the SX-1 level will have planning roles and responsibilites similar to those at the SX-2 level, with the primary differences being within scope, complexity and inter-relationship parameters. Planning roles will be required for TYPE B Projects and the Primary Phase of TYPE C Projects (as warranted by program output potentials), and will require team management, methodology development, work segmentation, liaison and advisory services, overall approach development, evaluation methodology development, and output development plans. Planning activities are vital to the successful completion of TYPE B Projects and the achievement of MOSST and Government goals and objectives within specified Sector fields of policy.

(f) INITIATION CAPACITY

Project Directors at the SX-1 level will require an initiation capacity similar to that for SX-2 level Directors, with the primary difference being within the overall scope and complexity of fields of work within which initiation roles are played. SX-1 Directors, having the less complex and narrower scope TYPE B Projects, will have less requirement for initiation roles on a total Project basis, but will have the same fields of initiation capacity to cover within Projects. Accordingly, SX-1 Project Directors will be required to initiate project ideas and concepts, solutions to Science and Technology problems, methods for attaining Science and Technology objectives under TYPE B Projects, recommendations for Science and Technology policies and programs, and developments in various analysis, research and methodologies areas. Such initiation activities will not usually be the result of external directives or inputs. Initiation activities of these positions will be vital to the successful attainment of MOSST objectives within a Sector of Science and Technology, as well as for attainment of Government objectives therein.

(g) ANALYTICAL CAPACITY

Project Directors at the SX-1 level will not normally be directly involved with the conduct of analysis (as participants), but will be required to produce analysis approaches, direction, methods and initiatives as well as to directly evaluate analysis outputs. The leadership provided in analysis areas will be provided by the SX-1 Project Director in relation to specific TYPE B Project issues, operations and related Science and Technology fields and disciplines, and, will require authoritatively resolving complex problems in analysis fields, requiring the initiation of new methods and approaches for problem resolution.

(h) DEVELOPMENT CAPACITY

Project Directors at the SX-1 level will be required to develop project ideas, concepts, proposals and plans for TYPE B Projects and large TYPE C Projects (with significant program orientation). They will also be required to develop strategies and approaches for the attainment of TYPE B Project objectives, as well as for the overall management of such Projects. The work will also require the development of effective R&D plans, the development of communication and liaison plans, the development of policy and program recommendations and the development of presentations and implementation plans. As was the case with other factors, the primary difference between SX-2 and SX-1 Project Directors is one of degree rather than of actual role requirements.

(i) ADVISORY CAPACITY

Project Directors at the SX-1 level will have a similar advisory capacity to Project Directors at the SX-2 level with the primary difference that advisory activities will take place in relation to TYPE B Projects and accordingly will not involve the same scope of, or range of, advisory services as those of SX-2 Directors responsible for TYPE A Projects. The same roles, fields and levels will, however, be involved. Reporting relationships for the SX-1 level Project Director are similar to those of the SX-2 level Project Director, but SX-1 Project Directors will report to the Assistant-Secretary of the Home Branch for policy purposes only, while reporting for administrative purposes to the General Director of the Project Division of the Home Branch.

(k) SCOPE FOR ACTIVITIES

Project Directors at the SX-1 level will be required to direct and undertake activities and operations involving the meeting of Branch, Ministry and Government Science and Technology objectives and goals within a Science and Technology Sector, under an environment of changing policy and program inter-relationships and inter-dependencies, affecting the potential for goal and objective achievement. Parameters for projects will be, at best, generally defined, and direction received will be general in nature. The work will take place within Sector policy and program fields having national implications and potential international implications. The positions will have substantial freedom of action, as well as freedom in managing, co-ordinating and controlling projects and related decision making activities.

(1) IMPACT OF ACTIVITIES

Decisions and recommendations made by SX-1 level Project Directors will affect: the successful completion of TYPE B Projects; the management of those project resources; the development of policy and program initiatives, strategies and recommendations; the effectiveness of the Ministry in meeting specific Sector and Science and Technology goals and objectives; the successful utilization and implementation of Science and Technology policy and program recommendations; the activities and resources of other Departments, levels of government and private sector areas; and, the related utilization of billions of dollars for Science and Technology resources in Canada. Indirectly, decisions and recommendations made will affect the economy of Canada within Sector Science and Technology areas as well as in those areas affected by Sector Science and Technology activities and outputs.

In order for Project Directors to be classified at the SX-1 level, the general parameters and characteristics outlined above must be fully met, for each project allocation. SX-1 Project Directors cannot be utilized in project work which does not have these defined knowledge, decision, management, planning, impact and other variables. Generally, the work which requires the capacities outlined is that of directing TYPE B Projects and occasionally the Primary Phase of TYPE C Projects. Any other allocation of SX-1 Project Directors would be incorrect in Classification terms, either due to under-utilization (such as directing TYPE C Projects for their duration) or over-utilization (such as directing TYPE A Projects).

As has been pointed out, much of the Classification differentiation between SX-1 and SX-2 Project Directors, is a matter of degree of variables rather than a matter of actually not having, or having, full classification characteristic roles. Basic differences in the type of work to be carried out do, however, exist. SX-2's must direct TYPE A Projects while SX-1's direct TYPE B Projects. The differences between these types of Projects do not of course lie in any single parameter, but rather, lie in the overall aspects of projects and involve, in that context, differences in priorities, complexities, impacts, scope, initiatives, creativity and other variables. It is important to note that it will be the responsibility of the PMS to determine whether or not Projects will be of TYPE A or TYPE B, based on evaluation of the nature, context, type and other variables of work as envisioned in project proposals. Once Project Type has been determined, then SX Project Director allocation can take place on the basis of project type. It should also be pointed out that these will be the same basic parameters for determining whether to utilize an ES-5 or ES-4 Project Director, when a professional orientation to the work is of primary importance. These parameters for professional orientation will be outlined further under the Specific Classification Characteristics for ES's.

II (C) CLASSIFICATION CHARACTERISTICS - AS-7 - POLICY ADVISORS

(a) KNOWLEDGE CAPACITY

Policy Advisors at the AS-7 level will require multi-disciplinary, highly specialized knowledge for application to complicated general problems in all types of Projects, with such knowledge to be gained through systematic study and analysis within specific areas in a number of disciplines, through comprehensive analysis of inter-relationships and trends in a number of fields and through extensive project experience, particularly in TYPE A and TYPE B Projects. General, but comprehensive knowledge of Science and Technology policies, programs, activities and operations within a major Science and Technology Sector will be required, as will knowledge and experience in research, analysis and development methodologies and techniques appropriate to Sector and related policy, and, if applicable, program development activities therein.

(b) DECISION CAPACITY

Policy Advisors at the AS-7 level will be required to formulate decisions and recommendations which require a high degree of judgement, initiative and discretion and which involve significant contributions to planning, developing and changing policy strategies and proposals, as well as program proposals, both directly and to meet stipulated objectives set by various Project Management personnel or Project Directors. Decisions will involve the development of solutions to diverse and inter-related problems and must anticipate or respond to changing conditions affecting decision making processes. Decisions will involve policy and program development, project development (B, C, and D TYPE Projects primarily), the management of project teams (not total project resources - for all types of Projects), the management of overall projects and resources (TYPE C and D), and the leadership of project Phases (See Below).

(c) CONTACT CAPACITY

Policy Advisors at the AS-7 level will be required to conduct extensive liaison and communication services involving senior officials and officers of other Departments and Agencies, other levels of government, industry, the private sector and other countries. The primary purposes of such Contact activities will be to represent the Ministry, to develop information flows and channels, to discuss various project operations, activities and requirements, participate in working groups or task forces and provide expert consultation and co-ordinative services relating to various projects and phases therein as well as to various policy and program issues. Occasionally, the AS-7 Policy Advisor will represent the Government of Canada at national and international conferences, committees and meetings.

(d) MANAGEMENT CAPACITY

Policy Advisors at the AS-7 level will be required to manage TYPE C and TYPE D Projects as well as phases of TYPE A and TYPE B Projects (usually Phases 2 and 3). Accordingly, these positions will require extensive management of resources, complex development, planning and organization activities for project management and extensive personnel direction for project and phase direction. Management of personnel will involve intermediate level Analysts but will not usually involve senior level Advisor's (AS-6 level). In general, AS-7 Advisor positions will provide the management of operational personnel during TYPE C and TYPE D projects and during the Analytical and Formulation Phase of TYPE B and A Projects (for specific project teams involved in these Phases).

(e) PLANNING CAPACITY

Policy Advisors at the AS-7 level will be required to formulate comprehensive plans and undertake complex planning activities in the following areas: methods development for utilization in Project phases, segments and activities; work segmentation (for TYPE C and D Projects and for phases of B and A); project team management; liaison and advisory services (overall for TYPE C and D Projects); methods of evaluation for project outputs; position strategies for various meetings and working groups; methods of consolidation and presentation of project (TYPE C and D) and phase work; and, methods of conducting complex research, development and analytical studies (either as segments and phases of TYPE A or B Projects, or, on an overall project basis for TYPE C and D Projects). The implications of activities to be planned and, their impact when completed, usually cannot be readily determined. Planning responsibilities for the AS-7 Policy Advisor are, therefore, highly complex and often are essential to the successful attainment of project and phase objectives.

(f) INITIATION CAPACITY

Policy Advisors at the AS-7 level will be responsible for Initiation activities in relation to: the identification of Science and Technology problems and opportunity areas; the development of project proposals (TYPE C and D Projects); the development of project ideas (any type of Project); the conduct of complex analyses within projects of all types; the development of effective primary and final outputs in TYPE C and D Projects; and, the development of effective recommendations in policy and program fields (under all types of Projects, but with varying stages for recommendations initiation). Such initiation activities will not usually be the result of inputs from Project Directors, but rather, will be the result of actions undertaken on the initiative and judgement of the incumbents of the positions.

(g) ANALYTICAL CAPACITY

Policy Advisors at the AS-7 level will be required to undertake the most complex analysis in all types of Projects, either directly as in TYPE A and B Projects or as a Project leader in TYPE C and D Projects. Analyses undertaken, usually involve a number of subject matter and policy fields, will require the development of new methods and techniques of analysis, will involve the utilization of a wide range of analytical approaches, will require the design of innovative and unique methods for problem solving and will involve the resolution of complex problems involving a number of fields and disciplines as well as policy areas.

(h) DEVELOPMENT CAPACITY

Policy Advisors at the AS-7 level will be required to develop project plans (formally - for TYPE B and C Projects) and proposals (for any Type of Project), operational and work segmentation plans, approaches to the resolution of highly complex problems in policy and analysis fields, plans for effective research and study into general problem areas, the methods and approaches by which analytical requirements in Projects and Phases of Projects can be met, plans for effective liaison, communication and advisory services provision during Phases and overall Projects, as well as for the development of effective policy, program and information outputs, usually for TYPE D and C overall, and for Phases of TYPE A and B Projects.

(i) ADVISORY CAPACITY

Policy Advisors at the AS-7 level will be required to provide effective advisory and consultation services concerning a number of policy, program and information areas as well as related subject matter fields, as an expert within these areas and fields. Advisory and Consultation services will be provided to Senior officials (ADM's) and officers of a wide range of government, private sector and international organizations and will involve formal representation roles in all cases, as a MOSST, Branch, or Government of Canada representative or official.

(j) REPORTING RELATIONSHIPS

Policy Advisors at the AS-7 level will report for administrative purposes to the General Director of the Home Branch - Projects Division. For project purposes however, they will report, under general direction, to SX-1 and SX-2 Project Directors or to ES-5 and ES-4 level Project Directors. On occasion, they will report to the Assistant Secretary of the Branch responsible for the Project, to provide inputs to policy and program development and when the AS-7 is required to lead TYPE C and TYPE D Projects.

(k) SCOPE FOR ACTIVITIES

Policy Advisors at the AS-7 level will be required to undertake activities and operations involving the meeting of very general objectives, within an environment of constantly changing conditions affecting the achievement of objectives, and which require the utilization of significant innovation and originality in planning, developing and changing operations to be undertaken. These positions will, therefore, have considerable freedom of action, with work being undertaken under general direction. The work will take place in a number of policy and program fields and will involve several disciplines, and accordingly, the potential for a wide scope in planning, decision making and output formulation exists.

(1) IMPACT OF ACTIVITIES

Decisions and recommendations made by Policy Advisors at the AS-7 level will affect the successful completion of projects of all types (either through leadership of TYPE C and D Projects or, because of significant output formulation activities and analyses undertaken in TYPE A and B Projects). Decisions and recommendations will also affect the efficiency and effectiveness of resource utilization in Projects, the effectiveness of policy outputs, and, the effectiveness of relations with external areas (and accordingly, the utilization or development of project outputs). Decisions and recommendations will ultimately affect the success of policy and program initiatives, strategies and materials in meeting Branch, Ministry and Government Science and Technology objectives, the effectiveness of overall policy initiatives (not directly resulting from projects, but relating to project outputs) and, the attainment of effective, co-ordinated Science and Technology policy capabilities to meet Canada's Science and Technology requirements. Decisions will also have an indirect effect upon the utilization of Canada's Science and Technology resources within a specified Sector. Therefore, decisions and recommendations made by AS-7 Policy Advisors will have major impact within a number of inter-related and inter-dependent policy and program fields.

In order for Policy Advisors to be classified at the AS-7 level, the general parameters and characteristics outlined above must be met for each project allocation. AS-7 Policy Advisors cannot be utilized in project work areas which do not have these defined Classification Characteristics in substantive terms. The clear delineation of Project, Sub-Project and Phase work requirements must be evident to allow for the effective and appropriate utilization of the AS-7 classification.

As was noted previously, the decision capacity for AS-7 Policy Advisors will vary according to the type of Project and involvement with each project as a Project or Phase leader. In general, AS-7 Policy Advisors will lead TYPE C and TYPE D Projects (or Sub-Projects), will be Phase 2 and Phase 3 leaders in TYPE B Projects (as a project team leader usually, rather than in a similar role to the overall SX-1 Project Director), and would lead Phases in TYPE A Projects only on an occasional, developmental basis (i.e. that as a team leader - AS-7's may be the most senior analytical staff, but may not play leadership roles in relation to other staff in terms of direct management in TYPE A Projects).

The different roles to be played (leadership, participation or development) and their relationship to Project operations and classification characteristics, will be fully defined at a later point in this report. It should, however, be obvious that any positions could, for example, be a leader in terms of analysis or some other classification characteristic, while not being the overall leader in terms of decision making. It is equally obvious that the capacities illustrated (i.e. decision capacity) will vary from one type of project to another (i.e. a leader capacity in TYPE C, a participant capacity in TYPE B), due to the role/work differentiation relationships inherent in the classification system of the Public Service.

II (D) CLASSIFICATION CHARACTERISTICS - AS-6 - POLICY ADVISORS

(a) KNOWLEDGE CAPACITY

Policy Advisors at the AS-6 level will require a knowledge capacity similar to that for AS-7 Policy Advisors, with the exception that knowledge within management, analytical, methodology development, and research methodology fields will not have to be as extensive as that for AS-7 Advisors, nor will it have to be applied to the same extent or degree during Projects. Knowledge in policy, program, activity and operations fields within a major Sector, as well as of several disciplines and subject matter fields (usually highly complex and specialized) will be required for application to general problems encountered in Project work (usually under Project TYPES B, C, or D). Knowledge of trends, developments and inter-relationships in the above mentioned areas will also be required. As was the case for knowledge capacity differentiation between SX-2 and SX-1, the knowledge capacity differentiation between AS-7 and AS-6 is not so much one of actual content knowledge, but rather, is a difference of degree in utilization and application of knowledge per project, as well as in experience in the use of knowledge.

(b) DECISION CAPACITY

Policy Advisors at the AS-6 level will not usually work on TYPE A Projects as a leader or usual participant, and accordingly, decisions and recommendations made will not require the same degree of judgement, initiative, innovation, scope or discretion as those of AS-7 Policy Advisors who do have usual roles on TYPE A Projects. Decisions and recommendations will require substantial contributions to the planning, developing and changing of policies and programs (usually as recommendations rather than direct decision inputs as is the case for AS-7's). Decisions and recommendations will also be made concerning the development and ammendment of analysis methods, the orientation of, and content of, various advisory and consultation services, and the development of courses of action to carry out project analysis requirements and resolve problems encountered in the work. Recommendations will also be made concerning changes to policies and programs. The implications of decisions and recommendations are usually difficult to foresee. Decisions affecting project management and phase leadership are outlined below.

(c) <u>CONTACT</u> CAPACITY

Policy Advisors at the AS-6 level will be required to undertake the same types of contacts (e.g. liaison, advisory and consultation) as AS-7 Policy Advisors, but such contacts will not involve officials at as senior a level as those for the AS-7. The same range of contacts (government, private and international) will be evident in both cases (AS-7, AS-6), but representation roles will be limited to that of a Branch and Department representative and will only very occasionally require representation on various committees (as a delegate). The purpose of contacts will also be similar in both cases, but the AS-6 will usually not require extensive, complex and long term discussions and negotiations as is the case for AS-7 Policy Advisors.

(d) MANAGEMENT CAPACITY

Policy Advisors at the AS-6 level will be required to manage TYPE D Projects, resources for such projects, small project teams (two to three people) and phases and segments of TYPE C and TYPE B Projects (Segments in TYPE B). Resources managed will be at intermediate and junior levels (AS-4, 3's usually). Management planning in the above mentioned areas will be required, but will usually not be long term in nature.

(d) PLANNING CAPACITY

Policy Advisors at the AS-6 level will be required to formulate effective, co-ordinated plans and planning materials in the following areas: the development of effective methods and approaches to the conduct of complex phase and segment work; work segmentation plans (for TYPE D Projects overall, Phases of C and occasionally B TYPE Projects, and usually, segments of B TYPE Projects); TYPE D Project management, liaison and advisory services (for TYPE D Projects overall, Phases of TYPE C and Segments of TYPE B); methods of evaluation for TYPE D and C Project and Phase outputs; methods of consolidation and presentation of work and related outputs; and, methods of conducting complex analysis and studies required under various Projects. The primary difference in the planning capacity of the AS-6 from the AS-7 Policy Advisor is in the scope of planning activities in relation to Project and Phase requirements. AS-6's will not usually be involved with TYPE A Projects planning, will be involved with TYPE B Segment planning only, will require Phase planning inputs for TYPE C Projects and will only plan overall project requirements for TYPE D Projects.

(f) INITIATION CAPACITY

Policy Advisors at the AS-6 level will have an Initiation Capacity similar to that for AS-7 Advisors with the exception that they will not usually be involved with initiation requirements of TYPE A Projects or with the initiation of overall project outputs except in TYPE D Projects. There will be variations in relation to C TYPE Projects (initiation of Phase outputs and plans rather than overall) and B TYPE Projects (initiation of outputs and plans re: segments rather than phases).

(g) ANALYTICAL CAPACITY

Policy Advisors at the AS-6 level will be required to undertake complex analyses in TYPE B, C and D Projects and may conduct more primary analysis (as a participant) for A TYPE Projects. The analysis undertaken in TYPE D Projects will be as a project leader rather than as a direct participant in project analysis. Analyses undertaken will involve a number of specialized fields and disciplines, but usually only within a limited number of policy and program fields at any given time. Analyses will also require the development of new methods and techniques, the utilization of a number of analytical approaches and methods, and the resolution of complex, inter-related problems within analysis fields.

(h) DEVELOPMENT CAPACITY

Policy Advisors at the AS-6 level will be required to develop project plans and proposals, operational and work segmentation plans (TYPE D Projects and Phases of TYPE C Projects), approaches to the resolution of complex problems, plans for effective analysis and studies of specific policy and program areas, and approaches for intensive analytical, communication, information development and policy and program initiatives and ammendments development, all of which relates to TYPE D Projects overall, Phases of TYPE C Projects and Segments of TYPE B Projects.

(i) ADVISORY CAPACITY

Policy Advisors at the AS-6 level will have an Advisory Capacity similar to that of AS-7 Policy Advisors, but involving less senior officials and officers, fewer policy and subject matter fields, and fewer (very occasional) Ministry representation roles. Usually, representation will be as a Branch officer involved with various working groups, task forces and meetings.

(j) REPORTING RELATIONSHIPS

Policy Advisors at the AS-6 level will report to Project Directors at the SX-2 and SX-1 level or the ES-4 and ES-5 levels.

II-40

In the case where TYPE C Projects are lead overall by an AS-7 Advisor, the participation of an AS-6 Advisor will not be required because such projects will not have the scope, resources or output priorities and complexities to warrant the use of two Policy Advisors, on the same project teams. AS-6 Policy Advisor participation on TYPE C Projects will be required when Projects are led overall by an SX-1 or when a TYPE C Project involves two project teams reporting to an SX-1 (with one small team) or when the TYPE C Project is a sub-project of other Projects led overall by an SX-1 or 2 or when a TYPE C Project has a TYPE D Sub-Project with the TYPE C Project having overall SX-1 leadership for the primary phase.

(k) SCOPE FOR ACTIVITIES

Policy Advisors at the AS-6 level will be required to undertake activities and operations involving the meeting of objectives established through general directives from superiors, concerning policy and program fields. Activities undertaken will often involve only very general parameters and will have to be undertaken in a context of changing conditions. Accordingly, significant scope for activities does exist in relation to work to be performed by AS-6 Policy Advisors. The work will take place under general direction, although closer direction will be utilized during any TYPE A Project participation by AS-6 level Policy Advisors.

(1) IMPACT OF ACTIVITIES

Decisions and recommendations made at the AS-6 Policy Advisor level will affect the completion of, and attainment of, objectives in relation to, TYPE C and TYPE D Projects (through leadership and through major phase output contributions) and will affect the development of effective outputs in relation to all types of Projects due to significant analytical and developmental contributions made therein. Activities will also affect the management of resources for TYPE C and D Projects, the effectiveness of policy, program and information outputs (TYPE B, C and D Projects usually) and the effectiveness of relations with external areas involved with, or concerned with, Project operations or outputs. Impacts within project parameters (e.g. in relation to methods, operations, etc.) will also be significant. Decisions and recommendations will ultimately affect the success of policies in meeting MOSST Science and Technology objectives, the effectiveness of policy initiatives and strategies in meeting specific Sector area objectives and the effectiveness of related Science and Technology activities in Canada. Decisions and recommendations will indirectly affect the utilization of millions of dollars of resources committed as a result of Science and Technology policy initiatives within a major Sector area.

As was noted previously, AS-6 Policy Advisors do not usually participate in TYPE A Projects. However, when they are involved, they will play participatory and developmental roles only and there will be significant differences in the types of assignments which will be undertaken. Because these are concerned with the activity unit work base, rather than with segment or phase work units, it should be pointed out that later graphs will indicate full participation roles for AS-6's, but, this participation will not be as substantial as that of AS-7 Advisors. Some Segment Differentiation can be illustrated between the AS-6 and AS-7 Policy Advisors in the Analytical Phase of TYPE A Projects, due to the leadership roles played by AS-7's, where AS-6's would only be participants. However, in the Output Formulation Phase, both the AS-6 and AS-7 play participant roles. The difference is of course that AS-7's make more significant contributions, more often and on a usual work basis, where AS-6's would not usually be utilized.

As was pointed out above, the Decision Capacity of AS-6 Policy Advisors will vary according to the type of Project to which such positions are allocated, and the involvement with each project as a Project, Phase or Segment leader. In general, AS-6 Policy Advisors will lead TYPE D Projects, will lead phases 2 and 3 of TYPE C Projects and will occasionally lead (but usually participate) in TYPE B Projects (leadership of segments in TYPE B or TYPE A Projects would be a developmental role). Leadership of TYPE C Projects (small projects with primarily information orientation) could also be undertaken on a developmental basis without affecting the classification Decision Capacity requirements and related Project resource allocation potentials.

In order for Policy Advisors to be classified as AS-6's, the general parameters and characteristics outlined above must be met for each project allocation. AS-6 Policy Advisors cannot be utilized in work situations and areas which do not substantively meet the classification characteristics and capacities outlined above.

The next level of work is represented by the AS-5 Policy Analyst. The primary difference to be made between the AS-6 (Advisor work) and AS-5 (Analyst work) is that the Analyst will not be directly and substantively involved with the development, ammendment or design of policy initiatives, strategies and materials, but rather, will be primarily involved with the conduct of analyses concerning various Science and Technology problem areas, problems with existing policies and programs, etc. and with the development of information and analytical materials which are utilized as base for policy and program output development. This does not mean that Policy Analysts will not have the capacity to make recommendations in policy and program fields. Rather, it means that the primary orientation and purpose of work carried out by Analysts is not for direct policy development, but to provide analytical materials. This distinction is evident in the Job Profiles in this Report (Part II, Section E) and will be evident in the following Classification Characteristics.

II (E) CLASSIFICATION CHARACTERISTICS - AS-5 - POLICY ANALYSTS

(a) KNOWLEDGE CAPACITY

Policy Analysts at the AS-5 level will require a comprehensive knowledge of at least two major policy fields and the principles and practices of related disciplines, for application to specific Sector problems in Science and Technology which involve complex inter-relationships and inter-dependencies. Such knowledge is gained through systematic study, evaluation and utilization of subject matter, as well as through assessment of trends and developments applicable to policy, disciplines and subject matter areas. The work requires experience in a number of policy and program analysis fields as well as a good knowledge of complex analysis, research and evaluation methods and techniques for utilization within project analysis work.

(b) DECISION CAPACITY

Policy Analysts at the AS-5 level will be utilized on all types of Projects as analysis specialists within two or more policy fields. Accordingly, decisions and recommendations made will require the exercise of a significant degree of judgement, initiative and discretion. Within the project work performed by AS-5 Policy Analysts, there will be requirements to recommend or take decisions concerning the modification, ammendment or development of analytical methods, techniques or processes to resolve complex, specific area, analysis problems. Recommendations will also involve some policy fields but usually will be aimed at methods for achieving objectives in relation to overall segment analytical work of the Project. The implications of various courses of action recommended for project analysis work, will usually be difficult to foresee. Decisions and recommendations will not involve project or phase leadership or management (except for TYPE D Projects - on a developmental basis), but will require substantive inputs to segment operations.

(c) <u>CONTACT</u> CAPACITY

Policy Analysts at the AS-5 level will be required to undertake extensive liaison and communication activities and contacts, usually involving senior operational levels of officers and professional officers of other Departments and Agencies and areas external to the Public Service. Contacts will be primarily for purposes such as developing information flows and exchanges, negotiating for information, discussing analytical methods and particular analysis problems and requirements, and participating in working groups involved with policy or Science and Technology problem analysis.

(d) MANAGEMENT CAPACITY

Policy Analysts at the AS-5 level will not usually manage other personnel or resources, although on occasion they may be required to supervise AS-3 developmental level personnel on TYPE D Projects. The work may require planning of resource use for segment work, but management or planning of resource use on a longer term basis (i.e. for Phases) will not be required except as a developmental function in preparation for promotion of a particular AS-5 Policy Analyst to the Policy Advisor levels.

(e) PLANNING CAPACITY

Policy analysts at the AS-5 level will be required to formulate effective plans in the following areas: methods for meeting segment responsibilities (development of basic work plans and approaches); work phase plans (as a developmental role for TYPE D Projects); approaches to meet liaison and advisory objectives for work; methods of analyses (for segment work); methods for effective correlation and integration of work results; and, methods for presenting work results and incorporating them into overall output plans during primary and working paper output formulation activities.

(f) INITIATION CAPACITY

Policy Analysts at the AS-5 level will be responsible for initiating activities in relation to project ideas presentation (as are all MOSST Project personnel), the development of work approaches for analyses in various segments, the conduct of specialized policy, program and information analyses, the development of segment outputs, and the development of effective recommendations resulting from analysis work. Such initiation activities will usually be the result of responses to directives from Senior Project Personnel or responses to stipulated, general project and phase objectives, goals and requirements. The primary area of initiation resulting from the incumbent's own actions will be in the various analysis activities undertaken, particularly in relation to the determination of optimal methods for use in analysis work.

(g) ANALYTICAL CAPACITY

Policy Analysts at the AS-5 level will be required to undertake complex analysis within phases and segments of all types of projects, with A and B TYPE Projects involving primary level analysis within segments. Such analysis work will involve the utilization of specialized evaluation, assessment, and other techniques within various policy, program and subject matter areas. Analyses work will occasionally require the development of new approaches and methods for study within new policy and program fields, but usually modification or refinement of existing methodologies for analyses will be all that is required at the

(h) DEVELOPMENT CAPACITY

Policy Analysts at the AS-5 level will be required to develop segment plans and related work and operations plans, as well as Phase plans for TYPE D Projects. AS-5 Policy Analysts will also be required to develop plans and methods for undertaking specialized analyses, related information development work and for effective liaison, advisory and assistance services required for segment and phase work. Occasionally, policy and program ammendment recommendations will be made as a result of analysis undertaken and as a result of developmental phase leadership roles in TYPE D Projects.

(i) ADVISORY CAPACITY

Policy Analysts at the AS-5 level will have an advisory capacity similar to that for AS-6 Policy Advisors, with the exceptions that discussions will be technically and analytically oriented (rather than policy oriented), levels of officials involved will be somewhat lower and that representative roles will usually only involve working group functions, as the analysis specialist, within designated fields. The purpose of advisory and consultation services will usually not exceed negotiation for information or complex discussion of technical issues related to effective completion of analysis work.

(j) REPORTING RELATIONSHIPS

Policy Analysts at the AS-5 level will usually report to AS-7 Policy Advisors for project work, but will report for administrative purposes to the General-Director of the Projects Division of the Home Branch. They may also report to SX-1 Project Directors on rare occasions when projects are undertaken without having AS-7 Policy Advisors playing phase or segment leadership roles.

(k) SCOPE FOR ACTIVITIES

Policy Analysts at the AS-5 level will be required to undertake analytical activities involving the meeting of specialized objectives established by superiors in relation to the successful completion of Project Phases and Segments and the meeting of analysis, policy and program development objectives within specific Sector area fields. Activities will be undertaken within general parameters and under changing analyses conditions. Work will require initiative in planning, and undertaking, assignments within phases and segments of all types of Projects. The work will take place

under Direction.

(1) IMPACT OF ACTIVITIES

Decisions and recommendations made by AS-5 Policy Analysts will affect the successful completion of phases of TYPE C and D Projects and segments of TYPE A and B Projects. Accordingly, analytical inputs to the project will have an indirect effect upon the efficiency and effectiveness of primary and final project information, data, program and policy outputs, due to the fact that such outputs will have to rely upon analyses performed in relation to various issues and problems, for orientation, scope and content, during output development. Impact within project parameters (i.e. during project operations and development of outputs) will be significant. Decisions and recommendations will also affect the utilization of junior operational personnel, supervised by AS-5 Policy Analysts on an occasional basis. Indirectly, recommendations made concerning analysis and evaluation work and its utilization, will affect actual policy initiatives and strategies content, and accordingly, the effectiveness of such policy outputs in meeting MOSST objectives within two or more major policy fields. Decisions and recommendations can also indirectly affect the successful development of policy outputs, in negative terms, when analyses are not complete and comprehensive or when errors in judgement are made, concerning the validity of analyses outputs and related issues such as policy use or requirements (one of the major variables upon which analyses are undertaken and, at the same time, upon which policy content is determined). In general, impacts from the work of AS-5 level Policy Analysts are significant, both within and outside of project parameters.

In order for Policy Analysts to be classified at the AS-5 level, the general parameters and characteristics outlined above must be met for each project allocation. AS-5 Policy Analysts cannot be utilized in work areas and situations which do not have the defined capacities, scopes and impacts outlined above.

II (F) CLASSIFICATION CHARACTERISTICS - AS-4 - POLICY ANALYSTS

(a) Knowledge Capacity

Policy Analysts at the AS-4 level will require a knowledge capacity similar to that for AS-5 Policy Analysts but with a reduced scope (i.e. not as many policy fields or disciplines) and a reduced degree of application requirement per project. Within the variations of scope and degree of application, other knowledge capacity parameters will be the same (e.g. analysis methods and techniques, problem solving processes, general subject matter comprehension, etc.). The same variations apply to experience variables within knowledge capacity with the exception that AS-4 Policy Analysts will not be required to have experience in supervising or co-ordinating work performed by other individuals on projects.

(b) DECISION CAPACITY

Policy Analysts at the AS-4 level will have a decision capacity similar to that of AS-5 level Policy Analysts but with reduced requirements concerning the number of fields within which decisions and recommendations are made, reduced policy input potentials, no management of resources recommendations and reduced requirements for recommendations concerning the development and utilization of new methods and techniques of analysis for application within project phases and segments. Given these reduced scope and area requirements for decisions and recommendations, other variables in decision capacity (i.e. requirements for initiative, judgement and discretion) will be similar.

(c) CONTACT CAPACITY

Policy Analysts at the AS-4 level will have the same contact capacity as Policy Analysts at the AS-5 level, but with less frequent representation activities (on external working groups) and less frequent negotiations activities. Levels of contacts will be the same in both cases.

(d) MANAGEMENT CAPACITY

Policy Analysts at the AS-4 level will not be required to manage Projects, Phases of Projects or Segments of Projects, nor manage associated personnel and other resources. Accordingly, they will not be required to perform other management roles such as developing resource utilization plans.

(e) PLANNING CAPACITY

Policy Analysts at the AS-4 level will be required to formulate effective plans and approaches in the following areas: methods for meeting segment analyses responsibilities; work approaches and plans for segment responsibilities; liaison and advisory activity plans (under various segments and phases); methods for the effective correlation and integration of work results, and, methods for presenting work results and utilizing them within the parameters of phase output plans.

(f) INITIATION CAPACITY

Policy Analysts at the AS-4 level will be required to initiate activities in relation to Segments of Projects and in relation to project proposals (as are all MOSST Project Personnel). They will also be responsible for the development of segment work approaches, the conduct of specialized analysis within phases and segments of Projects and the development of effective recommendations from segment work, all on an initiation basis. Such Initiation activities are usually the type which are in response to directives from senior project personnel and in response to stipulated objectives and requirements for project segments and phases.

(g) ANALYTICAL CAPACITY

Policy Analysts at the AS-4 level will be required to undertake complex analyses within phases and segments of projects, with analysis being limited to Phase 2 in TYPE A Projects. Analyses undertaken will be complex, but will not usually require the development of new methodologies and approaches. Rather, analysis will require the refinement or modification of existing methods and procedures and the utilization of specialized tools with the various subject matter areas under analysis.

(h) DEVELOPMENT CAPACITY

Policy Analysts at the AS-4 level will be required to develop segment, work and operations approaches and work plans, as well as approaches for undertaking specific analyses and problem solving activities. They will also be required to undertake extensive information development and liaison work and accordingly, must develop approaches to carry out these responsibilities. Occasionally, the work at this level will require development of recommendations concerning the use and impact of work outputs from the position, for program, information and policy output formulation activities during projects.

(i) ADVISORY CAPACITY

Policy Analysts at the AS-4 level will have advisory roles and responsibilities similar to those of AS-5 Analysts, with the exception that they will not encompass as many policy or subject matter fields.

(j) REPORTING RELATIONSHIPS

Policy Analysts at the AS-4 level will report, for administrative purposes, to the General Director of the Projects Division of the Home Branch, and for project work purposes to AS-7 or AS-6 Policy Advisors. AS-4 level Policy Analysts will report under direction.

(k) SCOPE FOR ACTIVITIES

Policy Analysts at the AS-4 level will have a scope of activities similar to that for AS-5 level Policy Analysts with the exceptions that they will be involved in TYPE A and B Projects on a less frequent basis, the analyses undertaken will involve more limited fields, they will play more developmental roles than AS-5 Analysts in relation to TYPE A and TYPE B Projects, they will have no management activities or potentials, and, they will not usually be concerned with policy or program output formulation directly (TYPE A and B Projects). The work will take place under Direction.

(1) IMPACT OF ACTIVITIES

Activities undertaken by Policy Analysts at the AS-4 level will have a similar impact to those undertaken by AS-5 Policy Analysts except that they will not directly influence the successful completion of phases of projects (although indirectly there will be significant impact). Specific policy, program and information development potentials can be affected by activities undertaken at this level, as a result of the effectiveness and utility of background, primary and more advanced analyses and studies undertaken. Decisions and recommendations will have a smaller scope for impact due to the fact that AS-4 Policy Analysts will work in fewer policy, program, subject matter, discipline and analyses fields than AS-5 Policy Analysts.

In order for Policy Analysts to be classified at the AS-4 level, the general work parameters and classification characteristics outlined above must be met for each project allocation. AS-4 Policy Analysts cannot be utilized in Project work areas which do not have the defined capacities, scopes and impacts outlined above.

As was mentioned previously, there may be a requirement for a recruitment/ development capability in the Ministry to allow for effective utilization of talented individuals without previous Science and Technology Project exposure. To allow for this particular case potential, there can be AS-3 level Policy Analysts. This would be the minimum effective level for participation in projects and all roles and capacities required at this level would be developmental in nature. AS-3 Policy Analysts would be utilized in a wide range of activities (analytical and informational) within a Science and Technology Sector, would report to senior Policy Analysts and Policy Advisors, would have limited external activities other than information development, would have limited (if any) work output impact, and would undertake primary level analyses. They would also report under general supervision. In effect, such positions would be technical information developers and analysts and would be developed within the overall project work situation into higher level Policy Analysts, and later, into Policy Advisors. At the development stage outlined above, work outside of TYPE C Projects would be highly unlikely.

To this point in the Classification Characteristics section of the report, the theoretical classification capacities and their actual application to Generalist Project Directors (SX-1, 2), Policy Advisors (AS-7, 6) and Policy Analysts (AS-5, 4) have been outlined. The next part of the Classification Characteristics will outline the characteristics required for professional personnel resource utilization in projects in terms of the ES Group.

There will be great similarity between the requirements for both generalist and professional specialist work allocations. In general, SX-2 equates to ES-5, SX-1 to ES-4, AS-7 to ES-3 and AS-5 to ES-2, for work allocation purposes. These do not represent formal "Equivalents" in terms of the Public Service. However, in work allocation terms they are correct. For example, the Classification Characteristics outlined for the ES-5 Project Director are correct in terms of the ES Classification Standard as well as being correct in terms of roles to be played in various Projects.

The cross comparison of non-professional, to professional Groups should not be made unless the basic assumption that professionals must be involved in work requiring identified, recognized professional qualifications, has been made. In short, although for example, an ES-3 and an AS-7 Policy Advisor will have similar roles to play in terms of Project work allocation, the ES-3 can only be utilized when a substantive portion of the project work requirement involves a recognized professional field. In this case, although AS-7's and ES-3's are not classification equivalents, they will both play Policy Advisor roles - one in a professional field, one in a general area.

To utilize the flexibility potential of IMPS correctly, in terms of comparing and utilizing non-defined Groups in Project work (such as the SI- Group), the AS Group should be utilized for equivalents in other non-professional groups, while the ES should be utilized for equivalents in other professional groups. It must be pointed out clearly, that the "equivalents" being utilized are not salary or pay equivalents. Rather, they are work and role potentials equivalents. Any other basis of equivalency would have to take into account variables such as contract conditions, collective bargaining, etc., which would be impossible. Further, any use of mixed equivalents (i.e. comparing non-professional to professional etc.) to determine optimal benefits prior to delineating formal requests for resource classification would also be incorrect, due to the fact that the primary factors for work allocation and performance would be ignored. The Classification Characteristics outlined below will indicate the general work parameters and requirements for utilization of the ES Group in Ministry project operations.

II (G) CLASSIFICATION CHARACTERISTICS - ES-5 - PROJECT DIRECTORS

(a) KNOWLEDGE CAPACTIY

Project Directors at the ES-5 level will require a comprehensive knowledge within all fields of a specific Science and Technology Sector, of inter-relationships and interdependencies among Sectors and of the principles, practices, theories and methods of economics, sociology or statistics, for application within TYPE A Projects and the development of comprehensive policies, programs and related materials, involving complex and comprehensive econometric, economic, statistical and other analyses. As well, they will require a general knowledge of other disciplines utilized within Science and Technology subject matter areas, of programs and policies of Science and Technology in Canada and elsewhere and of trends and developments in Science and Technology as related to major policy issues in Experience in managing TYPE A Projects Science and Technology. having a substantive economic, econometric or related orientation, the resources of such projects and the conduct of specific operations under Projects is also required. Experience in all aspects of R & D, the management of R & D and the utilization of R & D outputs with major national implications is also required. In general, a comprehensive grasp of economics, statistics, econometrics and other disciplines as related to Sector Science and Technology problems, policies and objectives is required.

(b) DECISION CAPACITY

Project Directors at the ES-5 level will be required to formulate decisions and recommendations requiring the highest degrees of professional responsibility, authority, initiative, discretion and judgement in relation to multi-Sector, Sector and national policies and programs as envisioned in TYPE A Projects. Decisions will involve authoritative, original and highly creative contributions to policy planning, economic, econometric or related Science and Technology research, policy development, the authoritative management of large multi-disciplinary project resources of the Department and elsewhere, and, the development of overall project plans, problem resolution and professional analyses approaches and responses to changing conditions within TYPE A Project parameters. Decisions will be made to ensure the effective professional leadership, management, control and operation of TYPE A Projects, as well as for the effective development of policy and program recommendations relating directly to national Science and Technology objectives.

(c) CONTACT CAPACITY

Project Directors at the ES-5 level will be required to initiate extensive contacts at the most senior levels within and outside of the Public Service as well as internationally, to co-ordinate extensive liaison, advisory, negotiation and project activities on a national, international and government-wide basis, to ensure effective TYPE A Project management, policy development, professional area analyses, and communciation activities. Representation roles, as the formal Canadian Government representative and professional field expert, will also be required at national and international conferences, committees and meetings. Contacts with external areas in relation to Project operations will usually take place as the Head of Co-ordinated Projects involving other Departments, other levels of government, and the private sector.

(d) MANAGEMENT CAPACITY

Project Directors at the ES-5 level will be required to manage TYPE A Projects with a substantive economic, econometric, statistical or related field orientation. Accordingly, these positions will require comprehensive management activities in relation to project resources, project planning, project development and project organization, all of which takes place on a multi-Branch, interdepartmental or national scale required for the conduct of TYPE A Projects. Resources managed will include professionals (ES-3's, 2's) and all levels of operational personnel, and, on a very occasional basis, ES-4 Project Directors engaged in specific Sub-Projects under a very large TYPE A Project.

(e) PLANNING CAPACITY

Project Directors at the ES-5 level will be required to formulate comprehensive, co-ordinated plans for the successful operation of TYPE A Projects. Such plans will require the determination of, and allowance for, Project approach development, professional methodology and use, work segmentation, project team management, liaison and advisory services development, analytical, evaluation and other methodologies development (e.g. Forecasting, Model, use, etc.), output formulation and presentation methods and materials development, etc. Invariably, the planning of TYPE A Projects involves extensive, complex determination problems due to the fact that the effects or implications of projects are unknown. The planning activities of ES-5 Project Directors are vital to the successful completion of TYPE A Projects and the attainment of national Science and Technology objectives through the development of planned policies and programs.

(f) INITIATION CAPACITY

Project Directors at the ES-5 level will be required to initiate

project ideas and concepts, solutions to economic, econometric, statistical and other problems, solutions to Science and Technology problems in areas of policy and programs with a substantial economic and social content; methods for attaining Science and Technology objectives under TYPE A Projects parameters; methods of operating, managing and co-ordinating TYPE A Projects; recommendations for major national and international Science and Technology policy initiatives, strategies and materials; and, methods development in various economic, statistical, econometric and related analysis and research fields. Such initiation activities and outputs will not be the result of external directives or inputs, but rather, will be the results of actions originated by positions themselves. The initiation activities of these positions will be vital to the success with which MOSST meets general and specific goals in Science and Technology, as well as being vital to the overall capacity of the Ministry to provide highly creative, sophisticated and effective policy and program outputs to focus Science and Technology activities in Canada.

(g) ANALYTICAL CAPACITY

Project Directors at the ES-5 level will not normally be direct participants in the conduct of economic, econometric, statistical, model or other analyses, but will be required to provide overall professional guidance and direction, analyses initiatives, approaches, analysis methods and evaluation of outputs. The leadership for analytical activities provided by ES-5 Project Directors will cover all aspects of TYPE A Project fields and will require authoritatively resolving extremely complex, professional area, theoretical and practical problems, through the initiation of highly creative methods and approaches for problem resolution.

(h) DEVELOPMENT CAPACITY

Project Directors at the ES-5 level will be required to develop project ideas, concepts, proposals and plans for TYPE A Projects and extremely important TYPE B Projects. They will also be required to develop strategies and approaches for the attainment of TYPE A Project objectives as well as to develop overall management plans for Project operations. The work will also require the development of comprehensive professional area R & D plans, methods and approaches, the development of total communications and liaison plans, the development of co-ordinated, effective policy and program recommendations affecting Science and Technology in Canada and internationally, and, the development of comprehensive, co-ordinated presentations and implementation plans for recommendations and policy and program

(i) ADVISORY CAPACITY

Project Directors at the ES-5 level will be required to provide authoritative, comprehensive and effective professional advisory and

consultation services concerning major Science and Technology options, problems, initiatives and recommendations, the development and utilization of new methods, approaches, techniques and theories in professional fields, the co-ordination and operation of TYPE A Projects, the resolution of wide-ranging professional and policy problems in a number of Science and Technology fields, and the utilization of TYPE A Project Outputs. Advisory and consultation services will be provided to DM's, ADM's and very senior officials throughout the Public and Private Sectors as well as to other levels of government in Canada and internationally. Such services would be provided as the Federal Government and Ministry authority, or as a formal representative.

(j) REPORTING RELATIONSHIPS

Project Directors at the ES-5 level will report to the Assistant Secretary of the Home Branch. Reporting will take place under general direction.

(k) SCOPE FOR ACTIVITIES

Project Directors at the ES-5 level will be required to direct and undertake activities and operations involving the meeting of Ministry, Government and National Science and Technology objectives and goals, with continually changing inter-relationships, interdependencies and conditions affecting the achievement and potential for achievement of such goals and objectives. The directing of activities and the achievement of objectives will take place in an environment of only very generally defined parameters for activities and will require extensive professional area creativity and originality for the successful completion of work. The work will take place in a number of professional fields (e.g. economics, econometrics, statistics, etc.) and Sector areas (policy and program) having national and international implications, priorities and scope. The positions will have a substantive degree of freedom of action and virtually complete freedom in the professional, management, decision making and development parameters of Projects.

(1) IMPACT OF ACTIVITIES

Decisions and recommendations made by ES-5 Project Directors will affect the successful completion of TYPE A Projects, the management of project resources, the development of national and international scope policy and program initiatives, strategies and recommendations, the effectiveness of the Ministry in meeting its national Science and Technology objectives, the successful utilization and implementation of Science and Technology policies and programs, the activities, resources and policy of other government and private sector areas, the development of effective, co-ordinated Science and Technology policies for Canada and the utilization of billions of dollars in Science and Technology fields in Canada. Decisions and recommendations will have, indirectly, a substantial impact on the economy of Canada through the use of Science and Technology policies and resources as determined by MOSST initiatives, strategies and co-ordinated inputs to Science and Technology activities in Canada.

In order for Project Directors to be classified at the ES-5 level, the general parameters and characteristics outlined above must be fully met for each project allocation. ES-5 Project Directors cannot be utilized in Project work which does not have the defined characteristics, impacts and capacities outlined.

II (H) CLASSIFICATION CHARACTERISTICS - ES-4 - PROJECT DIRECTORS

(a) KNOWLEDGE CAPACITY

Project Directors at the ES-4 level will require a knowledge capacity similar to that for Project Directors at the ES-5 level. The primary difference between the ES-5 and ES-4 level lies in the experience parameters and in the scope of knowledge utilization at any given time. Experience will be required in managing TYPE B Projects and the Primary Phase of TYPE C Projects, the resources of projects and the conduct of specific activities under Projects, when Projects require a substantive economic, econometric, statistical or related orientation, content or output. The TYPE B Projects will not have as large a scale as TYPE A Projects nor as complex an inter-relationships and interdependencies comprehension requirement. Experience in all aspects of economic, econometric or related R & D, the management of such R & D and the utilization of these R & D outputs with substantive professional, Ministry and Sector objectives achievement implications is also required. In general, as was the case for ES-5 Project Directors, a comprehensive grasp of all Sector and related Science and Technology requirements, policies, problems and objectives is required along with comprehenisve professional area expertise, but will not be utilized on as large or co-ordinated a basis per project, as is the case for ES-5 Project Directors.

(b) DECISION CAPACITY

Project Directors at the ES-4 level will be required to formulate decisions and recommendations in relation to Sector-wide, inter-Sector and national policies and programs as envisioned in TYPE B Projects. Decisions will require a high degree of professional initiate, judgement and discretion and will involve authoritative, innovative contributions to professional area research, policy research, development, planning and co-ordination, the management of significant Departmental, Branch and inter-Departmental project teams and resources, the development of resources, the development of project plans, priorities, strategies and approaches, and the development of solutions to problems encountered in TYPE B Projects. Decisions will be made, in general, to ensure the effective professional leadership, management, control and operations of TYPE B Projects and for the effective development of policy and program recommendations, initiatives and strategies concerning MOSST and Government Science and Technology objectives.

(c) CONTACT CAPACITY

Project Directors at the ES-4 level will require the same contact capacity as Project Directors at the ES-5 level, with the exception that contacts will be made to ensure effective TYPE B Project control, management, policy development and communications activities and that on co-ordinated, inter-departmental Projects, ES-4 Project Directors will not necessarily be the Head of such inter-departmental project bodies as are required to ensure effective Project completion.

(d) MANAGEMENT CAPACITY

Project Directors at the ES-4 level will be required to manage TYPE B Projects. Accordingly, these positions will involve comprehensive management activities in relation to overall project resources, planning, development and organization which takes place on an inter-Branch or inter-departmental basis, for TYPE B Projects with an extensive professional area (e.g. economics, econometrics, etc.) content, orientation, output potential and impact. Resources managed will include all levels of operational personnel (ES-3, down, AS-7 down), as utilized within TYPE B Projects.

(e) PLANNING CAPACITY

Project Directors at the ES-4 level will have planning roles and responsibilities similar to those at the ES-5 level, but with fundamental differences in scope, complexity and inter-relationships parameters. Planning roles will be required for TYPE B Projects and the Primary Phase of TYPE C Projects (as warranted by professional and program output potentials), and will require project teams management, methodologies development, work segmentation, liaison and advisory services, overall approach development, and evaluation methodologies development plans. Planning activities are vital to the successful completion of TYPE B Projects and the achievement of MOSST and Government goals and objectives within professional and specified Sector fields of policy.

(f) INITIATION CAPACITY

Project Directors at the ES-4 level will require an initiation capacity similar to that for ES-5 level Project Directors, with the primary differences being within the scope and complexity of fields of work within which initiation roles are played. ES-4 Project Directors, having the less complex and narrower scope TYPE B Projects to control, will have less requirement for initiation roles on a total Project basis, but will have the same fields of initiation capacity to cover within projects. Accordingly, ES-4 Project Directors will be required to initiate project ideas and concepts, solutions to Science and Technology problems, methods for attaining Science and Technology objectives under TYPE B Projects, recommendations for Science and Technology policies and programs, and developments in various analysis, research and methodologies fields concerned with economics, econometrics, statistics or related areas. Such initiation activities will not usually be the result of external directives and inputs. Initiation activities of these positions will be vital to the successful attainment of professional objectives and MOSST objectives within a Sector of Science and Technology, as well as for attainment of Government objectives therein.

(g) ANALYTICAL CAPACITY

Project Directors at the ES-4 level will not normally be directly involved with the conduct of professional area analyses, as a participant, but will be required to produce optimally effective professional analysis approaches, direction, methods and initiatives as well as to directly evaluate analysis outputs. The professional leadership provided in analysis areas by ES-4 Project Directors will be in relation to methods development and utilization, specific TYPE B Project issues, and operations, and, various Science and Technology policy and program issues, and will require that complex econometric, economic, statistical and other problems in analysis fields be resolved by these positions. Analytical activities of ES-4 Project Directors will also require the initiation of new, innovative and unique methods and approaches for problem resolution.

(h) DEVELOPMENT CAPACITY

Project Directors at the ES-4 level will be required to develop project ideas, concepts, proposals and plans for TYPE B Projects (with a substantive professional orientation and content) and for large TYPE C Projects (with significant program orientation, in professional fields). They will also be required to develop strategies and approaches for the attainment of TYPE B Project objectives as well as for the overall management of such projects. The work will also require the development of effective professional area R & D plans, the development of communication and liaison plans, the development of policy and program recommendations, the development of unique and complex methods and techniques of analysis, and the development of implementation plans for project outputs. The primary difference between ES-5 and ES-4 level Project Directors in this particular capacity is one of degree rather than actual role requirements.

(i) ADVISORY CAPACITY

Project Directors at the ES-4 level will have an Advisory Capacity similar to that for Project Directors at the ES-5 level, with the difference that advisory activities will take place in relation to TYPE B Projects and accordingly will not involve the same scope or range of advisory services as that of ES-5 level Project Directors responsible for TYPE A Projects. In both cases, the same roles, levels, and fields of services will, however, be involved.

(j) REPORTING RELATIONSHIPS

Reporting relationships for the ES-4 level Project Director are similar to those of ES-5 level Project Director, but ES-4 Project Directors will report to the Assistant Secretary of the Home Branch for policy purposes only, while reporting for administrative purposes to the General-Director of the Projects Division, of the Home Branch.

(k) SCOPE FOR ACTIVITIES

Project Directors at the ES-4 level will be required to direct and undertake activities and operations involving the meeting of Branch, Ministry and Government Science and Technology objectives and goals for a Science and Technology Sector, within an environment of constantly changing policy, program and professional area inter-relationships and interdependencies affecting the potential for goal and objectives achievement. Parameters for projects will be, at best, generally defined and direction received will be general in nature. The work will take place within a Sector policy and program field having substantive professional orientation, as well as having national, and potentially international, implications. These positions will have substantial professional authority and freedom of action as well as freedom in managing, co-ordinating and controlling Projects and related decision making activities.

(1) IMPACT OF ACTIVITIES

Decisions and recommendations made by ES-4 level Project Directors will affect the successful completion of TYPE B Projects, the management of project resources, the development of policy and program initiatives, strategies and recommendations, the development of new and unique professional area methodologies and techniques, the effectiveness of the Ministry in meeting specific Sector Science and Technology goals and objectives, the successful utilization and implementation of Science and Technology policy and program recommendations, the activities and resources of other Departments, levels of government and private sector areas, and the related utilization of billions of dollars for Science and Technology activities in Canada. Indirectly, decisions and recommendations made by ES-4 Project Directors will affect the economy of Canada within Science and Technology areas, as well as in those areas affected by Sector Science and Technology activities and outputs. In order for Project Directors to be classified at the ES-4 level, the general parameters and characteristics outlined above must be fully met for each project allocation. ES-4 Project Directors cannot be utilized in project work which does not have these defined professional knowledge, decision, management, planning, development, impact and other variables. Generally, the work which requires the classification capacities outlined, is that of directing TYPE B Projects and occasionally the Primary Phase of TYPE C Projects, when these have professional content, orientation, outputs, and impacts. Any other allocation of ES-4 Project Directors would be incorrect in Classification terms, either due to under-utilization, or to over-utilization.

As has been pointed out, much of the Classification differentiation between ES-5 and ES-4 Project Directors, is a matter of degree of variables rather than a matter of actually having, or not having, full classification characteristic roles. Basic differences in the type of work to be carried out do, however, exist. ES-5's must direct TYPE A Projects while ES-4's direct TYPE B Projects. The differences between these types of Projects do not of course lie in any single parameter. Rather, they lie in the overall aspects of projects, and involve, in that context, differences in priorities, complexities, scope, initiative, creativity, impacts, and other variables.

II (I) CLASSIFICATION CHARACTERISTICS - ES-3 - POLICY ADVISORS

(a) KNOWLEDGE CAPACITY

Policy Advisors at the ES-3 level will require a highly specialized knowledge of economics, econometrics or statistics as well as of several policy and program fields in a Science and Technology Sector, for application to complicated general problems (with a professional orientation and content) in all types of Projects, with such knowledge to be gained through systematic study and analysis, through comprehensive assessment of interrelationships, trends and developments in a number of professional and policy fields and through extensive Project experience, particularly in TYPE A and TYPE B Projects. General, but comprehensive knowledge of Science and Technology policies, programs, activities and operations within a major Science and Technology Sector will be required, as will knowledge and experience in professional area research, analysis and development methodologies and techniques appropriate to professional responsibilities and to Sector policy and program development activities, therein.

(b) DECISION CAPACITY

Policy Advisors at the ES-3 level will be required to formulate decisions and recommendations which require a high degree of professional judgement, initiative, discretion and authority and which involve significant contributions to planning, developing and changing policy strategies and proposals, as well as program proposals, both directly, and, to meet stipulated objectives set out by Project Management personnel or Project Directors. Decisions will involve the development of solutions to diverse and inter-related professional area problems, and must anticipate and respond to changing conditions affecting the decision making and analyses processes. Decisions will involve policy and program development (B, C, or D TYPE Projects primarily), the management of project teams (not total project resources - for all types of Projects), the management of overall projects and resources (for TYPE C and D Projects) and the leadership of Project Phases (See Below).

(c) CONTACT CAPACITY

Policy Advisors at the ES-3 level will be required to conduct extensive liaison and communication services involving senior officials, officers and professionals of other Departments and Agencies, other levels of government, the private sector and other countries. The primary purposes of such contacts will be to represent the Ministry, to develop information flows and channels, to discuss professional area (economics, econometrics, statistics, etc.) problems and possible application of developments, to discuss various project operations, activities and outputs, participate in working groups or task forces and to provide expert, professional consultation and co-ordinative services relating to various projects and phases therein, as well as to various policy and program issues. Occasionally, the ES-3 Policy Advisor will represent the Government of Canada at national and international conferences, committees and meetings.

(d) MANAGEMENT CAPACITY

Policy Advisors at the ES-3 level will be required to manage TYPE C and TYPE D Projects as well as Phases of TYPE A and TYPE B Projects (usually Phases 2 or 3, or both). Accordingly, the positions will require extensive management of resources, complex development, planning and organization activities for Project management and extensive professional direction of personnel for projects and phases of projects. Management of personnel will involve intermediate and junior level Analysts (ES-2's, AS-5's and AS-4's). In general, ES-3 Policy Advisor positions will provide the management for operational personnel during TYPE C and TYPE D Projects and during the Analytical and Formulation Phase of TYPE B and TYPE A Projects (for specific project teams involved in these Phases).

(e) PLANNING CAPACITY

Policy Advisors at the ES-3 level will be required to formulate comprehensive plans and undertake complex planning activities in the following areas: methods development for utilization in Project Phases, Segments and activities; work segmentation (for TYPE C and D Projects and Phases of TYPE A and B Projects); methods for evaluation of Project outputs; position strategies for various meetings and working groups; methods for development, consolidation and presentation of Project (TYPE C and D) and Phase work; and,

methods for conducting complex professional area research, development and analyses (either as segments or phases of TYPE A and B Projects or on an overall Project basis for TYPE C and D Projects). The implications of activities to be planned or, their impact when completed, cannot usually be readily determined. Planning responsibilities for the ES-3 Policy Advisor are highly complex and are often essential to the successful attainment of Project and Phase objectives.

(f) INITIATION CAPACITY

Policy Advisors at the ES-3 level will be responsible for Initiation activities in relation to: the identification of Science and Technology and professional area problem and opportunity areas; the development of Project proposals (TYPE C and TYPE D Projects with substantive professional requirements); the development of Project ideas (any Type of Project); the conduct of complex economic, econometric, statistical and other analyses within Projects; the development of effective Primary and Formal outputs in Projects of TYPE C and TYPE D; and, the development of effective recommendations in policy and program fields (under all Types of Projects but with varying stages for recommendation initiation). Such Initiation activities will not usually be the result of inputs from Project Directors, but rather, will be the result of actions undertaken on the initiative, judgement and professional capability of the incumbents of these positions.

(g) ANALYTICAL CAPACITY

Policy Advisors at the ES-3 level will be required to undertake the most complex professional analyses in all Types of Projects, either directly as in TYPE A or TYPE B Projects, or as a Project leader in TYPE C and TYPE D Projects. Analyses undertaken will usually involve a number of professional areas (economics, econometrics, statistics, etc.) as well as subject matter and policy fields, will require the development of new methods and techniques for analyses, will involve the utilization of a wide range of analytical approaches and methods, will require the design of innovative and unique methods for problem solving and will involve the resolution of complex professional, policy and program problems involved in all Types of Projects.

(h) DEVELOPMENT CAPACITY

Policy Advisors at the ES-3 level will be required to develop project plans (formally for TYPE C and D Projects) and proposals (for any Project), operational and work segmentation plans, approaches to the resolution of highly complex professional, policy and program analyses problems, plans for effective research and analyses into various Science and Technology problem areas, the methods and approaches by which professional analysis requirements can be met, and plans for effective liaison, consultation, communication and advisory services, as well as for the development of effective policy, program and informational outputs, usually for Projects of TYPE C and D overall and for Phases of TYPE A and B Projects.

(i) ADVISORY CAPACITY

Policy Advisors at the ES-3 level will be required to provide effective advisory and consultation services concerning a number of professional (economics, econometrics, etc.), policy, program and information areas as well as related subject matter fields, as an expert specialist in these areas. Advisory and consultation services will be provided to senior officials (ADMs), professionals and officers of a wide range of government, private sector and international organizations and will involve formal representation roles in all cases, as a MOSST, Branch or Government of Canada representative.

(j) REPORTING RELATIONSHIPS

Policy Advisors at the ES-3 level will report for administrative purposes to the General-Director of the Projects Division of the Home Branch. For project purposes however, they will report, under general direction, to SX-2, SX-1, ES-5, or ES-4 Project Directors. On occasion, they will report to the Assistant Secretary of the Branch responsible for the Project, to provide inputs to policy and program development processes, or to lead TYPE C and TYPE D Projects.

(k) SCOPE FOR ACTIVITIES

Policy Advisors at the ES-3 level will be required to undertake activities and operations involving the meeting of very general professional and other objectives, within an environment of constantly changing conditions affecting the achievement of objectives, and which require the utilization of significant innovation and originality in planning, developing and changing operations and activities to be undertaken. These positions will, therefore, have considerable professional freedom of action, with work being undertaken under general direction. The work will take place in a number of professional, policy and program fields and will involve a high degree of specialization. Accordingly, the potential for a wide scope in planning, decision making, R & D and output formulation, is evident.

(1) IMPACT OF ACTIVITIES

Decisions and recommendations made by Policy Advisors at the ES-3 level will affect the successful completion of projects of all types (either through leadership of TYPES C or D or because of significant output formulation activities and analyses undertaken in TYPE A or TYPE B Projects), when such projects involve a substantive professional orientation, content and impact. Decisions and recommendations will also affect the efficiency and effectiveness of resource utilization in Projects, the effectiveness of professional and policy outputs, and, the effectiveness of relations with external areas (and accordingly, the utilization or development of project outputs). Decisions and recommendations made will ultimately affect the success of policy and program initiatives, strategies and materials in meeting Branch, Ministry and Government Science and Technology objectives, the effectiveness of overall policy initiatives, and the attainment of effective, co-ordinated Science and Technology policy capabilities to meet Canada's Science and Technology requirements. Decisions will also have an indirect effect upon the utilization of Canada's Science and Technology resources within a Sector. Therefore, decisions and recommendations made by ES-3 Policy Advisors will have major impact within a number of inter-related and interdependent policy and program fields.

As was noted previously, the Decision Capacity for ES-3 Policy Advisors will vary according to the type of Project and involvement with each project as a Project or Phase leader. In general, ES-3 Policy Advisors will lead TYPE C or D Projects, will be Phase 2 and 3 leaders in TYPE B Projects (as a project team leader rather than in a similar role to the overall ES-4 or SX-1 Project Director) and will lead Phases in TYPE A Projects on an occasional basis.

In order for Policy Advisors to be classified at the ES-3 level, the general parameters and characteristics outlined above must be met for each project allocation. ES-3 Policy Advisors cannot be utilized in project work areas which do not have these defined Classification Characteristics present in substantive terms. The clear delineation of Project, Sub-Project and Phase work requirements must be evident to allow for the effective and appropriate utilization of the ES-3 classification.

II(J) CLASSIFICATION CHARACTERISTICS -ES-2- POLICY ANALYSTS

(a) KNOWLEDGE CAPACITY

Policy Analysts at the ES-2 level will require a comprehensive knowledge of economics, econometrics, statistics or related area theories, principles, practices, methods and techniques, as well as of at least two major policy fields within a Science and Technology Sector, for application to specific professional and Sector problems and issues which involve complex relationships and interdependencies. Such knowledge is gained through systematic study, analysis, evaluation and utilization of subject matter as well as through assessment of trends and developments in professional, policy and program fields. The work requires experience in a number of professional, policy and program analysis fields as well as a comprehensive knowledge of professional area analysis, research and evaluation methods and processes for utilization within project analysis work.

(b) DECISION CAPACITY

Policy Analysts at the ES-2 level will be utilized on all types of Projects as professional specialists within two or more analysis and policy areas. Accordingly, decisions and recommendations made will require the exercise of a significant degree of professional judgement, initiative and discretion. Within the project work performed by ES-2 Policy Analysts, there will be requirements to recommend or take decisions concerning the modification, ammendment or development of professional area analysis methods, techniques and processes, to resolve complex, specific area analysis problems. Recommendations will also involve some policy fields, but usually will be aimed at methods for achieving objectives in relation to overall segment analytical work of the Project. The implications of various courses of action recommended for project analysis work will usually be difficult to foresee in specific returns terms. Decisions and recommendations will not involve project or phase leadership or management (except for TYPE D Projects - on a developmental basis), but will require substantive inputs to segment operations.

(c) CONTACT CAPACITY

Policy Analysts at the ES-2 level will be required to undertake extensive professional area liaison and communication contacts, usually involving professionals and senior operational levels of officers of other Departments and Agencies and areas external to the Public Service. Contacts will be primarily for purposes such as developing information flows and exchanges, negotiating for information, discussing professional area problems and approaches for their resolution, discussing analytical methods and particular analysis problems and requirements, and participating in working groups involved with Science and Technology problem analyses where substantial professional area orientation is involved.

(d) MANAGEMENT CAPACITY

Policy Analysts at the ES-2 level will not usually manage other personnel or resources, although on occasion they may be required to supervise developmental level personnel engaged in TYPE D Projects. The work may require planning of resources use for segment work, but management or planning of resource use on a longer term basis (i.e. for Phases) will not be required except as a developmental function for promotion of a particular ES-2 Policy Analyst, to the ES-3 Policy Advisor level.

(e) PLANNING CAPACITY

Policy Analysts at the ES-2 level will be required to formulate effective plans in the following areas: methods for meeting segment responsibilities (development of basic work plans and approaches - professional areas); work phase plans (as a developmental role for TYPE D Projects); approaches to meet liaison and advisory objectives for work; methods of analysis (for Segment work); methods for effective correlation and integration of work results; and, methods for presenting work results and incorporating them into overall output plans during Primary and Working Paper output formulation activities.

(f) INITIATION CAPACITY

Policy Analysts at the ES-2 level will be responsible for initiating activities in relation to project ideas presentation (as are all MOSST Project personnel), the development of work approaches for professional area analyses in various Segments, the conduct of specialized professional analyses concerning policies, programs and information development areas, the development of Segment outputs, and, the development of effective recommendations from analysis work. Such initiation activities will usually be the result of responses to general directives from Senior Project Personnel or responses to stipulated, general project and phase objectives, goals and requirements. The primary area of Initiation activities resulting from the incumbent's own actions will be in the various professional area analyses undertaken, particularly in relation to the determination of optimal methods for use in analysis work.

(g) ANALYTICAL CAPACITY

Policy Analysts at the ES-2 level will be required to undertake complex economic, statistical, econometric and related area analyses within phases and segments of all Types of Projects, with A and B Type Projects involving primary level analysis at the Segment level. Such analysis work will involve the utilization of specialized, professional area evaluation, assessment and other techniques for application to various policy, program and subject matter areas. Analysis work will occasionally require the development of new approaches and methods for professional area study within policy and program fields, but usually modification or refinement of existing methodologies for analyses will be all that is required at the ES-2 Policy Analyst level.

(h) DEVELOPMENT CAPACITY

Policy Analysts at the ES-5 level will be required to develop Segment plans and related work and operations plans, as well as Phase Plans for TYPE D Projects. ES-3 Policy Analysts will also be required to develop plans and methods for undertaking specialized professional analyses, related information development work and for effective professional liaison, advisory and assistance services required for Segment work. Occasionally, policy and program recommendations will be made as a result of analyses undertaken and as a result of developmental, Phase leadership roles in TYPE D Projects.

(i) ADVISORY CAPACITY

Policy Analysts at the ES-2 level will have an Advisory Capacity similar to that for ES-3 level Policy Advisors with the exceptions that discussions will be more specific problem and analysis area oriented, levels of professionals and officials involved will be somewhat lower, and that representation roles will usually only involve working group functions as the professional specialist within designated areas. The purposes of advisory and consultation services will not usually exceed negotiations for information or complex discussion of analysis and related professional area issues and problems concerning the completion of analytical work.

(j) REPORTING RELATIONSHIPS

Policy Analysts at the ES-2 level will usually report to ES-3 Policy Advisors (or AS-7 Policy Advisors) for project work, but will report for administrative purposes to the General Director of the Projects Division of the Home Branch. They may also report to ES-4 or SX-1 Project Directors on rare occasions when Projects are undertaken without having ES-3 Policy Advisors (or AS-7 Policy Advisors), playing Segment or Phase leadership roles.

(k) SCOPE FOR ACTIVITIES

Policy Analysts at the ES-2 level will be required to undertake professional area analytical activities involving the meeting of specialized objectives established by superiors in relation to the successful completion of Project Phases and Segments, and the meeting of professional analysis, policy and program development objectives within specific Sector area fields. Activities will be undertaken within general parameters and under changing analyses conditions. Work will require initiative in planning and undertaking assignments within Phases and Segments of all Types of Projects. The work will take place under direction.

(1) IMPACT OF ACTIVITIES

Decisions and recommendations made by ES-2 Policy Analysts will affect the successful completion of phases of TYPE C and TYPE D Projects and Segments of TYPE A and TYPE B Projects. Accordingly, professional analytical inputs to the project will have an indirect affect upon the efficiency and effectiveness of primary and final outputs in information, data, program and policy areas due to the fact that such outputs will have to rely upon analyses performed in relation to various issues and problems, for orientation, scope and content development during output development. Impact within Project parameters (i.e. during project operations and development of outputs)

will be significant. Decisions and recommendations will also affect the utilization of junior project staff supervised by ES-2's on an occasional basis. Indirectly, recommendations made concerning analysis and evaluation work and its utilization will affect actual policy initiatives and strategies content and accordingly, the effectiveness of such policy outputs in meeting MOSST objectives within two or more major policy fields. Decisions and recommendations can also indirectly affect the successful development of policy outputs, in negative terms, when analyses are not complete and comprehensive, or when professional errors are made concerning the validity of analysis outputs and related issues such as policy use requirements (one of the major variables upon which analyses are undertaken and, at the same time, upon which policy content is determined). In general, Impacts from the work of ES-2 Policy Analysts are significant, both within and outside of project parameters.

In order for Policy Analysts to be classified at the ES-2 level, the general parameters and characteristics outlined above must be met for each Project allocation. ES-2 Policy Analysts cannot be utilized in work areas and situations which do not have the defined capacities, scopes and impacts outlined above.

The Section of the report has outlined the Classification Characteristics inherent in the SX, ES and AS Groups as related to the theoretical classification system requirements and the various types of work available within the Ministry's matrix project operations areas. The various characteristics utilized have outlined the objective capacities of positions, classified under different groups and different levels, in relation to variable work conditions and requirements. This should not be confused with the human resource abilities required to carry out the work within the work capacities outlined. The characteristics of work and classification outlined, are those characteristics which must be evident for positions (not personnel) to be classified at various levels and are not characteristics of human resources. Under each project work situation, the work available for positions must demonstrate room for the outlined classification Group and Level characteristics in objectives terms, in order for those levels and Groups to be utilized in project work situations. The classification of positions and the utilization of these positions within varying work situations has absolutely nothing to do with the resource abilities which must be evident in various personnel to carry out work within the capacity constraints outlined. The utilization of various positions (at classified levels) is only concerned with differential work situations and the potential for application and utilization of various classification levels within various work situations.

The primary reason for outlining the differences between Resource Abilities and Classification Characteristics is to ensure that no confusion exists between the use of properly classified positions to carry out work at the correct level, and the use of personnel (regardless of position classification and differential work capabilities and roles) to carry out work because of prior experience in any particular field. Human Resources cannot be utilized in any role or work situation which does not meet the classification and work characteristics outlined for the position to which resources are assigned. Resources cannot be utilized outside of the inherent capacities and requirements of formally classified positions, without facing the risk of inappropriate, inaccurate, inefficient, ineffective and illegal* useage of such personnel in collective bargaining, classification, staff relations and audit terms.

It must be remembered, that within the federal public service, under formal classification system, personnel are not classified positions are classified. Resources (personnel) are applied to positions (as classified) based on their ability to carry out the work inherent in the position (as outlined in terms of various classification capacities related to Classification Standards). The particular capabilities, abilities, and experience of any particular person does not have any bearing on the formal classification of the position or on the manner in which the position is used. If variable level use of personnel is attempted while these personnel are in the same position (without a changed classification) then personnel are being used illegally*. The basic point for outlining the Work and Classification Characteristics of positions (e.g. AS-7 Policy Advisors) is to illustrate the total range of areas within which those positions can be utilized (with their incumbents) without having to change the classification levels of the position. Flexibility of resource use (because it must be tied to a classified position) is lateral in the sense that position characteristics cannot be exceeded without having to change the classification of positions. Within the basic work parameters and classification characteristics constraints of positions, resource use can be hierarchical through differential role use under varying conditions (e.g. leadership, participation or development roles). Once the position parameters change however, the classification of these positions must change.

To illustrate the above mentioned points, an example of incorrect utilization of positions (and their incumbents) should be made. To utilize as AS-5 Policy Analyst position as the Director of a TYPE C Project would be incorrect (and illegal)* regardless of the particular experience or ability of the incumbent of that position in the subject matter field of the Project. The position would have to be re-classified at a much higher level (AS-7 Policy Advisor) to

*As Per - F.A. Act - Section 7 and Public Service Terms and Conditions of Employment Regulations

- also Public Service Staff Relations Act (Grievances)

ensure the proper utilization of the position (and its incumbent) and the proper payment of the incumbent in the position. Resource utilization within the context of various positions must meet the classification and work parameters outlined to avoid any possible problems.

The next section of this report deals with the Resource Abilities required to carry out work, as defined, within different positions at various Classification levels. The abilities which must be evident are of course directly related to the work and classification capacities of position. If the Resources utilized in various positions do not have appropriate abilities, then the work of positions will not be effectively carried out.

MINISIA

JUNE 11 1962

SCIENCE AND TICHNOLOGY

SCIENCES ET TECHNOLOGIE

C. RESOURCE ABILITY CHARACTERISTICS

1. GENERAL CHARACTERISTICS

Resource Ability Characteristics are basically defined as:

"....that group of abilities and qualifications which must be demonstrated by individuals in order for them to be assigned to formally classified positions and perform the duties and responsibilities for such positions, with such abilities and qualifications being in the following areas: ability to analyze and evaluate; ability to plan; ability to control; ability to direct; ability to communicate; and, ability to adapt and create, all of which, when taken as an integrated whole, in relation to various types of work, will provide a total, differentiated ability profile for utilization in the determination of an individual's suitability and capability for performing the work outlined in formally classified positions...."

The Resource Ability Characteristics will of course vary according to the type of work to be performed (i.e. Project Director, Policy Advisor, Policy Analyst responsibilities) and the level at which such work is to be performed. Accordingly, Resource Ability parameters must be tied to the differentiated work available, as indicated in both Work Definition and Classification terms. The Resource Ability Profiles will indicate Who (in theoretical terms) is capable of performing work (defined by work definitions) at each level(Classification Characteristics). The Resource Ability parameters (at each different level) have been derived from the formal Selection Standards of the Federal Public Service. These ability parameters, when integrated with Classification Characteristics and Work Definitions, will give a complete picture of formal resourcing requirements, capacities and capabilities. The Resource Ability Characteristics will provide the basic information required to resolve the problem of Who is doing the work within the matrix project organization, and when integrated with the other definitions presented, will complete the response to overall problem of What is Being Done, at What level is it Being Done and by Whom is it Being Done, in theoretical terms.

The IMP System will utilize seven different Resource Ability Characteristics. These seven characteristics, related to theoretical work and level requirements, define the abilities which must be present for particular staff resources to be selected and placed in specific, formal positions. The Seven Abilities are outlined below.

(A) ABILITY TO ANALYZE AND EVALUATE

The Ability to Analyze and Evaluate variable of Resource Ability Characteristics is concerned primarily with the overall, demonstrated capacity of an individual to assess and respond to problems, determine requirements for dealing with various problems and develop solutions to problems and situations in stipulated work areas. Accordingly this variable will be comprised of analyses and evaluation characteristics such as: the demonstrated use of methods, approaches and tools of analysis; the development of new methods and approaches; the utilization of methods in a variable number of fields and work situations, the complexity variables of analysis and evaluation, etc. The analysis and evaluation ability parameters will be related to work situations and classification requirements wherever possible. The required Ability to Analyze and Evaluate for each level and group of resource has been derived from the formal Selection System (Staff) of the Federal Public Service.

(B) ABILITY TO PLAN

The Ability to Plan variable of Resource Ability Characteristics is concerned primarily with the overall, demonstrated capacity of an individual to prepare and/or participate in the planning activities, operations and processes required to undertake, operate and formulate outputs from differentiated work situations at different levels. This variable will involve planning fields concerning approaches, methods, systems, operations, and other aspects of project operations and related policy and program research, development and implementations work, and will require differentiation of ability characteristics in these areas on both a classification level basis and work area basis as related to variable role requirements in leadership, participation and development fields. The Planning Ability parameters will therefore be related to work and classification requirements wherever possible. The required Ability to Plan for each group and level of resource has been derived from the formal Staff Selection System of the Federal Public Service.

(C) ABILITY TO ORGANIZE

The Ability to Organize variable of Resource Ability Characteristics is concerned primarily with the overall demonstrated capacity of an individual to undertake organizing responsibilities in relation to Projects, Phases and Segments of Projects, project operations and activities, project resources and project outputs. This variable will be directly related to various role potentials evident within each type of work undertaken by different levels of positions in classification groups. Activities involved with this variable include requirements to obtain, manipulate and utilize resources, structuring of operations, translating work objectives into concrete resource responsibilities, etc. Wherever possible, the Ability to Organize variable will be directly related to IMPS Work Definitions and Classification Characteristics. The required Ability to Organize for each group and level of resource has been derived from the formal Staff Selection System of the Federal Public Service.

(D) ABILITY TO CONTROL

The Ability to Control variable of Resource Ability Characteristics is concerned primarily with the overall demonstrated capacity of an individual to take charge of, and co-ordinate, various types of Project, Phase, and Segment work. Activities involved with this variable will include control of analytical, communication, output formulation and related assignments. Wherever possible, the Ability to Control variable will be directly related to IMPS work definitions and Classification Characteristics. The required Ability to Control for each group and level of resource has been derived from the formal Staff Seclection System of the Federal Public Service.

(E) ABILITY TO DIRECT

The Ability to Direct variable of Resource Ability Characteristics is concerned with the overall demonstrated capacity of an individual to manage work and related financial, personnel and other resources. This variable will be concerned with specific activities such as providing advice and guidance to staff, managing objectives, interpretations of objectives, and the provision of overall staff direction. Wherever possible, the Ability to Direct variable will be related to IMPS work and classification characteristics. The Ability to Direct for each level and group of resource has been derived from the Staff Selection System of the Federal Public Service.

(F) ABILITY TO COMMUNICATE

The Ability to Communicate variable of Resource Ability Characteristics is concerned primarily with the overall demonstrated capacity of an individual to communicate, both orally and in writing, at a level commensurate with position requirements. This ability will be concerned with specific activities such as leading or participating in discussions, negotiations, groups, meetings and committees, providing advisory services, promoting work and outputs, making presentations, and liaising with other areas to conduct or implement work. Wherever possible, the Ability to Communicate variable will be related to IMPS work and classification characteristics. The Ability to Communicate for each level and group of resource has been derived from the Staff Selection System of the Federal Public Service.

(G) ABILITY TO ADAPT AND CREATE

The Ability to Adapt and Create variable of Resource Ability Characteristics is concerned primarily with the overall demonstrated capacity of an individual to adapt to changing conditions, new ideas and concepts and other variables of work and to develop innovative, unique and creative methods for achieving work objectives and goals while maintaining appropriate levels of judgement, discretion, initiative and tact for the overall performance of duties. The Ability to Adapt and Create variable will be related, wherever possible, to IMPS work and classification characteristics. These Resource Ability Characteristics will be defined in terms of each level for the SX, ES and AS Groups and will be integrated in graph form in Part four of the Report.

II SPECIFIC GROUP AND LEVEL RESOURCE ABILITY CHARACTERISTICS

II (A) RESOURCE ABILITY CHARACTERISTICS - SX-2 - MAJOR PROJECT DIRECTORS

(a) ABILITY TO ANALYZE AND EVALUATE

SX-2 Project Directors will be required to have an overall demonstrated capacity and ability to analyze and evaluate the requirements, plans, methods of operation, approaches, outputs and total inter-related and inter-dependent problems concerned with TYPE A Projects and related policy and program initiatives, strategies and options within and between Science and Technology Sectors in This ability will be demonstrated in relation to the direction Canada. of projects and specific analysis and evaluation operations therein, to the development of comprehensive policy and program outputs affecting Science and Technology activities in Canada, to the utilization of outputs in an effective, co-ordinated manner, and to the overall co-ordination and integration of TYPE A Project outputs into existing and developed Science and Technology policy, program and operations frameworks. The Evaluation and Analysis Ability to be demonstrated, will be required for all management, research, development, analysis and output formulation and utilization parameters of TYPE A Projects.

(b) ABILITY TO PLAN

SX-2 Project Directors will be required to have an overall demonstrated capacity and ability to formulate comprehensive, coordinated and creative plans for the successful management, development and operation of TYPE A Projects involving planning direction in relation to specific areas such as: work segmentation; resources management; methodology and approach development; output development; presentation and utilization of outputs; communication services development and implementation; etc. The Ability to Plan for SX-2 Project Directors will be demonstrated in relation to extremely complex work projects and policy research and development processes, with such Projects involving the Branch, other MOSST Branches, other Departments and Agencies, other levels of government, other coutries and the Private Sector.

(c) ABILITY TO ORGANIZE

SX-2 Project Directors will be required to have an overall demonstrated ability and capacity to organize TYPE A Projects in areas such as project development and implementation, project operations and activities, project resource utilization, policy and program output formulation, presentation and implementation of outputs, etc. This ability will be evidenced in relation to both general, overall direction and leadership roles as well as in relation to specific problem resolution, idea formulation and related activities required for the effective organization of TYPE A Projects which involve large project teams and resources, Ministry-wide, interdepartmental, intergovernmental and international organization requirements for project operations, and national policy and program implementation organizing responsibilities to ensure proper useage of recommendations by other areas which have the overall responsibility for policy and program operation.

(d) ABILITY TO CONTROL

SX-2 Project Directors will be required to have an overall demonstrated ability and capacity to control and co-ordinate all work and operations involved with TYPE A Projects. This ability will be demonstrated in relation to overall Project requirements as well as in relation to specific Project, Phase and Segment areas such as analytical, communication, output formulation and related areas, requiring Ministry-wide, Interdepartmental, National and Interntational co-ordinative and control responsibilities (eg. as the Head of various Task Forces, Committees and Meetings). Control will be exercised in relation to work, operations, resources, outputs, and other fields in TYPE A Projects.

(e) ABILITY TO DIRECT

SX-2 Project Directors will be required to have an overall demonstrated ability and capacity to manage TYPE A Projects and related personnel, financial and other resources. This ability will be required to manage complex, high priority, Projects having extensive Sector-wide Impacts in Science and Technology. It will also be required to manage large project teams (often interdepartmental, intergovernmental and international in composition), the resources allocated by the Ministry for Projects and the operations of the Project, when such Project objectives and goals are not well defined, when implications of Projects are not known and when much of the work involved will require highly innovative and creative orientations, all of which make the directing of TYPE A Projects and their resources extremely complex.

(f) ABILITY TO COMMUNICATE

SX-2 Project Directors will be required to have an overall demonstrated ability and capacity to communicate, and control all communication activities, in relation to TYPE A Projects. This ability will be required to head up Task Forces, Committees and Meetings, advise on Project requirements, methods, operations and potentials, conduct complex and priority discussions and negotiations, develop and present major policy statements, initiatives and strategies, formulate position papers, promote major outputs of projects and co-ordinate all necessary implementation activities concerning output utilization. Such communication abilities will be required for both complex, integrated written presentations and statements as well as for direct oral communication in liaison, advisory, promotion, negotiation, discussion and related roles.

(g) ABILITY TO ADAPT AND CREATE

SX-2 Project Directors will be required to have an overall demonstrated ability and capacity to adapt to constantly changing work, planning, operational, management and policy and program conditions as envisioned in TYPE A Projects. They will also require an overall demonstrated ability to creatively approach Project management, operations, research and development and output development and implementation of work which will continuously require the development of new methods and procedures for analysis, communication, research, development and other fields. Both of these abilities will be required for overall and specific TYPE A Project direction, coordination and control, and must be utilized while maintaining the highest levels of judgement, initiative, discretion and tact within Project and related areas.

In order for individuals to be selected and utilized in SX-2 Project Director positions, the general ability parameters outlined above must be demonstrated. In other words, an individual who does not possess these demonstrated abilities cannot be assigned to SX-2 Project Director positions, because that individual would not have the overall capacity and capability to carry out SX-2 Project Director work as envisioned in TYPE A Projects.

II (B) RESOURCE ABILITY CHARACTERISTICS - SX-1 - PROJECT DIRECTORS

(a) ABILITY TO ANALYZE AND EVALUATE

SX-1 Project Directors will be required to have an overall demonstrated capacity and ability to analyze and evaluate the requirements, plans, methods of operation, approaches, outputs and total inter-related and inter-dependent problems concerned with TYPE B Projects and related policy and program initiatives, strategies and options within a major Science and Technology Sector in Canada. This ability parameter will be similar to that for SX-2 Project Directors, but will not involve the depth or scope of that required for SX-2's engaged in TYPE A Projects. Accordingly, this Ability will be demonstrated in relation to the direction of Projects and specific analyses and evaluations therein, to the development of comprehensive policy and program outputs affecting Sector Science and Technology activities, to the utilization of outputs, and, to the integration and co-ordination of TYPE B Project outputs into existing Science and Technology policy and program frameworks.

(b) ABILITY TO PLAN

SX-1 Project Directors will be required to have a demonstrated capacity and ability to formulate and implement comprehensive plans for the successful management, development and operation of TYPE B Projects involving the provision of planning direction in relation to specific areas such as: work segmentation; resources management; methodology and approach development; output development; presentation and utilization of outputs; communication services development and implementation; etc. The Ability to Plan for SX-1 Project Directors will be similar to that for SX-2 Project Directors but will not require the same creativity, complexity or inter-relationships evaluation parameters, due to the less complex, less far-reaching and reduced inter-relationship variables inherent in TYPE B Project work.

(c) ABILITY TO ORGANIZE

SX-l Project Directors will be required to have an overall, demonstrated ability and capacity to organize TYPE B Projects in areas such as project development and implementation, project operations and activities, project resource utilization, policy and program output formulation, presentations and implementation of outputs, R & D management, etc. This ability will be evidenced in relation to both general, overall direction and leadership roles as well as in relation to specific problem resolution, idea formulation and related activities required for the effective organization of TYPE B Projects which have sizeable project resources, and are undertaken on a Branch, Ministry and Inter-departmental basis and which require extensive implementation of outputs activities which must be organized in relation to other areas.

(d) ABILITY TO CONTROL

SX-1 Project Directors will be required to have an overall demonstrated ability and capacity to control and co-ordinate all work and operations involved with TYPE B Projects and the Primary Phase of larger TYPE C Projects. This ability will be demonstrated in relation to overall Project operations and requirements as well as in relation to specific Project, Phase and Segment areas, requiring Branch, Ministry and Inter-Departmental co-ordinative and control responsibilities as the Project Director.

(e) ABILITY TO DIRECT

SX-1 Project Directors will be required to have an overall demonstrated ability and capacity to manage TYPE B Projects and related personnel, financial and other resources. This ability will be required in order to manage large projects with extensive policy and program impacts, and with resources allocated by the Branch, Ministry and other Departments and Agencies. Project goals and objectives, and the implications of projects will be only very generally known, and the overall direction of project operations will require extensive innovation and creativity in relation to achieving objectives and managing resources to attain Project goals.

(f) ABILITY TO COMMUNICATE

SX-1 Project Directors will be required to have an overall demonstrated ability and capacity to communicate and control all communication activities, in relation to TYPE B Projects. This ability will be required to Head or participate in various Task Forces and Committees, advise concerning Project operations and requirements, conduct negotiations and priority discussions, develop and present policy papers, initiatives and recommendations, promote Project outputs and co-ordinate implementation activities as required. This ability is similar to that required for SX-2 Project Directors except that SX-2 Directors will be engaged in the highest priority, most complex and most important Project work and therefore must demonstrate the optimal communication abilities within Project matrix parameters.

(g) ABILITY TO ADAPT AND CREATE

SX-1 Project Directors will be required to have an overall demonstrated capacity and ability to adapt to continually changing work, planning, operational, management and policy and program conditions as envisioned in TYPE B Projects. The ability to creatively respond to a wide variety of management, output formulation and operational problems in complex Project work environments is also required, particularly in relation to methods and approaches development for Project and R & D planning and operations. Both of these abilities will be required for overall and specific TYPE B Project direction, co-ordination and control and must be utilized while maintaining a high degree of judgement, initiative, tact and discretion.

In order for individuals to be selected and utilized in SX-1 Project Director positions, the general ability parameters outlined above must be demonstrated. If individuals do not possess these demonstrated abilities they cannot be assigned to SX-1 Project Director positions because they would not be able to carry out the work as envisioned for Project Directors at the SX-1 level in relation to TYPE B and C Projects.

II (C) RESOURCE ABILITY CHARACTERISTICS - AS-7 - POLICY ADVISORS

(a) ABILITY TO ANALYZE AND EVALUATE

AS-7 Policy Advisors will be required to have a demonstrated ability and capacity to analyze and evaluate problem areas, requirements for resolving problems, requirements for meeting proposed objectives and goals of Project work and requirements for the development of recommendations to alleviate problems in a number of policy, program, subject matter and disciplines areas, involving a major S&T Sector. This ability will be demonstrated in relation to the conduct and leadership of complex Project, Phase and Segment research and analysis, requiring the utilization of a wide range of analytical methods, procedures, techniques and processes, the development of new methods and techniques of analysis, and the management of project teams and personnel. These abilities will be required in a leadership capacity for overall TYPE C and D Projects, Phase 2 and 3 in TYPE B Projects and Phase two of TYPE A Projects.

(b) ABILITY TO PLAN

AS-7 Policy Advisors will be required to have a demonstrated capacity and ability to formulate and implement effective plans for the successful management and operation of TYPE C and D Projects, as well as for Phases of TYPE A and B Projects. This ability will be demonstrated in relation to specific areas such as: the development of work plans for Phases and Projects; the development of analysis, research and output formulation approaches, methods and processes; the provision of specialist advisory services; the presentation of outputs; etc. in both a leadership and participant capacity. The Ability to Plan variable of Resource Ability Characteristics, in AS-7 Policy Advisors, will affect the management, operation and effectiveness of Projects (C&D TYPE) and Phases of Projects.

(c) ABILITY TO ORGANIZE

AS-7 Policy Advisors will be required to have a demonstrated ability and capacity to organize Projects (TYPE C and TYPE D) and Phases and Segments of Projects (TYPES A & B), involving areas such as obtaining and effectively utilizing personnel and other resources, structuring work and operations, delineating methods to meet work goals and objectives, and developing effective final outputs for Projects and Phases of Projects. This ability will be required in both leadership and participation roles in relation to Project work.

(d) ABILITY TO CONTROL

AS-7 Policy Advisors will be required to have a demonstrated ability and capacity to control and co-ordinate overall Project operations and activities (for TYPE C and D Projects) as well as Phase and Segment work for TYPE A and B Projects, involving activities such as: liaison and advisory services (inter- and intra-Departmentally, some inter-governmental); resource utilization and project team management; design and utilization of methods, procedures and techniques for work; methods of meeting overall Project and Phase objectives; etc.

(e) ABILITY TO DIRECT

AS-7 Policy Advisors will be required to have an overall, demonstrated ability and capacity to manage TYPE C and D Projects as well as various analytical teams involved with TYPE A and B Projects. This ability will be evidenced in relation to activities and operations such as: providing advice and guidance to staff; interpreting and managing work for the attainment of objectives; providing interpretations concerning policies, programs, procedures and related directives; selecting, instructing and motivating staff; and, providing effective developmental work for staff. This ability will be demonstrated in an environment of changing work goals and objectives, changing policy and program inter-relationships and changing Project requirements.

(f) ABILITY TO COMMUNICATE

AS-7 Policy Advisors will be required to have an overall demonstrated ability and capacity to communicate (both orally and in writing) with senior officials. This ability will be required in relation to activities such as: participating in senior level meetings; advising senior officials concerning assignments, services and activities; promoting the acceptance of work outputs and recommendations; presenting final project (TYPE C and D) and phase (TYPE B and occasionally TYPE A Projects) reports and recommendations; undertaking detailed discussions concerning reports; and, providing general and specialized information to senior officials of MOSST, other Departments, other levels of government and the private sector.

(g) ABILITY TO ADAPT AND CREATE

AS-7 Policy Advisors will be required to have an overall demonstrated capacity and ability to adapt to continually changing project and policy conditions, inputs (both internal and external) and new ideas and concepts in complex evaluation, analysis and policy development fields. The ability to creatively respond to complex, unique and original research, analysis and development problem situations and requirements is also required, particularly in relation to the development and utilization of new methods, techniques and processes of analysis in relation to TYPE A and TYPE B Project Phase and Segment work. Both of these abilities will be required for the leadership of project teams and overall projects (TYPE C and D) and must be utilized while maintaining optimal levels of judgement, initiative tact and discretion.

In order to be selected and utilized within an AS-7 Policy Advisor position, individuals will have to have the demonstrated abilities and capacities outlined above. If individuals do not possess these demonstrated abilities, they cannot be assigned to AS-7 Policy Advisor positions because they would not have the capacity to carry out the leadership roles and research roles required in all types of Projects.

II (D) RESOURCE ABILITY CHARACTERISTICS - AS-6 - POLICY ADVISORS

(a) ABILITY TO ANALYSE AND EVALUATE

AS-6 Policy Advisors will be required to have a demonstrated ability and capacity to analyze and evaluate problem areas, requirements for dealing with problems and for developing the means to alleviate problems in relation to a major sector of S&T policies, programs and operations and related specific disciplines. These abilities must be demonstrated in relation to the investigation, study and assessment of significant policy problems and options, the conduct of research and studies into various S&T fields and the development of policy, program and related materials, recommendations and options.

(b) ABILITY TO PLAN

AS-6 Policy Advisors will be required to have a demonstrated ability and capacity to plan in relation to the operations of TYPE D Projects, Phases of TYPE C Projects and segments of TYPE B Projects, the development of short, intermediate and long range approaches to meet approved or anticipated work requirements (in Projects and in follow up work), and the development requirements in relation to information, program and policy fields as related to project, phase, and segment work. As well, the ability to plan in relation to analysis and research methods, approaches and procedures must be demonstrated to effectively carry out project assignment in these areas.

(c) ABILITY TO ORGANIZE

AS-6 Policy Advisors are required to have a demonstrated ability and capacity to organize TYPE D Projects, Phases of TYPE C and B Projects and Segments of TYPE B and A Projects involving activities such as: obtaining, co-ordinating and utilizing material and human resources; structuring project work assignments; delineating approaches to meet objectives and deadlines; and, correlating and integrating project primary outputs into working papers and recommendations (primarily for TYPE C and D Projects).

(d) ABILITY TO CONTROL

AS-6 Policy Advisors are required to have a demonstrated ability and capacity to control and co-ordinate overall project requirements (TYPE D Projects) phases of projects (TYPE C and occasionally B) and segments of Projects (TYPE B and occasionally A) involving the integration of assignments and services, co-ordinating activities internally and with external areas, controlling resource use on projects and assignments, and co-ordinating the development and utilization of new methods, procedures and approaches to meet changing project conditions.

(e) ABILITY TO DIRECT

AS-6 Policy Advisors are required to have a demonstrated ability and capacity to manage TYPE D Projects, phases of TYPE C and TYPE B Projects and segments of TYPE B and TYPE A Projects (the latter occasionally, as a developmental role). This ability must be demonstrated in relation to activities such as: providing guidance and instruction to project team staff; interpreting and controlling the application of analysis methods, techniques and procedures; interpreting directives, procedures, objectives and goals to staff; and, participating in the selection, assessment, and assignment of staff, as well as in the overall development of staff during project assignments.

(f) ABILITY TO COMMUNICATE

Policy Advisors at the AS-6 level will be required to have a demonstrated capacity and ability to communicate, both orally and in writing, with senior officials and officers throughout the Ministry, in other federal departments and agencies, in other levels of government, in other countries, in industry and in other areas of the private sector. This communication ability must be demonstrated in relation to activities such as: participating in significant project meetings, working groups and task forces; preparing and presenting segments of, and overall, project reports (the latter for TYPE D Projects only); providing specialized policy and program advice; and, occasionally representing the Ministry at various meetings and committees.

(g) ABILITY TO ADAPT AND CREATE

AS-6 Policy Advisors are required to have a demonstrated ability and capacity to adapt to changing project and policy conditions, changing inputs and changing concepts and methods of analysis, evaluation, assessment and research. The ability to creatively respond to segment and phase research, analysis and output formulation problems is required, as is the ability to create specific problem resolution methods, procedures and techniques in relation to TYPE C and TYPE D Project work. Both of these abilities will be required to conduct complex research and analysis work, provide team leadership in Phases of TYPE C Projects and effectively manage TYPE D Projects. These abilities must be demonstrated while maintaining significant judgement, initiative, tact and discretion levels necessary for effective overall performance.

In order to be selected and utilized within an AS-6 Policy Advisor position, individuals will have to have the demonstrated abilities and capacities outlined above. If individuals do not have these demonstrated abilities, they cannot be assigned to AS-6 Policy Advisor positions because they would not have the capacity to carry out the analytical, advisory or management roles required in various Projects.

II (E) RESOURCE ABILITY CHARACTERISTICS - AS-5 - POLICY ANALYSTS

(a) ABILITY TO ANALYSE AND EVALUATE

AS-5 Policy Analysts will be required to have a demonstrated ability and capacity to analyze and evaluate problems, proposals, issues, developments and recommendations for change within at least two specialized major policy fields and related program areas within an S&T Sector. This analysis and evaluation ability will have to be applied within complex research and analysis fields, under all types of Projects, and will involve evaluation of modifications and changes taking place within both the specialized policy areas and the research and analysis methods, procedures, processes and techniques applicable to projects in these fields.

(b) ABILITY TO PLAN

AS-5 Policy Analysts will be required to have a demonstrated ability and capacity to plan in relation to the conduct of work assignments undertaken in various projects (phase assignments for TYPE D; segment assignments for A, B, and C Projects), as well as in relation to the development, ammendment and utilization of specific area analysis methods, procedures and techniques required for the resolution of complex, and often inter-related, analyses problems. The ability to plan will also be required, on an occasional basis, to guide the work of developmental level Policy Analysts.

(c) ABILITY TO ORGANIZE

AS-5 Policy Analysts will be required to have a demonstrated ability and capacity to organize work assignments (phase level in TYPE D Projects and segment level in other types of Projects), involving activities such as determining appropriate approaches to work, developing time and other parameters for work, determining methods for co-ordinating work with other areas, recommending uses for work outputs and, occasionally, obtaining and utilizing resource personnel (developmental level Analysts). The Ability to Organize must be demonstrated in an environment of only generally stipulated work objectives.

(d) ABILITY TO CONTROL

AS-5 Policy Analysts will be required to have a demonstrated ability and capacity to control and co-ordinate phases of Projects (TYPE D) and segments of projects, involving co-ordinating assignments internally (with other project staff and occasionally, with subordinate AS-3 developmental level Analysts) and externally (with personnel of other Departments and Agencies involved with Phase and Segment work), as well as ensuring that work timing, performance and outputs meet stipulated general requirements, goals and objectives.

(e) ABILITY TO DIRECT

AS-5 Policy Analysts will be required to have a demonstrated capacity and ability to manage operations and activities involved with the performance of segment, and occasionally, phase level analysis roles. This ability will also be required in relation to the occasional management of AS-3 level Policy Analysts engaged in developmental level analysis, evaluation and related work on projects.

(f) ABILITY TO COMMUNICATE

AS-5 Policy Analysts will be required to have a demonstrated capacity and ability to communicate effectively, both orally and in writing, with officers and officials of the Branch, the Ministry, other levels of government, other Departments and Agencies, private industry and the public, concerning information development, complex analyses and outputs, the development of new approaches and methods and the potential utilization of segment, phase and project outputs, all of which will require advisory, consultation, negotiation and representation roles.

(g) ABILITY TO ADAPT AND CREATE

AS-5 Policy Analysts will be required to have a demonstrated ability and capacity to adapt to changing project, analysis, evaluation and related input conditions, concepts and methods, to effectively carry out segment and phase analysis requirements. The ability to creatively respond to situations requiring the resolution of complex analytical problems and the development of analysis procedures, techniques and methods must also be demonstrated. Both of these capacities must be demonstrated while maintaining effective levels of judgement, initiative, tact and discretion required to ensure effective analysis completion. In order to be selected and utilized within an AS-5 Policy Analyst position, individuals will have to have the demonstrated abilities and capacities outlined above. If individuals do not have these abilities, they cannot be assigned to AS-5 Policy Analyst positions because they would not have the capacity to carry out the analytical, evaluation, output formulation and occasional management roles required in various Projects.

II (F) RESOURCE ABILITY CHARACTERISTICS - AS-4 - POLICY ANALYSTS

In general terms, the demonstrated abilities and capacities required to carry out AS-4 Policy Analyst work are similar to those for the AS-5 Policy Analyst, with the following exceptions:

....no management of personnel and other resources

-analysis in one or two fields rather than in two or more
-no phase leadership roles required
-no final report formulation required
-limited involvement (other than developmental) in TYPE A and B Projects
-reduced scope and breadth for overall analysis and related procedures, methods and techniques development work
-less complex analysis and evaluation work required due to more frequent involvement in C & D TYPE Projects rather than A & B TYPE Projects.

With the exception of the areas outlined above, the demonstrated abilities and capacities required of an individual to fill an AS-4 Policy Analyst position will be the same as those required for an AS-5 position. The primary difference between AS-5 and AS-4 level positions is associated with the scope of fields worked in and the related complexity of work within those fields. This scope and complexity of work reduction reflects on the level of ability required to perform the work rather than on the actual type of ability. Accordingly, the same ability and capacity characteristics must be demonstrated, but they are demonstrated at different levels.

II (G) RESOURCE ABILITY CHARACTERISTICS - ES-5 - MAJOR PROJECT DIRECTORS

(a) ABILITY TO ANALYZE AND EVALUATE

ES-5 Project Directors will be required to have an overall demonstrated capacity and ability to analyze and evaluate the requirements, plans, methods of operation, approaches, outputs, and total inter-related and inter-dependent problems concerned with TYPE A Projects (with significant economic, econometric, statistical and related area orientation, content and impact) and related policy and program initiatives, strategies and options within and between S&T Sectors in Canada. This ability must be demonstrated in relation to the direction of projects and highly complex and original analyses and evaluation therein, to the development of policy and program outputs affecting the S&T Sector and activities in Canada, to the utilization of outputs and to the overall co-ordination and integration of professionally oriented TYPE A Project outputs into existing and developed policy, program and operations frameworks. The Evaluation and Analysis ability to be demonstrated will be required for all management, research, development, analysis and output formulation and utilization parameters of professional area TYPE A Projects.

i

(b) ABILITY TO PLAN

ES-5 Project Directors will be required to have an overall demonstrated capacity and ability to formulate comprehensive, co-ordinated and creative plans for the successful professional management, development and operation of TYPE A Projects (with significant economic, econometric or statistical orientation, content and output). This ability will be demonstrated in relation to the direction of activities such as: work segmentation; resources management; methodology, hypothesis and approach development; output development; presentation and utilization of outputs; communication services and activities development; etc. The Ability to Plan for ES-5 Project Directors will be demonstrated in relation to extremely complex work projects and research, with such Projects involving the Branch, other MOSST Branches, other Departments and Agencies, other levels of government, other countries and the Private Sector.

(c) ABILITY TO ORGANIZE

ES-5 Project Directors will be required to have an overall demonstrated ability and capacity to organize professional area TYPE A Projects. This ability must be demonstrated in relation to areas such as: project development and implementation; project operation and activities; project resource allocation and utilization; research and development output formulation; policy and program output formulation; presentation and utilization of outputs, etc. This ability must be evidenced in relation to both general, overall direction and leadership roles as well as in relation to specific problem resolution, idea and concept formulation, and related activities for professionally oriented TYPE A Projects.

(d) ABILITY TO CONTROL

ES-5 Project Directors will be required to have an overall demonstrated ability and capacity to control and co-ordinate all work and operations involved with professional area TYPE A Projects. This ability will be demonstrated in relation to overall operational and professional Project requirements as well as in relation to specific Project, Phase and Segment areas such as analyses, communications and output formulation, requiring Ministry wide, Interdepartmental, National and International co-ordinative and control responsibilities (e.g. as the Head of various Task Forces, Committees and Meetings). Control will be exercised in relation to work, operations, resources, outputs, professional quality, and other aspects of TYPE A Projects.

(e) ABILITY TO DIRECT

ES-5 Project Directors will be required to have an overall demonstrated capacity and ability to manage TYPE A Projects with a substantive professional orientation. This ability will be required to manage large, complex, high priority Projects having extensive Sector-wide impacts in S&T, with such management involving large project teams (often interdepartmental, intergovernmental and international in composition), the resources allocated by the Ministry for Projects, and the actual operations of the projects, when implications of Projects are not known and when much of the work involved will require highly innovative and creative professional orientation, all of which makes the directing of such Projects extremely complex.

(f) ABILITY TO COMMUNICATE

ES-5 Project Directors will be required to have an overall demonstrated ability and capacity to communicate and control communication activities, in relation to professionally oriented TYPE A Projects. This ability will be required to head up Task Forces, Committees and Meetings, advise on Project methods, operations, potentials and requirements, conduct complex and priority discussions and negotiations, develop and present major research and related policy and program statements, initiatives, strategies and recommendations, formulate position papers, promote major outputs of projects and co-ordinate all necessary implementation activities concerning output utilization. Such communication activities will be required for both complex, integrated written presentations and materials as well as for direct oral communication in liaison, discussion, promotion, negotiation and advisory roles.

(g) ABILITY TO ADAPT AND CREATE

ES-5 Project Directors will be required to have an overall demonstrated ability and capacity to adapt to constantly changing work, planning, operational, management, professional area, and policy and program conditions as envisioned in professionally oriented TYPE A Projects. They will also require an overall demonstrated ability to creatively approach Project Management, operations, research and analyses, and output development and implementation work which will require the development of new theories, hypotheses, methods, techniques and procedures for analysis, research, communication and other areas. Both of these abilities will be required for the effective overall and specific direction, co-ordination and control of Projects and must be utilized while maintaining the highest levels of professional responsibility, judgement, tact, initiative and discretion in Project and related areas. In order for individuals to be selected and utilized in ES-5 Project Director Positions, the general, professionally oriented ability paramaters outlined above must be demonstrated. Individuals who do not possess these demonstrated abilities cannot be assigned to ES-5 Project Director positions because they would not have the overall leadership, management, and professional capacity and abilities to carry out work as envisioned in TYPE A Projects.

II (H) RESOURCE ABILITY CHARACTERISTICS - ES-4 PROJECT DIRECTORS

(a) ABILITY TO ANALYZE AND EVALUATE

ES-4 Project Directors must have a demonstrated capacity and ability to analyze and evaluate the requirements, plans, methods of operation, approaches, outputs and total inter-related and inter-dependent problems concerned with TYPE B Projects (having a substantive economics, econometrics, statistics or related area orientation, content and impact) and related policy and program initiatives, strategies and options within a major S&T Sector in Canada. This ability parameter will be similar to that for ES-5 Project Directors, but will not involve the depth or scope of that required for ES-5's engaged in TYPE A Projects. Accordingly, this ability will be demonstrated in relation to the professional direction of projects and specific research, analyses and evaluation therein, to the development of comprehensive policy program and research outputs affecting Sector S&T activities, to the utilization of outputs and to the integration and co-ordination of professionally oriented TYPE B Project outputs into existing S&T research, policy and program frameworks.

(b) ABILITY TO PLAN

ES-4 Project Directors will be required to have a demonstrated capacity and ability to formulate and implement comprehensive plans for the successful management, development and operation of professionally oriented TYPE B Projects involving the provision of planning direction in relation to specific areas such as: work segmentation; resources management; methodology and approach development; presentation and utilization of outputs; communication services development and implementation; problem resolution techniques; research approaches; etc. The Ability to Plan for ES-4 Project Directors will be similar to that for ES-5 Project Directors but will not require the same professional creativity, complexity or overall inter-relationships evaluations parameters, due to the reduced professional complexity, innovation, and inter-dependency variables inherent in TYPE B Project work.

(c) ABILITY TO ORGANIZE

ES-4 Project Directors will be required to have an overall

demonstrated capacity and ability to organize professionally oriented TYPE B Projects in areas such as: project development and implementation; project operations and activities; project resource utilization; research, policy and program output formulation; presentation and implementation of outputs; R&D management methods development; etc. This ability will be evidenced in relation to both general, overall direction and leadership roles as well as in relation to specific problem resolution, idea formulation and related activities required for the effective organization of professional area TYPE B Projects which have sizeable project resources, are undertaken on a Branch, Ministry and Inter-departmental basis and which require extensive implementation activities involving areas external to the Branch.

(d) ABILITY TO CONTROL

ES-4 Project Directors will be required to have an overall demonstrated ability and capacity to control and co-ordinate all work and operations involved with professionally oriented TYPE B Projects and the Primary Phase of similarly oriented, large, TYPE C Projects. This ability must be demonstrated in relation to specific Phase and Segment areas, often involving Branch, Ministry and Inter-departmental co-ordinative and control responsibilities as the Project Director.

(e) ABILITY TO DIRECT

ES-4 Project Directors will be required to have an overall demonstrated ability and capacity to manage TYPE B Projects (with a substantive professional area orientation, content and impact) and related personnel, financial and related resources. This ability is required to manage projects which have extensive economic, econometric, statistical and related area research requirements, policy and program impacts and resource committments involving the Branch, Ministry and other areas). Project goals and objectives, professional requirements and approaches and the implications of projects, will be only very generally known. The overall direction of Projects will accordingly require extensive professional innovation and creativity in relation to achieving objectives and managing resources to effectively reach Project goals.

(f) ABILITY TO COMMUNICATE

ES-4 Project Directors will be required to have an overall demonstrated ability and capacity to communicate, and control all communication activities in relation to TYPE B Projects with substantive professional area orientation, content and impact. This ability will be required to Head, or participate in, various Task Forces and Committees, advise concerning Project operations and requirements, conduct negotiations and priority discussions, develop and present research and policy papers, initiatives and recommendations, promote Project outputs and co-ordinate implementation activities as required. This ability is similar to that for ES-5 Project Directors except that ES-5 Project Directors will be engaged in the

highest priority, most complex and most important Project work and therefore must demonstrate the optimal communication abilities within Project matrix parameters.

(g) ABILITY TO ADAPT AND CREATE

ES-4 Project Directors will be required to have an overall demonstrated capacity and ability to adapt to continually changing work, planning, operational, management, professional and policy and program conditions as envisioned in professionally oriented TYPE B Projects. The ability to creatively respond to a variety of management, problem resolution, output formulation and operational conditions in complex Project work environments is also required, particularly in relation to methods, hypotheses and approaches development for Project R&D and policy planning and related operations. Both of these abilities will be required for overall and specific TYPE B Project direction, co-ordination and control and must be utilized while maintaining a high degree of professional judgement, initiative, tact, responsibility and discretion.

In order for an individual to be selected and utilized in an ES-4 Project Director position, the general ability parameters outlined above must be demonstrated. If individuals do not possess these abilities, they cannot be selected for ES-4 Project Director positions because they would not be able to carry out the leadership, management, development and other professional work responsibilities as envisioned in professional area TYPE B Projects.

II (I) RESOURCE ABILITY CHARACTERISTICS - ES-3 - POLICY ADVISORS

(a) ABILITY TO ANALYZE AND EVALUATE

ES-3 Policy Advisors will be required to have a demonstrated capacity and ability to analyze and evaluate problem areas, requirements for resolving problems, requirements for meeting proposed objectives and goals of professionally oriented Project work and requirements for the development of methods, procedures, techniques and recommendations to **al**leviate problems in a number of research, analysis, policy, program and related subject matter areas, involving a major S&T Sector. This ability will be demonstrated in relation to the conduct of, and leadership of, complex professional area Project, Phase and Segment research and analysis requiring the utilization, ammendment and development of new methods and techniques as well as the management of project teams and personnel. These abilities will be required in a leadership capacity for overall C and D TYPE Projects, Phase 2 and 3 of TYPE B Projects and Phase 2 of TYPE A Projects.

(b) ABILITY TO PLAN

ES-3 Policy Advisors will be required to have a demonstrated capacity and ability to formulate and implement effective plans for the successful management and operation of professionally oriented TYPE C and D Projects, as well as for Phases of similarly oriented TYPE A and B Projects. This ability must be demonstrated in relation to specific areas such as: the development of work plans for Phases and Projects; the development of analysis, research and output formulation approaches, methods and processes; the provision of expert, professional advisory services; the presentation of outputs; etc., in both a leadership and participation capacity. The ability to plan capacity of ES-3 Policy Advisors will affect the management, operations and effectiveness of Projects and Phases of Projects.

(c) ABILITY TO ORGANIZE

ES-3 Policy Advisors will be required to have a demonstrated ability and capacity to organize professionally oriented Projects (C and D TYPE) and Phases and Segments of Projects (A and B TYPE) involving areas such as: obtaining and effectively utilizing personnel, financial and other resources; structuring work and operations; delineating methods and approaches to meet research, evaluation, analysis and other work goals and objectives; and, developing effective final outputs for Projects and Phases of Projects. This ability will be required in both leadership and participation roles in relation to Project work.

(d) ABILITY TO CONTROL

ES-3 Policy Advisors will be required to have a demonstrated ability and capacity to control and co-ordinate overall Project operations and activities (for professionally oriented TYPE C and D Projects) as well as Phase and Segment work for TYPE A and B Projects. This ability will be required in areas such as: liaison and advisory services provision (intra and inter-departmentally, some inter-governmentally); resource utilization; project team management; design and utilization of methods, procedures and techniques for research analyses and other work; methods of meeting overall Project and Phase objectives; etc.

(e) ABILITY TO DIRECT

ES-3 Policy Advisors will be required to have an overall, demonstrated ability and capacity to manage professionally oriented TYPE C and TYPE D Projects as well as various research and analysis teams involved with TYPE A and B Projects. This ability will be evidenced in relation to activities and operations such as: providing professional advice and guidance to staff; interpreting and managing work for the attainment of objectives; providing interpretations concerning analyses, evaluation, policies, programs, procedures and directives; selecting, instructing and motivating staff; and, providing effective development work for staff. This ability must be demonstrated in an environment of changing work conditions and goals, changing professional area methods, theories, techniques and practices, changing policy and program inter-relationships, and changing Project requirements.

(f) ABILITY TO COMMUNICATE

ES-3 Policy Advisors will be required to have an overall, demonstrated capacity and ability to communicate in an effective professional manner (both orally and in writing) with senior officials, colleagues and associates. The ability will be required in relation to activities such as: participating in senior level meetings; advising officials concerning assignments, services, activities and outputs; promoting the acceptance of work outputs and recommendations; presenting final project (TYPE C and D) and phase (TYPE A and B Projects) reports and recommendations; undertaking detailed professional area discussions concerning reports; and, providing expert advice and information to officials, officers and professionals of MOSST, other Departments, other levels of government and the private sector.

(g) ABILITY TO ADAPT AND CREATE

ES-3 Policy Advisors will be required to have an overall, demonstrated capacity and ability to adapt to continually changing professional, policy and project conditions, inputs (both internal and external) and ideas and concepts in complex professional evaluation, research and policy fields. The ability to creatively respond to complex, unique and original research, analysis and development problems is also required, particularly in relation to the development and utilization of new methods, techniques and processes of analyses for application in A and B TYPE Project Phase and Segment work. Both of these abilities will be required for the leadership of project teams and overall Projects and must be utilized while maintaining optimal levels of judgement, initiative, responsibility, tact and discretion, in professional terms.

In order to be selected and utilized in an ES-3 Policy Advisor position, individuals will have to have the general abilities and capacities outlined above. If individuals do not possess these abilities, they cannot be selected for ES-3 Policy Advisor positions because they would not have the capability to carry out the leadership, research and development roles required in all types of Projects.

II (J) RESOURCE ABILITY CHARACTERISTICS - ES-2 - POLICY ANALYSTS

(a) ABILITY TO ANALYSE AND EVALUATE

ES - 2 Policy Analysts will be required to have a demonstrated ability and capacity to analyze and evaluate professional area (economics, econometrics, statistics) problems, proposals, issues, developments and recommendations for change within at least two major policy and related research fields within an S&T Sector. This analysis and evaluation ability will have to be applied within complex professional area research and analysis fields, in all types of Projects, and will involve evaluation of modifications and changes taking place within research methods, procedures, techniques, processes and procedures as well as within various policy fields.

(b) ABILITY TO PLAN

ES-2 Policy Analysts will be required to have a demonstrated ability and capacity to plan in relation to the conduct of work assignments undertaken in various professionally oriented Projects (Phase assignments for TYPE D Projects; segment assignments for TYPE A, B and C Projects), as well as in relation to the development, ammendment and utilization of specific area analysis methods, procedures and techniques required for the resolution of complex and often interrelated analysis problems. This ability will also be required, on an occasional basis, to guide the work of developmental level personnel.

(c) ABILITY TO ORGANIZE

ES-2 Policy Analysts will be required to have a demonstrated capacity and ability to organize work assignments (phase level in TYPE D Projects and segments in other Projects), involving a number of activities such as: determining appropriate approaches to work; developing time and other parameters for work; determining methods for co-ordinating work with other areas; recommending uses for work outputs; and, occasionally obtaining and utilizing resource personnel (developmental level). The Ability to Organize must be demonstrated in an environment of only generally stipulated professional and work objectives.

(d) ABILITY TO CONTROL

ES-2 Policy Analysts will be required to have a demonstrated ability and capacity to control and co-ordinate phases of Projects (TYPE D) and segments of projects, involving co-ordinating assignments internally (with other project staff and occasionally, with subordinate developmental level staff) and externally (with personnel of other Departments and Agencies involved with Phase and Segment work), as well as ensuring that work timing, performance, and outputs meet stipulated general requirements, goals and objectives.

(e) ABILITY TO DIRECT

ES-2 Policy Analysts will be required to have a demonstrated capacity and ability to manage operations and activities involved with the performance of Segment and, occasionally, Phase level analyses roles. This ability will also be required in relation to the occasional management of development level analysts engaged in evaluations, information and primary level analysis work.

(f) ABILITY TO COMMUNICATE

ES-2 Policy Analysts will be required to have a demonstrated capacity and ability to communicate effectively, both orally and in writing, with colleagues, associates, officers and officials of the Branch, Ministry, other levels of government, other Departments and Agencies, private industry and the public, concerning information development, complex analyses, research and outputs, the development of new methods and approaches, and the potential utilization of segment, phase and project outputs, all of which require advisory, consultative, negotiation and representation roles.

(g) ABILITY TO ADAPT AND CREATE

ES-2 Policy Analysts will be required to have a demonstrated ability and capacity to adapt to changing Project, analysis, evaluation and related input conditions, concepts and methods, to effectively carry out professionally oriented segment and phase analysis requirements. The ability to creatively respond to situations requiring the resolution of complex analytical problems and the development of analysis procedures, techniques and methods must also be demonstrated. Both of these abilities must be demonstrated while maintaining effective levels of judgement, initiative, professional responsibility, tact and discretion, required to ensure the efficient completion of analysis work.

In order to be utilized within an ES-2 Policy Analyst position individuals will have to have the demonstrated abilities and capacities outlined above. If individuals do not have these abilities, they cannot be assigned to ES-2 Policy Analyst positions because they would not have the capability to carry out the analytical, evaluation, output formulation and occasional management roles required in various Project work situations.

This Section of the report has outlined the Resource Ability Characteristics required for the SX, ES and AS Groups as related to theoretical Selection criteria, various types of work available within the Ministry's matrix project operations areas and the Classification Characteristics for each Group and Level. The requirements, in terms of abilities of individuals necessary to fill various positions at different Classification levels and under different work situations, have been outlined as a response to the problem of Who Is Doing the Work. The Resource Ability Characteristics, Classification Characteristics and Work Characteristics, when combined in graph form, provide the overall response necessary for the effective determination of What Work requires What Level of Resourcing and What type of Individual.

Before delineating the graphic representation of total work/resource interfaces, the utilization of several terms should be clarified. As well, the functional representation of typical work assignments for the SX, ES, and AS Groups should be presented and explained (as indicated through the actual, classified Positions Profiles). The next Section of the Report therefore, deals with the other Terminology which is utilized in the system. Following that, the Position Profiles will be presented and explained.

D OTHER TERMINOLOGY APPLICABLE TO I.M.P.S.

This Section of the report contains several terms utilized in a specific manner in Classification, Staffing, Human Resources Planning, Organizational Development and other Personnel Services fields. The terminology is supplied to ensure a clear understanding of both its everyday use and its specific application in relation to I.M.P.S.

1. CLASSIFICATION TERMS

(A) CLASSIFICATION PROCESS

The Classification Process can be basically defined as

"....that process utilized to determine the relative worth of positions within the Federal Public Service and which aims at grouping employees according to the duties performed in various positions, all of which involves the relative evaluation of both the responsibilities inherent in positions and the aptitude, knowledge, experience and other variables required to perform the duties of the positions...."

Inherent in the above definition are the requirements for methods of job evaluation, standards by which relativity can be established, occupational group structures into which positions can be placed, and methods for the descriptions of positions. The Classification Process is required within the Public Service due to the existence of Collective Bargaining which delineates the premise that equal work requires equal compensation. The methods utilized in the Classification process must therefore be objective, at least in terms of the description and assessment of work being performed, in order to ensure that similar types of work are compensated equally, regardless of particular individuals undertaking the work. The Classification process is therefore a process of work comparison and evaluation as differentiated from various personnel evaluation and assessment processes.

In relation to I.M.P.S., the Classification Process will involve the development and utilization of Position Profiles, the evaluation of the profiles in relation to Classification Standards and other points of relativity and the allocation of the positions to Groups and Levels as defined by the Classification System.

(B) CLASSIFICATION CATEGORY, GROUP AND SUB-GROUP

The effective allocation of positions under the Classification Process requires the formal designation of positions in terms of various occupational groupings. The first stage in the process of classifying positions is the determination of the place of positions in terms of a Category recognized within the Public Service. A Category is basically defined as:

"...a major occupational Division of jobs within the Public Service...." Categories include Executive, Administrative and Foreign Service, Technical, Scientific and Professional, Operational, and Administrative Support.

The next stage in classification is the determination of the Group Allocation applicable to the position. A Group is basically defined as:

> "....an occupational sub-division which is identified under the description of inclusions and exclusions of a given Category; groups are normally a natural unit of negotiation...." The Public Service utilizes over seventy different Groups to identify occupational sub-divisions of various Categories.

In some instances, the classification process may involve the determination of a Sub-Group Allocation applicable to the position.

A Sub-Group is basically defined as:

"....an occupational sub-division within a Group...."

As an example of all three definitions, a Typist position would be delineated as follows:

>Category - Administrative SupportGroup - SecretarySub-Group - Typist

(C) JOB EVALUATION

The Classification Process involves the determination of the relative worth of positions. This assessment of relative worth takes place through the utilization of various Job Evaluation processes which delineate Category, Group, Sub-Group and specific position level within a Group or Sub-Group. Job Evaluation can be basically defined as:

"....the process of determining the worth of a position in relation to other positions in a structure or organisation within the Public Service as well as determining the relationship between positions in an occupational grouping...." Such processes must be systematic, fair and defensible. Within the Public Service four types of evaluation systems are utilized: Ranking (as in the Military); Grade Description (as in various Administrative Support Groups); Factor Comparison (as in Professional positions such as Economists); and, Point Rating (as in Administrative positions such as Administrative Services or Program Administration).

Once the process of Job Evaluation is completed and positions have been allocated to a Group and Level within the Group, negotiated

pay ranges are applied to the position. Different levels (and accordingly different work for positions) within Groups are paid differently (as responsibilities increase or decrease). The pay scales of each group are negotiated through the Collective Bargaining process.

I.M.P.S. utilizes both the Category, Group and Sub-Group definitions and the Job Evaluation processes of the Federal Public Service, as they are defined and utilized throughout the Public Service. All evaluation and assessment steps in the Classification process are utilized as they exist, and accordingly, all requirements for their use must be met by IMPS. This requires that IMPS have position descriptions which can effectively be utilized during the Classification Process. The primary difference between use of IMPS position profiles and those utilized normally, lies in the fact that IMPS utilizes general, functional descriptions which have a wider application potential and accordingly, do not have to be classified when variations occur in work, unless those variations exceed the overall parameters outlined in IMPS Classification Characteristics and related Graphs outlined in PART IV.

(D) POSITION AUDIT

The allocation of positions to various Groups and Levels, through the Classification Process, is subject to audit. This audit will usually involve the verification of position responsibilities (as performed) in relation to the position description, the evaluation of position responsibilities in relation to changes in organizational, work, policy and other fields (again in relation to the position description as classified) and the evaluation of position activities against original expectations of position responsibilities (in the case of new positions). The audit of positions may result in the change of the classification of the positions when responsibilities are found to be different than those formally classified. Classifications may be upgraded (promotion) or downgraded (red-circle), or may stay the same, but with a requirement to change the content of a position description to match more accurately, the functions being undertaken.

There are several causes for non-compliance to duties formally described and classified, involving areas ranging from failure to update descriptions, all the way to incorrect utilization of positions. Two of the most common problems encountered in Audit involve underutilization and over-utilization of positions and their resources (incumbents). Over-utilization simply means that positions are required to undertake duties which are above the classification assigned (and accordingly, means that resources are performing functions above those for which they are being paid). Under-utilization of positions involves the positions undertaking duties which are lower than the classification assigned (and accordingly, means that resources are being paid at a higher level than their work allows). These two problems are particularly evident in positions where work performed is highly varied (as in project work). The classification of IMPS position profiles will be subject to exactly the same Audit process as is normally used throughout the Public Service. However, one extra Audit stage will also be utilized to avoid excessive over- or under-utilization of positions. As positions are assigned to various projects, the assignment will be verified against the general role potentials outlined in PART IV of the Report. This will ensure that positions are being effectively utilized (in Classification terms) in variable work situations envisioned in Projects, while reducing the potentials for position downgrading, re-writing or up-grading for each Project. This Pre-Audit of position use will not affect resource use flexibility in the system and in actual project operations, and, will allow for legitimate Classification Audit requirements.

The Pre-Audit of position and related resource allocation, will also have a peneficial effect in relation to ensuring that potential Staff Relations problems, particularly grievances, can be resolved. If positions are incorrectly utilized, then the individual in that position has a right to grieve the use of the position, due to the fact that incorrect utilization automatically involves incorrect pay to the person in the position. If a person is in a position which is being over-utilized, then that person can grieve on the basis that he or she is not being paid enough for the job being performed. If a position is being under-utilized, then individuals classified in other positions (at the same classification level and similar responsibilities) which are not being under-utilized, can grieve on the basis, again, that they are doing more work than the other position and should be paid more. Pre-Audit of position allocation will resolve some of the potentials for this type of grievance by ensuring that allocations are correct (at the beginning of projects), while regular Position Audit will ensure continued compliance.

(E) POSITION ANALYSIS SCHEDULE

A Position Analysis Schedule (Job Description, Position Profile) can be basically defined as follows:

> "....the systematic, formal description of essential data concerning the duties performed in a job, the qualifications required to perform the duties, the mental and physical requirements of the job, and its hazards, if any, presented in a pre-determined standard form. Descriptions should contain a complete and accurate description of the duties and requirements of the job and a full delineation of the requirements made upon the worker for the successful performance of the duties...."

In the Public Service, the Position Analysis Schedule is comprised of Identifying Information, a Summary of Duties, the Major Responsibilities of the job (What, Why and How the job is to be performed), the Specifications (outlining the abilities, aptitudes, and other requirements of the job), and the relevant Organization Chart. The Job Description has many uses outside the one most commonly known - that of being the basis of the Job Evaluation in the Classification Process. During Job Evaluation, the description is utilized to identify job facts concerning work requirements, job difficulty and responsibility, knowledge and skill requirements and other variables of work, all relevant to the determination of the relative worth of positions.

However, Job Descriptions are also utilized in Staffing during the Selection process to provide information needed by the recruiting officer when advertising a position, interviewing applicants and testing various abilities of applicants. They are also utilized in Staff Development (to study career patterns, develop controlled promotion paths, plan rotation schemes, formulate comprehensive long-range manpower plans), in Training, in Counselling and in Employee Performance appraisal.

The Position Analysis Schedules utilized for I.M.P.S., while sufficient for the description of major responsibility areas, are supplemented by detailed Work, Classification and Resource Ability Characteristics, and their integration in Graph Form, to ensure that all legitimate Staffing, Classification, Human Resources Planning and related Personnel Services requirements can be met without constant referral to, and re-development of, descriptions based on changing Project responsibilities of positions. The System developed has utilized all possible role/responsibility/work inter-relationships and therefore, can meet the requirements of Personnel Services usually taken care of by detailed, activity oriented, job descriptions.

(F) TYPES OF DIRECTION

The performance of any job takes place under varying degrees of managerial control. The extent, degree and closeness of this control will affect the methods by which work is undertaken, the freedom of action which individuals have for the performance of duties, the scope of activities undertaken within a position, and the related abilities required to perform the duties (i.e. the closer the managerial control, the less the requirements for creativity, adaptability, decision taking, etc.).

For use within I.M.P.S., the levels of managerials control are exemplified by three types of direction - Administrative Direction, General Direction, and Direction.

Administrative Direction is the guidance given to positions in administrative matters only (e.g. budgets, resources, procedures, directives) leaving the objectives, organization and other parameters of work to the position itself.

General Direction involves the exercise of only very broad degrees of control over work and usually takes the form of consultation and discussion concerning general-management matters. The position under General-Direction normally contributes to policy formulation and long term management planning and is expected to make decisions in relation to the expenditure of significant amounts and in relation to the approval of budgets for designated activities within an organization. Any review of the work of a position under General-Direction takes the form of an assessment of reports, proposals and operations which the position controls. Such a position would normally report to a Deputy-Minister, Assistant-Deputy Minister or other very senior official.

Positions under Direction have been directed to achieve a definite objective. The organization of work and the methods of producing the desired results are left up to the position itself. Accordingly, such positions are expected to overcome all problems of a technical or subject-matter nature and to meet and solve such general problems as are governed by the plans, policies, procedures, and purposes of the position's defined area of work. In problem areas outside of this scope the position is expected to undertake consultations and seek advice from superior positions. Such positions make no decisions concerning policy directly, but do make recommendations on policy as it relates to the positions area of responsibility.

The types of managerial control outlined above are followed within I.M.P.S. and have determined, to a limited extent, the degree of leadership roles in various policy development, research and analysis fields, as illustrated in the Classification Characteristics, Resouce Ability Characteristics and Position Profiles.

2. STAFF RELATIONS

Staff Relations is that area of Personnel Services concerned with the establishment and maintenance of a system of Collective Bargaining for the Public Service and the provision of a grievance process as part of, or in addition to, that system of Collective Bargaining. I.M.P.S. must respond to all normal Staff Relations requirements, particularly those inherent in the potential for grievances contained in the Public Service Staff Relations Act.

I.M.P.S. provides, through the position profiles and Graphs of resource utilization, the basic parameters within which resources can be legitimately utilized. As long as these parameters are met in the use of positions (and their incumbents), the potential for grievances concerning incorrect utilization of resources is greatly reduced. By using such parameters, management can determine the correct (in legal Classification terms) use for resources and still retain the flexibility of resource use required for effective matrix operations management. Non-utilization of the parameters will lead to grievances and related Staff Relations problems.

3. HUMAN RESOURCES PLANNING

Human Resources Planning is a process by which future human resource requirements are met. There are four stages in this process. The first stage involves the determination of Demand for human resources which involves consideration of organization, program and other objectives. The second stage requires the delineation and examination of the Supply of human resources in terms of their capabilities, qualifications, activities and other criteria. The third stage is the identification of the gap between Supply and Demand. The last stage of the process involves the development of Action Plans to close the gap between Supply and Demand.

The first two stages of the Human Resources Planning process require the development of various inventories of both demand for, and supply of, resources. As such, I.M.P.S. can meet some of the parameters for this determination through the provision of objective work criteria and related ability characteristics which can be compared to specific management demand inputs and specific individual employee performance.

The last stage of the process, that of Action Plan Development, can utilize I.M.P.S. specific and general Graphs in its various elements of training and development, career planning, re-classification and staffing. The Graphs indicate specific Development roles which can be identified to meet both the Demand of the organization in various objectives areas, as well as the requirements to develop the Supply of Human Resources to meet future demands.

While the actual Human Resources Planning process is not affected in terms of the ways in which each of the process stages is met, I.M.P.S. can provide inputs which will allow for the more effective carrying out of process activities.

4. STAFFING

Staffing is basically the process of filling vacancies on behalf of the employer utilizing a series of basic steps to recruit, refer, select and appoint employees. There are four basic steps to the Staffing Process - Request (by the employer through the job description and specific materials related to the job); Presentation (the first step involving the presentation of candidates to the employer through application, referrals, data stream search, etc.); Selection (the elimination of all but the most qualified candidate involving screening, interview, etc.); and, Appointment.

The I.M.P. System relates to Staffing by virtue of the fact that the Resource Ability Characteristics will provide the basic data required for Selection Profiles (Statements of Qualifications). The Selection Profile is basically a statement of the Essential and Desirable qualifications required to perform the duties of the position. Essential Qualifications are the minimum factors that are necessary to carry out the functions of a position. Desirable Qualifications are those factors which are advantageous or desirable for the performance of duties in a given position but which are not absolutely essential to the performance of duties.

5. MATRIX SYSTEM TERMINOLOGY

(A) MATRIX ORGANIZATION

Matrix organization, or design, in its basic form, is a cross-hatch of structural elements with discipline or functional elements forming the vertical dimensions and programatic or project units providing the horizontal dimensions. In more general terms, a matrix structure can respond to the needs of projects vertically (i.e. in the traditional hierarchical sense) as well as the needs of projects horizontally. In terms of organization structure, the matrix, in effect, allows for the existence of regular hierarchical tasking as well as unusual horizontal unit formulation for the carrying out of tasks.

In another sense of the phrase matrix structure, there are direct and substantial resource use implications. In this matrix resource use structure, resources (individuals in various positions) can play both horizontally and vertically differentiated roles depending upon the requirements for their particular capabilities within any project being carried out within the overall matrix structure. In more general terms, an individual resource may play participant roles in one project while playing leadership roles in another project, depending upon the nature of the task unit and its variation within the hierarchical level of work.

The utilization of a matrix organization structure with more than one type of task (project or work type) and with flexible role potentials based on the horizontal and vertical use of resources with capabilities to carry out these differentiated tasks, requires that the role/work/organizational variables of task completion be interfaced for the successful allocation, assignment, utilization, classification, selection and training of resources. In other words, the potential horizontal and vertical use of resources, under varying types of projects, must be delineated by level of resource to ensure that that resource is appropriately utilized, allocated, classified, selected and developed and also, to ensure that the appropriate level of resource is being utilized to carry out the appropriate horizontal and vertical tasks as differentiated by varying types of projects.

I.M.P.S. provides the Work, Classification and Resource Ability Characteristics and their integration in Graph form, to delineate all probable horizontal and vertical role requirements of various levels of resources under different project types. Accordingly, the requirement for the definition of responsibilities of various levels of positions (set by the Classification System) can be met while still allowing for the vertical and horizontal use of task units required by the matrix operations structure. As well, the requirements for development of resources to play higher level vertical and horizontal roles in variated work situations can be met through the use of graphs in PART IV of the Report, which outline the leadership, participation and development roles required at each level of resource in each type of work situation. Resource Allocation and Utilization can be co-ordinated through use of the same Graph materials due to the fact that vertical and horizontal roles required in variable work situations have been developed in relation to the allowable roles delineated in the Classification System. Resource Ability Profiles will also provide data necessary to the Staffing Process, insofar as the materials required for the determination and delineation of qualifications required to carry out variable work, are provided.

(B) PROJECT MANAGEMENT SYSTEM

The Project Management System is a managerial system to allow for the effective utilization of resource personnel within Ministry Projects regardless of the Home Branch assignments of these resources. The system is comprised of the Project Management Committee and the Project Management Committee Secretariate as well as related management procedures and directives required to ensure that resources can respond to project requirements both vertically and horizontally.

The Project Management Committee is comprised of the Secretary, the Assistant Secretaries, the Director-General Corporate Services, the General Directors of various Ministry Divisions and the Head of the Project Management Committee Secretariate. This Committee is the ministerial discussions and decision centre for Science and Technology policy development and policy evaluation projects. It will be in charge of the evaluation, assessment, management, delegation, co-ordination and approval of Ministry projects and outputs thereof.

The Project Management Committee Secretariate is primarily responsible for Project resource co-ordination, allocation, evaluation and related functions as well as for advising the PMC concerning the status, progress and other aspects of various projects. It will be the primary focus point for the effective operation of PMS processes, procedures, directives and operations and will be responsible for ensuring effective resource control on various projects, as the administrative co-ordination body of the PMS.

6. ROLE DEFINITIONS

For purposes of I.M.P.S. these are three potential roles to be played within various work situations. These are the Leadership roles, the Participation roles, and Development Roles.

The Leadership role (i.e. as a Director or leader of a specific team) requires the direct management or supervision of other human resources for the duration of a specific Project, Phase or Segment. This particular role will not extend beyond segments of Projects (i.e. to activities) for I.M.P.S. definition. Each Group and Level of human resources has leadership roles with the exception of developmental level and the first working level of Policy Analysts. For example, SX-1 (ES-4) Project Directors will lead TYPE B Projects. AS-7 (ES-3) Policy Advisors will lead TYPE C and D Projects and phases of TYPE B and A Projects. As-5 Policy Analysts will lead various Segments in TYPE D Projects.

II-103

The Participation Role does not require the leadership or management of other human resources. While a resource may be required to play a primary role in the conduct of various Segments and Phases of Projects, (e.g. Policy Analysts at the AS-5 level), unless such roles require the management of other human resources, they are designated as Participation roles.

Developmental roles are those roles required for the effective development of human resources to meet the responsibilities outlined for positions at a higher level than the ones occupied by various individuals (e.g. these roles required to develop from an AS-4 to an AS-5 Policy Analyst). Developmental roles may be of two types -Developmental leadership and Developmental Participation.

I.M.P.S. shows developmental roles in two ways. First, it outlines directly the developmental role potentials on various Graphs in PART IV, by Group and Level. Secondly, it allows for the utilization of human resources in higher level functions through cross-comparison of direct participation and direct leadership roles. For example, if a position is normally responsible for participation in various Segments and Phases of projects then the utilization of that position in a leadership capacity in those normal participation role areas would constitute a developmental function. It should be noted however, that such utilization must be pre-indicated to Personnel and the incumbent of the position (and be approved of by the incumbent) in order to avoid either re-classification (or other Personnel Services actions and objectives) or grievance from the incumbent. More detailed instructions for determination of development roles are available in PART III of the Report.

Normal leadership and participation roles are outlined in PART IV of the Report for each Group and Level. All role delineations in the Graphs can be utilized by Human Resources Planning specialists, to determine the required action plans to effectively meet the Organizations requirements for various groups and types of employees, and can provide inputs to the determination of both the demand for human resources and the supply of available resources.

This Section of the Report has outlined the meaning and uses of various Terms contained within I.M.P.S. and utilized extensively within Personnel Services. The next Section of the Report contains the Position Profiles utilized within Personnel Services for classification, staffing, audit, human resources planning, staff relations and other functions.

E POSITION PROFILES

1. GENERAL COMMENTS

This Section of the Report contains the specific Position Profiles which are utilized to define the work to be carried out by SX, ES and AS positions within the functional project matrix operations area of MOSST. The profiles have been developed to present the general, function responsibility areas for each Group and Level of resource utilized in Ministry projects, and accordingly do not contain specific activity or area parameters as is the case in full-fledged Position Analysis Schedules. The specific parameters for activities may be derived from examination of the Work, Classification and Resource Ability Characteristics outlined previously in the Report.

The profiles are presented as individual Groupings for comparison purposes. However, as was the case in the Classification and Resource Ability Characteristics Section, there are functional similarities between the profiles. SX-2, and SX-1 Profiles are similar to ES-5 and ES-4 Profiles with the primary difference being the professionalism apparent in the ES's. AS-7 and AS-5 Profiles are similar to ES-3 and ES-2 Profiles, with the same primary difference. POSITION PROFILES

2.

1

-

1

SX GROUP

SX-2 PROJECT DIRECTOR

POSITION PROFILE

2. A

SUMMARY OF DUTIES:

Under the general direction of the Assistant Secretary SX-3, plans, organizes and directs the development, implementation and operation of major matrix projects of the Branch and Ministry, involving projects with some or all of the following characteristics: multi-disciplinary and multi-field content in an S&T Sector; involvement of more than one MOSST Branch or of one MOSST Branch and several external areas; highest project priority assignment (by the PMC or Cabinet); impact on a Sector wide basis; largest size and related resource committment (Branch and MOSST); most complex, original and co-ordinative work required; highest sensitivity (political, economic, social, etc.); involvement of other Departments and Agencies required for the completion of projects; Cabinet initiated; high political, social, economic, and other area impact and priority; involvement of the most senior government or private sector officials; and, major policy and program initiatives in an S&T Sector as final project outputs; participates in the formulation, promulgation, promotion and implementation of major policy and program proposals in an S&T Sector; initiates and undertakes a wide variety of liaison, advisory, consultative and co-ordinative activities and services; and, manages major project resources for the duration of projects.

MAJOR RESPONSIBILITIES:

- Develops Science and Technology policy proposals and revisions to current policies, including implementation processes and procedures, and policy assessment criteria, based on comprehensive examinations of Sector activities, policies, requirements, studies, research, feedback from Sector areas, discussions, consultations, identification of S&T policy problems and opportunities, and other analyses and evaluations conducted within the Branch or in other areas, internal or external to the Government, which utilize or inter-relate with the Branch.
- 2. Prepares policy project proposals concerning Sector area requirements, develops project master plans, discusses overall project requirements with the Project Management Committee, PMC Secretariat, Assistant Secretaries, PMC and other Project directors and develops imlementation plans and procedures for S&T policy projects and related policy outputs.
- 3. Organizes, tasks and directs major project teams, which involves the assessment of project requirements, the development and implementation of plans, priorities, schedules, and other parameters for project teams, the making of initial contacts inside and outside the Public Service to be utilized by members of the project teams for obtaining information and advice, the managing of project resources (financial, personnel, seconded personnel, consultants, etc.), and the planning, organizing and co-ordinating of major projects and phases of extremely large projects, handled by the Assistant Secretary.
- 4. Attends meetings of the PMC, as requested by the Assistant Secretary, to provide specialized advice on major projects.
- 5. Develops, and co-ordinates the development of, ways and means to meet project goals and objectives, which involves the formulation of methodologies, procedures and techniques required for the definition of issues, policy options and consequences.
- 6. Reports on, and discusses, project progress to the PMC Secretariat, regarding relationships to the master plan, and proposes changes in resourcing and/or timing as necessary to reach defined objectives.
- 7. Provides expert advice, on request, within or outside the Ministry in the incumbent's fields of speciality.
- 8. Directs and participates in extensive liaison, consultation, co-ordination and advisory services for purposes such as advising senior level officials inside the Government and in other areas concerning projects, setting up information flows and exchanges, hiring consultants and specialists for major projects, attending and/or representing the Ministry and, on occasion, the Government of Canada at various national and international conferences and committees concerned with Sector outputs and impacts thereof, consulting interested parties

concerning project working papers, obtaining and co-ordinating the evaluation and discussion of feedback from interested parties, etc.

- 9. Directs the consolidation of research, analysis, evaluation, liaison inputs, feedback and other materials of the project, and controls the preparation, analysis and editing of final reports and related policy and program recommendations.
- 10. Provides the Assistant Secretary with advice on, and support in, the provision and preparation of major policy proposals for Ministerial or Cabinet Approval and discusses the proposals and related materials with the PMC, as required, in order to ensure that proposals and materials can be effectively screened, scheduled, distributed, examined and approved.
- 11. Prepares and submits to the PMC Secretariat, the project review and completion report, following examination of proposals and the approval of policy proposals by the Minister or Cabinet.
- 12. Directs and participates in liaison with the policy implementation Department, Agency or other areas involved to provide expert advice concerning policies and their impact, their design and operation potentials, their expected benefits and returns and other variables, in order to ensure that policies will be implemented as developed to achieve optimal goals and objectives for S&T.
- 13. Maintains a comprehensive, expert knowledge of Sector policies, programs, issues, activities, trends and developments, in order to ensure the effective direction of, development of, and refinement of projects, to allow for the initiation of proposals for projects, to ensure effective utilization of outputs within the Sector concerned and to ensure that effective leadership in relation to continuing objectives is provided to project teams, input areas and user areas.
- 14. Manages personnel and other major project resources for the duration of projects involving such matters as input into personnel selection, hiring, assessment and development to meet effectiveness and efficiency criteria for major projects and phases of extremely large projects.

DISTINGUISHING CHARACTERISTICS:

Project Directors at the SX-2 level require a comprehensive knowledge of Government and Sector S&T policies, programs, services and activities, as well as of trends and developments therein, to effectively direct, develop, refine and co-ordinate major projects within the Ministry matrix operation areas. The work requires an expert knowledge of research, analysis and development theories and their applications to major project work.

The work involves comprehensive planning and co-ordination requirements in relation to: the directing of major projects; the development of major project plans, proposals, strategies and organization; the operation of major projects and the managing of such project resources; the initiation of major project proposals; the development of diverse, complex and unique project outputs and related policy and program proposals and papers; the directing of inter-Branch major projects and the related development of such projects; the planning and directing of comprehensive liaison, advisory, co-ordination and consultation activities and services; initiating contacts with the most senior officials of other Departments, Agencies and non-government areas concerning major projects and their operation; and, directing co-ordinated inter-Departmental policy and program projects in major Sector areas. Accordingly, planning and co-ordination responsibilities are massive, complex and fundamental to the success of the matrix operations and related major projects of MOSST, as well as to the development of effective S&T policy and program outputs in relation to one of the major S&T Sectors.

Decisions and recommendations will affect the successful completion of major projects within a Branch, between Branches and between the Branch and a number of external areas. As well, they will affect the type, extent, effectiveness, efficiency, and content of overall Sector S&T policies and programs as a result of the outputs of major projects of the Branch as well as the inter-Branch and inter-Departmental projects which are co-ordinated by the position. Accordingly, decisions and recommendations will have a direct and substantive impact on the success of policies and programs developed in meeting MOSST and national objectives for S&T within a Sector as well as on the effectiveness and efficiency with which Sector outputs, totalling billions of dollars per annum are expended. As well, the activities undertaken will directly affect the social, economic and related quality of life structures in Canada as a result of more effective S&T policies, programs and their outputs. The position will also affect the utilization of Division resources as required for the effective completion of projects.

The position undertakes contacts at the DM, ADM, and senior executive levels of various Departments and Agencies, Cabinet, TBS, the PCO, other levels of government, other jurisdictions and the private sector, primarily as a Branch and Ministry representative and, on occasion, as a representative of the Canadian Government, to negotiate for and co-ordinate major projects, develop initial contacts with other areas engaged in project work of a major type, make formal representations and presentations and promote policies and programs developed within the context of major projects.

II-112

.



POSITION PROFILE

SX-1 PROJECT DIRECTOR

SUMMARY OF DUTIES:

Under the administrative direction of the General-Director Projects Division, SX-2, and the policy direction of the Assistant Secretary, SX-3, plans, organizes and directs TYPE B Projects of the Branch and Ministry involving areas of work and characteristics such as: single field of subject matter with variable disciplines involved with assessment of policy and program options, problems, initiatives, etc.; involvement of one MOSST Branch or one Branch with limited external areas (e.g. one or two departments); usually requires substantial original research, analysis and development; impact on a major policy Sector; high priority assignment; significant resource committment and large size; may require the involvement of an external area for its successful completion (e.g. TBS, PCO); senior MOSST originated or originated by other Central Agencies; single field policy initiatives, strategies and recommendations will be final outputs; may be a significant part of a major project (when major project is managed by the PMC or Assistant Secretary and when the segment invovled is handled as a separate sub-project), etc.; plans, organizes and co-ordinates the primary phase of TYPE C Projects; co-ordinates and participates in the provision of extensive liaison, advisory and consultative services to senior officials of external areas; and, manages project teams for the duration of projects.

- Develops Science and Technology policy proposals and revisions to current policies, including implementation processes and procedures, and policy assessment criteria, based on comprehensive examinations of Sector activities, policies, requirements, studies, research, feedback from Sector areas, discussions, consultations, identification of S & T policy problems and opportunities, and other analyses and evaluations conducted within the Branch or in other areas, internal or external to the Government, which utilize or inter-relate with the Branch.
- Prepares policy project proposals concerning sector area requirements, develops project master plans, discusses overall project requirements with the Secretary, Project Management Committee, PMC Secretariat, Assistant Secretary and other Project Directors and develops implementation plans and procedures for S & T policy projects and related policy outputs.
- 3. Directs project teams, which involves the assessment of project requirements, the development and implementation of plans, priorities, schedules, and other parameters for project teams, the making of initial contacts inside and outside the Public Service to be utilized by members of the project teams for obtaining information and advice, the managing of project resources (financial, personnel, seconded personnel, consultants, etc.), and the planning, organizing and co-ordinating of overall TYPE B Projects.
- 4. Attends meetings of the PMC, as requested by the Assistant Secretary, to provide specialized advice on project work undertaken.
- 5. Develops, and co-ordinates the development of, ways and means to meet project goals and objectives, which involves the formulation of methodologies, procedures and techniques required for the definition of issues, policy options and consequences.
- Reports on, and discusses, project progress to the PMC Secretariat, regarding relationships to the master plan, and proposes changes in resourcing and/or timing as necessary to reach defined objectives.
- 7. Provides expert advice, on request, within or outside the Ministry in the incumbent's fields of speciality.
- 8. Directs and participates in extensive liaison, consultation, co-ordination and advisory services for purposes such as advising senior officials inside the Government and in other areas concerning projects, setting up information flows and exchanges, attending and/or representing the Ministry, and, on occasion, the Government of Canada at various national and international conferences and committees concerned with project outputs and impacts thereof, consulting interested parties concerning project working papers, obtaining and co-ordinating and evaluation and discussion of feedback from interested parties.

- 9. Directs the consolidation of research, analysis, evaluation, liaison inputs, feedback and other materials of the project, and controls the preparation, analysis and editing of final reports and related policy and program recommendations.
- 10. Provides the Assistant Secretary with advice on and support in the provision and preparation of policy proposals for Ministerial or Cabinet Approval and discusses the proposals and related materials with the PMC Secretariat, as required, in order to ensure that proposals and materials can be effectively screened, scheduled, distributed, examined and approved.
- 11. Directs and participates in liaison with the policy implementation Department, Agency or other areas involved to provide expert advice concerning policies and their impact, their design and operation potentials, their expected benefits and returns and other variables, in order to ensure that policies will be implemented as developed to achieve optimal goals and objectives for S & T within the Sector.
- 12. Maintains a comprehensive, expert knowledge of Sector policies, programs, issues, activities, trends and developments, in order to ensure the effective direction of, development of, and refinement of projects, to allow for the initiation of proposals for projects, to ensure effective utilization of outputs within the Sector concerned and to ensure that effective leadership in relation to continuing objectives is provided to project teams, input areas and user areas.
- 13. Manages personnel and other project resources involving such matters as input into personnel selection, hiring, assessment and development, to meet effectiveness and efficiency criteria for projects.

DISTINGUISHING CHARACTERISTICS

Project Directors at the SX-1 level report to the Assistant Secretary of the Branch for policy formulation, approval and other policy development direction, and report to the General-Director of the Projects Division for administration and operations purposes. The work requires a comprehensive knowledge of S&T Sector policies, programs and activities as well as related subject matter disciplines required for the development of and research into policy and program fields within the Sector. The work also requires a comprehensive knowledge of research development and analysis theories, methods and techniques to ensure that TYPE B Project work is effectively carried out. Knowledge of management techniques sufficient to direct the work of project teams is also required.

The work requires extensive planning and co-ordination responsibilities in relation to: directing TYPE B Projects and sub-projects of major projects as well as directing the initiation phase of other types of projects of the Division; the development of TYPE B Project plans, proposals, strategies and methods for performing project operations; the co-ordination of project operations for TYPE B Project of the Division and in other Divisions of the MOSST matrix; the development of policy papers, reports and proposals resulting from project work; the co-ordination of projects involving one or two external areas within the S & T Sector; the planning and participating in liaison, advisory, consultative and co-ordinative activities and services to other MOSST areas, other Departments and Agencies and external areas; and, participating, as a senior member, in the planning and co-ordination of projects as well as in the operation of such projects, involving external areas for the successful completion of projects. Accordingly, planning and coordination responsibilities are complex, extensive and require considerable judgement, initiative, tact, discretion and creativity for their successful completion. As well, planning and co-ordination responsibilities will have a substantive effect on the successful attainment of S & T goals and objectives, within a Sector, on a national basis.

Decisions and effective recommendations will affect the successful completion of TYPE B Projects of the Division and Ministry, and accordingly, will affect the effectiveness, efficiency, content and type of Sector S & T policies, programs and initiatives They will also affect, on an occasional basis, outputs therein. of projects conducted on a co-ordinated basis with other Departments and Agencies within a specific policy field. Decisions and recommendations will, therefore, affect the success of policies and program initiatives developed from projects as well as the resources utilized for the implementation and operation of those policies and programs within an S & T Sector. As well, decisions and recommendations will indirectly affect the resources utilized in other S & T Sectors, which must respond to policy and program initiatives developed as a result of projects undertaken. Such

II-117

resources total billions of dollars per annum and affect the social, economic and related spheres in Canada. The position will also affect the utilization of Division resources through the management of such resources for the duration of projects.

The position undertakes contacts at the ADM and senior executive and officer levels of other Departments and Agencies, the TBS, PCO and a variety of external areas (i.e. provinces, other jurisdictions, private sector), primarily as a representative of the Division and MOSST, but on occasion, as a representative of the Canadian Government, to participate in and co-ordinate projects, develop contacts for project completion, make formal presentations and promote project work and related policy outputs. POSITION PROFILES AS - GROUP

3.

1

5

1

1

1

II-119

POSITION PROFILE AS-7 POLICY ADVISOR

.

3. A

II-120

SUMMARY OF DUTIES:

Under the general direction of the Project Director, and the administrative direction of the General-Director, Projects Division, (SX-2), identifies Science and Technology policy problem and opportunity areas and participates in the development of policy proposals; participates in the preparation of policy project proposals and develops proposals for TYPE C and D Projects; plans, organizes, tasks and co-ordinates the work of specialized project teams and manages teams utilized in TYPE C or D Projects; develops methodologies, techniques and procedures to meet Project requirements; develops comprehensive definitions of issues, policy options and consequences of such options; provides expert liaison, advisory, consultation, negotiation and other services to senior officials and officers of MOSST and external areas; conducts complex and specialized research, studies and analyses; consolidates research, studies, analysis, evaluation, and other materials into effective project reports and recommendations; and, performs other duties.

MAJOR RESPONSIBILITIES:

- 1. Identifies Science and Technology (S&T) policy problem areas and opportunity areas for policy development, and participates in the development of policy proposals and revisions to current policies, including implementation procedures, and policy assessment criteria, based on specialized examinations of sector activities, policies, requirements, studies, research, feedback from sector areas, discussions, consultations and other analysis and evaluations conducted by the incumbent, by project teams in the Branch, and by other areas, internal or external to the Government, which utilize or inter-relate with the Branch.
- 2. Participates in the preparation of policy project proposals, develops proposals for small projects or for segments of large projects, undertakes evaluations, analyses and activities required for the development of project master plans, discusses overall project requirements with the Project Director, other project Policy Advisors, and Policy Analysts and develops project operations plans to effectively undertake projects or co-ordinate project teams working on small projects.
- 3. Plans, organizes, tasks, and co-ordinates the work of specialized project teams and manages such teams for small projects, which involves the development of guidelines, priorities, schedules and other parameters for work within master plans, the making of initial contacts inside and outside the Public Service to be utilized by members of the project team for obtaining information and advice, the managing of project resources, or segments thereof, and the evaluation of project progress for small projects and segments of larger projects.
- 4. Determines appropriate methodologies, procedures and techniques to meet project goals and objectives based on comprehensive research, evaluation, discussion, consultation, liaison and development work involving Project Directors, other Policy Adivsors, other areas of the Ministry, other departments and agencies, other levels of government, academic institutions and private sector areas, in order to ensure that projects can be effectively carried out.
- 5. Attends meetings of the Project Management Committee, (PMC) upon request, to provide specialized advice on C and D TYPE Projects or segments of larger projects.
- 6. Develops comprehensive and precise definitions of issues, policy options and consequences of various options, in order to effectively orient project work, to evaluate project progress, and to assess the viability of various courses of action open under various options, and reports on and discuss the progress of studies and TYPE C & D Projects, including proposed changes to the resourcing and/or timing, with the Project Director, the Head, PMC Secretariat, and other interested Ministry officials.
- 7. Provides expert, specialist liaison, advisory, consultation,

co-ordination and support services to senior officials inside and outside the Government for purposes such as providing expert input to various projects, developing information flows and exchanges, discussing problems and issues relating to projects, utilizing consultants, attending and/or representing the Branch, the Ministry, and on occasion, Government of Canada, at various national and international conferences, committees, etc., and obtaining feedback concerning projects.

- 8. Consolidates studies, research, analysis, evaluations, liaison inputs, feedback and other materials of the projects, prepares and analyzes project reports, edits final reports for TYPE C and D Projects and assesses the effectiveness and efficiency potentials of recommendations and proposals contained in reports.
- 9. Conducts, as a member of a project team, complex and specialized studies, research and analysis concerning various segments of large projects, which involves discussions with the Project Director, other Policy Advisors, and Policy Analysts, assessment of roles provided or expected, determination of priorities and other variables, development of information flows and exchanges, evaluation of information and data and, in more complex areas, the development of new methods and techniques required to meet specialized segment goals and objectives.
- 10. Participates in the preparation and provision of policy proposals for Cabinet or Ministerial approval, either directly for C and D TYPE Projects or in consolidation activities for larger projects, and discusses the feedback received on proposals resulting from screening, analysis and examination processes of the PMC Secretariat, Minister and Cabinet.
- 11. Directs the work of Policy Analysts assigned during various C and D TYPE Projects and for various segments of large projects.
- 12. Participates, with the Project Director, in the provision of liaison services to the policy implementation agency responsible for implementing approved policies, to provide specialized advice concerning policies, policy segments and their impacts, their design and operation potentials, their expected returns and benefits and other variables, in order to ensure the most effective utilization and implementation of policies that is possible.
- 13. Maintains a good knowledge of sector area policies, programs, issues, activities and developments, as well as a comprehensive, expert knowledge of a specialized field therein, in order to ensure effective planning, organization and co-ordination of projects and segments of projects, to initiate proposals for C and D TYPE Projects and to ensure that policy outputs resulting from projects will be optimally efficient and effective in relation to the Branch and the Ministry's goals and objectives.

DISTINGUISHING CHARACTERISTICS:

Policy Advisors at the AS-7 level require highly specialized knowledge in a number of specific Science and Technology fields, gained through systematic study and analysis within specialized fields in a number of disciplines. A comprehensive knowledge of Science and Technology policies, programs, activities and operations within a major sector is required as is a good knowledge of research, analysis and development methodologies appropriate to the sector and related policy and program development activities therein. The ability to undertake activities and operations involving the meeting of very general objectives, under constantly changing conditions and which require the utilization of significant creativity is necessary in planning, developing and changing operations. The position also requires the ability to develop projects, plans and proposals, operational and work segmentation plans, approaches to the resolution of highly complex problems, plans for effective research and study into general problem areas involving a number of disciplines and other project related activities to effectively carry out the work parameters and characteristics outlined for a Policy Advisor at the AS-7 level. The position also requires experience in comprehensive analysis of inter-relationships and trends in a number of fields and in related TYPE A and TYPE B Projects.

Effective decisions and recommendations are made to Project Directors (SX-1 and SX-2) in the following general areas; managing small projects (and related resources - usually C & D Projects) as well as phases of A & B TYPE Projects (usually Phase II and occasionally Phase III) which require significant planning, development and organization of activities; formulating comprehensive plans in such areas as methods development for complex project phases, segments and activities, work segmentation (C&D overall and phase and segment approaches in B and occasionally A), project team managment, liaison and advisory services (overall for C&D, Phase II and III in B usually), methods of evaluation for project progress and outputs, positions for meetings and working groups, and methods of consolidation of project (C&D) or phase work, etc.; initiating activities in relation to the identification of Science and Technology problem and opportunity areas, the development of project proposals (C&D TYPES), the conduct of highly complex analysis within projects of all types, the development of effective primary and final outputs in projects (B, C&D), etc., and, in undertaking the most complex analysis in all types of Projects (either directly as in A & B Projects or as the project leader in C & D Projects). Effective decisions and recommendations must respond to and anticipate changing conditions.

Decisions and recommendations will affect the successful completion of projects, the effective utilization of resources for projects, the effectiveness of policy and program outputs and effectiveness of relations with external areas. Decisions and recommendations will also affect the success of policies in meeting Government and MOSST objectives, the effectiveness of overall policy initiatives and Science and Technology activities in Canada as well as the attainment of effective, co-ordinated Science and Technology policy capabilities to meet both government and private sector S & T requirements. Decisions will also have an indirect effect upon the utilization of billions of dollars applied to Science and Technology activities in Canada. Decisions and recommendations involve the exercise of a high degree of judgement, initiative and discretion particularly those involving policy and program development, project development (B,C,D primarily), the management of project teams (all types of projects), and the leadership of project phases.

The position involves contacts with senior officials and officers in the Ministry, officials of other Departments and Agencies, other levels of government, industry, the private sector and/or other countries, primarily as a representative of the Ministry to develop information channels; to provide extensive liaison and advisory services concerning a number of policy and program fields as well as related discipline therein as an expert within these fields and disciplines; to participate in working groups and task forces as a senior member; and, to represent the Ministry at national and international conferences, committees, and meetings.

Policy Advisors at the AS-7 level supervise intermediate level Analysts (AS-5, AS-4, AS-3), as projects require.

II-125

POSITION PROFILE

AS-6 POLICY ADVISOR

3. В

SUMMARY OF DUTIES:

Under the general direction of the Project Director, and the administrative direction of the General-Director, Projects Division, (SX-2), identifies Science and Technology policy problem and opportunity areas and participates in the development of policy proposals; participates in the preparation of policy project proposals and develops proposals for TYPE D Projects; plans, organizes, tasks and co-ordinates the work of small project teams and manages teams for TYPE D Projects; develops methodologies, techniques and procedures to meet project requirements; develops comprehensive definitions of issues, policy options, and consequences of such options; provides expert liaison, advisory, consultation, negotiation and other services to senior officials and officers of MOSST and external areas; conducts complex research, studies and analyses; consolidates research, studies, analyses, evaluations and other materials into project reports and recommendations; and, performs other duties.

MAJOR RESPONSIBILITIES:

- 1. Identifies Science and Technology (S&T) policy problem areas and opportunity areas for policy development, and participates in the development of policy proposals and revisions to current policies, including implementation procedures, and policy assessment criteria, based on specialized examinations of sector activities, policies, requirements, studies, research, feedback from sector areas, discussions, consultations and other analysis and evaluations conducted by the incumbent, by project teams in the Branch, and by other areas, internal or external to the Government, which utilize or inter-relate with the Branch.
- 2. Participates in the preparation of policy project proposals, develops proposals for TYPE C or D Projects or for segments of large projects, undertakes evaluations, analyses and activities required for the development of project master plans, discusses overall project requirements with the Project Director, other project Policy Advisors, and Policy Analysts, and develops project operations plans to effectively undertake projects or co-ordinate project teams working on TYPE C or D Projects.
- 3. Plans, organizes, tasks, and co-ordinates the work of specialized project teams and manages such teams for D Projects, which involves the development of guidelines, priorities, schedules and other parameters for work within master plans, the making of initial contacts inside and outside the Public Service to be utilized by members of the project team for obtaining information and advice, the managing of project resources, or segments thereof, and the evaluation of project progress for TYPE D Projects and segments of larger projects.
- 4. Determines appropriate methodologies, procedures and techniques to meet project goals and objectives based on comprehensive research, evaluation, discussion, consultation, liaison and development work involving Project Directors, other Policy Advisors, other areas of the Ministry, other departments and agencies, other levels of government, academic institutions and private sector areas, in order to ensure that projects can be effectively carried out.
- 5. Attends meetings of the Project Management Committee (PMC) upon request, to provide specialized advice on D TYPE Projects or segments of larger projects.
- 6. Develops comprehensive and precise definitions of issues, policy options and consequences of various options, in order to effectively orient project work, to evaluate project progress, and to assess the viability of various courses of action open under various options, and reports on and discusses the progress of studies and TYPE D Projects, including proposed changes to the resourcing and/or timing, with the Project Director, the Director, PMC Secretariat, and other interested Ministry officials.

- 7. Provides expert, specialist liaison, advisory, consultation, co-ordination and support services to senior officials inside and outside the Government for purposes such as providing expert input to various projects, developing information flows and exchanges, discussing problems and issues relating to projects, utilizing consultants, attending and/or representing the Branch, the Ministry, and on occasion, Government of Canada, at various national and international conferences, committees, etc., and obtaining feedback concerning projects.
- 8. Consolidates studies, research, analysis, evaluations, liaison inputs, feedback and other materials of the projects, prepares and analyzes project reports, edits final reports for D TYPE Projects and assesses the effectiveness and efficiency potentials of recommendations and proposals contained in reports.
- 9. Conducts, as a member of a project team, complex and specialized studies, research and analysis concerning various segments of large projects, which involves discussions with the Project Director, other Policy Advisors, and Policy Analysts, assessment of roles provided or expected, determination of priorities and other variables, development of information flows and exchanges, evaluation of information and data and, in more complex areas, the development of new methods and techniques required to meet specialized segment goals and objectives.
- 10. Participates in the preparation and provision of policy proposals for Cabinet or Ministerial approval, either directly for D TYPE Projects or in consolidation activities for larger projects, and discusses the feedback received on proposals resulting from screening, analysis and examination processes of the PMC Secretariat, Minister and Cabinet.
- 11. Directs the work of Policy Analysts assigned during various TYPE D Projects and for various segments of large projects.
- 12. Participates, with the Project Director, in the provision of liaison services to the policy implementation agency responsible for implementing approved policies, to provide specialized advice concerning policies, policy segments and their impacts, their design and operation potentials, their expected returns and benefits and other variables, in order to ensure the most effective utilization and implementation of policies that is possible.
- 13. Maintains a good knowledge of sector area policies, programs, issues, activities and development, as well as a comprehensive expert knowledge of a specialized field therein, in order to ensure effective planning, organization and co-ordination of projects and segments of projects, to initiate proposals for Projects and to ensure that policy outputs resulting from projects will be optimally efficient and effective in relation to the Branch and the Ministry's goals and objectives.

DISTINGUISHING CHARACTERISTICS:

Policy Advisors at the AS-6 level require highly specialized knowledge in several specific Science and Technology fields, gained through systematic study and analyses within specialized fields in a number of disciplines. A comprehensive knowledge of Science and Technology policies, programs, activities and operations within a major sector is required as is a knowledge of research, analysis and development methodologies appropriate to the sector and related policy and program activities therein. The ability to undertake activities and operations within very general parameters and under changing conditions and which require the utilization of significant initiative is necessary in planning and undertaking activities. The position also requires the ability to develop project plans and proposals, operations and work segmentation plans (D Project and phases of C), approaches to the resolution of complex problems, plans for effective analysis and study of specific and specialized program and policy areas, and other project related activities to effectively carry out the parameters and characteristics outlined for a Policy Advisor at the AS-6 level. The position also requires experience in analysis of trends, developments and inter-relationships which occur in several fields and disciplines.

Effective decisions and recommendations are made to Project Directors (SX-1 and SX-2) in the following general areas: managing TYPE D Project teams (2-3 people) at the intermediate and junior levels and resources (D Projects and phases in C TYPE), which require some planning of activities; formulating plans in such areas as method development for complex segments of projects, work segmentation (D TYPE Projects overall, phases of C TYPE, and segments of B), D project team management, liaison and advisory services (D overall, phases of C, segments of B occasionally, C overall for development), methods of evaluation for C and D TYPE Projects and phase outputs, methods of consolidation and presentation of work results and methods of conducting complex analytical studies; initiating activities in relation to the identification of Science and Technology problem and opportunity areas, the conduct of complex analysis within projects of all types, the development of effective final outputs in projects (D, occasionally C), the development of project proposals (D TYPE), etc.; and in undertaking complex analysis in B, C, and D Projects and more primary analysis in A TYPE Projects (as a project leader in D Projects). Recommendations will be made to effect changes in programs and the implication of such courses of action are often difficult to foresee.

Decisions and recommendations will affect the successful completion of Projects (through leadership or major contribution to phases) and will affect the development of effective outputs in all types of projects due to the significance of analytical contribuitions made therein. Recommendations and decisions will also affect the management of resources (D Projects and phases in C TYPE), the effectiveness of policy and program outputs (C&D usually) and the effectiveness of reactions with external areas. Decisions made will ultimately affect the success of policies within a Sector in meeting MOSST objectives, the effectiveness of overall initiatives within a major policy field and the effectiveness of related Science and Technology activities in Canada. Decisions will also affect the utilization of millions of dollars of resources applied through Science and Technology policies and related activities within a major policy Sector in Canada. All such decisions and recommendations require judgement, initiative and discretion. In general, the impact of decisions and recommendations within project parameters will be major in nature.

The position involves contact with senior MOSST officers and officials up to the Director level, and officials of other Departments and Agencies, other levels of government, industry, the private sector and/or other countries, primarily as a Branch representative to develop information channels, to provide liaison and advisory services concerning specific policy and program fields as well as related disciplines therein as an expert within these fields and disciplines, to participate in working groups and task forces; and, to represent the Branch, as a working member, on committees.

POSITION PROFILE

AS-5 POLICY ANALYST

3. C

SUMMARY OF DUTIES:

Under the direction of the Project Director or Policy Advisor, and the administrative direction of the General-Director, Projects Division, (SX-2), identifies Science and Technology policy problem and opportunity areas; conducts, as a member of a project team, complex studies concerning various segments of projects; provides extensive support to the Project Directors and Policy Advisors in carrying out project responsibilities; prepares segments of S & T policy working papers and participates in the development of overall project papers; participates in the preparation of project final reports; liaises with and advises officials and officers of MOSST and other areas; and, performs other duties.

MAJOR RESPONSIBILITIES:

- 1. Identifies Science and Technology policy, problem and opportunity areas based on examinations of specialized areas of sector activity, previous research and analysis, discussions with other Policy Analysts and officers of other departments, agencies and areas, feedback from previous project work and evaluations conducted by the incumbent.
- 2. Conducts, as a member of a project team, complex and specialized studies, research and analysis concerning various segments of projects, which involves discussions with the Project Director, Policy Advisors, and other Policy Analysts, assessment of roles provided or expected, determination of priorities and other variables, development of information flows and exchanges, evaluation of information and data and, in more complex areas, the development of new methods and techniques required to meet specialized segment goals and objectives.
- 3. Provides extensive support to the Project Director and Policy Advisors in carrying out their work, such as obtaining, analyzing and commenting upon data and information required for such things as policy option analyses and formulation of alternative policy structures.
- 4. Participates in the definition of issues, policy options and consequences of various options, through the provision of expert analysis, development and evaluation services within a specialized field of operations.
- 5. Prepares segments of S & T policy working papers and participates in the development of overall papers through the provision of expert inputs and analyses within the incumbent's specialized fields, and concerning the inter-relationships and interdependencies of various specialized inputs.
- 6. Obtains, evaluates and consolidates feedback from interested and affected parties concerning the specialized project segments, which involves extensive liaison and consultation within the Ministry, federal government and external areas, with colleagues, associates and, on occasion, senior level officials.
- 7. Participates in the preparation of project final reports by evaluating inputs relating to the incumbent's areas of specialization, in order to ensure that the final report accurately reflects these inputs.
- 8. Liaises with various policy implementation areas to develop information and data flows concerning the effectiveness and efficiency of policy implementations within the incumbent's specialized fields, evaluates the data and provides recommendations to Project Directors and Policy Advisors concerning performance parameters and requirements for policy changes to meet the original policy intent.

9. Maintains a good knowledge of sector area policies, programs, issues, activities and developments, as well as an expert knowledge of specialist areas therein, in order to ensure the provision of effective study research, analysis, evaluation, support and development inputs to overall project operations.

DISTINGUISHING CHARACTERISTICS:

Policy Analysts at the AS-5 level require a comprehensive and specialized knowledge of the principles and concepts of two or more major policy fields and related disciplines therein for application to specific Sector problems in Science and Technology, which involves complex inter-relationships and inter-dependencies. The work also requires a good knowledge of specialized analysis, research and evaluation methods and techniques for utilization within project segment work. Such knowledge is gained through continuing evaluation and study of trends and developments within the specialized fields as well as through related work experience within a number of project and program fields.

The ability to undertake analytical activities involving the meeting of specified objectives, within general parameters and changing analyses conditions and which requires the exercise of initiative is necessary in planning and undertaking activities within phases and segments. The position also requires the ability to develop phase plans (D TYPE Projects), segment plans, operational plans and related work. The ability to develop plans and methods for undertaking specialized analysis, related information development work and for effective liaison is also required to effectively meet the work parameters and characteristics outlined for Policy Analysts at the AS-5 level.

Decisions and recommendations are made to Policy Advisors, AS-7, and on occasion to Project Directors, SX-1, (i.e. when leading phases, or segments in B TYPE or C TYPE Projects), in the following general areas: planning methods for meeting segment responsibilities (work plans), work phase plans (D TYPE Projects), liaison and advisory services (phases of D, segments of B, C), methods analysis (for segment work and phases of D), etc.; initiating activities in relation to Phase, Segments of Projects, the development of work approaches (segments usually, phases in D), the conduct of specialized analyses within projects, etc.; developing advisory, liaison and information contacts; and, in undertaking complex analyses within phases and segments of all types of projects, with A and B Projects involving usually primary level analyses. The implications of various courses of action recommended during projects will usually be difficult to foresee.

Decisions and recommendations will affect the successful completion of phases of C and D Projects and segments of A and B Projects. Accordingly, the efficiency and effectiveness of overall project recommendations will be affected as will resultant policy and program developments within the sphere of project operations. Decisions will also affect the management of junior level resources for project phases. Decisions made will ultimately affect the successful formulation of policy initiatives, strategies and actual policy content, within two or more policy fields of a major Science and Technology Sector.

II-136

Indirectly, the effectiveness of policy in these areas in meeting MOSST objectives and the related effectiveness of activities resulting from use of MOSST policy outputs, will be affected, particularly when information and analysis outputs of the AS-5 Analyst positions are not comprehensive or fully valid in relation to overall policy use requirements upon which policies are formulated. Accordingly, decisions can affect the efficiency with which resources are utilized within a major policy sphere in Canada in Science and Technology fields. In general, the impact of decisions and recommendations within project parameters will be significant and require the exercise of a significant degree of judgement, initiative and discretion.

The position involves contacts with senior operational officers in MOSST, operational and professional level personnel of other Departments and Agencies and areas external to the Public Service, primarily to develop information flows and exchanges, to participate in technical working and discussion groups, to negotiate for information and to provide expert specialized advice to such officers and officials relating to project work being undertaken.

Policy Analysts at the AS-5 level supervise AS-3 development level personnel on TYPE D Projects (within phases of D Projects) as required. POSITION PROFILE AS-4 POLICY ANALYST

3. D

SUMMARY OF DUTIES:

Under the direction of the Project Director or Policy Advisor, and the administrative director of the General-Director, Projects Division, (SX-2), identifies Science and Technolgoy policy problem and opportunity areas; conducts, as a member of a project team, studies concerning various segments of projects; provides extensive support to the Project Directors and Policy Advisors in carrying out project responsibilities; prepares segments of S & T working papers and participates in the development of overall project papers; participates in the preparation of final report materials; liaises with officials of the Ministry and external areas; and, performs other duties.

MAJOR RESPONSIBILITIES

- Identifies Science and Technology policy problem and opportunity areas based on examinations of specialized areas of sector activity, previous research and analysis, discussions with other Policy Analysts and officers of other departments, agencies and areas, feedback from previous project work and evaluations conducted by the incumbent.
- 2. Conducts, as a member of a project team, complex and specialized studies, research and analysis concerning various segments of projects, which involves discussions with the Project Director, Policy Advisors, and other Policy Analysts, assessment of roles provided or expected, determination of priorities and other variables, development of information flows and exchanges, evaluation of information and data and, in more complex areas, the development of new methods and techniques required to meet specialized segment goals and objectives.
- 3. Provides extensive support to the Project Director and Policy Advisors in carrying out their work, such as obtaining, analyzing and commenting upon data and information required for such things as policy option analyses and formulation of alternative policy structures.
- 4. Participates in the definition of issues, policy options and consequences of various options, through the provision of expert analysis, development and evaluation services within a specialized field of operations.
- 5. Prepares segments of S&T policy working papers and participates in the development of overall papers through the provision of expert inputs and analyses within the incumbent's specialized fields, and concerning the inter-relationships and interdependencies of various specialized inputs.
- 6. Obtains, evaluates and consolidates feedback from interested and affected parties concerning the specialized project segments, which involves extensive liaison and consultation within the Ministry, federal government and external areas, with colleagues, associates and, on occasion, senior level officials.
- 7. Participates in the preparation of project final reports by evaluating inputs relating to the incumbent's areas of specialization, in order to ensure that the final report accurately reflects these inputs.
- 8. Liaises with various policy implementation areas to develop information and data flows concerning the effectiveness and efficiency of policy implementations within the incumbent's specialized fields, evaluates the data and provides recommendations to Project Directors and Policy Advisors concerning performance parameters and requirements for policy changes to meet original policy intent.

9. Maintains a knowledge of sector area policies, programs, issues, activities and developments, as well as an expert knowledge of specialist areas therein, in order to ensure the provision of effective study research, analysis, evaluation, support and development inputs to overall project operations.

DISTINGUISHING CHARACTERISTICS:

Policy Analysts at the AS-4 level requires a specialized knowledge of one major policy field and its related disciplines along with a good general knowledge of other fields for applications to specific Sector problems in Science and Technology, which involves complex inter-relationships and inter-dependencies. The work also requires a good knowledge of specialized analysis, research and evaluation methods and techniques for utilization within project segment work. Such knowledge is gained through continuing evaluation and study of trends and developments within the specialized field and other fields as well as through related work experience within a number of projects and program fields.

The ability to undertake analytical activities involving the meeting of specified objectives, within general program parameters and changing analyses conditions and which require the exercise of initiative is necessary in planning and undertaking activities within programs. The position also requires the ability to develop segment plans and related work and operations plans. The ability to develop plans for undertaking specialized analysis, related information work and effective liaison and occasionally to develop direct program recommendations as a result of segment work in TYPE D Projects, is also required to effectively carry out the parameters and characteristics outlined for Policy Analysts at the AS-4 level.

Decisions and recommendations are made to Policy Advisors at the AS-7 or AS-6 level, in the following general areas: planning methods for meeting segment responsibilities, work plans for segments, work phase plans (occasional/developmental), liaison and advisory services (segments of projects), methods of analysis (segment work), methods for the effective correlation and integration of work results, and methods for presenting work results and utilizing them within phase output plans, initiating activities in relation to segments of projects and for project ideas, as well as developing segment work approaches conducting specialized analysis within projects and developing effective recommendations for segment work (i.e. such activities are usually the type which are in response to directives from TYPE B Project personnel and in response to stipulated objectives, and requirements for project segments and phases); undertaking complex analysis within phases and segments of projects with B Projects involving primary level analysis, and, in developing advisory liaison and information contacts. The implications of various courses of action recommended during projects will usually be difficult to foresee.

Decisions and recommendations will affect specific program and policy development potentials, as a result of the effectiveness of background, primary and advanced analysis performed. Decisions made will ultimately effect the successful formulation of policy initiatives, strategies and actual policy content within one policy field of a major Science and Technology Sector. Indirectly, the effectiveness of policy in this area in meeting MOSST objectives and the related effectiveness of activities resulting from use of Sector policy outputs, will be affected, particularly when information and analysis outputs of the AS-4 positions are not comprehensive or fully valid in relation to overall policy use requirements upon which policies are formulated. Accordingly, decisions can effect the efficiency with which resources are utilized within one policy sphere in a Sector of a Science and Technology field. In general, the impact of decisions and recommendations within segment parameters will be significant and require the exercise of a significant degree of judgement, initiative and discretion.

111

The position involves contacts with senior operational officers in MOSST, operational and professional level personnel of other Departments and Agencies and areas external to the Public Service, primarily to develop information flows and exchanges, to participate in technical working and discussion groups, to negotiate for information and to provide expert advice, in one specialized field, to such officers and officials relating to project work being undertaken.

Policy Analysts at the AS-4 level are not required to supervise other personnel.

POSITION PROFILES

非社

1

I

1

1

4.

ES GROUP

POSITION PROFILE

ES-5 PROJECT DIRECTOR

E9-3 PRODECT

4. A

.

.

.

.

SUMMARY OF DUTIES:

Under the general direction of the Assistant Secretary, SX-3, plans, organizes and directs the development, implementation and operation of major projects of the Branch and Ministry, involving projects with some or all of the following characteristics: comprehensive economics, statistics and related quantitative fields content with associated requirements for the application of economics, econometrics, sociology and related principles, practices, theories, methods and processes for the successful completion of projects, and formulation of outputs which will affect the economic and sociological aspects of policies and programs within an S & T Sector; involvement of more than one Branch or of one MOSST Branch and several external areas; highest project priority assignment (by the PMC or Cabinet); impact on a Sector wide basis and on the economy of Canada within the S & T Sector involved; highest political, social and economic sensitivity; involvement of other Departments and Agencies required for the completion of projects; Cabinet initiated; high social, economic and political impact and priority; involvement of the most senior government and private sector officials; and, major policy and program initiatives in the S & T Sector as final project outputs; participates in the formulation, promulgation, promotion and implementation of major policy and program proposals within an S & T Sector; initiates and undertakes a wide variety of liaison, advisory, consultative, and co-ordinative activities and services, and, manages major project resources for the duration of projects.

II -145

MAJOR RESPONSIBILITIES:

- Develops Science and Technology policy proposals and revisions to current policies, in fields which involve a significant economic and/or sociological content and impact, based on comprehensive examinations of sector activities, policies, requirements, studies, research, feedback from sector areas, discussions, consultations, identification of economic and/or sociological problems and opportunities in S & T policy and other specialized economic, econometric, sociological and related area evaluations and analyses conducted within the Branch, or in other areas internal or external to the Government, which utilize outputs from or inter-relate with the Branch.
- 2. Prepares policy project proposals concerning sector area requirements, develops project master plans, discusses overall project requirements with the Project Management Committee Secretariat, Assistant-Secretaries and other Project Directors and develops implementation plans and procedures for S & T economic, econometric and/or sociological projects for policy development and related policy outputs.
- 3. Organizes, tasks and directs major project teams, which involves the assessment of project requirements, the development and implementation of plans, priorities, schedules and other parameters for project teams, the making of initial contacts inside and outside of the Public Service to be utilized by members of project teams for obtaining information and advice, the managing of project resources (financial, personnel, seconded personnel, consultants, etc.) and, the planning, organizing and co-ordinating of major projects and phases of extremely large projects, handled by the Assistant-Secretary.
- 4. Attends meetings of the PMC, as requested by the Assistant-Secretary, to provide specialized, professional advice on major projects concerned with the development of S & T policies and proposals with major implications in economics and related fields.
- 5. Develops and co-ordinates the development of ways and means to meet project goals and objectives, which involves the formulation of methodologies, procedures and techniques (e.g. statistical models, forecasting, econometric models, economic evaluation methods, etc.) required for the definition of issues, policy options and consequences.
- Reports on and discusses project progress to the PMC Secretariat, regarding relationships to the Master Plan, and, proposes changes in resourcing and/or timing as necessary to reach defined objectives.

- 7. Provides expert advice, on request, within or outside the Ministry, in the incumbent's fields of speciality (i.e. within economics, statistics, econometrics and related sub-disciplines vis-a-vis a Sector of S & T).
- 8. Directs and participates in extensive liaison, consulatation, co-ordination and advisory services for purposes such as advising senior level officials inside the Government and in other areas concerning projects, setting up information flows and exchanges, hiring consultants and specialists for major projects, attending and/or representing the Ministry, and, on occasion, the Government of Canada, at various national and international conferences and committees concerning sector outputs and impacts thereof, consulting interested parties concerning project working papers, obtaining and co-ordinating the evaluation and discussion of feedback from interested parties, etc.,
- 9. Directs the consolidation of research, analyses, evaluation, liaison inputs, feedback and other materials of the project, and controls the preparation, analysis and editing of final reports and related policy and program recommendations.
- 10. Provides the Assistant Secretary with advice on and support in the provision and preparation of major policy proposals for Ministerial or Cabinet approval and discusses the proposals and related materials with the PMC as required, to ensure that proposals and materials can be effectively screened, scheduled, distributed, examined and approved.
- 11. Prepares and submits to the PMC Secretariat, the project review and completion report following examination of proposals and the approval of policy proposals by the Minister or Cabinet.
- 12. Directs and participates in liaison with the policy implementation Department, Agency or other areas involved to provide expert professional advice concerning policies and their impact, their design and operation potentials, their expected economic and other benefits and returns, and other variables, to ensure that policies will be implemented as developed to achieve optimal goals and objectives for S & T.
- 13. Maintains a comprehensive, expert knowledge of economics, econometrics and/or other disciplines, of the theories, principles, practices and methods utilized in economics and of the sector policies, programs issues, activities, trends and developments, to ensure the effective utilization of outputs within the Sector concerned and to ensure that effective leadership in relation to continuing objectives is provided to project teams, input areas and user areas.
- 14. Manages personnel and other major project resources for the duration of projects involving such matters as input into personnel selection, hiring, assessment and development, to meet effectiveness and efficiency criteria for major projects

and phases of extremely large projects.

DISTINGUISHING CHARACTERISTICS:

Project Directors at the ES-5 level require a comprehensive knowledge of economics, econometrics, statistics and related subject matter theories, principles, practices, methods and techniques as well as a comprehensive knowledge of Government and Sector S & T policies, programs, services and activities. A comprehensive knowledge of trends and developments in the above mentioned areas is also required to effectively direct, develop, refine and co-ordinate major projects (with a substantive economics, econometrics, statistics or sociology content) within the Ministry Matrix operation areas. The work also requires an expert knowledge of research, analysis and development theories and their application to major project work.

The work requires comprehensive planning and co-ordination requirements in relation to: directing major projects; the developing of major project plans, proposals, strategies and organization as well as related approaches, methods and techniques to handle extremely complex assignments with a large number of variables and inter-relationships; the operation of major projects and the managing of project resources; the initiation of major project proposals and the identification and definition of the objectives of projects; the development of diverse, complex and unique project outputs and related policy and program proposals and papers based upon the analysis and interpretation of project findings and the formulation of authoritative and final conclusions; the directing of inter-Branch major projects and the related development of such projects involving the definition of highly complex problems and the development of detailed analyses and hypotheses; the planning and directing of comprehensive professional liaison, advisory, co-ordination and consultation activities and services; initiating contacts with the most senior officials of other Departments, Agencies, and non-government areas concerning major projects and their operations; and, directing co-ordinated inter-Departmental policy and program projects in major Sector areas with substantive economic and social implications. Accordingly, planning, co-ordination, professional and management responsibilities are massive, complex and fundamental to the success of the matrix operations and related major projects of MOSST as well as to the development of effective S & T policy and program outputs with significant economic and/or sociological content and impact in relation to one of the major S & T Sectors.

Decisions and recommendations will affect the successful completion of major projects within a Branch, between Branches and between the Branch and a number of external areas. As well, they will affect the type, extent, effectiveness, efficiency and content of overall Sector S & T policies and programs as a result of the outputs of major projects of the Branch as well as of inter-Branch and inter-Departmental projects which are co-ordinated by the position. Accordingly, decisions and recommendations will have a direct and substantive impact on the success of policies and programs developed in meeting MOSST and national objectives for S & T within a Sector as well as on the effectiveness and efficiency with which Sector S & T resources (and the resources of other S & T areas affected by Sector outputs), totalling billions of dollars per annum are expended. As well, the activities undertaken will directly affect the social, economic and related quality of life structures in Canada as a result of more effective S & T policies, programs and their outputs. The position will also affect the utilization of Division resources as required for the effective completion of projects.

The position undertakes contacts at the DM, ADM, and senior executive levels of various Departments and Agencies, Cabinet, TBS, the PCO other levels of government, other jurisdictions and the private sector, primarily as a Branch and Ministry representative and, on occasion, as a representative of the Canadian government, to negotiate for and co-ordinate major projects, develop initial contacts with other areas engaged in project work of a major type, make formal representations and presentations and promote policies and programs developed within the context of major projects.

II-151

POSITION PROFILE ES-4 PROJECT DIRECTOR

.

.

4. B

SUMMARY OF DUTIES:

Under the administrative direction of the General-Director, Projects Division, (SX-2), and the policy direction of the Assistant-Secretary (SX-3), plans, organizes and directs TYPE B Projects of the Branch and Ministry involving areas of work and characteristics comprehensive and substantive economics, statistics, such as: econometrics and/or sociological content within a single large policy field within an S & T Sector, involved with the assessment of policy and related program options, problems, initiatives and impacts (again within the sphere of economics, econometrics and related disciplines); involvement of one MOSST Branch or one Branch with limited external areas (e.g. one or two Deaprtments); usually requires substantial original economics, econometrics, statistical or related research, analysis and development; impact on a major policy sector and the economic and/or social structures therein; high priority assignment; significant resources committment and large size; may require the involvement of an external area for its successful completion (e.g. TBS or PCO); senior MOSST originated or originated by other Central Agencies; single field policy initiatives, strategies and recommendations will be final outputs; may be a significant part of a major project (when the major project is handled by the PMC or Assistant Secretary and when the phase involved is handled as a separate sub-project), etc., plans, organizes and co-ordinates the primary phase of TYPE C Projects when the projects are substantially concerned with economic, econometric, statistical and related materials development; co-ordinates and participates in the provision of intensive professional liaison, advisory and consultative services to senior officials and professional economists of external areas; and, manages project teams for the duration of projects.

MAJOR RESPONSIBILITIES:

- 1. Develops Science and Technology policy proposals and revisions to current policies, within policy areas which involve a significant economic and/or sociological content and impact, including implementation processes and procedures and policy assessment criteria, based on comprehensive examinations of sector activities, policies, requirements, economic and other studies, research, feedback from sector areas, discussions, consultations, identification of economic and/or sociological problems and opportunities in S & T policy and other economic, econometric, statistical and/or sociological analyses and evaluations conducted within the Branch or in other areas, internal or external to the Government, which utilize outputs from or inter-relate with the Branch.
- 2. Prepares policy project proposals concerning sector area requirements, develops project master plans, discusses overall project requirements with Secretary, Project Management Committee Secretariat, Assistant Secretary and other Project Directors and develops implementation plans and procedures for S & T TYPE B Projects (economic, econometric, statistical and/or sociological) for policy development and related policy outputs.
- 3. Directs project teams, which involves the assessment of project requirements, the development and implementation of plans, priorities, schedules and other parameters for project work, the making of initial contacts inside and outside the Public Service to be utilized by members of project teams for obtaining information and advice, the managing of project resources (financial, personnel, seconded, consultant, etc.), and, the planning, organizing and co-ordinating of overall TYPE B Projects with significant economics and related fields content, orientation and impact.
- 4. Attends meetings of the PMC, as requested by the Assistant-Secretary, to provide specialized, professional advice on project work undertaken.
- 5. Develops and co-ordinates the development of ways and means to meet projects goals and objectives, which involves the formulation of methodologies, procedures and techniques required for the definition of issues, options, consequences of policy options and all related research and analyses.
- 6. Reports on and discusses progress to the PMC Secretariat regarding relationships to the Master Plan, and, proposes changes in resourcing and/or timing as necessary to reach defined objectives.
- 7. Provides expert advice, on request, within or outside the Ministry, in the incumbent's fields or speciality (i.e. economic, econometrics, statistics and related sub-disciplines vis-a-vis major policy field of S & T or a Sector of S & T.

- 8. Directs and participates in extensive liaison, consultation co-ordination and advisory services for purposes such as advising senior officials inside the Government and in other areas concerning projects, setting up information flows and exchanges, attending and/or representing the Ministry and, on occasion, the Government of Canada, at various national and international conferences and committees concerned with projects and impacts thereof, consulting interested parties concerning project working papers, obtaining and co-ordinating the evaluation and discussions of feedback from interested parties, etc.
- 9. Directs the consolidation of research, analysis, evaluation, liaison inputs, feedback and other materials of the project, and, controls the preparation, analysis and editing of final reports and related policy and program recommendations from TYPE B Projects.
- 10. Provides the Assistant Secretary with advice on, and support in, the provision and preparation of policy proposals for Ministerial or Cabinet approval and discusses the proposals and related materials with the PMC Secretariat as required to ensure that TYPE B Projects proposals and materials can be effectively screened, scheduled, distributed, examined and approved.
- 11. Directs and participates in liaison with the policy implementation Department, Agency or other areas involved to provide expert and professional advice concerning policies and their impact, their design and operation potentials, their expected economic and other benefits and returns and other variables, to ensure that policies will be implemented as developed to achieve optimal goals and objectives for S & T within the Sector.
- 12. Maintains a comprehensive expert knowledge of economics, econometrics, statistics and/or other disciplines as well as of sector policies, programs, issues, activities, trends and developments, to ensure the effective direction of, development of, and refinement of projects, to allow for the initiation of effective proposals for TYPE B Projects with substantive economic, econometric, statistical and/or other orientation, content, and impact potentials, to ensure the effective utilization of outputs within a Sector and to ensure that effective leadership is provided to project teams, input areas and user areas, in relation to continuing project objectives.
- 13. Manages personnel and other project resources involving such matters as input into personnel selection, hiring, assessment and developments, to meet effectiveness and efficiency criteria for TYPE B Projects.

DISTINGUISHING CHARACTERISTICS:

Project Directors at the ES-4 level report to the Assistant Secretary of the Branch for policy formulation, approval and other policy development direction, and report to the General-Director of the Projects Division for administration and operations purposes. The work requires a comprehensive knowledge of S & T Sector policies, programs and activities as well as economics, econometrics, statistics and/or related subject matter disciplines required for the development of and research into policy and program fields which have a substantive economics content, orientation and impact on S & T The work also requires a comprehensive knowledge of economics Sectors. and related research development and analysis theories, methods and techniques to ensure that TYPE B Project work is effectively carried Knowledge of management techniques sufficient to direct the out. work of project teams is also required.

The work requires extensive planning and co-ordination responsibilities in relation to: directing TYPE B Projects and sub-projects of TYPE A Projects which have substantive economics, econometrics, statistics and/or sociological content as well as directing the initiation phases of other informational projects of the Division; the development of TYPE B Project plans, proposals, strategies and related economic analyses methods for performing project operations; the co-ordination of project operations for TYPE B Projects of the Division and in other Divisions of the MOSST matrix; the development of policy papers, reports and proposals resulting from project work; the co-ordination of economics projects involving one or two external areas within the S & T Sector; the planning and participating in professional liaison, advisory, consultative and co-ordinative activities and services to other MOSST areas, other departments and agencies and external areas; and, participating, as a senior member, in the planning and co-ordination of economics projects as well as in the operation of such projects, involving external areas for the successful completion of projects. Accordingly, planning and co-ordination responsibilities are complex, extensive and require considerable judgement, initiative, tact, discretion, development responsibility and creativity for their successful completion. As well, planning and co-ordination responsibilities will have a substantive effect on the successful attainment of S & T goals and objectives, within a Sector, on a national basis.

Decisions and effective recommendations will affect the successful completion of TYPE B Projects (economics oriented) of the Division and Ministry and accordingly, will affect the effectiveness, efficiency, content and type of Sector S & T policies, programs and initiatives therein. They will also affect, on an occasional basis, outputs of projects with a significant economics content and impact conducted on a co-ordinated basis with other Departments and Agencies within a specific policy field. Decisions and recommendations will, therefore, affect the success of policies and program initiatives developed from projects as well as the resources utilized for the implementation and operation of those policies and programs within an S & T Sector. As well, decisions and recommendations will indirectly affect the resources utilized in other S&T Sectors, which must respond to policy and program initiatives developed as a result of projects undertaken. Such resources total billions of dollars per annum and affect the social, economic and related spheres in Canada. The position will also affect the utilization of Division resources through the management of such resources for the duration of projects.

The position undertakes contacts at the ADM and senior executive officer levels of other Departments and Agencies, the TBS, PCO and a variety of external areas (i.e. provinces, other jurisdictions, private sector), primarily as a representative of the Division and MOSST, but on occasion, as a representative of the Canadian Government, to participate in and co-ordinate economics projects, develop contacts for project completion, make formal presentations and promote project work and related policy outputs. POSITION PROFILE

،دېد دې

•

ES 3 POLICY ADVISOR

4. C

SUMMARY OF DUTIES

Under the general direction of the Project Director and the administrative direction of the General-Director, Projects Division (SX-2), identifies Science and Technology policy problem and opportunity areas and recommends the understanding of various projects; participates in the preparation and development of project proposals and projects; plans, organizes, tasks and co-ordinates the work of TYPE C and D Projects and specialized teams in other projects; develops and utilizes various economics, econometrics, statistics and related area analysis, methods, procedures and techniques for research; provides expert, comprehensive liaison, advisory, consultation, negotiation and related services to senior officials and professionals of the Ministry and external areas; consolidates research and develops project materials and reports; conducts complex research and analyses concerning segments, phases and overall project issues and problems; participates in the development of policy proposals; and performs other duties.

MAJOR RESPONSIBILITIES:

- 1. Identifies Science and Technology (S&T) policy problem areas and opportunity areas for policy development, particularly in areas with a substantive economics orientation and impact and participates in the development of policy proposals and revisions to current policies, including implementation processes and procedures, and policy assessment criteria, based on specialized economic, econometric, statistical and/or sociological examinations of sector activities, policies, requirements, studies, research, feedback from sector areas, discussions, consultations and other analysis and evaluations conducted by the incumbent, by project teams in the Branch, and by other areas, internal or external to the Government, which utilize or inter-relate with the Branch.
- 2. Participates in the preparation of policy project proposals, develops proposals for TYPE D Projects or, for segments of large projects, undertakes economics and related disciplines, evaluations, analyses and activities required for the development of project master plans and methods, discusses overall project requirements with the Project Director, other project Policy Advisors, and Policy Analysts, and develops project operations plans to effectively undertake projects or co-ordinate project teams working on TYPE C or TYPE D Projects.
- 3. Plans, organizes, tasks, and co-ordinates the work of specialized project teams and manages such teams for TYPE C and D Projects, which involves the development of guidelines, priorities, schedules and other parameters for work within master plans, the making of initial contacts inside and outside the Public Service to be utilized by members of the project team for obtaining information and advice, the managing of project resources, or segments thereof, and the evaluation of project swhich will involve economics, econometrics, statistics and related fields analysis for successful completion and formulation of relevant outputs.
- 4. Determines appropriate economics, econometrics, statistics, etc., analysis methodologies, procedures and techniques to meet project goals and objectives based on comprehensive research, evaluation, discussion, consultation, liaison and development work involving Project Directors, other Policy Advisors, other areas of the Ministry, other departments and agencies, other levels of government, academic institutions and private sector areas, in order to ensure that projects can be effectively carried out.
- 5. Attends meetings of the Project Management Committee, (PMC) upon request, to provide specialized economics and related area advice on TYPE C and TYPE D Projects or segments of larger projects.

- 6. Develops comprehensive and precise definitions of economic issues, policy options and consequences of various options, in order to effectively orient project work, to evaluate project progress, and to assess the viability of various courses of action open under various options, and reports on and discuss the progress of studies and projects, including proposed changes to the resourcing and/or timing, with the Project Director, the Secretary, PMC Secretariat, and other interested Ministry officials.
- 7. Provides expert, specialist liaison, advisory, consultation, co-ordination and support services to senior officials inside and outside the Government within economic fields for purposes such as providing expert input to various projects, developing information flows and exchanges, discussing problems and issues relating to projects, utilizing consultants, attending and/or representing the Branch, the Ministry, and on occasion, the Government of Canada, of various national and international conferences, committees, etc., and obtaining feedback concerning projects.
- 8. Consolidates studies, research, analysis, evaluations, liaison inputs, feedback and other materials of the projects, prepares and analyzes project reports, edits final reports for TYPE C and D projects and assesses the effectiveness and efficiency potentials of recommendations and proposals contained in reports.
- 9. Conducts, as a member of a project team, complex and specialized economics studies, research and analysis concerning various segments of large projects, which involves discussions with the Project Director, other Policy Analysts, assessment of roles required or expected, determination of priorities and other variables, development of information flows and exchanges, evaluation of information and data and, in more complex areas, the development of new economic analysis methods and techniques required to meet specialized segment goals and objectives.
- 10. Participates in the preparation and provision of policy proposals for Cabinet or Ministerial approval, either directly for TYPE C and D projects or in consolidation activities for larger projects, and discusses the feedback received on proposals resulting from screening, analysis and examination processes of the PMC Secretariat, Minister and Cabinet.
- 11. Directs the work of Policy Analysts assigned during various TYPE C and D projects and for various segments of large projects.
- 12. Participates, with the Project Director, in the provision of liaison services to the policy implementation agency responsible for implementing approval policies, to provide specialized economics and related fields advice concerning policies, policy segments and their impact, their design and operation potentials, their expected returns and benefits and other variables, in order to ensure the most effective utilization and implementation of policies that is possible.

13. Maintains a good knowledge of sector area policies, programs, issues, activities and developments as well as a comprehensive, expert knowledge of an economics, econometrics and related fields therein, in order to ensure effective planning, organization and co-ordination of projects and segments of projects, to initiate proposals for TYPE C and D Projects and to ensure that policy outputs resulting from projects will be optimally efficient and effective in relation to the Branch and the Ministry's goals and objectives.

DISTINGUISHING CHARACTERISTICS:

Policy Advisors at the ES-3 level require highly specialized knowledge in a number of specific Science and Technology fields, gained through systematic economics, econometrics, statistics and related disciplines analysis within those fields. A comprehensive knowledge of Science and Technology policies, programs, activities, and operations within a major sector is required as is a good knowledge of economics, statistics, econometrics and/or sociology research, analysis and development methodologies appropriate to the sector and related policy and program development activities therein. The ability to undertake activities and operations involving the meeting of very general objectives, under constantly changing conditions and which require the utilization of significant creativity is necessary in planning, developing and changing operations. The position also requires the ability to develop projects, plans and proposals, operational and work segmentation plans, approaches to the resolution of highly complex economics and related fields problems, plans for effective research and study into economic problem areas involving the development, on occasion of new analyses methods and other project analyses tools to effectively carry out the work. The position also requires experience in comprehensive analysis of inter-relationships and trends in a number of economics fields and in related TYPE A and TYPE B Projects.

Effective decisions and recommendations are made to Project Directors (SX-1 and SX-2) in the following general areas: managing projects (and related resources - usually C & D projects) as well as phases of A&B TYPE Projects (usually Phase II and occasionally Phase III) and require significant planning, development and organization of activities; formulating comprehensive plans in such areas as methods development for complex analyses in project phases, segments and activities; work segmentation (C&D overall and phase and segment approaches in B and occasionally A); project team management, liaison and advisory services (overall for C&D, Phase II and III in B usually); methods of evaluation for project progress and outputs; positions for meetings and working groups, and methods of consolidation and presentation of project (C&D) or phase work, etc., initiating activities in relation to the identification of Science and Technology problem and opportunity areas; the development of economics project proposals (C&D TYPES); the conduct of highly complex econometrics, economics and other analysis within projects of all types; the development of effective primary and final outputs in projects (B,C&D), etc., and, in undertaking the most complex economic analysis in all types of Projects (either directly as in A&B Projects or as the project leader in C&D Projects). Effective decisions and recommendations must respond to and anticipate changing conditions within the Sector.

Decisions and recommendations will affect the successful completion of projects, the effective utilization of resources for projects, the effectiveness of economics oriented S&T policy and program outputs and effectiveness of relations with external areas, Decisions and recommendations will also affect the success of policies in meeting Government and MOSST objectives, the effectiveness of overall policy initiatives and Science and Technology activities in Canada as well as the attainment of effective, co-ordinated Science and Technology policy capabilities to meet both government and private sector Science and Technology requirements. Decisions will also have an indirect effect upon the utilization of billions of dollars applied to Science and Technology activities in Canada. Decisions and recommendations involve the exercise of a high degree of judgement, initiative and discretion particularly those involving policy and program development, project development (B,C,D primarily), the managment of project teams (all types of projects), and the leadership of project phases.

The position involves contacts with senior officials and officers in the Ministry, economists and other officials of other Departments and Agencies, other levels of government, industry, the private sector and/or other countries, primarily as a representative of the Ministry to develop information channels; to provide extensive liaison and advisory services concerning a number of policy and program fields with substantive economic content and impact as an expert within these areas and related economics fields; to participate in working groups and task forces as a senior member; and, to represent the Ministry at national and international conferences, committees, and meetings.

Policy Advisors at the ES-3 level supervise intermediate level Analysts (AS-5, AS-4, ES-2), as projects require.

ES 2 POLICY ANALYST

POSITION PROFILE

11-104

.

4. D

SUMMARY OF DUTIES:

Under the direction of the Project Director or Policy Advisor, and the administrative direction of the General-Director, Projects Division, (SX-2), identifies Science and Technology policy problem and opportunity areas; participates in and conducts complex and specialized economics studies and analyses concerning segments of various projects; provides extensive support to the Project Director and Policy Advisors in carrying out project assignments; prepares segments of S&T policy working papers and participates in the development of overall papers; participates in the preparation of final project reports; liaises with a wide variety of officials and professionals; and, performs other duties.

MAJOR RESPONSIBILITIES:

- 1. Identifies Science and Technology policy problem and opportunity areas based on economic, econometric, statistical and other examinations of specialized areas of sector activity which are substantively economics oriented, previous research and analysis, discussions with other Policy Analysts and officers of other departments, agencies and areas, feedback from previous project work and economic and other evaluations conducted by the incumbent.
- 2. Conducts, as a member of a project team, complex and specialized economics studies, research and analysis concerning various segments of projects, which involves discussions with the Project Director, Policy Advisors, and other Policy Analysts, assessment of roles provided or expected, determination of priorities and other variables, development of information flows and exchanges, evaluation of information and data and, in more complex areas, the occasional development of new economic, statistics or econometrics analysis methods and techniques required to meet specialized segment goals and objectives.
- 3. Provides extensive support to the Project Director and Policy Advisors in carrying out their work, such as obtaining, analyzing and commenting upon specialized data and information required for such things as economic policy option analyses and formulation of alternative policy structures.
- 4. Participates in the definition of issues, policy options and consequences of various options, through the provision of expert economics analysis, development and evaluation services within a specialized field of S&T operations.
- 5. Prepares segments of S&T policy working papers and participates in the development of overall papers through the provision of expert economics advice inputs and analyses within the incumbent's specialized fields, and concerning the inter-relationships and inter-dependencies of various specialized economics inputs within these fields, particularly in relation to the potential economic impact, orientation and content of various policy papers and options developed from working papers.
- 6. Obtains, evaluates and consolidates feedback from interested and affected parties concerning the specialized project segments, which involves extensive liaison and consultation within the Ministry, federal government and external areas, with colleagues, associates and, on occasion, senior level officials.
- 7. Participates in the preparation of project final reports by evaluating inputs relating to the incumbent's area of economics, econometrics or related specialization, in order to ensure that the final report accurately reflects these inputs.

- 8. Liaises with various policy implementation areas to develop information and data flows concerning the effectiveness and efficiency of policy implementations within the incumbent's specialized fields, evaluates the data and provides recommendations to Project Directors and Policy Advisors concerning performance parameters and requirements for policy changes to meet the original policy intent.
- 9. Maintains a knowledge of sector area policies, programs, issues, activities and developments, as well as an expert knowledge of economics, statistics and related specialist areas therein, in order to ensure the provision of effective economics studies research, analysis, evaluation, support and development inputs to overall project operations which have a substantive economics orientation, content and impact.

DISTINGUISHING CHARACTERISTICS

The Policy Analyst reports to a Project Director or Policy Advisor as is appropriate to the size and structure of a project (AS-7 to SX-2 and equivalents). The work requires undertaking economics studies, research, analysis, evaluation, development, liaison, consultation, information development and related recommendation roles within a specialized field as part of a project team. The work also requires determining S&T policy problem and opportunity areas and the making of recommendations for projects relating to such identified areas.

Policy Analysts at the ES-2 level require a comprehensive and specialized knowledge of the principles and concepts of economics, of two more major policy fields and related areas therein for application to specific Sector problems in Science and Technology, which involves complex economics inter-relationships and interdependencies. The work also requires a good knowledge of specialized economic, econometric and statistical research and evaluation methods and techniques for utilization within project segment work. Such knowledge is gained through continuing evaluation and study of trends and developments within economics fields as well as through related work experience within a number of project and program fields in a S&T Sector.

The ability to undertake analytical activities involving the meeting of specified objectives, within general parameters and changing analyses conditions and which requires the exercise of initiative is necessary in planning and undertaking activities within phases and segments. The position also requires the ability to develop phase plans (D TYPE Projects), segment plans, operational plans and related work. The ability to develop plans and methods for undertaking specialized economics and other related information development work and for effective liaison is also required to effectively carry out the work.

Decisions and recommendations are made to Policy Advisors, AS-7 and ES-3, and on occasion to Project Directors, SX-1 and ES-4 (i.e. when leading phases, or segments in B TYPE or C TYPE Projects), in the following general areas: planning methods for meeting segment responsibilities (work plans), work phase plans (D TYPE Projects), liaison and advisory services (phases of D, segments of B, C), methods of economic and other analysis (for segment work and phases initiating activities in relation to Phase, Segments of of D), etc.: Projects, the development of work approaches (segments usually, phases in D), the conduct of specialized economics analysis within projects etc. developing advisory, liaison and information contacts: and, in undertaking complex economics analyses within phases and segments of all types of projects, with A and B Projects involving usually primary level analyses. The implications of various courses of action recommended during projects will usually be difficult to forsee.

Decisions and recommendations will affect the successful completion of phases of C and D Projects and segments of A and B Projects. Accordingly, the efficiency and effectiveness of overall project recommendations will be affected as will resultant economic policy and program developments within the sphere of project operations. Decisions will also affect the management of junior level resources for project phases. Decisions made will ultimately effect the successful formulation of economics oriented policy initiatives, strategies and actual policy content, within two or more policy fields of a major Science and Technology Sector. Indirectly, the effectiveness of policy in these areas in meeting MOSST objectives and the related effectiveness of activities resulting from use of MOSST policy outputs, will be affected, particularly when information and analysis outputs of the ES-2 Analyst positions are not comprehensive or fully valid in relation to overall policy use requirements upon which policies are formulated.

Accordingly, decisions can affect the efficiency with which resources are utilized within a major policy sphere in Canada in Science and Technology fields. In general, the impact of decisions and recommendations within project parameters will be significant and require the exercise of a significant degree of judgement, initiative and discretion.

The position involves contacts with senior operation officers in MOSST, operational and professional level personnel of other Departments and Agencies and areas external to the Public Service, primarily to develop information flows and exchanges, to participate in technical working and discussion groups, to negotiate for information and to provide expert specialized advice to such officers and officials relating to project work being undertaken.

<u>SYSTEM UTILIZATION</u> - <u>INSTRUCTIONS, ILLUSTRATIONS</u> AND INTERPRETATIONS -

1

1

I

1

I

. GENERAL COMMENTS

This Section of the report will be concerned primarily with the delineation of system capabilities and the use of system materials, for various System users including Classification, Audit, Staffing, Human Resources Planning, Staff Relations, and various Management Components (PMC, PMCS). Instructions for the use of the System, and, where applicable, interpretations and illustrations of the use of System materials will be provided in relation to each category of system users.

The uses outlined in this Section of the Report will explain the direct utilization of materials as well as their indirect impacts and applications. Wherever possible, these inter-relationships will be illustrated and integrated.

2. CLASSIFICATION UTILIZATION OF I.M.P.S.

The Classification of I.M.P.S. will be relatively straightforward. There are no procedural changes from normal position evaluation or classification. The selection of appropriate profiles will be up to management as part of the normal request process in Classification Actions.

Classification will however be required to explain the meaning, appropriateness and other parameters of position profile use to management, to ensure an effective mix of resource levels and allocations given the work situation in general, as outlined in various project reports. This is done, of course, to ensure that once profiles have been classified they can be utilized (as classified positions) on a continuously effective basis. If a situation were to arise where positions had been classified at only the top levels or only the bottom levels, then there would of course be an extremely high potential for incorrect position utilization in both under and over employment terms.

The Classification of position profiles will be exceedingly simple once the overall evaluation and assessment of work/level requirements has been determined. Because all profiles at each level have been written in generic and functional terms, the Classification point ratings or other evaluation outputs can be pre-determined. Variations from these point allocations will be highly unlikely, but should an individual position have a unique (and continuing) requirement outside of those general work parameters outlined in position profiles and the specific Classification Characteristics contained in PART II of the Report, then allowances can be made through re-evaluation of the position and ammendment of the position profile. Given the relatively comprehensive nature of the Profiles and the Classification Charateristics, this will however, be an extremely rare occurance. In delineating the meaning of the various Groups and Levels available for project work to managers requiring classification, the Job Profiles and the Classification Characteristics Sections of PART II of the Report, should be utilized. As well, the general work allocation and role potentials Graphs contained in the first section of PART IV of the Report should be utilized to illustrate the particular range of work of an individual position at a certain level, as well as the potential work which can be allocated to a range of positions at variable levels. If required, the Work Definitions can be utilized to explain the specific project and phase work allocation and work capacities of an individual position or range of positions, particularly when management is uncertain of the types of work which can be performed by various positions in various project conditions.

To illustrate this situation, the utilization of an AS-5 Profile, Graphs, and Classification Characteristics will be provided. Assume that a manager wishes to know what an AS-5 is capable of.

By utilizing the Position Profile, the following information can be given:

-general functional and role requirements (e.g. conduct of specialized studies concerning various segments of projects)
- general contact and discussion requirements
-general output responsibilities
-general management responsibilities
-general knowledge and experience requirements
- general decision making requirements

....general managerial responsibilities, etc.

By utilizing other position profiles, the differences between an AS-5 Analyst and other positions can be determined through reference to the Distinguishing Characteristics Section, in particular, and to the duties, in general.

By utilizing the Classification Characteristics for an AS-5, the manager can be advised of specific position capabilities in relation to Decision Making, Knowledge, Impact, Scope of Responsibilities, and so forth, all indicated in relation to specific work situations (e.g. Project, Phase and Segment). For example, in Decision Making, AS-5's will recommend modifications, ammendments and developments in relation to Analytical methods, procedures and techniques to resolve complex, specific area analysis problems, in all types of projects (see II-42)

By utilizing the general Role Potential Graphs, the Decision Capacity cannot be specifically determined, but the overall role requirements of AS-5's in relation to various Project Phases can be determined (e.g. participant roles - TYPE A, B Projects). The specific Decision Capacity role potential can be determined for each Project, Phase and Segment by evaluations of the Classification/Work Segment Role Graphs in PART IV of the Report (12 graphs for all Project Types). The Ability required to make those Decisions (under various roles) can be determined through evaluation of the AS-5 Classification/Resource Ability Interface Graphs (12 graphs for all projects). The objective ability required to carry out various work segments (in various role situations) can be determined through evaluation of the Work/Segment/Resource Ability Interface Graphs (12 graphs for all Projects). These thirty-six specific Graphs, plus the general Graphs in PART IV, for AS-5's, will provide Classification with a comprehensive work/resource interface picture with which to advise management concerning Classification.

The interpretation of this material for Classification is also straightforward. The Classification Characteristics, Work Definitions, Job Profiles and related Terminology used are all selfexplanatory. Use of the Graph material will be directly related to the written material.

For example, if it is required to know what an SX-1 would do on a TYPE B Project, a look at the Role Potentials or Work Allocation Graphs will indicate total leadership roles for Project duration. Leadership roles are defined. TYPE B Projects are defined, as are each phase and segment. Specific Classification Characteristics define the various capacities in relation to the defined work.

If more specific data is required, then' the Graphic Material for SX-1's in TYPE B Projects for Classification/Work Segment, Classification/Resource Ability and Resource Ability/Work Segment interfaces can be used. As was the case for each of the general graphs, all Graph material terms are defined in the written material, both in theoretical terms (Project, Classification Capacity, Resource Ability etc.) and in practical terms (e.g. Classification Decision Capacity components vis-a-vis segment, phase and project roles):

In strictly procedural terms, Classification will procede as follows. First, a request from management is received (and discussed). Secondly, the appropriate profile and organization chart are selected. Third, any variations from the profile are stipulated (rarely). Fourth, the rationale, TB-330-8 and other file materials are collected, verified and approved. Fifth, the appropriate manager is advised of the result of Classification action.

It is evident that the use of I.M.P.S. will simplify the Classification of positions enormously, due to the use of a comprehensive data base. At the same time, Classifications service oriented functions can be increased greatly, with improved information provision and discussion. Problems will tend to move away from the single position assessment situation toward the larger field problems of position level mix throughout a Project Division.

* See also - Use of Graphic Materials, in the next section of the Report.

3. CLASSIFICATION AUDIT USE OF SYSTEM MATERIALS

The Classification Audit use of I.M.P.S. will be unchanged for the most part, in terms of audit procedures and methods utilized in any audit situation. The evaluation of actual Classification procedures and methods will not change. The audit of positions to determine compliance with formally described responsibilities will not change in procedural terms, but will change both in terms of materials utilized during audit, as well as in terms of frequency of audit.

III-4

t

The audit of positions will require the utilization of the Position Profiles, Work Definitions, Classification Characteristics and General Role Potential Graphs. The position profiles will outline the general responsibility areas of each position while the Classification Characteristics will provide detailed information concerning specific requirements in terms of contacts, decisions, impact, management of resources and so forth. The Work Definitions will provide the detailed information into which the Classification Characteristics information can be integrated to determine basic work contexts for each position. A desk audit will provide the specific context of work at any specific point in time. The General Role Potential Graphs illustrate the appropriate work and role responsibilities for each Group and Level of position and can be utilized to determine general compliance of positions, in variable work situations.

The frequency of audit will vary from the norm, insofar as a pre-audit potential will exist. The allocation of positions to various projects can be checked and approved based on Project Proposal Reports sent to Personnel by the PMS. Allocations of resources have to be evaluated by Human Resources Planning to determine supply, demand and action parameters and accordingly, can be made available to Classification Audit for verification of actual allocations. If the allocation of resources for projects involves direct Classification action, then, of course, Classification rather than Audit will be responsible for evaluations of the Group and Level and its formal assignment to a position.

If, during the evaluation of general resource allocation potentials for various projects, a discrepancy should become apparent, then, of course, Classification must advise management of the potential difficulty which will be encountered should a particular position be utilized in the manner proposed by the Project proposals. This, of course, varies from the normal procedure insofar as Classification Audit normally recommends action based on actual discrepancies rather than on the potential for discrepancies between work level and classification level. For this reason, Classification, rather than Classification Audit, should take the necessary steps to advise management of the potential problems.

It must be pointed out that the pre-audit of resource allocations cannot affect actual allocations because no actual discrepancy between classified level and work level exists. Audit can only make recommendations regarding position compliance and related Group and Level changes once a discrepancy actually occurs. Classification (rather than Audit) must therefore ensure that management is advised of potential problems should the inappropriate allocation be made. Such advice would go to the Head of the PMCS and through that position to management (unless otherwise requested by the Head, PMCS). In normal Audit situations, the results of audit would, of course, be transmitted as per normal procedures. In Pre-Audit situations, Audit would advise Classification which in turn would advise the Head, PMCS (with recommendations developed in conjunction with Human Resources Planning), who would in turn advise management, or request that management be advised by Classification.

In general, all normal audit methods and procedures will be utilized by Classification Audit without change. The use of IMPS does not change the Audit process, but does provide data for audit and does allow for a pre-audit potential. To the degree that management will be provided with Work Allocation and Role Responsibility graphs, audit should be simplified because of a higher potential compliance of work to actual formal position descriptions and related materials. If management utilizes the Graphic materials in conjunction with Classification and Human Resources Planning, then the potential for incorrect, inappropriate or other problems in work allocation should be greatly reduced. Accordingly, the requirements for post-Audit actions to correct problems will be limited. The materials utilized by Audit within I.M.P.S. have been verified by Audit and accordingly, management compliance with these materials will reduce potentials for resource allocation problems as well as for related Audit actions.

. STAFF RELATIONS

Staff Relations procedures will remain virtually unchanged as far as the utilization of I.M.P.S. as a Staff Relations tool is concerned. I.M.P.S. does not directly affect the conduct of Staff Relations activities, but rather provides a data and information base from which Staff Relations operations can draw materials as required.

I.M.P.S. materials relate primarily to the grievance process for which Staff Relations is responsible. Should an employee wish to grieve the Classification of his or her position (based upon discrepancies between work allocated by management and the evaluated worth of the position), Staff Relations can utilize the Position Profiles, Classification Characteristics, General Work Allocation graphs and Specific Integration Graphs to provide advice concerning the validity or otherwise of the proposed grievance. The same materials can also be utilized to advise management of the potential for causing

S

grievances (e.g. through inappropriate or unequal use of positions and their incumbents). These materials can further be utilized to defend against a grievance (as warranted) as part of the materials utilized in determining the Classification level of the position involved.

In general terms, I.M.P.S. provides data necessary to ensure that the requirements of the Staff Relations grievance process can be met, without affecting the actual procedures and methods utilized within that process. Both management and employees can be advised of the legitimacy, validity, potential and other aspects of complaints concerning work and resource allocation, through explanation of the meaning of each distinct part of I.M.P.S. data relevant to Staff Relations, as well as through explanation of the integrated materials of I.M.P.S. Staff Relations may also utilize these materials to evaluate overall resource allocations and potentials for grievances through association with Classification Audit, as well as to explain to management the general potentials for problems and possible courses of action to avoid such problems (as differentiated from Classification which is responsible for delineating specific position use problems). Further, Staff Relations can be involved in explaining the legitimacy of, and requirements for, Developmental activities, to both management and specific incumbents, to ensure that such developmental activities remain within the parameters of the system and the legitimate rights of various employees.

HUMAN RESOURCES PLANNING

5.

The process utilized in Human Resources Planning will remain unchanged insofar as the utilization of I.M.P.S. as part of the determination of future human resource requirements is concerned. I.M.P.S. does not directly affect processes utilized in Human Resources Planning but does provide comprehensive data for use in the four stages of planning.

In the first stage, that of Demand for Human Resources, the requirements of theoretical work, related resource ability requirements and related Classification requirements are outlined by I.M.P.S., in such a manner that a comprehensive Work Level/Ability picture can be provided. More specific data can be obtained from various Project and Management reports and can be integrated into I.M.P.S. materials to provide a concise definition of overall qualitative Demand requirements. I.M.P.S. cannot provide data to aid in the development of quantitative demand requirements.

In the second stage of Human Resources Planning, that of determining the Supply of Human Resources, I.M.P.S. can provide qualitative, theoretical parameters to which existing human resource profiles can be compared. The Resource Ability, Work, Classification and General and Specific Graph definitions provide the theoretical supply requirements which must be evident for work to be effectively carried out. In the third and fourth stages of Human Resources Planning, involving the determination of the gap between Supply and Demand and the development of Action Plans to close this gap, I.M.P.S. data can be utilized as criteria which must be met in both cases (supply and demand) and accordingly, Action Plans may be formulated to meet these criteria in terms of human resources development. The utilization of I.M.P.S. materials will, however, require the use of other materials not contained in the system, in order to delineate the differences between theoretical supply and demand and actual supply and demand, as well as to effectively meet the quantitative requirements which I.M.P.S. does not contain. Such materials will include the bi-monthly Project Reports (which outline participation of resources), the Project Proposals, management reports, staffing requests and related data and information.

The graph materials contained within this report are of particular relevance to Human Resources Planning in determining the actual and potential role requirements of various groups and levels of human Accordingly, their use is explained, in detail, in Part resources. IV of the Report in relation to leadership, participation and development roles as well as in relation to Work/Classification, Work/Ability and Classification/Ability interfaces for each role required. This integrated material will be useful in relation to determining and delineating work assignments and roles for particular individuals to ensure that these individuals can be effectively utilized and developed to meet future demands of the Ministry. The development of effective plans to ensure individual development in relation to work requirements will require that individual profiles be constructed from work reports and assignment data that match the format utilized in the general and detailed graph materials of I.M.P.S. Once these materials have been developed and plotted on the graphs, these graphs can be effectively cross-compared with the theoretical work allocation, role and other graph materials contained in I.M.P.S. to determine further work, development and training requirements for each individual, necessary to meet the theoretical demand parameters as outlined in I.M.P.S. The formulation of effective action plans should be greatly simplified due to the potential comprehensiveness of cross-comparisons between what individuals have actually done and what theoretically is required of individuals to carry out work at their own group and level, as well as at higher levels through developmental activities. The theoretical work allocations, requirements and roles will be computerized, as will the actual individual work profiles. The differences between these two can be easily seen, as can requirements for the development of resources to higher levels to meet organizational human resources objectives.

To illustrate the potential for use of I.M.P.S. in Human Resources Planning, an example of developing an AS-4 resource to an AS-5 level can be used. Utilizing the AS-5 Group, Usual Work Allocations for Projects Graphs, in Part IV of the report, the developmental role requirements, for each type of Project, can easily be determined. By cross-comparing the AS-4 to the AS-5 in Type B Projects, it is evident that the use of an AS-4 as a full-fledged participant in Phase 3 would constitute a developmental activity insofar as AS-4's are not usually involved at all in Phase 3 work. (The determination of the type of developmental role-participation or leadership-is performed by horizontally comparing AS-4 to AS-5. In this case, Phase 3 for the AS-4 is developmental, for the AS-5 participatory). This provides an area of general development for the AS-4. For more specific development, the use of detailed graphs is required.

In the detailed graphs, developmental roles (for an AS-4 to AS-5, Type B Projects) are outlined in Graphs 334, 337 and 340, and illustrate Work Segment/Classification Capacity, Classification Capacity/Resource Ability and Resource Ability/Work Segment, development roles, requirements and capacities. These detailed graphs illustrate the ability required to carry out work, the capacity required to perform work and the ability required to carry out various actions defined within classification fields. Accordingly, when actual, individual performance records are developed, put into I.M.P.S., format and compared with the theoretical materials within I.M.P.S., extremely detailed resource development and use profiles can be formulated, from which effective training, development and other area action plans can be derived.

6. STAFFING

Staffing use of I.M.P.S. materials will be very limited. The Resource Ability Characteristics will be utilized as the basis of various Staffing materials as will the Position Profiles. These materials will be used in the development of Selection Profiles, Competition Posters and various interview and competition materials.

7. MANAGEMENT

Management's use of I.M.P.S. will be essential to the basic operation of the system and its success in resolving the problems created by the use of a functional project matrix and existing personnel systems. Without management's authoritative input at the beginning of each project, the I.M.P. System will not be capable of operating effectively.

Management, through the P.M.O. and P.M.C.S., will be required to use the work definitions in determining the Type of Project to be carried out. Management's determination of Project Type forms the basis for the Personnel Services use of I.M.P.S., insofar as the delineation of Project Type forms the basis for resource selection and approval, resource use, classification approval, classification audit and related activities. Management will also be required to utilize the general resource allocation and role potential graphs contained in Part IV of the report in determining the use of individuals for each Project. Such determination of resources should take place in consultation (through the P.M.C.S. and individual managers) with Classification (to ensure that individuals are being used at properly classified levels), Human Resources Planning (to delineate possible developmental and related role requirements), Staff Relations (to ensure that the individual's wishes are legitimate and are met to avoid grievances), and the individual (if developmental roles and activities are required).

The P.M.C.S. will be the primary contact point between management and personnel services during the total process of determination of Project Type and the allocation of human resources to carry out each project. The P.M.C.S. will utilize all I.M.P.S. materials as required, to advise management of personnel requirements and consult It should be made with personnel during the setting up of projects. clear that this consultation by the P.M.C.S. is done for each Project and is distinct from normal Classification, Staffing, Planning and other activities of personnel which have to be carried out regardless of Projects. The P.M.C.S. consultation is carried out to ensure the effective use of existing resources for proposed Projects and not for the Classification, Staffing or related activities required to set up matrix positions or develop the individuals holding such positions. The P.M.C.S. role will, accordingly, be related to Project servicing, control of project resources, effective use of project resources and effective management of project resources, with consultation in relation to Personnel Services being for the purpose of ensuring effective resource allocation, control, use and management and for problem avoidance (e.g. ensuring project resources are not being overor under-utilized).

The actual utilization of the System, in terms of management inputs, will be as follows. First, management must determine the Type of Project being undertaken, based on evaluation of the Project Proposals and I.M.P.S. Project Definitions. Secondly, management must determine the human resources required to carry out the project as defined. This stage will involve evaluation of the general Resource Allocation and Role Potential Graphs outlined in Part Four of this Thirdly, management, through the P.M.C.S., must obtain Report. approval of human resource allocations proposed in the Project Report. This will require discussion with Classification and Human Resources Planning Specialists in Personnel Operations. These management requirements are the mandatory inputs necessary for the effective operation of Projects in relation to Personnel Services. The following inputs are required for Personnel Services activities in Human Resources Planning, Staff Relations, and related fields.

To develop various individuals from one Classification level to the next level higher, will involve detailed discussions between individual managers and Human Resources Planning Specialists. These discussions will centre on various Resource Ability Characteristics, general work allocations for development of individuals and specific, detailed development plans based on the Resource Ability/Classification, Classification/Work Segment and Resource Ability/Work Segment Graphs contained in Part IV. Management will provide information to Human Resources Planning in performance reports, progress reports, project reports and work reports, as well as in other forms to ensure that individual employee development can be comprehensively planned by Personnel Operations. Staff Relations will also be involved in this process to ensure that employee rights are adhered to. Staff Development and Training and Staffing will be involved in later activities such as formal training and promotion operations as required to implement legitimate development requests from management.

Management will also be required to utilize the Position Profiles contained in I.M.P.S. in order to obtain continuing, correctly classified positions. The Classification of positions is dependent upon the Position Profiles and related Classification Characteristics contained within I.M.P.S. Once positions have been classified following the normal evaluation procedures, management can utilize the positions as illustrated in the General Graphs contained in Part IV of the report. Any other utilization of the positions and their incumbents, without approval from Personnel Services (e.g. for development of individual employees) will result in potential over- and/or under-utilization of resources. The procedures for utilization of the positions through assessment of potential roles and responsibilities outlined in Graph form is contained in Part IV of the Report.

This Section of the report has outlined the potential for I.M.P.S. utilization through a series of instructions and interpretations, and where necessary, illustrations from various sections of the report. The next section of the report will outline the Graph materials of I.M.P.S. and their utilization parameters.

PART IV

SYSTEM GRAPH

1

1

I

MATERIALS

. GENERAL COMMENTS

This section of the Report contains the Graph materials of I.M.P.S. These materials will be utilized by both management and Personnel Services for a variety of purposes including resource allocation, determination of role potentials, work allocation, Classification, Classification Audit, Human Resources Planning and Staff Relations. The materials are presented in two major sections: General Graphs (showing role potentials and usual work allocations at the phase level of operations for all Groups and Levels); and, the Detailed Graphs showing the Work Segment/Classification Capacity, Resource Ability/Classification Capacity and Resource Ability/Work Segment interfaces for all Groups and levels. These Graph materials are derived from the written definitions and related materials contained within I.M.P.S.

2. GENERAL GRAPH MATERIALS-EXPLANATION

The General Graphs are broken down into two main sections -Role Potentials - SX, ES and AS Groups and, Usual Work Allocations for Projects - SX, ES and AS Groups. The second set of Graphs is derived from the first set.

The Role Potential Graphs illustrate the roles to be played under various work allocations (Project Types) in various Phases of projects by each level of resource (presented singly). For example, Graph 1 illustrates the fact that an SX-2 Project Director will lead all Phases of a Type A Project, the Primary Phase of a Type B Project (when Type B Projects are extremely large) and will not be involved in Type C or D Projects. Graph 7 illustrates an entirely different set of roles for AS-7 Policy Advisors, with Type A Projects involving Developmental (Phase 1 and 4), Participation (Phase 3) and Leadership (Phase 2) Roles. The differences between SX-2 and AS-7 role potentials under varying work allocations are derived from the Work, Classification and Resource Ability Definitions contained in I.M.P.S. One other point must be made as well. The leadership roles outlined for Project Directors and Policy Advisors are substantively different in terms of inherent responsibilities and capacities. SX-2's are overall project directors (hence leadership roles) while AS-7's are Policy Advisors (leading a specific analytical or advisory team while under the overall direction of the SX-2). In Type D Projects, however, the AS-7 Policy Advisor has become the overall manager of the project and accordingly plays leadership roles more in line with Project Directors (minus the size, policy, priority, etc. as per Project Definitions).

Two types of leadership roles are therefore apparent - overall direction and specific phase analysis or advisory leadership (involving the control of other resources). The primary difference between these two types of leadership lies in the fact that the overall direction type must encompass the total project (or at least the last three phases, as in AS-7 Type C Projects - Graph seven).

The Usual Work Allocation Graphs outline the potential work allocations for each level of resource on each type of project in comparative terms. Graph 1 illustrates the work allocation for SX-2's and SX-1's on Type A Projects. The SX-1 will not be involved in Type A Projects (unless there is a Type B Sub-Project of a Type A Project - see Graph 2). Graph 9 shows the work allocation for each level of AS in Type A Projects. It should not be assumed that all levels of resource will be utilized on the same Project. These Graphs outline, in comparative terms, the work allocations to be made if a resource is used on a particular project. In Type C Projects, for example, it is highly unlikely that an AS-7 and AS-6 would both be utilized (for reasons outlined in Part II of the Report), but it is valuable to know what differences in work allocation exist between AS-7 and AS-6 on a Type C Project and accordingly, these have been illustrated on the same Graph (see Graph 11). This type of comparative work allocation illustration allows for easy assessment of areas of development required to take a resource from one level to the next, as well as allowing management to see at a glance appropriate work allocations for each level of resource on each type of Project, to ensure that such allocations can be effectively made to avoid possible Staff Relations, Classification or related problems.

The utilization of both sets of General Graphs is relatively straightforward. Each Graph is colour coded - Red for Leadership; Green for Participation; Black for Development; White - No Involvement. By identifying the Project, Phase and Colour type, the usual activities for each level of resource are evident. The determination of developmental role requirements is somewhat more complex, and involves the use of either the second set of General Graphs, or, the Detailed Graphs.

The delineation of developmental potentials may be done in one First, all black-coded areas indicate areas of potential of two ways. development with developmental roles being of the participatory kind. Secondly, the delineation of developmental leadership roles may be undertaken by comparing the colour code for each phase of one level of resource to the colour code of each phase for the next highest level of resource, involved in the same type of project. For example, the ninth graph in the second set of General Graphs shows a developmental area in Phase One, a participatory area in Phase Two and Three, and a developmental area in Phase Four, all for the AS-6. The two black areas (Phases One and Four) allow for the utilization of the AS-6 in a developmental participation capacity. In Phase Two, the AS-6 can also play a developmental role, that of developmental leadership by virtue of the fact that an AS-7 normally leads Phase Two. This assumes, of course, that the AS-6 is being developed to the AS-7 level. In Phase Three, no developmental role is allowed, because this phase of activity is also participatory for the next level of resource (AS-7).

In general, developmental areas (black) will require developmental participation roles. Developmental leadership roles are determined by cross-comparing the colour coding (Green to Red) of one level of resource to the next highest level of resource. Where the lower level is Green and the next level is Red (by phase), a developmental leadership role can be played (e.g. Phase 2, Type A Projects, AS-6 Green, AS-7 Red - AS-6 plays a developmental leadership role). If the normal activity for a resource level is red, in a particular phase, then no developmental role will be required.

The determination of developmental roles, requirements and capacities in more specific terms can also be undertaken by reference to the Detailed Graphs area of this Section of the report. Developmental areas are indicated for each level of resource, in particular graphs, to illustrate the roles required for development, the abilities which must be developed to meet level requirements and the abilities required to carry out the higher level types of work.

There is a distinct difference between developmental areas of work and areas of work where no involvement is allowed. Developmental work areas are areas of developmental work where the individual would not normally be involved at his or her classification level. For example, an AS-7 would not normally be involved with any activity or segment contained in the primary phase of Type A Projects, but the potential for involvement in a developmental capacity does exist without causing Classification or other problems, so long as the incumbent and Personnel Services are advised of this assignment and approve it. On the other hand, a No Involvement Phase (White code on the General Graphs) indicates an area where utilization of the resource would represent a totally unfit allocation (either over- or under-utilization) and where use, even in developmental terms, would not be possible without encountering Classification Audit or grievance problems.

DETAILED GRAPH MATERIALS

3.

The Detailed Graph Materials outline the Classification Capacity/ Work Segment, Classification Capacity/Resource Ability and Work Segment/ Resource Ability interfaces for all Groups and Levels in terms of developmental, participation and leadership requirements, roles and capacities in each Type of Project. Accordingly, there are thirty-six graphs for each level of Resource (3 roles x 3 types of interface x 4 Types of Project). The Graphs are presented in the order of SX, ES and AS Groups.

The first three graphs indicate the potential roles in various Work Situations (Segments) in terms of various Classification Capacities, for the SX-2 in Type A Projects. All roles, in this particular case, are leadership roles and accordingly, the first two graphs are blank (developmental and participation). The leadership roles Graph should be read as follows (from Decision Capacity through various Segments): - Initiation, Planning, Operational Approach Development, etc... will involve leadership roles in relation to Decision Making by SX-2 Project Directors, in Type A Projects.

The next three Graphs, illustrating Classification Capacity/ Resource Ability Characteristics interfaces for an SX-2 in Type A Projects show a similar lack of participation and development requirements. Graph 6 illustrates the leadership requirements necessary in terms of various Resource Abilities to carry out Decision Making, Contact and other functions in Classification terms. Using the Ability to Analyze and Evaluate column, the Graph should be read as follows... SX-2 Project Directors are required to demonstrate leadership in terms of their Ability to Analyze and Evaluate in relation to Decision Making, Management, Planning, Initiation, Analysis and Development activities defined within various Classification Capacity variables.

Graphs 7 through 9 illustrate Work Segment/Resource Ability interfaces for SX-2 Project Directors engaged in Type A Projects. Since no Development or Participation capacities are required, the Graph outlining Leadership Capacities will be used as an example of possible Work/Ability interfaces. Using the Initiation column, Graph 9 should be read as follows.... Individuals in SX-2 Project Director positions will be required to demonstrate a leadership capacity in the following Ability areas: Analysis and Evaluation, Planning, Organizing, Directing, Communicating and Adapting and Creating, to effectively undertake Initiation Segment activities in Type A Projects.

Graphs 10 through 36 illustrate the same interface requirements, roles and capacities for SX-2's in Type B, C and D Projects. Graphs 37 through 72 illustrate SX-1 requirements, roles and responsibilities. Graphs 73 through 108 outline the ES-5 interfaces. Graphs 109 to 144 for ES-4's, 145-180 for ES-3, and 146-205 for ES-2. The remaining graphs are for the AS-Group.

These graphs are very straightforward and are extremely detailed in nature. They will be used primarily by Human Resources Planning and Staff Relations to ensure the effective and legitimate development of resources to meet various goals and objectives of the Ministry.

GENERAL GRAPHS

1

4.

- ROLE POTENTIALS -

SX, ES & AS GROUPS

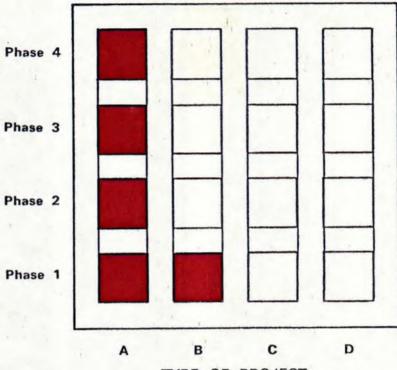
4-A

SX - GROUP

PROJECT PHASES & CLASSIFICATION LEVEL

ROLE POTENTIALS - BY

1



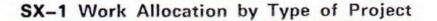
SX-2 Work Allocation by Type of Project

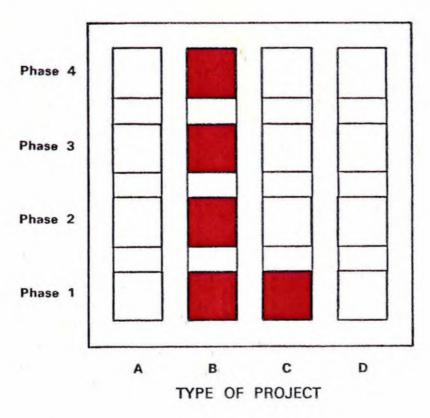
TYPE OF PROJECT

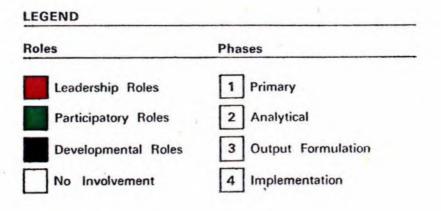
LEGEND

1

Roles	Phases
Leadership Roles	1 Primary
Participatory Roles	2 Analytical
Developmental Roles	3 Output Formulation
No Involvement	4 Implementation



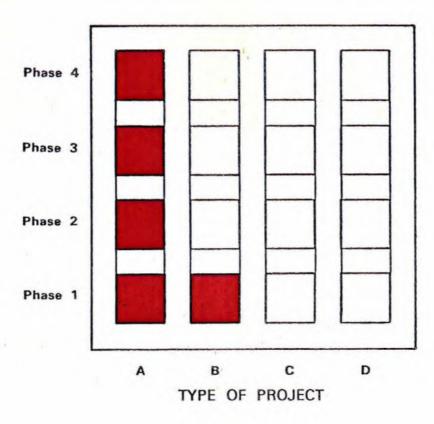


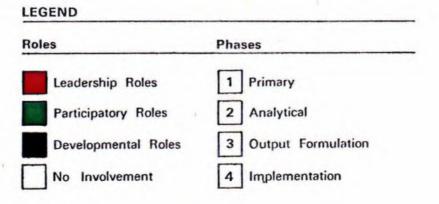


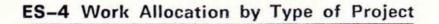
ROLE POTENTIALS - BY PROJECT PHASES & CLASSIFICATION LEVEL

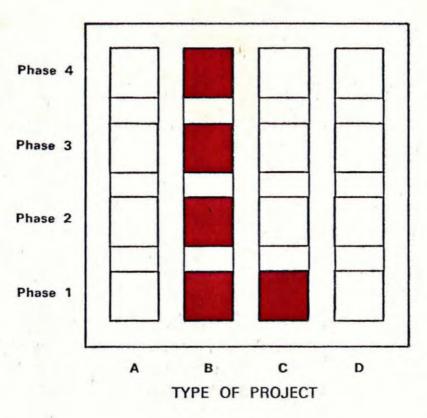
ES - GROUP

ES-5 Work Allocation by Type of Project

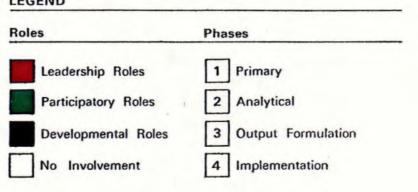


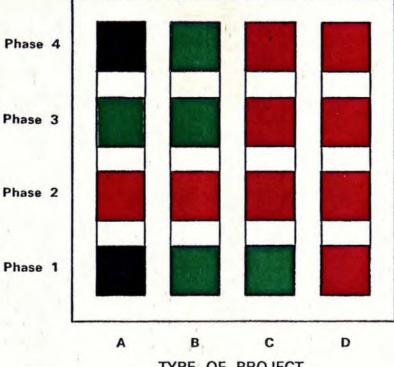








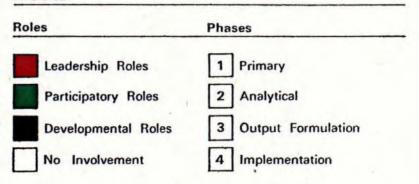


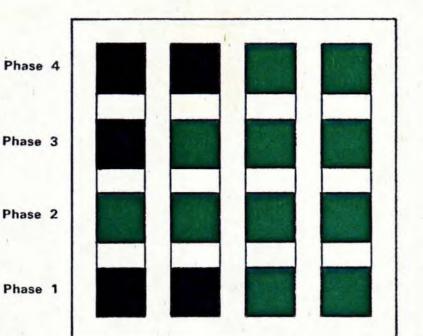


ES-3 Work Allocation by Type of Project

TYPE OF PROJECT

LEGEND

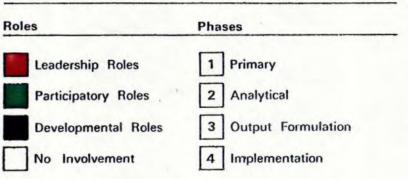




ES-2 Work Allocation by Type of Project

A B C D TYPE OF PROJECT

LEGEND



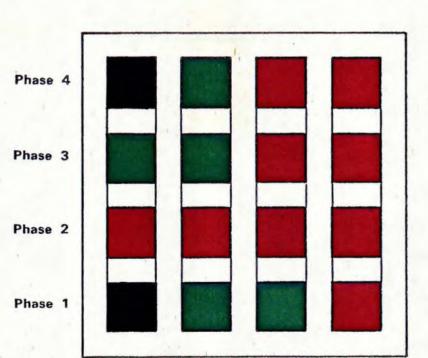
- AS - GROUP -

1

I

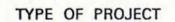
PROJECT PHASES & CLASSIFICATION LEVEL

ROLE POTENTIALS - BY



AS-7 Work Allocation by Type of Project

41.44



С

D

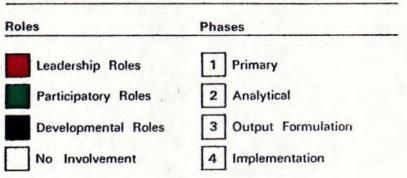
в

LEGEND

A

1

I

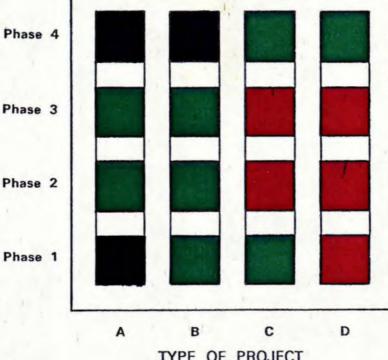


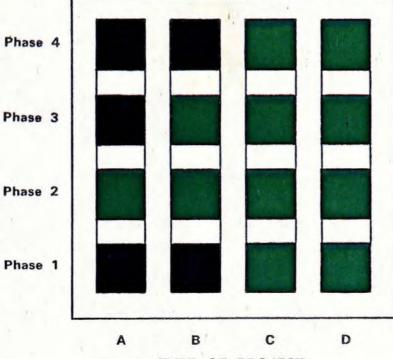
C A B D

TYPE OF PROJECT

LEGEND Roles Phases Primary Leadership Roles 1 2 Analytical Participatory Roles **Developmental Roles** 3 **Output Formulation** No Involvement 4 Implementation

AS-6 Work Allocation by Type of Project

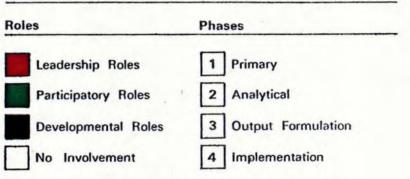


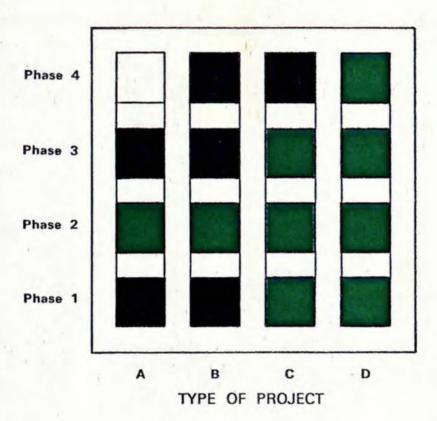


AS-5 Work Allocation by Type of Project

TYPE OF PROJECT

LEGEND





AS-4 Work Allocation by Type of Project

LEGEND

Roles	Phases
Leadership Roles	1 Primary
Participatory Roles	2 Analytical
Developmental Roles	3 Output Formulation
No Involvement	4 Implementation

USUAL WORK ALLOCATIONS SX, ES & AS GROUPS

1

1

I

1

1

l

4-в

USUAL WORK ALLOCATIONS FOR PROJECTS -AT RESOURCE LEVELS

I

1

I

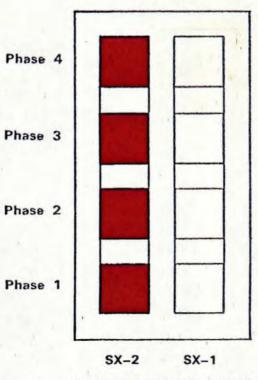
I

1

I

SX - GROUP

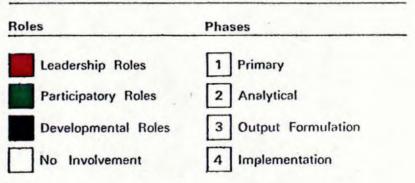
Work	Allocation	by Classification	Level -
Туре	A Projects	- SX Group	



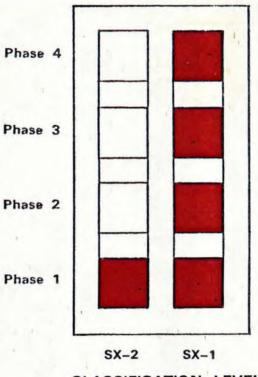
CLASSIFICATION LEVEL

LEGEND

1

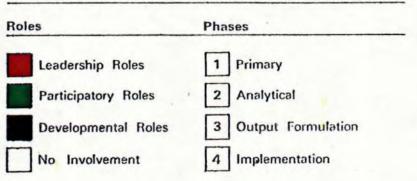


Work Allocation by Classification Level -Type B Projects - SX Group

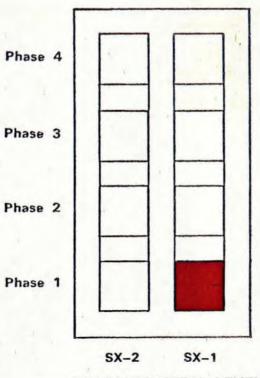


CLASSIFICATION LEVEL

LEGEND

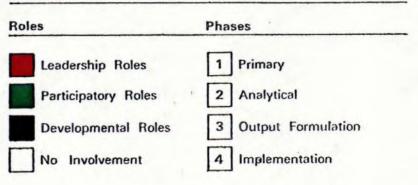


Work	A	llocation	by	Cla	assification	Level	-
Type	С	Projects	-	SX	Group		

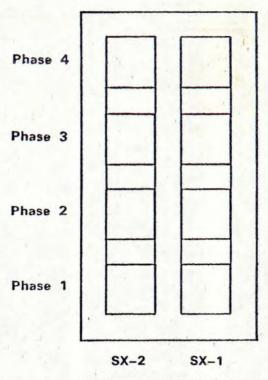


CLASSIFICATION LEVEL

LEGEND

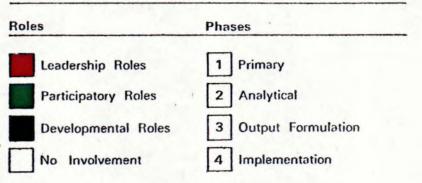


Work Allocation by Classification Level -Type D Projects - SX Group



CLASSIFICATION LEVEL

LEGEND

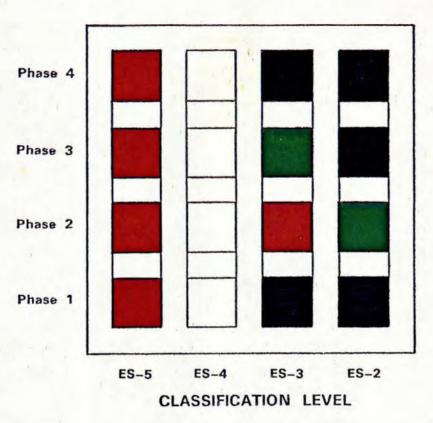


USUAL WORK ALLOCATIONS FOR PROJECTS -AT RESOURCE LEVELS

1

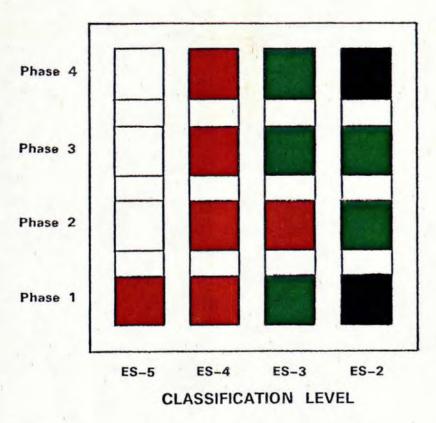
ES - GROUP

Work Allocation by Classification Level – Type A Projects – ES Group

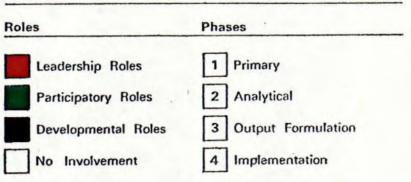


Example Phases Roles Phases Leadership Roles 1 Primary Participatory Roles 2 Analytical Developmental Roles 3 Output Formulation No Involvement 4 Implementation

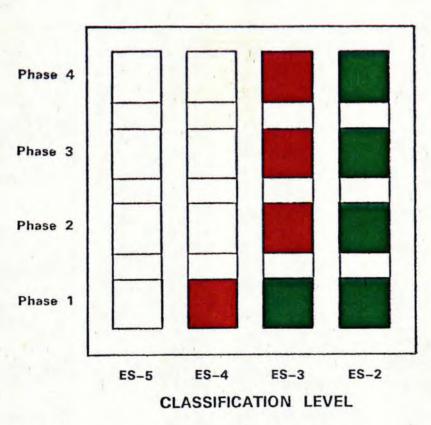
Work Allocation by Classification Level – Type B Projects – ES Group



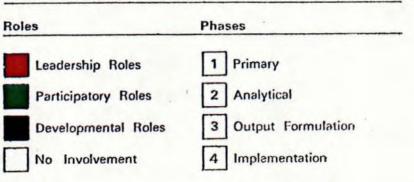
LEGEND



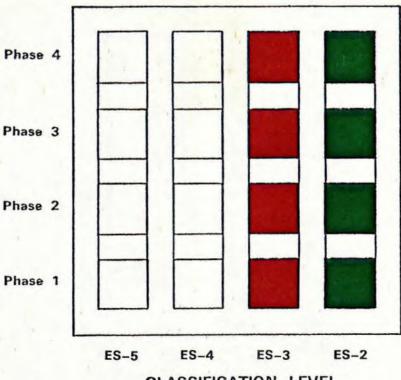
Work Allocation by Classification Level – Type C Projects – ES Group



LEGEND



Work Allocation by Classification Level -Type D Projects - ES Group



CLASSIFICATION LEVEL

LEGEND Roles Phases Leadership Roles 1 Primary Participatory Roles 2 Analytical Developmental Roles 3 Output Formulation No Involvement 4 Implementation

USUAL WORK ALLOCATIONS FOR PROJECTS -AT RESOURCE LEVELS

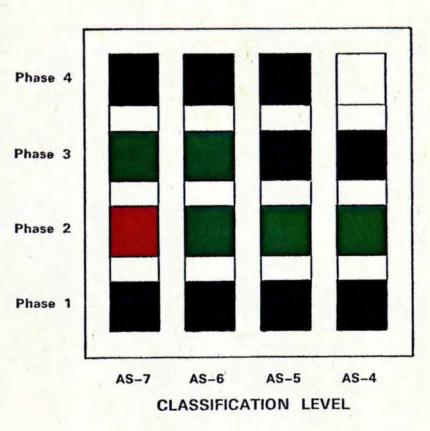
é

-

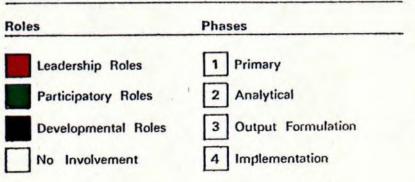
1

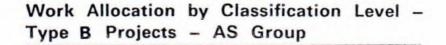
AS - GROUP

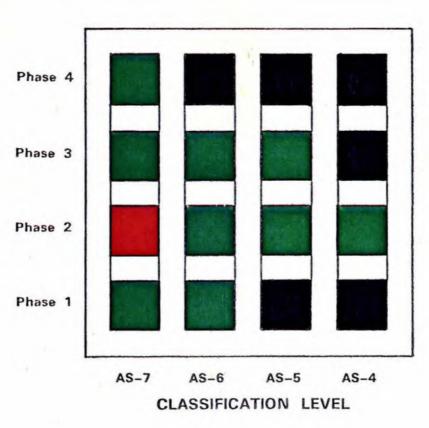
Work Allocation by Classification Level -Type A Projects - AS Group



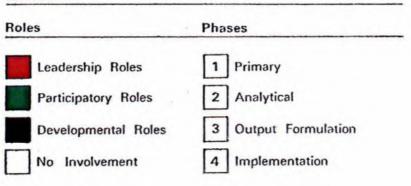
LEGEND

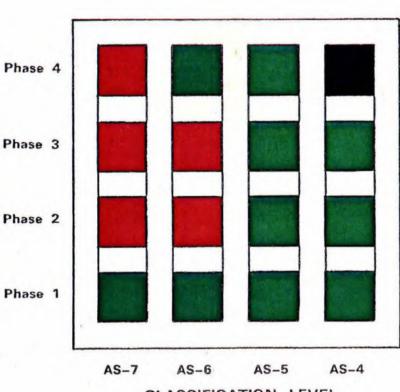






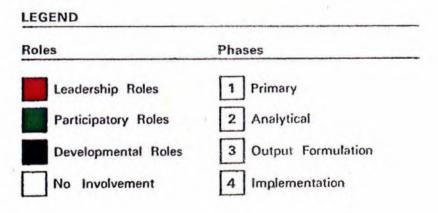
LEGEND

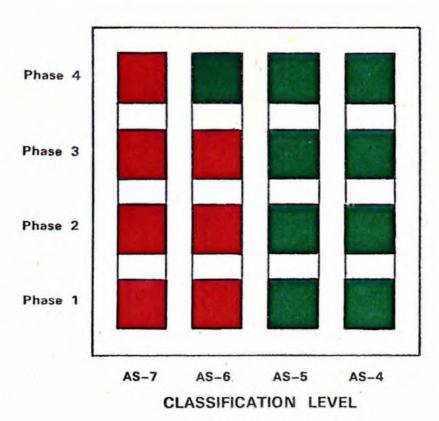




Work Allocation by Classification Level -Type C Projects - AS Group

CLASSIFICATION LEVEL





Work Allocation by Classification Level – Type D Projects – AS Group

 LEGEND

 Roles
 Phases

 Leadership Roles
 1 Primary

 Participatory Roles
 2 Analytical

 Developmental Roles
 3 Output Formulation

4

No Involvement

Implementation

DETAILED GRAPHS

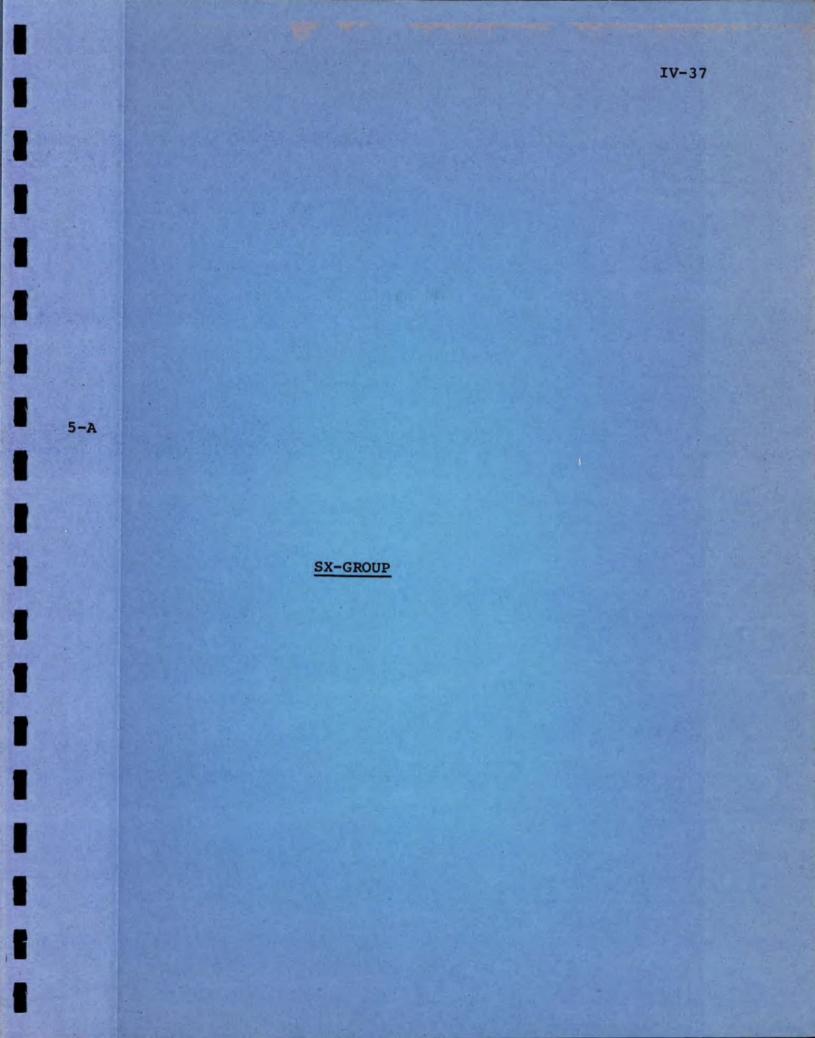
I

1

1

1

1



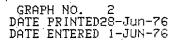
GRAPH NO. 1 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Developemental Roles For SX-2 - Tupe A Projects.

| | | | | | | | | | Advisory Capacity
 | | | | | | | | | Development Capacity
 | | | | | | | | Reporting
 | | | | | | | Scope
 | | | | | | | Impact Potential
 | | | | | Analytical Capacity
 | | | | Initiation Capacity
 | | | Planning Capacity
 | | | Planning Capacity
 | | Contacts Capacity
 | Decision Capacity
 Knowledge

WORK SEGMENTS

COMMENTS: NO DEVELOPMENT ROLES REQUIRED



Classification Capacities/Work Segments - Participatory Roles For SX-2 - Type A Projects.

CLASSIFICATION CAPACITIES												••														
								:							.•									,		
Final Recommendations	•	•	•	•	•	•`	•	•	•	•		•	-													
Formal Output Formulation	•	•	•	•		•		•	•	•		•	•												•	
Evaluation and Discussion of Outputs	-	•		•				•	•	•		•	-													
Primary Output Formulation				•	•		•					•														
Working Paper Development				•			•	•		•			•								•					
Follow Up Contact and Discussion				•								•					•		•							
Refinement	-		•	•		•							•										•			
Primary Analysis			•	•									•		· -		-									
Initial Information Development	•	•							•.			-														
Initial Contact							۰.	•										•						•		
Work Segmentation and Distribution		•			•			•				•	•							•						
Operational Approach Development							۰.	•	•		-	•														
Planning		•	•				•	•		•		•	•		••••											
Initiation				•	•		•	•				•														
		De	C15	onta Sior	Pl Pl anag acts	anr Jeme Ca	niti ning ent apac	iali iat ca Ca citi	npa yti ion apa nac	cop ct cal Ca cit	ep Po Po pa	or tei apa	velo ting ntia acit	opm g al	ory ent	Ca Ca	oac	itu itu								

WORK SEGMENTS

COMMENTS: NO PARTICIPATORY ROLES REQUIRED

GRAPH NO. 3 DATE PRINTED28-Jun-74 DATE ENTERED 1-JUN-74

Classification Capacities/Work Segments - Leadership Roles For SX-2 - Type A Projects.

CLASSIFICATION CAPACITIES Final Recommendations . L . . L . LL Formal Output Formulation . L . L L . . . L L Evaluation and Discussion of Outputs . L L L . L L . . L . Primary Output Formulation . L . L L L L Ĩ. -Working Paper Development . L . L L . L L . Follow Up Contact and Discussion . L Ľ /. L Refinement Ť. LLL -L . L L Primary Analysis LLL . L Ľ -Initial Information Development L L LL Initial Contact . I. Ľ L.L L . . Work Segmentation and Distribution . L . L L L L . Operational Approach Development - T. . L L L . T. . · · · Planning . L . L L L . L . . . Initiation Ĩ. Advisory Capacity 1 Development Capacitú Reporting 1 Scope Impact Potential Analytical Capacity Initiation Capacity Planning Capacity Management Capacity Contacts Capacity 1 1. Decision Capacitu Knowledge.

WORK SEGMENTS

GRAPH NO. 4 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Developemental Requirements For SX-2 - Type A Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity	•	•	•	•		•	•
Development Capacity	•	•				•	
Reporting	•	•			•	•	
Scope		•			•	•	
Impact Potential		•	•		•		
Analytical Capacity		•	•			•	•
Initiation Capacity		•			•	•	•
Planning Capacity	•	•			•	•	• ·
Management Capacity	•	•	•	•	•	•	•
Contacts Capacity		٠		•	•	•	•
Decision Capacity		•				•	
Knowledge	•	•		•	•	•	••
	Ab		 Ab ili	¦ Ab ili ty	Ab ili ty to 1	Ab ili ty to Pla	Ability to Adapt and Create ility to Communicate ty to Direct to Control Organize n e and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO DEVELOPMENTAL REQUIREMENTS.

Classification Capacities/Resource Ability Characteristics - Participatory Requirements For SX-2 - Type A Projects.

GRAPH NO. 5 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

CLASSIFICATION CAPACITIES

Advisory Capacity	•		•		•	•	
Development Capacity	-	•	•	•			
Reporting	-		•		•	•	
Scope							
Impact Potential	•			•		•	
Analytical Capacity				•		•	
Initiation Capacity	-			•	•	٠	
Planning Capacity		•				•	
Management Capacity	•				•	•	
Contacts Capacity	•	-	•			•	
Decision Capacity		-					
Knowledge		•					
	l I Ab	 Ab	 Ab ili	 At ili ty	Ab ili ty to	Ab ili ty to Pla	Ability to Adapt and Create ility to Communicate ty to Direct to Control Organize n e and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO PARTICIPATION REQUIREMENTS.

GRAPH NO. 6 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76 Classification Capacities/Resource Ability Characteristics - Leadership Requirements For SX-2 - Type A Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity	•	L	L	L	L	L	•
Development Capacity	L	r.	L	L	L	•	L
Reporting			•		•	•	•
Scope	• .					•	
Impact Potential							
Analytical Capacity	L	L,	L	L.	L	•	L
Initiation Capacity	L	L	L	L	L	•	L
Planning Capacity	L	L	L	L	L	•	L
Management Capacity	L	L	L	L	Ĺ	L	L
Contacts Capacity	•	L	L	L	L	L	•
Decision Capacity	L	L	•	L	L		L
Knowledge	-	•	•	•	•		
· · · · · · · · · · · · · · · · · · ·		Ab	Ab ili	ili	ili ty	ili ty to	Ability to Adapt and Create ility to Communicate ty to Direct to Control Organize n

Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

GRAPH NO. 7 DATE PRINTED28-Jun-76

DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Developemental Capacities For SX-2 - Type A Projects.

RESOURCE ABILITY CHARACTERISTICS Ability to Adapt and Create Ability to Communicate Ability to Direct Ability to Control Ability to Organize Ability to Plan Ability to Analyze and Evaluate | | Final Recommendations | Formal Output Formulation 1 | Evaluation and Discussion of Outputs | Primary Output Formulation | Working Paper Development ! | Follow Up Contact and Discussion Refinement l Primary Analysis Initial Information Development | Initial Contact Work Segmentation and Distribution 1 Operational Approach Development Planning Initiation

WORK SEGMENTS

COMMENTS: NO DEVELOPMENTAL CAPACITIES REQUIRED.

GRAPH NO. B DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Participatory Capacities For SX-2 - Type A Projects.

RESOURCE ABILITY CHARACTERISTICS	
Ability to Adapt and Create	
Ability to Communicate	
Ability to Direct	
Ability to Control	
Ability to Organize	
Ability to Plan	
Ability to Analyze and Evaluate	
	I I I I I Final Recommendations I I I I Formal Output Formulation I I I I Evaluation and Discussion of Outputs I I I I Primary Output Formulation I I I I I Primary Output Formulation I I I I I I I I I I I I I I I I
	Primary Analysis Initial Information Development Initial Contact Work Segmentation and Distribution Operational Approach Development Planning Initiation

WORK SEGMENTS

COMMENTS: NO FARTICIPATORY CAPACITIES REQUIRED.

GRAPH NO. 9 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Leadership Capacities For SX-2 - Type A Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create	L
Ability to Communicate	L L L L . L . L
Ability to Direct	LLLLLLLLL
Ability to Control .	. L L L L L L L L .
Ability to Organize	L L L L L L L L L .
Ability to Plan	L L L L L L L L
Ability to Analyze and Evaluate	L L L L L
	<pre> </pre>

WORK SEGMENTS

GRAPH NO. 10 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76.

Classification Capacities/Work Segments - Developemental Roles For SX-2 - Type B Projects.

CLASSIFICATION CAPACITIES

Final Recommendations	•	•	•	•	•	•	•	•	•	•	•	•	•			
Formal Output Formulation	•	•	-	•	•	•	•	•	•	•	-	•				
Evaluation and Discussion of Outputs	•	•	-	•	•	•	•	•	•	٠	•	•				
Primary Output Formulation	•	•	•	•	•	•	•	-	•		•	•				
Working Paper Development		•			•	•	•			•	• `					
Follow Up Contact and Discussion	•	•	•	•	•	•		•		•	•	• .				
Refinement	•	•		•	•	•		-		•	•	•				
Primary Analysis	-	•	•		•	•	•	•		•	•	•				
Initial Information Development	•	•	•		•		•	•	•	•	•	•				
Initial Contact	•		٠		-		•	•			•	•				
Work Segmentation and Distribution	•	•	•		•	•	•	•	•	•	•	•		•		
Operational Approach Development		•	•		•			•	•	•		•				
Planning	•	•	•		•		•	•	•	•	•	•			· .	
Initiation	•		•		•	•	•	•	•	•	•	• •				
			Co cis	nta ion	nagi	ann eme Ca	iti ing nt pac	aly ati Ca Cap	pac tic on pac aci	ope t f al Cap itu	por ote Cap aci	Advisor <u></u> velopment ting ntial acity ty	Capac Capac	ty ity		

WORK SEGMENTS

COMMENTS: NO DEVELOPMENTAL ROLES REQUIRED.

	PH NO.		•
DATE	PRINTE	028-0	Jun-76
DATE	ENTERE	D 1-J	TUN-76

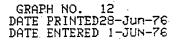
Classification Capacities/Work Segments - Participatory Roles For SX-2. - Type B Projects.

CLASSIFICATION CAPACITIES

Final Recommendations		•	•	•	•	•	•	•	•	•	•	
Formal Output Formulation	•	•		•	•	•	•		•	•	•	
Evaluation and Discussion of Outputs		•		•	•	•	•	•	•	•	•	
Primary Output Formulation		•	•		•	•	•		•			
Working Paper Development	•	•	•			•			•			
Follow Up Contact and Discussion	•	•	•		•	•	-	•			•	
Refinement	•	•		•	•	•	•	•		•		
Primary Analysis	•	•	•		•	•	•	•	•	•	•	
Initial Information Development	•	•		•	•	•	•	•	•	•	•	
Initial Contact	•	•		•	•	•	•	•	•	•		•
Work Segmentation and Distribution	•	•	•	•	•	•	•	•	•	•		
Operational Approach Development		•	•		•	•	•	•	•	•	•	
Planning	•	•	•	•	•	•	•	•	•	•	•	
Initiation		•	•	•	•	•	•	•	•	•	•	
	Kni			nta ion	nage Sts	ann: emer Cap	itia ing nt (pac:	alyi atio Cap Capa	bac tic on bac	ope t Po al Cap ity	oor otei Capi	Advisory Capacity velopment Capacity ting ntial acity ty

WORK SEGMENTS

COMMENTS: NO PARTICIPATION ROLES REQUIRED.



Classification Capacities/Work Segments - Leadership Roles For SX-2 - Type B Projects.

CLASSIFICATION	CAPACITIES

Final Recommendations	•	•	•	•	•		•	•		•	•	•		
Formal Output Formulation	•	•	•	•	•		•	•	. •	•	-	•		
Evaluation and Discussion of Outputs	•			•	•	•			•	•	•	•		
Primary Output Formulation		•			•			•	•	•	•	•		
Working Paper Development		•	•		•		•	•	•	•	•	•		
Follow Up Contact and Discussion	•	•	•	•	•	•	٠	•	•	•	•	•		
Refinement	•	•	•	•		•	•	•	•	•	•	•		
Primary Analysis	•		•	•		•	•	•		•	-	•		
Initial Information Development	•	•	•	•	•	•	•	•	•	•	•	•		
Initial Contact	•	•	•	•	•	•	•	•	•	•	•	•		
Work Segmentation and Distribution	۲ .	L	•	L	L	L.	•	•	•	•	L	•		
Operational Approach Development	•	L	•	L	L	L	•	•	•	•	L	•		
Planning	•	Ļ	•	L	Ļ	L	•		-	•	L	• .		
Initiation	•	L	•	•	•	L	•	•	•		•	•		
				nta ion	nag cts	In eme Ca pac	iti ing nt pac	aly ati Ca Cap	Sc pac tic on pac aci	Re ope t P al Cap ity	por ote Cap aci	Advisory velopment ting ntial acity ty	Capaci Capaci	ty ty

WORK SEGMENTS

COMMENTS: PRIMARY PHASE INVOLVEMENT ONLY

Developmente odpdolicg,	•	•	-	•	•	•	•
Reporting		•		•	•		
Scope			•	•	•	•	
Impact Potential			•		•	•	
Analytical Capacity		-		•	•	•	
Initiation Capacity	•	•			•		
Planning Capacity				•			•
Management Capacity						•	
Contacts Capacity	•	•		•	•	•	
Decision Capacity		•				•	
Knowledge		•				•	
	 Ab	 Ab	¦ Ab ili	¦ Ab ili ty	Ab ili ty to	ili ty to Pla	Ability to Adapt and Create ility to Communicate ty to Direct to Control Organize n e and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO DEVELOPMENTAL REQUIREMENTS.

GRAPH NO. 14 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76 Classification Capacities/Resource Ability Characteristics - Participatory Requirements For SX-2 - Type B Projects.

CLASSIFICATION CAPACITI	ES								•		
Advisory Capacity			• .	•		-	-				
Development Capacity		•	•		•	• .	•	•			
Reporting			•			•	•	•			
Scope							•		· .		
Impact Potential		•'	•	•		•	•	•			
Analytical Capacity			•		•		•				
Initiation Capacity		•	•				•				
Planning Capacity		•	•	•	•		•	•			
Management Capacity		•	•		•	•	•				
Contacts Capacity		•	•	•		•	•	•			
Decision Capacity		•	•		•	•	•	•		•	
Knowledge		•	•	•	•						
			Abi	li	ili ty	ili ty to	ili ty to Pia	Ability to Adapt and ility to Communicate ty to Direct to Control Organize n e and Evaluate	Create		

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO PARTICIPATION REQUIREMENTS.

Classification Capacities/Resource Ability Characteristics - Leadership Requirements For SX-2 - Type B Projects.

GRAPH NO. 15 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

CLASSIFICATION CAPACITIES

Advisory Capacity	•	L	•	•	-	•	
Development Capacity	L	L	L	L	L	•	L
Reporting					•	•	
Scope		•			•		
Impact Potential	•						
Analytical Capacity							
Initiation Capacity	L.	L	L	L	L	•	L
Planning Capacity	L	L	L	L	L		L
Management Capacity	L	L	L	L	L		L
Contacts Capacity							
Decision Capacity	L	L		L	L.	•	L
Knowledge		•			•		
	 	 Ab	 Ab	¦ Ab ili ty	Ab ili ty to	Ab ili ty to Pla	Ability to Adapt and Create ility to Communicate ty to Direct to Control Organize n e and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: PRIMARY PHASE INVOLVEMENT ONLY.

GRAPH NO. 16 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Developemental Capacities For SX-2 - Type B Projects.

RESOURCE ABILITY CHARACTERISTICS															
Ability to Adapt and Create	-		•	•	-		-	•	•	•	-		•	-	•
Ability to Communicate	-	-	•		•	•	•	÷	•	•	•	i	•	•	•
Ability to Direct		•						•	•		•		•		
Ability to Control	•		•		•		•	•		•	•			•	
Ability to Organize	•			•	•		•	•	•		•				•
Ability to Plan	•	•								•			•		
Ability to Analyze and Evaluate	•						•				•				
	In		anni	erat ing	In rk	In: Itia	Pr itia al (neni	Re ima con tat	Fo fin ry Inf tac ion	Wo llo Ana orr t a ar	ork: ow l ent alys nat: nat:	up Up si: io: Di:	g j Ci s n j sti	par Dev Dev	Final Recommendations ormal Output Formulation uation and Discussion of Outputs Output Formulation per Development tact and Discussion velopment oution

WORK SEGMENTS

COMMENTS: NO DEVELOPMENTAL CAPACITIES REQUIRED.

GRAPH NO. 17 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Participatory Capacities For SX-2 - Type B Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create	•	-	•	•	•	•	-	•	•	•	•	•	-	•
Ability to Communicate		•				•		•	-		•		•	•
Ability to Direct		•	•					-		•			•	
Ability to Control		•	•	•	•		•			•	•		•	· ·
Ability to Organize		•	•	•	•	•	•	•	-		•	•	•	
Ability to Plan	•		•	•	•	•		•	•	•	•	•	•	
Ability to Analyze and Evaluate	•	•	•	-	•	•	•	•	•	•	•	-	•	
				era ing	rk	iti Seg	iti al men	ima al Con tat	fin ry Inf tac	llo eme Ana orm t an	ן Pr w U nt lys ati d D	Ex ima ng lp (sis on)ist	palu ary Pap Cont Dev rik	Final Recommendations ormal Output Formulation Jation and Discussion of Outputs Output Formulation oer Development tact and Discussion Velopment

WORK SEGMENTS

COMMENTS: NO PARTICIPATORY CAPACITIES REQUIRED.

GRAPH NO. 18 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76 Type B Projects.

-

			•		
RESOURCE ABILITY CHARACTERISTICS					
Ability to Adapt and Create	L			• •	·. ·
Ability to Communicate	LL.			• •	
Ability to Direct	LLL	L		• •	
Ability to Control	. L L	L L			
Ability to Organize	LLL	L L		• •	
Ability to Plan	LLL	L		• •	
Ability to Analyze and Evaluate	LL.				
		Prin Initial C Work Segment Operational App App	Eva Primar Working P Follow Up Co Refinement mary Analysis L Information D ontact ation and Distr	ibution	Outputs

WORK SEGMENTS

COMMENTS: PRIMARY PHASE INVOLVEMENT ONLY.

Copyright (C) 1976 by The Minister of State for Science and Technology, Ottawa Ontario

Resource Ability Characteristics/Work Segments - Leadership Capacities For SX-2

GRAPH NO. 19 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Developemental Roles For SX-2 - Type C Projects.

CLASSIFICATION CAPACITIES

Final Recommendations					•			•	•	•		•
Formal Output Formulation				•		•			•	•		
Evaluation and Discussion of Outputs	•		•	•	•	•		•	•	•		
Primary Output Formulation	•	•	•		•	•	•	•	•	•	•	
Working Paper Development				•	•	•	•	•	•		•	
Follow Up Contact and Discussion		•	•	•	•	•	•	•			•	
Refinement	•	•		•	•	•	•	•	•		•	
Primary Analysis			•			•	•	•				
Initial Information Development	•	•			•			•				
Initial Contact		•		•		•			•	•		
Work Segmentation and Distribution				•	•	•		•	•			
Operational Approach Development	•	•		•	•			•	•		•	
Planning	•		•	•	•	•	•	•	•	•		
Initiation	•	•			•	•		•	•		•	
	Kn			nta ion	nagi ots	ann emei Cai	itia ing nt (pac:	aly ati Cap Cap	pac tic on pac	ope t P al Cap itu	por ote Cap aci	Advisory Capacity velopment Capacity ting ntial acity ty

WORK SEGMENTS

COMMENTS: NO SX-2 INVOLVEMENT IN TYPE C PROJECTS.

GRAPH NO. 20 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Claśśification Capacitiès/Work Segments – Participatory Roles For SX-2 – Type C Projects.

CLASSIFICATION CAPACITIES												
Final Recommendations	•				-	•	•		•		•	•
Formal Output Formulation	•	•	•			•	•	•	•	•	•	•
Evaluation and Discussion of Outputs	•	•			•	•	•		•	•	•	
Primary Output Formulation				•		•	•	•	•	•	•	•
Working Paper Development		•	•		•	•	•	•	•	•	•	•
Follow Up Contact and Discussion		•		•	•	•		•	•	•	•	•
Refinement	•					•		•	•	•	•	•
Primary Analysis	• ·	•		•	•	•	•	•	•	•	•	•
İnitial İnformation Development	•	•		•	•	•	•		•	•	•	•
Initial Contact	•	•	•	•	.•	•		•		• .		•
Work Segmentation and Distribution	•	•		•	•	•	•		•	• •	•	•
Óperational Approach Development	•	•	•	•	•		•			•	•	
Planning	•	•		•	•	÷	•	•	•		•	
Initiation	•	•	•	•	•	÷		•	•	•	•	
				1				1		Rej	l De por	Advisory Capacity velopment Capacity ting
	Kni) J Dec	cis:	nta: ion	nage cts	ann: emer	itia ing nt (bac:	alui atio Cap Capa	bac tica on (bac	t Po al (Capa itu	Cap	ntial acity ty

WORK SEGMENTS

COMMENTS: NO SX-2 INVOLVEMENT IN TYPE C PROJECTS.

GRAPH NO. 21 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Leadership Roles For SX-2 - Type C Projects.

CLASSIFICATION CAPACITIES

Final Recommendations		•	•	•		•	•	•	•	•	•		
Formal Output Formulation	•	•		•			•	•	•		•		
Evaluation and Discussion of Outputs		•				•			•	•	•	•	
Primary Output Formulation		•	•		•	•	•		•	•	•	•	
Working Paper Development	•	•	•	•	•	•			•	-	•	•	
Follow Up Contact and Discussion			•	•	•	•	-	•	•	•	•	•	
Refinement	•	•		•	•	•	•	•	•	•	•	-	
Primary Analysis				•	•	•	•	•		•			
Initial Information Development	•	•				•	-	•	•	•	•	•	
Initial Contact		•	•	•	•	•	•	•	•	•	-	•	
Work Segmentation and Distribution				•	•	-	•	•	•	•	•		
Operational Approach Development		•		•	•	•	•	•	•		•	•	
Planning	•	•	•		•	•	•		•	•	• .		
Initiation	•	•	•	•	•	•	•		•	•		•	
	Kn			nta: ion	nage cts	In: ann: emer Cap	itia ing nt (paci	alyi atio Cap Cap	bac tica on (bac	ope t Po al Capa ity	oor: oter Capa	Advisory velopment ting ntial acity ty	

WORK SEGMENTS

COMMENTS: NO SX-2 INVOLVEMENT IN TYPE C PROJECTS.

GRAPH NO. 22 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Developemental Requirements For SX-2 - Type C Projects.

		•					
CLASSIFICATION CAPACITIES			*.				· · ·
Advisory Capacity	•	•	• . •	•	• •		
Development Capacity	•	•		•	• •		
Reporting	•	•	• •		•••		
Scope	•	•		•			
Impact Potential					• •		
Analytical Capacity		•				`	
Initiation Capacity	•	•		•			
Planning Capacity	-	•	• •	•			
Management Capacity	· •	•		•	• •		
Contacts Capacity	•	•					
Decision Capacity	· .	•					
Knowledge	•				• •		
		Abi		ity t	Ability to (ility to Dire ty to Control to Organize	ect	Create

Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO SX-2 INVOLVEMENT IN TYPE C PROJECTS.

GRAPH NO. 23 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76 Classification Capacities/Resource Ability Characteristics - Participatory Requirements For SX-2 - Type C Projects. CLASSIFICATION CAPACITIES Advisory Capacity . Development Capacitu Reporting Scope Impact Potential Analytical Capacitu Initiation Capacity Planning Capacity Management Capacity Contacts Capacity Decision Capacity Knowledge

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO SX-2 INVOLVEMENT IN TYPE C PROJECTS.

GRAPH NO. 24 DATE PRINTED28-Jun-?(DATE ENTERED 1-JUN-?(

Classification Capacities/Resource Ability Characteristics - Leadership Requirements For SX-2 - Type C Projects.

CLASSIFICATION CAPACITIES		•
Advisory Capacity		
Development Capacity		
Reporting		
Scope		
Impact Potential	· · · · · · · ·	
Analytical Capacity		
Initiation Capacity		
Planning Capacity		
Management Capacity		
Contacts Capacity		
Decision Capacity		
Knowledge		
	Ability to Adapt and Creat Ability to Communicate Ability to Direct Ability to Control Ability to Organize	e.
	l Ability to Plan	

Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO SX-2 INVOLVEMENT IN TYPE C PROJECTS.

GRAF	'H NO	. 25	i
DATE	PRIN	TED28	-Jun-7

DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Developemental Capacities For SX-2 - Type C Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create Ability to Communicate Ability to Direct Ability to Control Ability to Organize Ability to Plan Ability to Analyze and Evaluate | | | Final Recommendations | | Formal Output Formulation | Evaluation and Discussion of Outputs 1 . 1 | | Primary Output Formulation | Working Paper Development ţ | Follow Up Contact and Discussion Refinement Primary Analysis Initial Information Development I Initial Contact Work Segmentation and Distribution Operational Approach Development ; Planning Initiation

WORK SEGMENTS

COMMENTS: NO SX-2 INVOLVEMENT IN TYPE C PROJECTS.

GRAPH NO. 26 DATE PRINTED28-JUN-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Participatory Capacities For SX-2 - Type C Projects.

RESOURCE ABILITY CHARACTERISTICS	
Ability to Adapt and Create	
Ability to Communicate	
Ability to Direct	
Ability to Control	je na svoje na
Ability to Organize	
Ability to Plan	· · · · · · · · · · · · · · · · · · ·
Ability to Analyze and Evaluate	
-	

WORK SEGMENTS

COMMENTS: NO SX-2 INVOLVEMENT IN TYPE C PROJECTS.

Resource Ability Characteristics/Work Segments - Leadership Capacities For SX-2 - Type C Projects.

GRAPH NO. 27 DATE PRINTED28-DATE ENTERED 1-

RESOURCE ABILITY CHARACTERISTICS

Ability	to	Adapt and Create	•	•	•	•	•	•	•				•		
Ability	to	Communicate	•			•							•	•	
Ability	to	Direct	•	•						-					
Ability	to	Control												•	
Ability	to	Organize		-						-					
Ability	to	Plan											•	٠	
Ability	to	Analyze and Evaluate		•		•	•								
			In	Ope ann: atio	era: ing	rk –	itia	itia al (meni	ima al Con tat	fine ry f Info tact ion	emer Anal Anal Anal Anal Anal Anal Anal	rkir v Up nt lys: atic d D:	ima ng c is is ist	Fo ry Pap ont Dev	Final Recommendations mation and Discussion of Outputs Output Formulation er Development act and Discussion Pelopment

WORK SEGMENTS

COMMENTS: NO SX-2 INVOLVEMENT IN TYPE C PROJECTS.

GRAPH NO. 28 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Developemental Roles For SX-2 - Type D Projects.

													•		• •	-	
CLASSIFICATION CAPACITIES						•						. •					
Final Recommendations	•	•.		•	•	•	•		•		•						
Formal Output Formulation	•	•	•	•	•		•	•	•		•	•					
Evaluation and Discussion of Outputs					•	•		•				•			-		
Primary Output Formulation		•	•						•			•					
Working Paper Development		•			•					-	•						
Follow Up Contact and Discussion	•		•						•				·				
Refinement				•					•	•	•						
Primary Analysis			•	•	•						•	•					
Initial Information Development	•	•	•		•	•	•	•	•	•		•					•
Initial Contact		•			•		•	•		•	•						
Work Segmentation and Distribution		•		•	•	•	•	•	•								
Operational Approach Development			•		•	•	•		•	•							
Planning		•	•		•	•		•	•	•	•						
Initiation	•		•	•	•	•	•	•	•	•	•	•					
· · · · · · · · · · · · · · · · · · ·	·		cis	nta ion	nag cts	In ann caj pac	iti ing nt p a c	Im aly ati Ca Cap ity	Sc pac tic on pac aci	Re ope t P al Cap itu	De por ote Cap aci	velopment ting ntial acity	y Capacity Capacity	•			

WORK SEGMENTS

COMMENTS: NO SX-2 INVOLVEMENT IN TYPE D PROJECTS.

GRAPH NO. 29 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

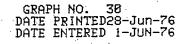
Classification Capacities/Work Segments - Participatory Roles For SX-2 - Type D Projects.

CLASSIFICATION CAPACITIES

Final Recommendations	•		•		٠					•		•		
Formal Output Formulation		•	•		•	•	•	•		•	-	•		
Evaluation and Discussion of Outputs			•	•		•		•	-			•		
Primary Output Formulation			•	-	•	•	•	•		•	•	•		
Working Paper Development	•	-	•	•		•	•	•	-	•	•			
Follow Up Contact and Discussion		•	•	•	•		•		-			•		
Refinement	•	•	•	•	•	•	•	•	•		•			
Primary Analysis		•		-	•	•	•			•	•	•		
Initial Information Development				•	•		•		•	•	•	•		
Initial Contact		•	•	•	•	•	•	•	•	•	•	•		
Work Segmentation and Distribution	•	•		•	•	•	•	•	•	•		•		
Operational Approach Development		•	•		•	•	•	•	•		•			•
Planning	-	•	•	•	•	•	•	•	•	•	•	•		
Initiation	•				•	•	•	•	•	•	•	-		
. <u>.</u>		De	cis	nta ion	nag cts	ann eme Ca	iti ing nt pac	aly ati Ca Cap ity	Sc pac tic on pac aci	ope t F al Cap itu	De por ote Cap paci	Advisory velopment ting ntial acity ty	Capacity Capacity	

WORK SEGMENTS

COMMENTS: NO SX-2 INVOLVEMENT IN TYPE D PROJECTS.



Classification Capacities-Work Segments - Leadership Roles For SX-2 - Type D Projects.

CLASSIFICATION CAPACITIES								•						•.				÷		•		
Final Recommendations		•						-		•												•
Formal Output Formulation		•	•			•		•									_					
Evaluation and Discussion of Outputs	•											-	·									
Primary Output Formulation											•											
Working Paper Development		•			.•		•			•		•										
Follow Up Contact and Discussion	•					•						-										
Refinement	•	•			•				•			•										
Primary Analysis		•.		•		•		•		•		•										
Initial Information Development		•			•		•		•	•	•	•										• •
Initial Contact	•	•	•	•	•			•		•	•					•			•			
Work Segmentation and Distribution	•	•	•	•	•	•		•		•	•	•										
Operational Approach Development		•	•	•	•		•	•	•	•	•	-										
Planning	•	•	•	•	,		•	•	• `	•	•	•										
Initiation	•	•	•	•	•		•	•	•	•	•	•										
	Kn	De owl	cis	nta ion	nag cts	In ann Ca pac	iti ing nt pac	l Im aly ati Cap Cap ity	Sc pac tic on pac aci	Re ope t P al Cap ity	De por ote Cap aci	vel tin nti aci	al	y (t (apaci apaci	ty ty						

8

WORK SEGMENTS

COMMENTS: NO SX-2 INVOLVEMENT IN TYPE D PROJECTS.

DATE ENTERED 1-JUN-76 Classification Capacities/Resource Ability Characteristics - Developemental Requirements For SX-2 - Type D Projects.

GRAPH NO. 31 DATE PRINTED28-Jun-76

CLASSIFICATION CAPACITIES

Advisory Capacity	•	•	•		•		
Development Capacity				•	•		
Reporting		•		•	-		
Scope	•	•	•				
Impact Potential		•					
Analytical Capacity	•	-	•		•	•	•
Initiation Capacity	٠	•	•		•		
Planning Capacity			•	•			
Management Capacity		•		•	•		
Contacts Capacity					•	•	
Decision Capacity		•	•	•	•	•	
Knowledge	•			•	•		
	- Ab		 Ab ili	 Ab ili ty	Ab ili ty to	Ab ili ty to Pla	Ability to Adapt and Create ility to Communicate ty to Direct to Control Organize n e and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO SX-2 INVOLVEMENT IN TYPE D PROJECTS

Classification Capacities/Resource Ability Characteristics - Participatory Requirements For SX-2 - Type D Projects.

GRAPH NO. 32 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

CLASSIFICATION CAPACITIES	
Advisory Capacity	• • • • • •
Development Capacity	· · · · · · · ·
Reporting	· · · · · · ·
Scope	· · · · · · · ·
Impact Potential	
Analytical Capacity	
Initiation Capacity	
Plahning Capacity	· · · · · · ·
Management Capacity	
Contacts Capacity	· · · · · · ·
Decision Capacity	· · · · · · ·
Knowl edge	· · · · · · ·
	Ability to Adapt and Create Ability to Communicate Ability to Direct Ability to Control Ability to Organize Ability to Plan Ability to Analuze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO SX-2 INVOLVEMENT IN TYPE D PROJECTS.

GRAPH NO. 33 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Leadership Requirements For SX-2 - Type D Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity	
Development Capacity	
Reporting	
Scope	· · · · · · · ·
Impact Potential	
Analytical Capacity	
Initiation Capacity	
Planning Capacity	
Management Capacity	
Contacts Capacity	
Decision Capacity	
Knowledge	
	<pre></pre>

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO SX-2 INVOLVEMENT IN TYPE D PROJECTS.

GRAPH NO. 34 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Developemental Capacities For SX-2 - Type D Projects.

RESOURCE ABILITY CHARACTERISTICS	· ·					-									
Ability to Adapt and Create		•		÷			•		-	•		•	•		•.
Ability to Communicate		-			•	• -	•	•	•		•		•	•	•
Ability to Direct		•			•	•		•	•	•	•	• ·	•	•	
Ability to Control		•	•			•	•	•	۴	•	•		•	•	
Ability to Organize		•	•	-	•	•	•	•	•	•	•	-	•	•	
Ability to Plan	· .	•	•	•	•	•	•	•	•	•	•	•	•	•	` .
Ability to Analyze and Evaluate			•	•		•	•		•	•	•	-	•	•	
	•	Ini			irat ng	ĸ s	itia Segn	iti: al (nen	ima al Con tat	l fin ry Inf tao ion	Wo llo Ana orm t an	Pr prki w U nt ilys nati	Ev ima ng p C is on ist	For Fali Par Dev Dev	Final Recommendations ormal Output Formulation Uation and Discussion of Outputs Output Formulation per Development tact and Discussion velopment bution t

WORK SEGMENTS

COMMENTS: NO SX-2 INVOLVEMENT IN TYPE D PROJECTS.

DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76 Resource Ability Characteristics/Work Segments - Participatory Capacities For SX-2 - Type D Projects. RESOURCE ABILITY CHARACTERISTICS ' Ability to Adapt and Create Ability to Communicate Abilitu to Direct Ability to Control Ability to Organize Abilitu to Plan Ability to Analyze and Evaluate I Final Recommendations | Formal Output Formulation Evaluation and Discussion of Outputs 1 Primary Output Formulation | | Working Paper Development | Follow Up Contact and Discussion Refinement l Primary Analysis Initial Information Development Initial Contact Work Segmentation and Distribution 1 Operational Approach Development

GRAPH NO. 35

WORK SEGMENTS

COMMENTS: NO SX-2 INVOLVEMENT IN TYPE D PROJECTS.

Copyright (C) 1976 by The Minister of State for Science and Technology, Ottawa Ontario

l Planning Initiation

GRAPH NO. 36 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Leadership Capacities For SX-2 - Type D Projects.

RESOURCE ABILITY CHARACTERISTICS	
Ability to Adapt and Create	
Ability to Communicate	
Ability to Direct	
Ability to Control	
Ability to Organize	
Ability to Plan	
Ability to Analyze and Evaluate	
	<pre> Final Recommendations Formal Output Formulation Evaluation and Discussion of Outputs Primary Output Formulation Working Paper Development Working Paper Development Follow Up Contact and Discussion Refinement Refinement Primary Analysis Initial Information Development Initial Contact Work Segmentation and Distribution Operational Approach Development Planning</pre>
	Initiation

WORK SEGMENTS

COMMENTS: NO SX-2 INVOLVEMENT IN TYPE D PROJECTS.

GRAPH NO. 37 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Developemental Roles For SX-1 - Type A Projects.

CLASSIFICATION CAPACITIES

Final Recommendations	•	DL	•		DL	•		•		•	DL I	DL		
Formal Output Formulation	•	DL		DL	DL		DL	•		•	DL I	DL		
Evaluation and Discussion of Outputs	•	DL	DL	DL		DL,	DL		•		. I	DL		
Primary Output Formulation	•	DL		DL	DL	DL	DL	• .			DL	•		
Working Paper Development		DL	•	DL	DL	•	DL	•	•	•	DL	•		
Follow Up Contact and Discussion	-	DL	DL	-	•	•			•		. 1	DL		
Refinement		DL	•	DL	DL	DL	DL	•			DL I	DL		
Primary Analysis		DL	•		DL	DL	DL	•	•	•	DL I	DL		
Initial Information Development	•	DL	•		DL	DL	-				DL I	DL		
Initial Contact		DL	DL		DL	DL	•			•	.]	DL		
Work Segmentation and Distribution	-	DL	•	DL	DL	DL	•	•	•	•	DL	•		
Operational Approach Development	•	DL	•	DL	DL	DL	•	•	•		DL			
Planning		DL		DL	DL	DL	•	•	•	•	DL	•		
Initiation		DL	•		•	DL	•	•	•		•			
		D D	eci	ont sio	lana act	lan gem s C	¦ ¦ An	l Im aly ati Cap ity	pac pac tic on pac	R R R R R R R R R R R R R R R R R R R	epor e Pote Cap pací y	velopment ting ntial acity	Capacity Capacity	

WORK SEGMENTS

COMMENTS: ALL SX-1 INVOLVEMENT IN TYPE A PROJECTS-DEVELOPMENTAL IN NATURE.

GRAPH NO. 38 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Participatory Roles For SX-1 - Type A Projects.

CLASSIFICATION CAPACITIES												•	
Final Recommendations	•		•	•	•		•			•	•	•	
Formal Output Formulation	•						•	•			•.	•	
Évaluation and Discussion of Outputs								•			•	•	
Primary Output Formulation	-		•			•	•	•	•	•			
Working Paper Development			•	•	•		•		•		•	. •	
Follow Up Contact and Discussion	•	•			•		•		•			•	
Refinement		•			•		•	•			•		
Primary Analysis	•		•			•						•	•
Initial Information Development		`N			•		•	÷				•	
Initial Contact	•	•					•				•.		
Work Segmentation and Distribution		,	•		•		•		•		-	•	
Óperational Approach Development	•	•	è	•	•	•		• .	•			•	
Planning					÷		•		·			•	
Initiation	÷	•	÷			۰.	• ·	•	•	•			
· · ·	Kne	Dec	cis	nta: ion	nag Sts	ann emei Cai	iti: ing nt (pàc	aly ati Cap Cap	pac tic on pac	ope t P al Cap ity	por ote Cap	velopmenť ting ntial acitú	Capacity Capacity

WORK SEGMENTS

COMMENTS: NO PARTICIPATION ROLES REQUIRED.

Classification Capacities/Work Segments - Leadership Roles For SX-1 - Type A Projects.

GRAPH NO. 39 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

· · ·																			
CLASSIFICATION CAPACITIES																	-		
Final Recommendations		•							•				•						
Formal Output Formulation	•	•			•		•		•		•		•						
Evaluation and Discussion of Outputs	•	•	•	•			•	•	•	•	•		•						
Primary Output Formulation				•		•		•	•		•		•						
Working Paper Development		•	•	•	•	•		•		•	•		•						
Follow Up Contact and Discussion	•	•	•		•		•	•	•	•	•		•						
Refinement	•	•			•	•		•	•	•	•		•						
Primary Analysis	•	•		•	•		•	•	•	•	•		•						
Initial Information Development	•			-	•	•	•	•	•	•	-		•						
Initial Contact			•		•	•		•	•	•	•								
Work Segmentation and Distribution		•	•	-				-	•	•	•		•						
Operational Approach Development		•	•	•	•		•	•	•	•	•		•						
Planning	-	•			•	•		•	•	•	٠								
Initiation .	•		•	•	•	•		•	•	•	•		•						
	Kn		Co cis	nta ion	Pl: nagi cts Caj	ann eme Ca	iti ing nt pac	aly ati Ca Cap ity	pac tic on pac aci	ope t H al Cap itu	epol Poti Ca Dac	ev rt en pa	Advisory velopment ing ntial acity y	Capacit Capacit	IJ IJ				

WORK SEGMENTS

COMMENTS: NO LEADERSHIP ROLES REQUIRED.

Classification Capacities/Resource Ability Characteristics -

Developemental Requirements For SX-1 - Type A Projects.

GRAPH NO. 40 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

CLASSIFICATION CAPACITIES

	DL	ĎL	DL.	DL	DL	-	
DL	DL	DL	DL	DL	•	DL	
	•	•	•				
-			•		•		
•				•		•	
DL	DL	DL	DL	DL		DĻ	
DL	DĻ	DL	DL	DL	•	DL	
DĻ	DL,	DĻ	DĻ	DL		DL	
DL.	DL	DĻ	DL	DL	DL	DL	•
-	DL.	DL	DĻ	DL	DL		
DL	DL	•	ÐL	DL	•	DL	• ·
-	•	•	•	•			·
	***				Al Dil	bil: ity	pility to Adapt and Create ity to Communicate to Direct Control
	DL - - - - - - - - - - - -	DL DL DL DL DL DL DL DL DL DL DL DL . DL	DL DL DL DL DL DL DL DL DL DL DL DL DL DL DL . DL DL	DL DL DL DL DL DL DL DL DL DL DL DL . DL DL DL . DL DL DL 	DL DL DL DL DL DL DL DL DL DL DL DL DL DL N	DL DL DL DL DL DL DL DL DL DL DL DL . . . DL DL DL DL DL DL . . . DL DL DL DL DL DL . . . DL DL DL DL DL DL . . . DL DL DL DL DL DL DL . DL DL DL DL DL DL DL . DL DL DL DL DL DL . . DL DL DL DL DL <t< td=""><td>DL DL DL DL DL . DL DL DL DL DL DL DL DL DL DL DL DL DL DL DL DL DL DL . DL DL DL . DL DL . DL </td></t<>	DL DL DL DL DL . DL DL DL DL DL DL DL DL DL DL DL DL DL DL DL DL DL DL . DL DL DL . DL DL . DL

Ability to Plan Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: ALL SX-1 INVOLVEMENT AND ABILITIES IN TYPE A PROJECTS-DEVELOPMENTAL IN NATURE. Copyright (C) 1976 by The Minister of State for Science and Technology, Ottawa Ontario

GRAPH NO. 41 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

DATE ENTERED 1-JUN-76 Classification Capacities/Resource Ability Characteristics - Participatory Requirements For SX-2 - Type A Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity	•	•	•		•	•	
Development Capacity	-	-	-				
Reporting			•		•		
Scope		•			•	•	
Impact Potential		•	•		•		
Analytical Capacity			•	•	•		
Initiation Capacity	-		•		•	•	•
Planning Capacity		-				•	•
Management Capacity		•	•	•			
Contacts Capacity					•		
Decision Capacity	•	•				•	
Knowledge .	•	•		•	•	•	
	Abi	Abi	Abi lit	lit y t	Ab: Ilii Ilii Ilii Ilii Ilii Ilii	Abi ilit ty t to C Plar	Ability to Adapt and Create ility to Communicate ty to Direct to Control Organize and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO PARTICIPATION REQUIREMENTS.

42 GRAPH NO. DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Leadership Requirements For SX-1 - Type A Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity	
Development Capacity	
Reporting	
Scope	· · · · · · ·
Impact Potèntial	
Analytical Capacity	
Initiation Capacity	
Planning Capacity	
Management Capacity	
Contacts Capacity	• • • • • • •
Decision Capacity	
Knowledge	
	Ability to Adapt and Create Ability to Communicate Ability to Direct Ability to Control Ability to Organize Ability to Plan Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO LEADERSHIP REQUIREMENTS.

GRAPH NO. 43 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Developemental Capacities For SX-1 - Type A Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create	DLDL.DL
Ability to Communicate	DL DL DL DL . DL . DL
Ability to Direct	DL DL DL DL DL DL DL DL DL DL DL DL DL
Ability to Control	. DL DL DL DL DL DL DL DL DL .
Ability to Organize	DL DL DL DL DL DL DL DL DL .
Ability to Plan	DL DL DL DL DL DL DL DL DL .
Ability to Analyze and Evaluate	DL DL DL DL DL
	<pre> Final Recommendations Formal Output Formulation </pre>

WORK SEGMENTS

COMMENTS: ALL SX-1 ABILITIES FOR TYPE A PROJECT WORK-DEVELOPMENTAL IN NATURE.

GRAPH NO. 44 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Participatory Capacities For SX-1 - Type A Projects.

RESOURCE ABILITY CHARACTERISTICS	
Ability to Adapt and Create	
Ability to Communicate	
Ability to Direct	· · · · · · · · · · · · · · · · · · ·
Ability to Control	
Ability to Organize	· · · · · · · · · · · · · · ·
Ability to Plan	
Ability to Analyze and Evaluate	
	<pre> Final Recommendations Formal Output Formulation Evaluation and Discussion of Outputs Primary Output Formulation Working Paper Development Follow Up Contact and Discussion Refinement Primary Analysis Initial Information Development Initial Contact Work Segmentation and Distribution Operational Approach Development Planning Initiation</pre>

WORK SEGMENTS

COMMENTS: NO PARTICIPATORY CAPACITIES REQUIRED.

GRAPH NO. 45 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Leadership Capacities For SX-1 - Type A Projects.

RESOURCE ABILITY CHARACTERISTICS	
Ability to Adapt and Create	
Ability to Communicate	
Ability to Direct	
Ability to Control	
Ability to Organize	
Ability to Plan	
Ability to Analyze and Evaluate	
	<pre> Final Recommendations Formal Output Formulation Evaluation and Discussion of Outputs Primary Output Formulation Working Paper Development Follow Up Contact and Discussion Refinement Primary Analysis Initial Information Development Initial Contact Work Segmentation and Distribution Operational Approach Development Planning Initiation</pre>

WORK SEGMENTS

COMMENTS: NO LEADERSHIP CAPACITIES REQUIRED.

GRAPH NO. 46 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Developemental Roles For SX-1 - Type B Projects.

CLASSIFICATION CAPACITIES

Final Recommendations	•	•	•	•	•	•	•	•	•	•	•	•
Formal Output Formulation		•	-		•	•	•	•	•	•	-	
Evaluation and Discussion of Outputs	•	•	•	•	•	•	•	•	•	•	•	•
Primary Output Formulation	•	•		•	•	•	•	•	•	•	•	•
Working Paper Development	•	•	•	•	•	•	•		•	•	•	
Follow Up Contact and Discussion	•	•		•	•	•	•	•	•	•	•	
Refinement		•		-	•		•	•	•	•		•
Primary Analysis	•	•	•		•	-	•	•	•	•		•
Initial Information Development	•	•	• '	•		•	•	•	•	•	•	•
Initial Contact	•	•	•		•			•	•	•	•	
Work Segmentation and Distribution				•	•	•	•	•	÷	•	•	•
Operational Approach Development	•	•	•	•	•	•		•	•	•	•	•
Planning	•			-	•	•	•		•	•	•	
Initiation	•	•			•	•	•	•		•	•	•
				ntao ion	nage Sts	ann: 2mer Cap	itia ing nt (paci	aty atin Cap Cap	pac tic on pac	ope t P al Cap ity	por ote Cap ac	Advisory Capacity evelopment Capacity rting ential pacity ity

WORK SEGMENTS

COMMENTS: NO DEVELOPMENTAL ROLES REQUIRED.

GRAPH NO. 47 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Participatory Roles For SX-1 - Type B Projects.

CLASSIFICATION CAPACITIES

Final Recommendations														
Formal Output Formulation	-										•	•		
Evaluation and Discussion of Outputs				-						•				
Primary Output Formulation								•				•		
Working Paper Development							•			•		•		
Follow Up Contact and Discussion			•						•		•			
Refinement		•	•			•		•	•					
Primary Analysis	•			•	•			•				•		
Initial Information Development	•				•	•				•		•		
Initial Contact		-	•					•				•		
Work Segmentation and Distribution	•	•	•				•				•			
Operational Approach Development		•	•				•					•		
Planning		•	•			•	•					•		
Initiation			•		•			•				•		
	Kn	De Du	cis	inta ion	nag cts	ann Ieme Ca	iti ing nt pac	aly Ca Cap ity	pac tic on pac aci	ope t P al Cap ity	por ote Cap aci	Advisory velopment ting ntial acity ty	Capacity Capacity	

WORK SEGMENTS

COMMENTS: NO PARTICIPATORY ROLES REQUIRED.

GRAPH NO. 48 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Leadership Roles For SX-1 - Type B Projects.

CLASSIFICATION CAPACITIES

Final Bocommondations		Ŧ			Ŧ						Ŧ	T
Final Recommendations	•	۰Ľ,	•	-	L	•	•			•		Ľ.
Formal Output Formulation	• ·	L	•	L	L	•	L	•	•	•	L	L
Evaluation and Discussion of Outputs	•	L	L	L	•	L	L	•	•	•	•	L
Primary Output Formulation	•	L	•	L	L	L	L	•	•	•	L	
Working Paper Development	•	L		L	L	•	L	•	•	•	L	•
Follow Up Contact and Discussion		L	L		•	•	•	•	•		•	L
Refinement		L	•	L	L	L	L		•	•	L	L
Primary Analysis		L	•	•	L	L	L _.	•	•	•	L	L
Initial Information Development	•	L	•	•	•	L				•	L	L
Initial Contact		L.	L	•	L	L	-		•	•	•	L
Work Segmentation and Distribution	•	L	•	L	L	L	•			•	L	
Operational Approach Development	•	L	•	L	L	L	•		•	•	L	
Planning	•	L		L	L	L		•	•	•	L	
Initiation	•	L	•		•	L	•				•	
		De	cis	nta ion	nac icts	anr eme Ca	An itti ing pac ity	Im aly ati Ca Cap ity	pac tic on pac aci	ope t P al Cap ity	De por ote Cap aci	Advisory Capacity velopment Capacity ting ntial acity ty

WORK SEGMENTS

GRAPH NO. 49 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76 Classification Capacities/Resource Ability Characteristics - Developemental Requirements For SX-1 - Type B Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity		
Development Capacity		
Reporting		
Scope		
Impact Potential		
Analytical Capacity		
Initiation Capacity		
Planning Capacity		
Management Capacity		
Contacts Capacity		
Decision Capacity		
Knowledge		
	<pre> Ability to Adapt and Creat Ability to Communicate Ability to Direct Ability to Control Ability to Organize ! Ability to Plan Ability to Analyze and Evaluate</pre>	te

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO DEVELOPMENTAL REQUIREMENTS.

GRAPH NO. 50 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76 Classification Capacities/Resource Ability Characteristics - Participatory Requirements For SX-1 - Type B Projects.

CLASSIFICATION CAPACITIES		· · · ·	
Advisory Capacity			• •
Development Capacity			
Reporting			
Scope			
Impact Potential			
Analytical Capacity			
Initiation Capacity			
Planning Capacity			
Management Capacity			
Contacts Capacity			
Decision Capacity			
Knowledge			
	Abili Ability Ability to Ability to Cor Ability to Organi Ability to Plan Ability to Analyze and	itrol Ze	· · · · · · · · · · · · · · · · · · ·

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO PARTICIPATION REQUIREMENTS.

Classification Capacities/Resource Ability Characteristics - Leadership Requirements For SX-1 - Type B Projects.

GRAPH NO. 51

CLASSIFICATION CAPACITIES

Advisory Capacity	•	Ľ	L	L	L	L	•
Development Capacity	Ľ	L	L	Ľ	L	÷	L
Reporting	•	•	·•		•		•
Scope			•		•		•
Impact Potential							
Analytical Capacity	L	L	L	L	L		L
Initiation Capacity	L	L	L	L	L		L
Planning Capacity	L	L	L	L	L		L
Management Capacity	L	L	L	L	L	L	L
Contacts Capacity	-	L	L	L	L	L	
Decision Capacity	L	L	•	L	L		L
Knowledge	•	-		•	•		
	Ak	 	¦ Ab ili	l At nili ity	Ak Ak ili ity to	Ak Dili Ity To Pla	Ability to Adapt and Create Dility to Communicate ity to Direct to Control Organize an ze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

GRAPH NO. 52 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Developemental Capacities For SX-1 - Type B Projects.

RESOURCE ABILITY CHARACTERISTICS							•					:			· . ·		•		. '		
Ability to Adapt and Create		•				•.	•	•	•	÷					•						
Ability to Communicate		· •	•	•	•	•	•	•			•	•			-						
Ability to Direct		-	•	•	•	•	•	•		•				•						•.	
Ability to Control		•	•	•				•			•				•						
Ability to Organize	•	-	•		•		•	•	•	•.	•		٩		•						
Ability to Plan	•	• ·	•	•	•	•		•	•	•	•	•	-	•	•		,				
 Ability to Analyze and Evaluate	•	-		•	•	•	•	•	•	•	•		•		•						
		ri Li Li	ann	era ing	rk	iti	iti al men	ima al Con tat	fin ry Infi tac ion	llo eme Ana orm t an	rki w U nt lys ati d D	E im ng p is on is	val Pa Cor De	ibu	Final mal O tion utput r Dev ct an lopme tion	utpu and For elop d Di	t For Discu mulat ment	rmula ussio tion	ition	Outputs	

WORK SEGMENTS

COMMENTS: NO DEVELOPMENTAL CAPACITIES REQUIRED.

GRAPH NO. 53 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Participatory Capacities For SX-1 - Type B Projects.

RESOURCE ABILITY CHARACTERISTICS	
Ability to Adapt and Create	
Ability to Communicate	
Ability to Direct	$\mathbf{x}_{1} \mathbf{x}_{2} \mathbf{x}_{3} \mathbf{x}_{4} \mathbf{x}_{1} \mathbf{x}_{2} \mathbf{x}_{3} \mathbf{x}_{4} \mathbf{x}_{4} \mathbf{x}_{5} \mathbf{x}_{1} \mathbf{x}_{2} \mathbf{x}_{3} \mathbf{x}_{4} \mathbf{x}_{5} \mathbf$
Ability to Control	
Ability to Organize	
Ability to Plan	· · · · · · · · · · · · · · · · · · ·
Ability to Analyze and Evaluate	· · · · · · · · · · · · · · · · · ·
	<pre> Final Recommendations Formal Output Formulation Evaluation and Discussion of Outputs Primary Output Formulation Working Paper Development Follow Up Contact and Discussion Refinement Refinement Primary Analysis Initial Information Development Initial Contact Work Segmentation and Distribution Operational Approach Development Planning Initiation</pre>

WORK SEGMENTS

COMMENTS: NO PARTICIPATORY CAPACITIES REQUIRED.

GRAPH NO. 54 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Leadership Capacities For SX-1 - Type B Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create	L
Ability to Communicate	L L L L . L . L
Ability to Direct	LLLLLLLLLL
Ability to Control	. L L L L L L L L .
Ability to Organize	LLLLLLL.L.
Ability to Plan	LLLLLLL
Ability to Analyze and Evaluate	L L L L
	<pre> Final Recommendations </pre>

WORK SEGMENTS

GRAI	PH NO.	55
		28-Jun-76
DATE	ENTERED	1-JUN-75

Classification Capacities/Work Segments - Developmental Roles For SX-1 - Tupe C Projects.

CLASSIFICATION CAPACITIES Final Recommendations Formal Output Formulation Evaluation and Discussion of Outputs Primary Output Formulation Working Paper Development Follow Up Contact and Discussion Refinement Primary Analysis Initial Information Development Initial Contact Work Segmentation and Distribution Operational Approach Development Planning Initiation ! ! Advisory Capacity ! Development Capacity 1 1 ł | Reporting Scope Impact Potential -| Analytical Capacity | Initiation Capacity | | | | Planning Capacity | | | Management Capacity | | Contacts Capacity | Decision Capacity Knowledge

WORK SEGMENTS

COMMENTS: NO DEVELOPMENTAL ROLES REQUIRED.

GRAPH NO. 56 DATE PRINTED28+Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Participatory Roles For SX-1 - Type C Projects.

CLASSIFICATION CAPACITIES

							•												
Final Recommendations	•	. •		•						•			•						
Formal Output Formulation	•	•			•			•		•	•		•	•			•		
Evaluation and Discussion of Outputs		•	•					•		-									
Primary Output Formulation						-	•	•	•				•						
Working Paper Development	•		•		•					• •	•		-					-	
Follow Up Contact and Discussion				•					•				•						
Refinement		•											•						
Primary Analysis		•		•	٠			•	-				•	• .					
Initial Information Development		•	•	•			•		•	•	•								
Initial Contact	•		•	•															
Work Segmentation and Distribution	•	•		•		•	•		•		•		•						
Operational Approach Development	•	•	•					•	•.		•		• .						
Planning		•	•		•	•		•	. •	•			•						
Initiation	•	•	•	•	•				•	•	•		•						
		De	cis	ion ior	inag icts	In ann jeme Ca	iti ing nt pac	alu ati Cap itu	pa on pa ac	cope ct l cal Cal city	D epo ot Ca cac	ev irt en	Advisory elopment ing tial city y						

WORK SEGMENTS

COMMENTS: NO PARTICIPATION ROLES REQUIRED.

GRAPH NO. 57 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Leadership Roles For SX-1 - Type C Projects.

CLASSIFICATION CAPACITIES

Final Recommendations	•	•					•					.•			
Formal Output Formulation						•	-	-							
Evaluation and Discussion of Outputs				•		•	-	•							
Primary Output Formulation	-		•								÷				
Working Paper Development	•	•	-					-		•		•			
Follow Up Contact and Discussion	-	•					•								
Refinement .							-			•		•			
Primary Analysis			•				•			•					
Initial Information Development			•							•		•			
Initial Contact		•			•										
Work Segmentation and Distribution		L		L	L	L.	•				L				
Operational Approach Development	•	L	•	L	L	L.		•		•	L				
Planning		L	-	L	L	L.		-			L				
Initiation	•	L	•			L		-		•	•				
	Kn	De		nta ion	hag cts	In eme Cap pac	iti: ing nt (pac	alyi atio Cap Capa	l Sco Daci tica Dn (Daci	Repope t Pr al Cap: ity	De por ote Cap	Advisory velopment ting ntial acity ty			

WORK SEGMENTS

COMMENTS: PRIMARY PHASE INVOLVEMENT ONLY.

GRAPH NO. 58 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76 Classification Capacities/Resource Ability Characteristics - Developemental Requirements For SX-1 - Type C Projects.

CLASSIFICATION	~~~~
AREA TO LETTON	OUT HOT ITTO

Advisory Capacity		
Development Capacity	• • • • • •	· · · ·
Reporting	· · · · · ·	
Scope	· · · · · · · ·	
Impact Potential	· · · · · · · · ·	
Analytical Capacity	· · · · · · ·	
Initiation Capacity		
Planning Capacity		
Management Capacity	· · · · · · ·	
Contacts Capacity	· · · · · · ·	
Decision Capacity		
Knowledge	• • • • • • • •	
·	Ability to Adapt and Create Ability to Communicate Ability to Direct Ability to Control Ability to Organize	

l Ability to Plan Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO DEVELOPMENTAL REQUIREMENTS.

Classification Capacities/Resource Ability Characteristics - Participatory Requirements For SX-1 - Type C Projects.

GRAPH NO. 59 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

CLASSIFICATION CAPACITIES Advisory Capacity Development Capacity Reporting Scope Impact Potential Analytical Capacity Initiation Capacity Planning Capacity Management Capacity Contacts Capacity Decision Capacity Knowledge ! Ability to Adapt and Create
! Ability to Communicate Ability to Direct Ability to Control 1 1 1 Ability to Organize Ability to Plan

Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO PARTICIPATION REQUIREMENTS.

GRAPH NO. 60 DATE PRINTED28-Jun-76

Classification Capacities/Resource Ability Characteristics -

DATE ENTERED 1-JUN-76 Leadership Requirements For SX-1 - Type C Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity	•	L	•		•	•	•
Development Capacity	L	L	L	L	L	:	L
Reporting		•	•	•		•	•
Scope			•		•	•	
Impact Potential	•.		•	•	•	•	· •
Analytical Capacity	•	•		•		•	
Initiation Capacity	L	L	L	L	L	•	L .
Planning Capacity	L	L	L	L	L		L
Management Capacity	L	L	L	L.	L	•	L
Contacts Capacity		•	•				
Decision Capacity	L	L.		L	L	•	L
Knowledge		•	•		•		•
		Ab	oili	ili ty	Ab ili ty to	ili ty to Pla	pility to Communicate ty to Direct to Control Organize

Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: PRIMARY PHASE INVOLVEMENT ONLY.

GRAPH NO. 61 DATE PRINTED28-JUD-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Developemental Capacities For SX-1 - Type C Projects.

RESOURCE ABILITY CHARACTERISTICS Ability to Adapt and Create Ability to Communicate Ability to Direct Ability to Control Ability to Organize Ability to Plan Ability to Analyze and Evaluate 1 Final Recommendations | Formal Output Formulation ł Evaluation and Discussion of Outputs . 1 | Primary Output Formulation | Working Paper Development | Follow Up Contact and Discussion | Refinement ! Primary Analysis Initial Information Development Initial Contact Work Segmentation and Distribution Operational Approach Development Planning Initiation

WORK SEGMENTS

COMMENTS: NO DEVELOPMENTAL CAPACITIES REQUIRED.

GRAPH NO. 62 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76 cts.

Resource Ability	y Characteristics/Work	Segments -	Participatory	Capacities	For SX-1	- Type C	Projec
------------------	------------------------	------------	---------------	------------	----------	----------	--------

RESOURCE ABILITY CHARACTERISTICS	
Ability to Adapt and Create	· · · · · · · · · · · · ·
Ability to Communicate	· · · · · · · · · · · · · · · · · · ·
Ability to Direct	
Ability to Control	
Ability to Örganizé	
Ability to Plan	
Ability to Analyże and Evaluate	
	<pre> </pre>

WORK SEGMENTS

COMMENTS: NO PARTICIPATORY CAPACITIES REQUIRED.

GRAPH NO. 63 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

١

Resource Ability Characteristics/Work Segments - Leadership Capacities For SX-1 - Type C Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create	L				•		•	-			•	•		•		
Ability to Communicate	L	L	•	-	•	•	•	•				•	•	*	·	
Ability to Direct	L	L	L	L	-			•					•	•	• • •	
Ability to Control	-	L	L	L	•	•	•	•	۰.			•	•			
Ability to Organize	L	L	L	L		•	•	•	•		•	•		•	r,	
Ability to Plan	L	L	L	L		-				•		•				
Ability to Analyze and Evaluate	L	L		•	•					•		•			· .	
·			ann	era Ning	rk tic	iti Seg	iti al men	ima al Con itat	efin Iry Inf Itac	llo eme Ana orm t an	rki w L nt lys ati d I	ima ng ip (is on)is	vali Paj Con De tril	ormal Out Jation ar Output E per Devel tact and velopment	Discussion	Outputs

WORK SEGMENTS

COMMENTS: PRIMARY PHASE INVOLVEMENT ONLY.

GRAPH NO. 64 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Developemental Roles For SX-1 - Type D Projects.

CLASSIFICATION CAPACITIES								•										
Final Recommendations	-			•		•	•		•		•	•						
Formal Output Formulation	•	•	•	•		•	•	•	•	•	•						_	
Evaluation and Discussion of Outputs	•	•	•	•		•	•	•	•	•	•							
Primary Output Formulation	• :	•	•	•		•	•		•	•	•							
Working Paper Development	•	•	•	•	•	•	•	•			•	•						
Follow Up Contact and Discussion	•	•	•	·	•			•	•	٠	•	· .		•				
Refinement		•	•		•	•	.•		•	•	•	•						
Primary Analysis	•	•	•.	٠	•	•	•	•	•		٠	•	· .					
Initial Information Development	•	•	•	•	•		•	• •	•	•	•	•						
Initial Contact	•	•	-	•	•	•	÷	•	•		•							
Work Segmentation and Distribution	•	•	•	•		÷	•	•	•			•						
Operational Approach Development	•	•	•	•	•	٩	•	•	•		•	•						
Planning	•	•	÷		٠		•	٠	•	•	•	•						
Initiation	•	•	•		•	•		•	•	ę	•	۰.						
	Kno	Dec	is:	Maı ntar ion	nag cts	ann eme Ca	Ana iti ing nt pac ity	aly ati Cap ity	oac tic on oac	ope t H al Cap	De por Pote Cap	eve ti ent	lopment ng ial ity	Capacity Capacity				

WORK SEGMENTS

COMMENTS: NO SX-1 INVOLVEMENT IN TYPE D PROJECTS.

Classification Capacities/Work Segments - Participatory Roles For SX-1 - Type D Projects.

CLASSIFICATION CAPACITIES											·				
Final Recommendations	•							•		•	-	•			
Formal Output Formulation					-	•	•	•				•			
Evaluation and Discussion of Outputs	•	•		•	•		•				•	•			
Primary Output Formulation	-			•	-			•	•	•		•			
Working Paper Development		•	•		•	•		•			•	•			
Follow Up Contact and Discussion	•		•	•	-		•	•			•	•			
Refinement		•	•	•	•	•									
Primary Analysis	•					•			•	-					
Initial Information Development	•	•		•		•		•	•			•	·		
Initial Contact								•	•		•	•			
Work Segmentation and Distribution						•		•		•	•	•			
Operational Approach Development		•			•	•	•	•	•			•			
Planning		-	•		•	•	•			•	•				
Initiation		•.		•				•	•	•	•	•			
·	Kn	De	cis	nta ion	Pl nag cts Ca	ann eme Ca	iti ing nt pac	aly ati Ca Cap	pac tic on pac aci	Re ope t P al Cap ity	por ote Cap aci	Advisory velopment ting ntial acity ty	Capacity Capacity		

GRAPH NO. 65 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

WORK SEGMENTS

COMMENTS: NO SX-1 INVOLVEMENT IN TYPE D PROJECTS.

GRAPH NO. 66 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Leadership Roles For SX-1 - Type D Projects.

CLASSIFICATION CAPACITIES		•			•."									· · ·										
Final Recommendations																							. ·	
Formal Output Formulation	•.	•		•		•	•	•		•														
Evaluation and Discussion of Outputs	•	•	•	•	•		•	•	:	•	•	.•						~					•	
Primary Output Formulation	٠	÷		•	•	•	•				÷											•		
Working Paper Development		••	4	•	•	•	•	•	•	•	•													
Follow Up Contact and Discussion	•	•	•	•	•	•	•	•	•	•	٠	•												
Refinement	• .	•	•	•	•	•	•	•.	•	•	•	•												
Primary Analysis	•	•	•	•	÷	•	•	•	•	÷	•	•		•										
Initial İnformation Development	٩	÷	÷	÷	•	÷	•	•	•	•	-	•												
İnitial Contact	•	•	i	•	•	•	•	•	•	•	ì	. •												
Work Segmentation and Distribution	•	÷	•	•	•	•	•	•	•	•	÷	÷								•				
Operational Approach Development	•	•	÷	í	•	÷	•	•	•	•	•	•												
Planning	•	•	•	•	•	•	i	•	•	•	i	-												
Initiation	•	•	•	¥	•	÷	•	•	•	÷	•	•												
	Kna	Dec	Cor cisi	itac ion	nag: cts	ann∶ ∋mèr Cap	iti: ing nt pac	aly atic Cap Capa	Sco Sac tic on o Sac	Re ope t P al Cap itu	De por ote Cap aci	eve ti ent	lop ng ial itu	omer	it i	Càr Car	jac jac	ity ity						

WORK SEGMENTS

COMMENTS: NO SX-1 INVOLVEMENT IN TYPE D PROJECTS.

GRAPH NO. 67 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Developemental Requirements For SX-1 - Type D Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity Development Capacity Reporting Scope Impact Potential Analytical Capacity Initiation Capacity Planning Capacity Management Capacity Contacts Capacity Decision Capacity Knowledge Ability to Organize Ability to Plan Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO SX-1 INVOLVEMENT IN TYPE D PROJECTS.

DATE ENTERED 1-JU Classification Capacities/Resource Ability Characteristics - Participatory Requirements For SX-1 - Type D Projects.

GRAPH NO. 68 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76 Tune D. Projects.

	• •							
	CLASSIFICATION CAPACITIES							
	Advisory Capacity	•			-			•
	Development Capacity	· •	•					•
	Reporting	•						•
	Scope	•		•				
	Impact Potential							•
•	Analytical Capacity							
	Initiation Capacity			•		-		
	Planning Capacity					•		•
	Management Capacity			•	1		•	•
	Contacts Capacity				÷			
	Decisión Capacity					•		
	Knowledge			•	:			
		Ab	 	ili	ili ty	Ab ili ty to :	ili ty to (Plan	Ability to Adapt and Create Dility to Communicate ity to Direct to Control Organize an ze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO SX-1 INVOLVEMENT IN TYPE D PROJECTS.

GRAPH NO. 69 DATE PRINTED28-Jun-76

Classification Capacities/Resource Ability Characteristics - Leadership Requirements For SX-1 - Type D Projects.

DATE ENTERED 1-JUN-76 adership Requirements For SX-1 - Type D Projects.

CLASSIFICATION CAPACITIES

Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO SX-1 INVOLVEMENT IN TYPE D PROJECTS.

GRAPH NO. 70 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Developemental Capacities For SX-1 - Type D Projects.

RESOURCE ABILITY CHARACTERISTICS	
Ability to Adapt and Create	
Ability to Communicate	nga ana ana ana ana ana ang taong taong taong taong taong taong taong taong taong taong taong taong taong taong
Ability to Direct	
Ability to Control	· · · · · · · · · · · · · · · · · · ·
Ability to Organize	• • • • • • • • • • • • • • • • • • •
Ability to Plan	· · · · · · · · · · · · · · · · · · ·
Ability to Analyze and Evaluate	
	<pre> Final Recommendations Formal Output Formulation Evaluation and Discussion of Outputs Primary Output Formulation Working Paper Development Follow Up Contact and Discussion Refinement Refinement Primary Analysis Initial Information Development Initial Contact Work Segmentation and Distribution Operational Approach Development Planning Initiation</pre>

WORK SEGMENTS

COMMENTS: NO SX-1 INVOLVEMENT IN TYPE D PROJECTS.

GRAPH NO. 71 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Participatory Capacities For SX-1 - Type D Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create	· · · · · · · · · · · · · · ·
Ability to Communicate	
Ability to Direct	
Ability to Control	
Ability to Organize	
Ability to Plan	
Ability to Analyze and Evaluate	
	<pre> Final Recommendations Formal Output Formulation Evaluation and Discussion of Outputs Primary Output Formulation Working Paper Development Follow Up Contact and Discussion Refinement Refinement Initial Information Development Initial Contact Work Segmentation and Distribution Operational Approach Development Planning Initiation</pre>

WORK SEGMENTS

COMMENTS: NO SX-1 INVOLVEMENT IN TYPE D PROJECTS.

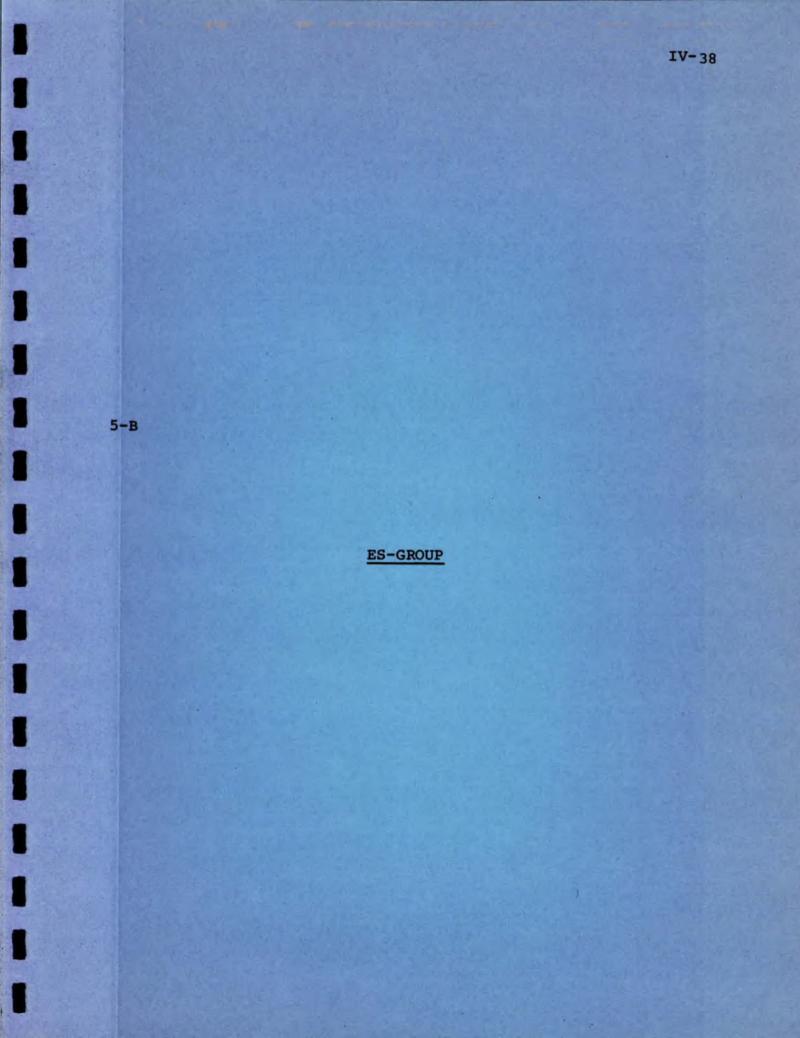
GRAPH NO. 72 DATE PRINTED28-JUN-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Leadership Capacities For SX-1 - Type D Projects.

RESOURCE ABILITY CHARACTERISTICS							•	•						
Ability to Adapt and Create		•	•			•	•			•				· ·
Ability to Communicate	•	•	•	•	•	•		•	•	•	•			
Ability to Direct	•	•	•	•	•	.•		•	•			•		• •
Ability to Control	•	•	•	•	•	•			•	•	•	•		• •
Ability to Organize	•	•		•		•	•		•		.•			• •
Ability to Plan					•	÷		•		•			•	• •
Ability to Analyze and Evaluate	-	•	•		•			•			•	•		
	an at an an an an an an an an an				rk i	iti	iti al men	ima al Cor tat	fir Fo Inf Inf itac	Wo blic Ana form t	Pr Drki Dw L Ent alys nati	E rim Jp Sis ior Dis	iva nar Cc i I	I Final Recommendations Formal Output Formulation Aluation and Discussion of Outputs y Output Formulation aper Development intact and Discussion Development ribution
	İn	itiz												

WORK SEGMENTS

COMMENTS: NO SX-1 INVOLVEMENT IN TYPE D PROJECTS.



GRAPH NO. 73 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Developemental Roles For ES-5 - Type A Projects.

CLASSIFICATION CAPACITIES														•
Final Recommendations			•				•	-		•				
Formal Output Formulation							•	•	•		-	-		
Evaluation and Discussion of Outputs						•							•	
Primary Output Formulation						•	-	•		•	•	-		
Working Paper Development			•		•	•	•	•	•	•	•			
Follow Up Contact and Discussion							•	• ·			٠			
Refinement		•			•	•	•			•		•		
Primary Analysis								•				•		
Initial Information Development		•						•						
Initial Contact				•	•	•								
Work Segmentation and Distribution	•				•		•					•		
Operational Approach Development	•	•	•	•		•	•	•		•	•	•		
Planning		•		•	•					•		•		
Initiation	•			•	•			•	•	•	•			
			Coscia	nta: ion	nag cts	ann emei Ca	iti ing nt pac	aly ati Ca Cap ity	pac tic on pac aci	ope t P al Cap ity	por ote Cap aci	velopmer ting ntial acity	y Capacity t Capacity	

WORK SEGMENTS

COMMENTS: NO DEVELOPMENTAL ROLES REQUIRED.

GRAPH NO. 74 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Participatory Roles For ES-5 - Type A Projects.

CLASSIFICATION CAPACITIES	
Final Recommendations	· · · · · · · · · · · ·
Formal Output Formulation	· · · · · · · · · · · ·
Évaluation and Discussion of Outputs	· · · · · · · · · · ·
Primary Output Formulation	· · · · · · · · · · · · · · · · · · ·
Working Paper Development	· · · · · · · · · · · · · · · · · · ·
Follow Up Contact and Discussion	· · · · · · · · · · · · · · · · · · ·
Refinement	
Primary Analýsis	• • • • • • • • • • • • • •
Initial Information Development	
Initial Contact	
Work Segmentation and Distribution	
Operational Approach Development	· · · · · · · · · · · · · · · · · · ·
Planning	· · · · · · · · · · · · · · · ·
Initiation	· · · · · · · · · · · · · · · · · · ·
	Advisory Capacity Development Capacity Reporting Scope Impact Potential Analytical Capacity
	Initiation Capacity Planning Capacity Management Capacity Contacts Capacity Decision Capacity Knowledge

WORK SEGMENTS

COMMENTS: NO PARTICIPATORY ROLES REQUIRED.

Classification Capacities/Work Segments - Leadership Roles For ES-5 - Type A Projects.

GRAPH NO. 75 DATE PRINTED29-Jur-76 DATE ENTERED 1-JUN-76

CLASSIFICATION CAPACITIES

Final Recommendations	•	L	•		L	•	•	•			L	L
Formal Output Formulation	•	L		L	L		L	•	•		L	L
Evaluation and Discussion of Outputs	•	L	L	L		L	L			•	•	L
Primary Output Formulation	•	L	•	L	L	L	Ľ	•	•	•	L	
Working Paper Development		L		L	L		L	•	•	•	L	
Follow Up Contact and Discussion	-	L	L	•	•	•			•'	•	•	L
Refinement		L	•	L	L	L	L	•			L	Ľ
Primary Analysis		L	•	•	L	L	L		•		L	L
Initial Information Development		L		•		L	-	•	•		L	L
Initial Contact	•	L	L		L	L	•	•				L
Work Segmentation and Distribution	•	L		L	L	L		•	•		L	
Operational Approach Development		L		L	L	L	•				L	
Planning	•	L	•	L	L	Ľ		•	•		L	•
Initiation		L		•		L		-			•	
	Kr	De	ecis	onta sion	l Pl anac acts	anr Jeme S Ca	An iti ing ent apac ity	aly ati Cap ity	Sc pac tic on pac aci	ope al Cap itu	por Pote Cap	Advisory Capacity velopment Capacity ting ential acity ty

WORK SEGMENTS

Classification Capacities/Resource Ability Characteristics - Developemental Requirements For ES-5 - Type A Projects.

GRAPH NO. 76 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

CLASSIFICATION CAPACITIES

 Advisory Capacity		•	•	•	•	÷	
Development Capacity	•	•		•	•		•
Reporting		•	٩	•	•	•	
Scope				•	•	•	•
Impact Potential		•		•	•		•
Analytical Capacity	•	•	•		-		•
Initiation Capacity						•	
Planning Capacity			•		•		•
Management Capacity	•		•				
Contacts Capacity		•		•			
Decision Capacity							•
Knowledge					•		•
	Abi	 	ili	ili ty	ili ty to l	Ab ili ty to Pla	Ability to Adapt and Create ility to Communicate ty to Direct to Control Organize n e and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO DEVELOPMENTAL REQUIREMENTS.

GRAPH NO. 77 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Participatory Requirements For ES-5 - Type A Projects.

CLASSIFICATION CAPACITIES Advisory Capacity Development Capacity Reporting Scope Impact Potential Analutical Capacitu Initiation Capacity Planning Capacitu Management Capacitu Contacts Capacity Decision Capacity Knowledge ! Ability to Adapt and Create
! Ability to Communicate | | Ability to Direct | Ability to Control | Ability to Organize Ability to Plan Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO PARTICIPATION REQUIREMENTS.

GRAPH NO. 78 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Leadership Requirements For ES-5 - Type A Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity . L L L L L . Development Capacity LLLL . L Reporting Scope Impact Potential Analytical Capacity L L L L Τ. . L Initiation Capacity L L L L L . L Planning Capacity L L L L L . L Management Capacity LLLLLL Contacts Capacity . L L L L L . Decision Capacity LL . L L . L Knowledge ! Ability to Adapt and Create Ability to Communicate Ability to Direct Ability to Control Ability to Organize

Ability to Plan

Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

GRAPH NO. 79 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Developemental Capacities For ES-5 - Type A Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create Ability to Communicate Ability to Direct Ability to Control Ability to Organize Ability to Plan Ability to Analyze and Evaluate Final Recommendations Formal Output Formulation Evaluation and Discussion of Outputs Primary Output Formulation Working Paper Development Follow Up Contact and Discussion Refinement Primary Analysis Initial Information Development Initial Contact Work Segmentation and Distribution Operational Approach Development Planning Initiation

WORK SEGMENTS

COMMENTS: NO DEVELOPMENTAL CAPACITIES REQUIRED.

GRAPH NO. 80 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability	Characteristics/Work	Segments -	Participatory	Capacit
------------------	----------------------	------------	---------------	---------

Participatory Capacities For ES-5 - Type A Projects.

			•			•											· ·						•			
RESOURCE ABILITY CHARACTERISTICS				•																						
								•		•										•						•
Ability to Adapt and Create		•	•	•	۰.	÷	•	•		•	•		•													•
Ability to Communicate		•	•	. •	•	÷	•	•	•	•	•	•	•	•		•										
Ability to Direct	.;	•	•	•	•	•	•	•	•	•	•		•	•		•			•							
Ability to Control		•		•	•	•	•	•	•	•	•	•	•	•		•							·			
Ability to Organize		•	•	•		•		. •	•		•	÷	•	•		•										
Ability to Plan		•	•	•	•	•	•		•	•	•	•	•	•		•										
Ability to Analyze and Evaluate		•	•	•	•		ŗ	•	-	•	•		•	•.		•										
		f			** ** ** ** ** ** ** **			niti	ima al	efin Iry Inf	eme Ana orm	nki w U nt ilys	ima ng Jp (val Pa Con	ior ua JO ape ita	mal tio utp r D ct	Ou n a ut eve and	itpi and Foi eloi d D	ut : Di: rmu pme	Forr scus lat:	nula ssic ion	ions atior on of	0u1	tput	, S	
		**	Pl		i Wo Dera Ding	ork atic	Seg	mer	Con ntat opro	ion	an	id D Ivel)ist .opm	tri nen	ibu it	tio	n									
· · ·		In	iti	ati	ion																					

WORK SEGMENTS

COMMENTS: NO PARTICIPATORY CAPACITIES REQUIRED.

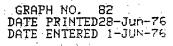
GRAPH NO. 81 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Leadership Capacities For ES-5 - Type A Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create	L.,
Ability to Communicate	L L L
Ability to Direct	L L L L L L L L L L L
Ability to Control	. L L L L L L L L .
Ability to Organize	L L L L L L L L L .
Ability to Plan	LLLLLLL. L.
Ability to Analyze and Evaluate	L L L L L L L
	<pre> Final Recommendations </pre>

WORK SEGMENTS



Classification Capacities/Work Segments - Developemental Roles For ES-5 - Type B Projects.

CLASSIFICATION CAPACITIES

Final Recommendations		
Formal Output Formulation	· · · · · · · · · · · ·	,
Evaluation and Discussion of Outputs	· · · · · · · · · · · · ·	
Primary Output Formulation	· · · · · · · · · · · · ·	
Working Paper Development		
Follow Up Contact and Discussion		·
Refinement		
Primary Analysis	• • • • • • • • • • • •	
Initial Information Development		
Initial Contact	•••••••••••••••	
Work Segmentation and Distribution		
Operational Ápproach Development	· · · · · · · · · · · · · · · · · · ·	
Planning	· · · · · · · · · · · ·	
Initiation	· · · · · · · · · · · ·	
	<pre>/ / / / / / / / / Advisory Capacity / / / / / / / / Development Capacity / / / / / / / Reporting / / / / / / Scope / / / / / / Scope / / / / / / Impact Potential / / / / / Impact Potential / / / / Initiation Capacity / / / Planning Capacity / / Planning Capacity / / Management Capacity / / Contacts Capacity / Decision Capacity Knowledge</pre>	· · ·

WORK SEGMENTS

COMMENTS: NO DEVELOPMENTAL ROLES REQUIRED.

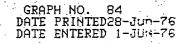
Classification Capacities/Work Segments - Participatory Roles For ES-5 - Type B Projects.

GRAPH NO. 83 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

			,	
CLASSIFICATION CAPACITIES		· · · · ·		
Final Recommendations	· · · · ·			
Formal Output Formulation		• • • <i>•</i> • • •		
Evaluation and Discussion of Outputs				
Primary Output Formulation				
Working Paper Development				·
Follow Up Contact and Discussion	<i>.</i>	· · · · · · · ·		· · ·
Refinement				
Primary Analysis		• • • • • • •		
Initial Information Development				
Initial Contact				
Work Segmentation and Distribution				
Operational Approach Development			· ·	
Planning				
Initiation				
	Manac	Developm Scope Scope I Impact Potential Analytical Capacity Initiation Capacity lanning Capacity gement Capacity s Capacity	sory Capacity ment Capacity	

WORK SEGMENTS

COMMENTS: NO PARTICIPATION ROLES REQUIRED.



Classification Capacities/Work Segments -Leadership Roles For ES-5 - Type B Projects.

CLASSIFICATION CAPACITIES

Final Recommendations		` .	'n	•	· -	• .	•		-		•	•		
Formal Output Formulation		-		•	•		•		•		•			
Evaluation and Discussion of Outputs					•	•			•	٩	÷	•		۰.
Primary Output Formulation						•		•						
Working Paper Development		-	•.		•	•		•		•	•	•		
Follow Up Contact and Discussion		•			•	•		• .		•	•			
Refinement	•								•.		•	•		
Primary Analysis			•			•	•		. •					
Initial Information Development		-			÷	÷	÷		•	•	•	•		
Initial Contact	•						•					•		
Work Segmentation and Distribution	•	Ĺ	•	L	L	L			•		Ŀ	•		
Operational Approach Development	i	L	÷	L	Ĺ	L	•	•	•		L			
Planning	÷	L		L	L	L	÷	•	•		L	•		
İnitiation	•	L			i	L	÷	ì	•	•	•			
			cis	nta ion	inac icts	ann Ieme Ca	iti ing nt pac	alu ati Ca Cap itu	pac itic on pac iaci	ope t F al Cap	De por ote Cap	velo ting ntia	pment I	Capacity Capacity
	Kn	intit.	ede	10										

WORK SEGMENTS

COMMENTS: PRIMARY PHASE INVOLVEMENT ONLY.

GRAPH NO. 85 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Developemental Requirements For ES-5 - Type B Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity Development Capacity Reporting Scope Impact Potential Analytical Capacity Initiation Capacity Planning Capacity Management Capacity Contacts Capacity Decision Capacity Knowledge Ability to Adapt and Create Ability to Communicate Ability to Plan Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO DEVELOPMENTAL REQUIREMENTS.

GRAPH NO. 86 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76 Classification Capacities/Resource Ability Characteristics - Participatory Requirements For ES-5 - Type B Projects. CLASSIFICATION CAPACITIES

> | | | | | Ability to Adapt and Create | | | | Ability to Communicate | | | Ability to Direct | Ability to Control | Ability to Organize | Ability to Plan Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO PARTICIPATION REQUIREMENTS.

DATE ENTERED 1-JUN-7ê Classification Capacities/Resource Ability Characteristics - Leadership Requirements For ES-5 - Type B Projects.

GRAPH NO. 87 DATE PRINTED28-Jun-76

CLASSIFICATION CAPACITIES

							· · ·
Advisory Capacity	•	L.	•	•	•	•	•
Development Capacity	L	L.	L.	L.	L.		L
Reporting	•	•		•			
Scope							•
Impact Potential					•		•
Analytical Capacity		•				•	•
Initiation Capacity	L.	L	L.	L.	L.	•	L
Planning Capacity	L.	L	L	L	L.		L
Management Capacity	L.	L	L.	L	L	•	L
Contacts Capacity		•	•	•		•	•
Decision Capacity	L.	L	•	L	L.		L
Knowledge	-	•	•			•	
	- Ak	 Ak	ili	ili. ty	Ab ili ty to	At ili ty to Pla	Ability to Adapt and Create pility to Communicate ty to Direct to Control Organize an e and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: PRIMARY PHASE INVOLVEMENT ONLY.

GRAPH NO. 88 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Developmental Capacities For ES-5 - Type B Projects.

RESOURCE ABILITY CHARACTERISTICS	
Ability to Adapt and Create	· · · · · · · · · · · · · · · · · · ·
Ability to Communicate	· · · · · · · · · · · · · · · · · · ·
Ability to Direct	· · · · · · · · · · · · · · · · · · ·
Ability to Control	
Ability to Organizê	
Ability to Plan	
Ability to Analyze and Evaluate	<pre>// · · · · · · · · · · · · · · · · · ·</pre>
	Image: Second state of the second s

WORK SEGMENTS

COMMENTS: NO DEVELOPMENTAL CAPACITIES REQUIRED.

GRAPH NO. 89 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Participatory Capacities For ES-5 - Type B Projects.

RESOURCE ABILITY CHARACTERISTICS	
Ability to Adapt and Create	· · · · · · · · · · · · · · · · ·
Ability to Communicate	· · · · · · · · · · · · · · · · · · ·
Ability to Direct	
Ability to Control	· ·
Ability to Organize	
Ability to Plan	
Ability to Analyze and Evaluate	· · · · · · · · · · · · · · ·
	<pre> </pre>

WORK SEGMENTS

COMMENTS: NO PARTICIPATORY CAPACITIES REQUIRED.

Copyright (C) 1976 by The Minister of State for Science and Technology, Ottawa Ontario

GRAPH NO. 90 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability	Characteristics/Work	Segments -	Leadership	Capacities	For	ES-5 -	- Type B	Projects.

WORK SEGMENTS

COMMENTS: PRIMARY PHASE INVOLVEMENT ONLY.

GRAPH NO. 91 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

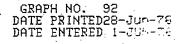
Classification Capacities/Work Segments - Developemental Roles For ES-5 - Type C Projects.

										•						
CLASSIFICATION CAPACITIES																
Final Recommendations	-	-								. •	•					
Formal Output Formulation			. •						•	•					•	
Evaluation and Discussion of Outputs								•	•		•	•	·			
Primary Output Formulation		•	•		•			•	•	•	•	•	4	·		
Working Paper Development							•	•	•							
Follow Up Contact and Discussion		• .							•		•					
Refinement	•		•	•.	•			•		•	•	•				
Primary Analysis		•		•	•		•	•	•	•	•	•				
Initial Information Development					•	•		•	•	•		•				
Initial Contact		•	•	•	•	•	•	•	٠	•'	•	•				
Work Segmentation and Distribution		•	•			•					•	•				
Operational Approach Development	•	•	•	•	•	•	•	•		•		•				
Planning		•	•	•	•	•	•	•	•	•		•				
Initiation		•	•	•	•	•	•		•	•	•	•				
		De owl	cis	nta ion	nag cts	ann Ieme Ca	iti ing nt pac	aly ati Ca Cap	pac on pac aci	ope t F al Cap itu	epor Pote Cap Daci	evelopment ting ential bacity	Capacity Capacity			

WORK SEGMENTS

 \sim

COMMENTS: NO ES-5 INVOLVEMENT IN TYPE C PROJECTS.



Classification Capacities/Work Segments - Participatory Roles For ES-5 - Type C Projects.

				·												. *						۰.			•		
CLASSIFICATION CAPACITIES			• •			•							•						•								
																										-	
Final Recommendations	•	•	•	•.	.• ·	•	•		•	••		•	•														
Formal Output Formulation		•			•	•	•	•	•			•	•														
Evaluation and Discussion of Outputs		•	•		•		•	•	÷			•	•			, ·											•
Primary Output Formulation	•	•	• .	•	•	•	•	•	-	•		•				•											
Working Paper Development		•			•	•	•	•	•			•	•									•		•			
Follow Up Contact and Discussion	•	•	•	•	•	•	•	•	•	•		•	•										•		٠		
Refinement		•	•	•	•		•	•		•		•	•														· .
Primary Analysis	•	•	•	•	•	•		•	•	•		• .	•							-							
Initial Information Development		•	•	•			•	•	•	•		•	•	·		•											
Initial Contact	•	•	•	•		•	•		•																		
Work Segmentation and Distribution	•	•	•	•	•	•	•	•	•			•	•														
Operational Approach Development	•	•	•		۰	•	•	•	•	•		•	•														
Planning	•		•	•	•	•	•	. •	•	•		•	•								·				Ŧ		
Initiation	ŧ	•			٠	•	•	•	•			•														•	
		De	Co cis	nta ion	nag cts	In ann eme Ca	iti inc nt pac	alu ati Car Car	ipa iti on ipa jac	cop ct cal Ca cit	ep e Po pa y	or tei ap	ve ti nt ac	- ial ity	sori nen	ų Ca	apa	cit cit	y								

WORK SEGMENTS

COMMENTS: NO ES-5 INVOLVEMENT IN TYPE C PROJECTS.

GRAPH NO. 93 DATE PRINTED28-Jun-76 DATE ENTERED 1-30%-76.

Classification Capacities/Work Segments - Leadership Roles For ES-5 - Type C. Projects.

CLASSIFICATION CAPACITIES

													•
Final Recommendations		•.	•	•		•	•		•	•		•	
Formal Output Formulation		-							•		•	•	
Evaluation and Discussion of Outputs	•		•	•			•	-					
Primary Output Formulation					•				•			•	
Working Paper Development	•					•			•			•	:
Follow Up Contact and Discussion				•		•		•			•	•	
Refinement			•					•				•	· •.
Primary Analysis			•		•	•				•	•		
Initial Information Development	-		•	•	•							•	•
Initial Contact	-				•		-					•	
Work Segmentation and Distribution									•	٠		•	
Operational Approach Development	-								•		•		
Planning	•					•					•	•	
Initiation	•	•		•					•		•	•	
		De	cis	nta ion	nag cts	ann eme Ca	An: iti ing pac ity	aly ati Ca Cap	pac tic on pac	ope t P al Cap ity	por ote Cap aci	velopment ting ntial acity	Capacity Capacity

WORK SEGMENTS

COMMENTS: NO ES-5 INVOLVEMENT IN TYPE C PROJECTS.

GRAPH NO. 94

DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76 Classification Capacities/Resource Ability Characteristics - Developemental Requirements For ES-5 - Type C Projects.

CLASSIFICATION CAPACITIES		
Advisory Capacity		
Development Capacity	· · · · · · · ·	
Reporting		
Scope	· · · · · · ·	• .
İmpact Potential		
Analytical Capacity	• • • • • • •	
Initiation Capacity	· · · · · · · · ·	
Planning Capacity	· · · · · · ·	
Management Capacity		
Contacts Capacity		
Decision Capacity		
KHOULEdge		
	Ability to Adapt and Create Ability to Communicate Ability to Direct Ability to Control Ability to Organize Ability to Plan	

Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO ES-5 INVOLVEMENT IN TYPE C PROJECTS.

GRAPH NO. 95 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Participatory Requirements For ES-5 - Type C Projects.

CLASSIFICATION CAPACITIES Advisory Capacity Development Capacity Reporting Scope Impact Potential Analytical Capacity Initiation Capacity Planning Capacity Management Capacity Contacts Capacity Decision Capacity Knowledge 1 | Ability to Adapt and Create
1 Ability to Communicate Ability to Plan Ability to Ability to Control Ability to Organize Ability to Plan Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

é?

COMMENTS: NO ES-5 INVOLVEMENT IN TYPE C PROJECTS. Copyright (C) 1976 by The Minister of State for Science and Technology, Ottawa Ontario Classification Capacities/Resource Ability Characteristics - Leadership Requirements For ES-5 - Type C Projects.

CLASSIFICATION CAPACITIES				· .			• ••							: :
Advisory Capacity			-	•								0		
Development Capacity		•	•			•						•		
Reporting			•	•	•	•								
Scope		•	•	•										
Ìmpact Potential			•					•						
Analytical Capacity				•			•							,
Initiation Capacity			•			•		•						
Planning Capacity				•		•	•	÷	,					
Management Capacity	•	•	•	•	•	•						·	• •	
Contacts Capacity			•	•	•		•	•		;			. •	
Decision Capacity					-	•		•						
Knowledge	• •		•								•			
		44 AT AT A			l l Ab	ili	ili ty	Ability ility to ty to Di to Contr Organize) Commur irect -ol	ipt and licate	Create	ŗ		

Ability to Plan Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO ES-5 INVOLVEMENT IN TYPE C PROJECTS.

GRAPH NO. 97 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Developemental Capacities For ES-5 - Type C Projects.

RESOURCE ABILITY CHARACTERISTICS Ability to Adapt and Create Ability to Communicate Ability to Direct Ability to Control Ability to Organize Ability to Plan Ability to Analyze and Evaluate | Final Recommendations Formal Output Formulation
Formal Outputs
Formulation
Frimary Output Formulation I Working Paper Development Follow Up Contact and Discussion Refinement l Primary Analysis Initial Information Development Initial Contact Work Segmentation and Distribution Operational Approach Development Planning Initiation

WORK SEGMENTS

COMMENTS: NO ES-5 INVOLVEMENT IN TYPE C PROJECTS.

GRAPH NO. 98 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Participatory Capacities For ES-5 - Type C Projects.

RESOURCE ABILITY CHARACTERISTICS	
Ability to Adapt and Create	
Ability to Communicate	
Ability to Direct	
Ability to Control	· · · · · · · · · · · · · · · ·
Ability to Organize	· · · · · · · · · · · · · · · · · · ·
Ability to Plan	
Ability to Analyze and Evaluate	· · · · · · · · · · · · · · ·
	<pre> Final Recommendations Formal Output Formulation Evaluation and Discussion of Outputs Primary Output Formulation Working Paper Development Follow Up Contact and Discussion Refinement Primary Analysis Initial Information Development Initial Contact Work Segmentation and Distribution Operational Approach Development Planning Initiation</pre>

WORK SEGMENTS

COMMENTS: NO ES-5 INVOLVEMENT IN TYPE C PROJECTS.

GRAPH NO. 99 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Leadership Capacities For ES-5 - Type C Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create Ability to Communicate Abilitu to Direct Ability to Control Ability to Organize Ability to Plan Ability to Analyze and Evaluate | Final Recommendations l Formal Output Formulation Evaluation and Discussion of Outputs | | Primary Output Formulation | Working Paper Development | Follow Up Contact and Discussion Refinement | Primary Analysis Initial Information Development Initial Contact 1 | Work Segmentation and Distribution ł | Operational Approach Development Planning Initiation

WORK SEGMENTS

COMMENTS: NO ES-5 INVOLVEMENT IN TYPE C PROJECTS.

GRAPH NO. 100 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Developemental Roles For ES-5 - Type D Projects.

•	CIACCIEI	COTION	codo c t t t t c c
	LLHAAIICI	LHIPUN	CAPACITIES

Final Recommendations	· · · · · · · · · · · · · · · · · · ·
Formal Output Formulation	· · · · · · · · · · · · · · · · · · ·
Evaluation and Discussion of Outputs	en en en en en en en en en en en en en e
Primary Output Formulation	
Working Paper Development	
Follow Up Contact and Discussion	· · · · · · · · · · · ·
Refinement	· · · · · · · · · · · · · · ·
Primary Analysis	· · · · · · · · · · · · · · · · · · ·
Initial Information Development	• • • • • • • • • • •
Initial Contact	
Work Segmentation and Distribution	· · · · · · · · · · · · · · · · · · ·
Operąțional Approach Development	· · · · · · · · · · · · · · · · · · ·
Planning	
Initiation	
	Advisory Capacity
·	Development Capacity Reporting Scope Scope Impact Potential Analytical Capacity Initiation Capacity Planning Capacity Management Capacity Decision Capacity
	Knowledge

WORK SEGMENTS

COMMENTS: NO ES-5 INVOLVEMENT IN TYPE D PROJECTS.

GRAI	γH NO.	101	
DATE	PRINTE	D28-J	un-76
DATE	ENTERE	ED 1-J	UN-76

CLASSIFICATION CAPACITIES Final Recommendations Formal Output Formulation Evaluation and Discussion of Outputs Primary Output Formulation Working Paper Development Follow Up Contact and Discussion Refinement Primary Analysis Initial Information Development Initial Contact Work Segmentation and Distribution Operational Approach Development Planning Initiation I Advisory Capacity Development Capacity 1 l Reporting l Scope Impact Potential Analytical Capacity Initiation Capacity I Planning Capacity
I Management Capacity
Contacts Capacity Decision Capacity Knowledge

Classification Capacities/Work Segments - Participatory Roles For ES-5 - Type D Projects.

WORK SEGMENTS

COMMENTS: NO ES-5 INVOLVEMENT IN TYPE D PROJECTS.

Copyright (C) 1976 by The Minister of State for Science and Technology, Ottawa Ontario

nce an**u iec**

GRAPH NO. 102 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Leadership Roles For ES-5 - Type D Projects.

CLASSIFICATION CAPACITIES			•									· ,					
Final Recommendations	•	•	•	•	•	•	•	•	•	•	•	•	'n				
Formal Output Formulation	•	•	-	•	•	•	•	•	•	•	•	• .					
Evaluation and Discussion of Outputs	•	•	•	•	.•	•	•	•		•	•		,	,			
Primary Output Formulation	•	٠	•	•	•		•	•	•	•	•	•					
Working Paper Development		•			•	•	•	•	•	•		•					
Follow Up Contact and Discussion		•	•		•	•	•		•	•	•	•	x				
Refinement	•	•	•	•		•	•	•	-	•	•	•					
Primary Analysis	•	•	•	•	•	•	•	•	•	•	•	•			•	•	
Initial Information Development	•	•	•	•	•	•	•	•		•	•				•		
Initial Contact	-	•	•	•	•	•	•	•	•	•	•	•	·				
Work Segmentation and Distribution	•	•			•	•	•	•	• '	•		•					
Operational Approach Development	•	•	•	•	•	•	•	•	•	•	•	•					
Planning	-	•	•	•	•	•	-	•		•	•	•					
Initiation	•	•	•		•	•	•	-	•	•	•	•					
			Co	nta ion	inag icts	ann Ieme Ca	iti ing	alı at Cap itu	mpac ytic ion apac oaci	ope t F al Cap	De por ote Cap iaci	Advisory evelopment rting ential bacity ity	Capacity Capacity				

WORK SEGMENTS

COMMENTS: NO ES-5 INVOLVEMENT IN TYPE D PROJECTS.

GRAPH NO. 103 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Developemental Requirements For ES-5 - Type D Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity Development Capacity Reporting Scope Impact Potential Analytical Capacity Initiation Capacity Planning Capacity Management Capacity Contacts Capacity Decision Capacity Knowledge ! Ability to Adapt and Create
! Ability to Communicate Ability to Commun Ability to Direct Ability to Control Ability to Organize Ability to Plan Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO ES-5 INVOLVEMENT IN TYPE D PROJECTS.

GRAPH NO. 104 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Participatory Requirements For ES-5 - Type D Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity Development Capacity Reporting Scope Impact Potential Analytical Capacity Initiation Capacity Planning Capacity Management Capacity Contacts Capacity Decision Capacity Knowledge Ability to Adapt and Create Ability to Communicate Ability to Direct Ability to Control Ability to Organize Ability to Plan Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO ES-5 INVOLVEMENT IN TYPE D PROJECTS.

GRAPH NO. 105 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Leadership Requirements For ES-5 - Type D Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity Development Capacity Reporting Scope Impact Potential Analytical Capacity Initiation Capacity Planning Capacity Management Capacity Contacts Capacity Decision Capacity Knowledge 1 Ability to Adapt and Create Ability to Communicate Ability to Direct Ability to Control 4 1 | | Ability to Organize Ability to Plan Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO ES-5 INVOLVEMENT IN TYPE D PROJECTS.

GRAPH NO. 106 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76 Type D Projects.

Resource Ability Characteristics/Work Segments - Developemental Capacities For ES-5	Resource Ab	oility	Characteristics/Work	Segments -	Developemental	Capacities	For	ES-5	-
---	-------------	--------	----------------------	------------	----------------	------------	-----	------	---

RESOURCE ABILITY CHAI	RACTERISTICS				•				••••					•	•	
										•						
Ability to Adapt and	Create	•	• •	• •	•	• •	•	•		÷	• .	•				
Ability to Communicat	te		• •		•	• •	•	•				•				
Ábility to Direct		•			•	• · •	••	÷		•	-	•	`			
Ability to Control		•			•	• •	· •	•	• •	•	•					
Ability to Organiże		-			•		••			•					•	
Ability to Plan		•	•••	•	•	•	· .		• •							
Ability to Analyże ar	nd Evaluate		• •		•	. .						•				
		Ini	l l l l l l l l l l l l l l l l l l l	perat ning	Ini K Se	Inii tià egme	rima tial Con entat	Fol fine ry f Info tact ion	 Worki lòw U ment malys rmati	Eva iman ng 1 lp Co is is on 1)ist	Foi alua ry (Pape onta Deve ribu	Final Re mal Outp ation and Dutput Fo er Develo act and D elopment ution	ut Formul Discuss rmulation pment	lation ion of n	Outputs	

WORK SEGMENTS

COMMENTS: NO ES-5 INVOLVEMENT IN TYPE D PROJECTS.

GRAPH NO. 107 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Participatory Capacities For ES-5 - Type D Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create	· · · · · · · · · · · · · · · · · · ·
Ability to Communicate	
Ability to Direct	
Ability to Control	· · · · · · · · · · · · · · · · · · ·
Ability to Organize	• • • • • • • • • • • • • •
Ability to Plan	· · · · · · · · · · · · · · · · · · ·
Ability to Analyze and Evaluate	· · · · · · · · · · · · · · · · · · ·
	<pre> Final Recommendations Formal Output Formulation Evaluation and Discussion of Outputs Primary Output Formulation Working Paper Development Follow Up Contact and Discussion Refinement Primary Analysis Primary Analysis Initial Information Development Initial Contact Work Segmentation and Distribution Operational Approach Development Planning Initiation</pre>

WORK SEGMENTS

COMMENTS: NO ES-5 INVOLVEMENT IN TYPE D PROJECTS.

GRAPH NO. 108 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Leadership Capacities For ES-5 - Type D Projects.

RESOURCE ABILITY CHARACTERISTICS								,									
							•										
Ability to Adapt and Create		•	•	•	•	•	•	•	•	•	•	•	•	•	• ·		
Ability to Communicate	•	•	•	•		•		•	•			• .	•	•			
Ability to Direct		•		•		•	-	•	•		•		•	. •			
Ability to Control	•	•	•	•		•			•	•		•	•	•			
Ability to Organize		•	•	•	•	•	-	•		•		-	•	•			
Ability to Plan		•	•	•		٠	•	•	•	•		•	•	•	•		
Ability to Analyze and Evaluate			•	•	•	•	•	•	•	•	•	•	•	•	•		·
			i i i i i i i i i i i i i i i i i i i	ann	era ing	rk tio	iti	iti al men	ima al Con tat	fin Inf Inf itac	illo Ana orm t an	nrki w U nt ilys nati nd D	ima ng p C is on ist	alu ry Pap ont Dev rib	Final Recomm rmal Output Fo ation and Disc Output Formula er Development act and Discus velopment oution	ormulation cussion of ation t	

WORK SEGMENTS

COMMENTS: NO ES-5 INVOLVEMENT IN TYPE D PROJECTS.

GRAPH NO. 109 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

.

Classification Capacities/Work Segments - Developemental Roles For ES-4 - Type A Projects.

CLASSIFICATION CAPACITIES

Final Recommendations	•	DL			DL	•	•				DL	DL.
Formal Output Formulation		DL		DL	DL	•	DL	•	•	•	DL	
Evaluation and Discussion of Outputs	•	DL	DL	DL	•	DL	DL	•	•	•		
Primary Output Formulation	•	DL		DL	DL	DL	DL	•			DL	•
Working Paper Development	•	DL		DL	DL	•	DL	•		•	DL	
Follow Up Contact and Discussion	•	DL	DL	•		•		•	•	•	•	DL.
Refinement	•	DL	•	DL	DL	DL	DL	•	•		DL	DL
Primary Analysis	•	DL	•	•	DL	DL	DL	•	•	•	DL	DL ·
Initial Information Development	•	DL	•		DL	DL	•	•	•	•	DL	DL
Initial Contact	•	DL	DL	•	DL	DL	•	•	•		•	DL.
Work Segmentation and Distribution	•	DL		DL	DL	DL	•	•	•	•	DL	•
Operational Approach Development	•	DL	•	DL	DL	DL	•	•			DL	
Planning	•	DL	•	DL	DL	DL		•	•	•	DL	
Initiation	•	DL			•	DL	. •	•	•	•	•	
				I M ont sio	 P ana act	l I lan gem s C		Im aly ati Cap ity	pac tic on pac aci	R op t al Ca it	D epo: Pot Ca pac	evelopmenī Capacity rting ential pacity

WORK SEGMENTS

COMMENTS: ALL ES-4 INVOLVEMENT IN TYPE A PROJECTS-DEVELOPMENTAL IN NATURE.

GRAPH NO. 110 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Participatory Roles For ES-4 - Type A Projects.

CLASSIFICATION CAPACITIES												• •	•					
Final Recommendations	• .	•				•				•	-	•	•					
Formal Output Formulation		•	• •			•		•	•	•	•							
Evaluation and Discussion of Outputs	•	•				•		•	•			•						
Primary Output Formulation	•	•					•		•	•	•							
Working Paper Development		•	•	•			•		• `	•	•	•				•		
Follow Up Contact and Discussion		•	•			•	•	•	•		•	•						
Refinement				•	•	•			•		•	•						
Primary Analysis	•	•			•	•	•	•		•		•	• •					
Initial Information Development	•	•	÷	•	•	•	•	•	•	•	٠	•			·			
Initial Contact		•	-	•		•	•	•		•	•	•				`		
Work Segmentation and Distribution	•	•	•	•	•	•	•	• `	.		•	•						
Operational Approach Development	•	•	•	•	•	•	•		•	•	•	•						
Planning	٠	•	-	•	•	•	•	•	•	•	•	•						
Initiation		•	•	•	•	•	•	•		•	•	•						
			Cor	nta: ion	nagi ots	ann emei Cai	iti; ing nt (pac	aly ati Cap Cap	bac tic: on (pac aci	ope t P al Cap ity	De por ote Cap aci	Advisory velopment ting ntial acity ty	Cap Cap	acity acity				

WORK SEGMENTS

COMMENTS: NO PARTICIPATION ROLES REQUIRED.

GRAPH NO. 111 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Leadership Roles For ES-4 - Type A Projects.

CLASSIFICATION CAPACITIES													· .
Final Recommendations	-	•						•				•	
Formal Output Formulation	•							•	•				
Evaluation and Discussion of Outputs		1		•									
Primary Output Formulation								•			•		
Working Paper Development		•		•				•		•	•		
Follow Up Contact and Discussion			•					•	•			•	
Refinement	•								•	• .		•	
Primary Analysis		•						•		•	•	•	
Initial Information Development									•		•		
Initial Contact		•	•								•		
Work Segmentation and Distribution								•			•		•
Operational Approach Development			•			•			•		•		
Planning						•							
Initiation											•	•	
	۲ ۲ ۲	De	cis	nta ion	inag icts	ann Jeme Ca	An An iti ing nt pac	aly ati Ca Cap ity	pac tic on pac ací	ope t P al Cap ity	por ote Cap aci	velopment ting ntial acity	Capacity Capacity

WORK SEGMENTS

COMMENTS: NO LEADERSHIP ROLES REQUIRED.

GRAPH NO. 112 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76 Tupe A Projects.

Classification Capacities/Resource Ability Characteristics -

Developemental Requirements For ES-4

CLASSIFICATION CAPACITIES

Advisory Capacity	. DL DL DL DL .
Development Capacity	DL DL DL DL . DL
Reporting	· · · · · · ·
Scöpè	
Impact Potential	· · · · · · · ·
Analytical Capacity	DL DL DL DL . DL
Initiation Capacity	DL DL DL DL : DL
Planning Capacity	DL DL DL DL . DL
Mànagement Capacity	DL DL DL DL DL DL
Contacts Capacity	. DL DL DL DL .
Decision Capacity	DL DL . DL DL . DL
Knowledge	
	Ability to Adapt and Create
	Ability tō Organize Ability to Plan Ability to Plan

Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: ALL ES-4 INVOLVEMENT AND ABILITIES IN TYPE A PROJECTS-DEVELOPMENTAL IN NATURE. Copyright (C) 1976 by The Minister of State for Science and Technology, Ottawa Ontario

GRAPH NO. 113 DATE PRINTED28-Jun-76

DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Participatory Requirements For ES-4 - Type A Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity Development Capacity Reporting Scope Impact Potential Analytical Capacity Initiation Capacity Planning Capacity Management Capacity Contacts Capacity Decision Capacity Knowledge | | | Ability to Adapt and Create | | Ability to Communicate | Ability to Direct Ability to Control . . Ability to Organize Ability to Plan Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO PARTICIPATION REQUIREMENTS.

GRAPH NO. 114 DATE PRINTED28-Jun-76-DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Leadership Requirements For ES-4 - Type B Projects.

1	
CIACCITICATION	cobocirrinc
CLASSIFICATION	CHIHLIILS

Advisory Capacity		•	•	•	••	•						
Development Capacity			•	•		•			•			
Reporting	•				•							
Scope	•	•			•		•					
Impact Potential	•		•		• .							
Analytical Capacity	•				•	•	•					
Initiation Capacity	-				•		•					
Planning Capacity	•	•	•			•	•		·			
Management Capacity	•	• ·				÷	•					
Contacts Capacity	•	•	•			•						
Decision Capacity	•	•					á					
Knowledge	•				•							
			ili	ili ty	¦ Ab ili ty to	Ab ili ty to Pla	ility ty to to Co Organ	tō Dir ntro ize	Comr ect	nunic	and ate	Create

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO LEADERSHIP REQUIREMENTS.

GRAPH NO. 115 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Developemental Capacities For ES-4 - Type A Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create	DL DL . DL
Ability to Communicate	DL DL DL DL DL . DL
Ability to Direct	DL DL DL DL DL DL DL DL DL DL DL DL DL
Ability to Control	. DL DL DL DL DL DL DL DL DL .
Ability to Organize	DL DL DL DL DL DL DL DL DL .
Ability to Plan	DL DL DL DL DL DL DL DL DL .
Ability to Analyze and Evaluate	DL DL DL DL DL DL DL
	<pre> Final Recommendations Formal Output Formulation Evaluation and Discussion of Outputs Primary Output Formulation Working Paper Development Follow Up Contact and Discussion Follow Up Contact and Discussion </pre>

WORK SEGMENTS

COMMENTS: ALL ES-4 ABILITIES FOR TYPE A PROJECT WORK-DEVELOPMENTAL IN NATURE

GRAPH NO. 116 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Participatory Capacities For ES-4 - Type A Projects.

RESOURCE ABILITY CHARACTERISTICS		
Ability to Adapt and Créate	· · · · · · · · · · · · ·	
Ability to Communicate		
Ability to Direct		· · ·
Ability to Control		• • •
Ability tó Organize	· · · · · · · · · · · ·	
Ability to Plan		
Ability to Analyże and Evaluate		• • •
		sis ion Development Distribution

WORK SEGMENTS

COMMENTS: NO PARTICIPATORY CAPACITIES REQUIRED.

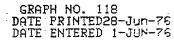
GRAPH NO. 117 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Leadership Capacities For ES-4 - Type A Projects.

RESOURCE ABILITY CHARACTERISTICS Ability to Adapt and Create Ability to Communicate Ability to Direct Ability to Control Ability to Organize Ability to Plan Ability to Analyze and Evaluate 1 | Final Recommendations I I I I Formal Output Formulation
I I I Evaluation and Discussion of Outputs
I I Primary Output Formulation
I Working Paper Development
I Follow Up Contact and Discussion
Definement 1 1 1 1 Refinement l Primary Analysis Initial Information Development Initial Contact | | Work Segmentation and Distribution 1 Operational Approach Development Planning Initiation

WORK SEGMENTS

COMMENTS: NO LEADERSHIP CAPACITIES REQUIRED.



Classification Capacities/Work Segments - Developemental Roles For ES-4 - Type B Projects.

							•	· .	•									
CLASSIFICATION CAPACITIES						· `			• •				•					
Final Recommendations		•	•	•		-	•			•		•		`				
Formal Output Formulation	•			•			-		•		-	-						
Evaluation and Discussion of Outputs				•	•	•	•	•	•			•	ł					
Primary Output Formulation				-	•	••	•		•	•	•							
Working Paper Development		•	•		•	٠	-	•		•	•			•		• •		
Follow Up Contact and Discussion		•	•	•	•			•	•									
Refinement	•		•			•	•		•	•								
Primary Analysis						•	•	•			-						•	•
Initial Information Development		•	•		•		•	•	•		•	•						
Initial Contact	•	•		•	•			•	•	-	÷							
Work Segmentation and Distribution		•		•			•	•		•	•		. •					
Óperational Approach Development	•.	•		•	•			•	•	•			·					
Planning	•	•		•	•	•	•	•		•								
Initiation	•		•	•	•	•	•	•		•		•						
		De	cis	nta ion	nag cts	ann eme Ca	iti ing nt pac	alu ati Cap itu	ipac itic ion ipac iaci	cop ti al Cap tit	epor e Pote Cap cac∶	evel rtin enti paci	opment J al	y Capacity Capacity	·			, .

WORK SEGMENTS

COMMENTS: NO DEVELOPMENTAL ROLES REQUIRED.

GRAPH NO. 119 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Participatory Roles For ES-4 - Type B Projects.

OPHOAT TOULION OUTHOITIPC	CLASSI	FICATION	CAPACITIES
---------------------------	--------	----------	------------

															•		
Final Recommendations	•	•	•		•	•	•	-	•		•	-					
Formal Output Formulation	•		•	•				•	-		•	•			٠		
Evaluation and Discussion of Outputs		•	•		•		•	•	•		•	•					
Primary Output Formulation	•	•	•	•	•		•		-	•	•	• ·					
Working Paper Development	•	•	•	•	•	•	•	•	•		•	•					
Follow Up Contact and Discussion			•	•	•	•	•		•	•							
Refinement	•	•	•	•	•	•	•		•		•	•		•			
Primary Analysis		•	•	•	•	-	•	•	•		•	•					
Initial Information Development	-	•	•	•		•		٠		•	•	•					
Initial Contact	•	•	•	•	•	•	•	•	•	•	•	•					
Work Segmentation and Distribution	•	•		•	•	•	•	•	•	•		•					
Operational Approach Development	•	•	•	•	•	•	•	•	•	•	•	•					
Planning		٠	•	•	•	•	•		-	•		•					
Initiation	•	•	•	•		•		•	-	•	•	•					
	Kni		L L Col cis	nta ion	nag cts	In ann Cal pac	iti ing nt pac	aly ati Ca Cap ity	pac tic: on pac aci	ope t Pi al Cap ity	De por ote Cap aci	Advisory velopment ting ntial acity ty	Capac: Capac:	i ty i ty	·		

WORK SEGMENTS

COMMENTS: NO PARTICIPATORY ROLES REQUIRED.

GRAPH NO. 120 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Leadership Roles For ES-4 - Type B Projects.

CLASSIFICATION CAPACITIES

Final Recommendations	•	L	•	•	Ĺ	•	•		•	÷	L	L							
Formal Output Formulation	•	L	•	L	L	•	L	•	•		L	L					•		
Evaluation and Discussion of Outputs	-	L	L	L	•	L	L		ï	•		L							
Primary Output Formulation		L		L	L	L	Ľ			•	L	•							
Working Paper Development	•	L		L	L	•	L		•	•.	L	•							
Follow Up Contact and Discussion	•	L	L	•				•		•	•	L							
Refinement		L	•	L	L	L	L	•			L	L							
Primary Analysis		L	•	•	L	L	L	•	•	•	L	Ŀ				•			
Initial Information Development	•	L	•	•	•	L		•		•	L	L		•					
Initial Contact	•	L	L	•	L	L		•	•	•		L							
Work Segmentation and Distribution	•	L	·•	L	Ĺ	Î.	•			•	L	• •						•	
Operational Approach Development	•	L	•	L	L	L		•	:	•	Ĺ	•							
Planning	•	L		L	L	L	•	۰.	•	•	Ŀ	. :							
Initiation	•	L			•	L		•	•	•	•								
		De Iowl	cis	nta ion	inag icts	anr Jeme S Ca		alı at Cap itu	mpac utic ion apac	cope ct H cal Cap citu	epo Pot Ca	Ac vevel rtir enti pači ity	opmer g al	ry Capa It Capa	ncity ncity				

WORK SEGMENTS

GRAPH NO. 121 DATE PRINTED28-Jun-?{ DATE ENTERED 1-JUN-?{ Classification Capacities/Resource Ability Characteristics - Developemental Requirements For ES-4 - Type B Projects.

CLASSIFICATION CAPACITIES	
Advisory Capacity	· · · · · ·
Development Capacity	
Reporting	· · · · · · · · · · · · · · · · · · ·
Scope	· · · · · · ·
Impact Potential	· · · · · · · · · · · · · · · · · · ·
Analytical Capacity	· · · · · · · ·
Initiation Capacity	· · · · · · ·
Planning Capacity	· · · · · · · ·
Management Capacity	
Contacts Capacity	
Decision Capacity	
Knowledge	· · · · · ·
	Ability to Adapt and Create Ability to Communicate Ability to Direct Ability to Control Ability to Organize Ability to Plan Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO DEVELOPMENTAL REQUIREMENTS.

GRAPH NO. 122

DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76 Classification Capacities/Resource Ability Characteristics - Participatory Requirements For ES-4 - Type B Projects.

CLASSIFICATION CAPACITIES	
Advisory Capacity	
Development Capacity	· · · · · · ·
Reporting	
Scope	· · · · · · ·
Impact Potential	· · · · · · · · · · · · · · · · · · ·
Analytical Capacity	· · · · · · · ·
Initiation Capacity	· · · · · · ·
Planning Capacity	· · · · · ·
Management Capacity	
Contacts Capacity	
Decision Capacity	
Knowledge	· · · · · · ·
	Ability to Adapt and Create Ability to Communicate Ability to Direct Ability to Control Ability to Organize Ability to Plan

Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO PARTICIPATION REQUIREMENTS.

GRAPH NO. 123 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76 Classification Capacities/Resource Ability Characteristics - Leadership Requirements For ES-4 - Type B Projects.

CLASSIFICATION CAPACITIES			•					•			•					
CLHSSIFICHTION CHPHCITLES																
Advisory Capacity	•	L	L	Ľ	L	L	-									
Development Capacity	L	L	L	L	L		L			•						
Reporting	•			•	•											
Scope	•	•	•		•	•										
Impact Potential	-	•	•	•	•							-				
Analytical Capacity	L	L	L	L	L		L									
Initiation Capacity	Ĺ	L	L	L	L		L									
Planning Capacity	L	L	L	L	L		L									
Management Capacity	L	L	L	L	L	L	L									
Contacts Capacity	•	L	L	L	L	L										
Decision Capacity	L	L	•	L	L	•	L									
Knowledge	-	•	•		•	•	•									
	Ab	Ab ili	ili	ili tu	ili ty to	ty to Pla	Ability ility to Di to Contr Organize n e and Ev	commur rect ol	apt and licate	d Cri	eate					

RESOURCE ABILITY CHARACTERISTICS

GRAPH NO. 124 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76 Ports

Resource Ability Characteristics/Work Segments - Developemental Capacities For ES-4 - Type B Projects.

RESOURCE ABILITY CHARACTERISTICS	
Ability to Adapt and Create	
Ability to Communicate	
Ability to I rect	la contra de la co
Ability to strol	
Ability to Organize	
Ability to Plan	
Ability to Analyze and Evaluate	· · · · · · · · · · · · · · · · · · ·
	<pre> Final Recommendations Formal Output Formulation Evaluation and Discussion of Outputs Primary Output Formulation Working Paper Development Follow Up Contact and Discussion Follow Up Contact and Discussion Primary Analysis Primary Analysis Initial Information Development Initial Information Development Work Segmentation and Distribution Operational Approach Development Planning Initiation</pre>

WORK SEGMENTS

COMMENTS: NO DEVELOPMENTAL CAPACITIES REQUIRED.

GRAPH NO. 125 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Participatory Capacities For ES-5 - Type B Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create Ability to Communicate Ability to Direct Ability to Control Ability to Organize Ability to Plan Ability to Analyze and Evaluate Final Recommendations | | Formal Output Formulation | | Evaluation and Discussion of Outputs | Primary Output Formulation I Working Paper Development Follow Up Contact and Discussion l Refinement Primary Analysis Initial Information Development Initial Contact Work Segmentation and Distribution | Operational Approach Development Planning Initiation

WORK SEGMENTS

COMMENTS: NO PARTICIPATORY CAPACITIES REQUIRED.

Resource Ability Characteristics/Work Segments - Leadership Capacities For ES-4 - Type B Projects.

RESOURCE ABILITY CHARACTERISTICS	
Ability to Adapt and Create	ĹL.LĽĹ
Ability to Communicate	L L L L . L . L
Ability to Direct	LLLLLLLLLL
Ability to Control	. L L L L L L L L .
Ability to Organize	L L L L L L L L L .
Ability to Plan	L L L L L L L L L
Ability to Analyze and Evaluate	L L L L L L L
	<pre> Final Recommendations Formal Output Formulation Evaluation and Discussion of Outputs Primary Output Formulation Primary Output Formulation Primary Output Formulation Follow Up Contact and Discussion Refinement Refinement Refinement Refinement </pre>

WORK SEGMENTS

GRAPH NO. 127 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Developemental Roles For ES-4 - Type C Projects.

CLASSIFICATION CAPACITIES

/

Final Recommendations	-	•				•	•	•	•	•	•	
Formal Output Formulation			•				•	•	-	•	-	•
Evaluation and Discussion of Outputs	•		•		-	•	•		•		•	
Primary Output Formulation		•	•									
Working Paper Development				-		•	•	•	•		•	
Follow Up Contact and Discussion		•						•		• .		•
Refinement	•	•	•		-		•	•	•			
Primary Analysis						•			•		•	
Initial Information Development	•	•		-		•	•		•		•	
Initial Contact	•	•	•	•		•		•	•	•	•	
Work Segmentation and Distribution	•	•	•	•						-		•
Operational Approach Development		•			•	•						
Planning	•.		•		-	•		•	•	•	•	
Initiation		•			-			•				
	Kn			nta ion	Pl Pl Ca	ann eme Ca	iti ing nt pac	aly ati Ca Cap ity	pac tic on pac aci	ope t P al Cap ity	por ote Cap aci	Advisory Capacity evelopment Capacity rting ential acity ty

WORK SEGMENTS

COMMENTS: NO DEVELOPMENTAL ROLES REQUIRED.

Classification Capacities/Work Segments - Participatory Roles For ES-4 - Type C Projects.

GRAPH NO. 128 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

CLASSIFICATION CAPACITIES

. •

						•																	
Final Recommendations	•	•	•		•	•	•	-	•	•	•.	•	·			•							
Formal Output Formulation	•	•	. •				•	•		•	•					•							
Evaluation and Discussion of Outputs	•	•		•	•	• .		•			•											1	
Primary Output Formulation		•	•		•			•															
Working Paper Development .		•				•				•	•	•								:			
Follow Up Contact and Discussion	۰.	•					•		•		•												
Refinement	-				•		•		•						•								
Primary Analysis		.•					•																
Initial Information Dévelopment				•		•		•				• .											
Initial Contact	•	•		.•						•	•	•	۰.										
Work Segmentation and Distribution	•	•					•		ŀ	•													
Operational Approach Development							•	•			-								•		;		
Planning		•	•		-		•		•			•											
Initiation			•	•			•			-													•
· · · · · · · · · · · · · · · · · · ·		De	Co	nta	nag cts	In ann Ca	iti ing nt pac	aly ati Ca Cap ity	pac on pac	Re cope t F cap cap	De por ote Cap aci	vel tin nti: aci	opmi g al	ory ent	Cap Cap	acit acit	:y :y						

WORK SEGMENTS

COMMENTS: NO PARTICIPATION ROLES REQUIRED.

GRAPH NO. 129 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Leadership Roles For ES-4 - Type C Projects.

CLASSIFICATION CAPACITIES

Final Recommendations		•				-		•						
Formal Output Formulation	•										•			
Evaluation and Discussion of Outputs		•				-					-	-		
Primary Output Formulation	٠										-	•		
Working Paper Development	•										-	•		
Follow Up Contact and Discussion		•				-					-	•		
Refinement		-				-					-	•		
Primary Analysis		-			•	-					-			
Initial Information Development		•			•									
Initial Contact		•							•					
Work Segmentation and Distribution		L		L	L	L				•	L			
Operational Approach Development		L		L	L	L		•			L	•		
Planning	•	L		L	L	L		٠			L	•		
Initiation		L				L								
	Kn	De	cis	nta ion	nag cts	In ann eme Ca	iti ing nt pac	aly ati Ca Cap ity	pac tic on pac aci	ope t P al Cap itu	por ote Cap aci	velopmenť ting ntial acitu	Capacity Capacity	

WORK SEGMENTS

COMMENTS: PRIMARY PHASE INVOLVEMENT ONLY.

DATE ENTERED 1-JUN-76 Classification Capacities/Resource Ability Characteristics - Developemental Requirements For ES-4 - Type C Projects.

GRAPH NO. 130 DATE PRINTED28-Jun-76

CLASSIFICATION CAPACITIES	
Advisory Capacity	· · · · · · ·
Development Capacity	· · · · · · ·
Reporting	· · · · · · ·
Scope	· · · · · · · ·
Impact Potential	· · · · · · · ·
Analytical Capacity	
Initiation Capacity	· · · · · · ·
Planning Capacity	· · · · · · ·
Management Capacity	· · · · · · · · · · · · · · · · · · ·
Contacts Capacity	
Decision Capacity	
Knowledge	
÷ • •	Ability to Adapt and Create Ability to Communicate Ability to Direct Ability to Control Ability to Organize Ability to Plan Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO DEVELOPMENTAL REQUIREMENTS.

GRAPH NO. 131 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Participatory Requirements For ES-4 - Type C Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity	
Development Capacity	
Reporting	
Scope	
Impact Potential	
Analytical Capacity	
Initiation Capacity	· · · · · · ·
Planning Capacity	
Management Capacity	· · · · · · ·
Contacts Capacity	· · · · · · ·
Decision Capacity	
Knowledge	· · · · · ·
	Ability to Adapt and Create Ability to Communicate Ability to Direct Ability to Control Ability to Organize Ability to Plan Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO PARTICIPATION REQUIREMENTS.

DATE ENTERED 1-JUN-76 Classification Capacities/Resource Ability Characteristics - Leadership Requirements For ES-4 - Type C Projects.

2

GRAPH NO. 132 DATE PRINTED28-Jun-76

CLASSIFICATION CAPACITIES

Advisory Capacity		•	L	•	•	•		•
Development Capacity		L.	L	L	L	L	•	L
Reporting				•	•			
Scope		•				•		
Impact Potential			•		• .		•	
Analytical Capacity				•		•		
Initiation Capacity		L	L	L	L	L		L
Planning Cápacity		L	L	L	L	L	•	L
Management Capacity		L	L	L	L	L	ì	L
Contacts Capacity	·	•				•	•	
Decision Capacity	20 1 ⁹ 10	L	L	•	L	L		L
Knowledge	А	•	•	•			•	•
		Ab		ili	ili ty	ili ty to	ty to Pia	oility to Communicate ity to Direct to Control Organize

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: PRIMARY PHASE INVOLVEMENT ONLY.

Resource Ability Characteristics/Work Segments - Developemental Capacities For ES-4 - Type C Projects.

GRAPH NO. 133 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

RESOURCE ABILITY CHARACTERISTICS Ability to Adapt and Create Ability to Communicate Ability to Direct Ability to Control Ability to Organize Ability to Plan Ability to Analyze and Evaluate | Final Recommendations Formal Output Formulation Evaluation and Discussion of Outputs Primary Output Formulation
 Working Paper Development
 Follow Up Contact and Discussion Refinement Primary Analysis Initial Information Development Initial Contact | Work Segmentation and Distribution Operational Approach Development 1 Planning Initiation

WORK SEGMENTS

COMMENTS: NO DEVELOPMENTAL CAPACITIES REQUIRED.

Resource Ability Characteristics/Work Segments - Participatory Capacities For ES-4 Projects. Type C

RESOURCE ABILITY CHARACTERISTICS	
Ability to Adapt and Create	• • • • • • • • • • •
Ability to Communicate	· · · · · · · · · · · · · · · · · · ·
Ability to Direct	
Ability to Control	
Ability to Organize	
Ability to Plan	
Ability to Analyze and Evaluate	
	<pre> Final Recommendations </pre>
	Initiation

WORK SEGMENTS

COMMENTS: NO PARTICIPATORY CAPACITIES REQUIRED.

Copyright (C) 1976 by The Minister of State for Science and Technology, Ottawa Ontario

Initiation

GRAPH NO. 135 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Leadership Capacities For ES-4 - Type C Projects.

RESOURCE ABILITY CHARACTERISTICS								·						
Ability to Adapt and Create	L				•			•				-		
Ability to Communicate	L	L	•	•	٠	•	•	•	•			•		•
Ability to Direct	L	L	L	L	•	•		•	•					•
Ability to Control	•	L	L	L	•			-				•		
Ability to Organize	L	L	L	L					•		•	•		
Ability to Plan	L	L	L	L		•		•	•			•		, .
Ability to Analyze and Evaluate	L	L	•	•	•	•	•	•	•	•		•		
				era ing	In In tio	In Iti: Segi	Pr iti al men	Re ima al Con	Fo fin ry Inf tac ion	llo eme Ana orm t an	ן Pr w l nt ilys ati	Ex ing ing ing ing ing ing ing ing ing ing	F Val Pa Cor De tri	Final Recommendations Formal Output Formulation Luation and Discussion of Outputs Output Formulation aper Development Itact and Discussion Evelopment ibution

WORK SEGMENTS

COMMENTS: PRIMARY PHASE INVOLVEMENT ONLY.



Classification Capacities/Work Segments -

Developemental Roles For ES-4 Type D Projects.

CLASSIFICATION CAPACITIES

Final Recommendations	•	•	•	•	•	•	•	•	•	• .	•	•	
Formal Output Formulation	•	-	•	•	•	•		•	•		•	•	
Evaluation and Discussion of Outputs			•	•	•	•		•	•	•	•	•	
Primary Output Formulation	•	•	•	•	•	•	•	•	•	•	•		
Working Paper Development		•	•	•	•	•	•	•	•	•	•	• '	
Follow Up Contact and Discussion		•	•	•	•	•	•	•	•	•	•	•	
Refinement		•.		•	•	-	•	•	•	•	•	•	
Primary Analysis		•	•	•	•	•	•	•	• ·		•	•	
Initial Information Development		•	•	-		•			•	•	•	•	
Initial Contact		•		•	•	•	•		•	•	•	•	
Work Segmentation and Distribution	•	Ţ			•	•	•	•		•	•		
Operational Approach Development		•	•	•	•		•	•	•	•		•	
Planning	•	•		•	•	•	•		•	•		•	
Initiation		•		•	•	•	•	•	•				
			cis	nta ion	nagi cts	ann emei Cai	iti ing nt pac	alu atio Cap Capa	bac tic on oac	ope t P al Cap ity	por otei Cap	velopment ting ntial acity	Capacity Capacity

WORK SEGMENTS

COMMENTS: NO ES-4 INVOLVEMENT IN TYPE D PROJECTS.

Copyright (C) 1976 by The Minister of State for Science and Technology, Ottawa Ontario

Knowledge

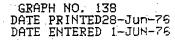
GRAPH NO. 137 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Participatory Roles For ES-4 - Type D Projects.

CLASSIFICATION CAPACITIES				-														
Final Recommendations	•			•		• .			•			•		•				
Formal Output Formulation							-					•						
Evaluation and Discussion of Outputs		•		•							•							•
Primary Output Formulation	•		•									•						
Working Paper Development						•				٠		•		· _	•			
Follow Up Contact and Discussion			•				•			•						. •		
Refinement	•		•	•		•		•		•								
Primary Analysis		•											•					
Initial Information Development								•										
Initial Contact							•	•									•	
Work Segmentation and Distribution						•	-		•									
Operational Approach Development				•		•				•								
Planning						•						•					•	
Initiation			•								•	•						
	Kn		Co cís	nta ion	nag c ts	ann eme Ca	An: iti ing nt pac ity	aly ca Cap ity	Sc pac tic on pac aci	Re ope t P al Cap ity	De por ote Cap	Advisory evelopment rting ential pacity ity						

WORK SEGMENTS

COMMENTS: NO ES-4 INVOLVEMENT IN TYPE D PROJECTS.



Classification Capacities/Work Segments - Leadership Roles For ES-4 - Type D Projects.

CLASSIFICATION CAPACITIES

Final Recommendations	•	•	•		•	•				•	•		
Formal Output Formulation	•	•		•		• ,	•			•	•	•	
Evaluation and Discussion of Outputs	•	•.	• •	•	•		•		÷	•	•	•	•
Primary Output Formulation	•	•	•	•	•	•	•	•			•	•	
Working Paper Development	•	•	•	•	•	•	•	•	• .	•	•	•	. •
Follow Up Contact and Discussion	÷	•	•	•	•	•	•	•	•	•	•	•	
Refinement	•	•		•	•	•	•	•	•	•	•	•	
Primary Analysis	•	•.	•	•	•	•	•.	•		•	•	•	
Initial Information Development	•		•	•	•	•	•	•	•	•	•	•	
Initial Contact	•	•	•	•	•	•	•	•		•	•	•	
Work Segmentation and Distribution	•	•	•	•	•	•	•	•	• `	•	•		
Operational Approach Development	•	•	•	•	•	•	•	•	•	•	•		
Planning	•	•	•	•	•	•	•	•	•	•		•	
Initiation	•	•	•	•	•	•	•	•	•	•	•		
• • •	Knii	Dec	cis	nta: ion	nage Sts	Ini anni emer Cap	itia ing nt (pac:	aly atio Cap Capa	tica tica on (oac	ope t Po al (Capa ity	ote: Capa	velopmen ting ntial acity	ry Capacity nt Capacity

WORK SEGMENTS

COMMENTS: NO ES-4 INVOLVEMENT IN TYPE D PROJECTS.

GRAPH NO. 139 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Developemental Requirements For ES-4 - Type D Projects.

CLASSIFICATION CAPACITIES

• • • • • • • • • • • • • • • • • • • •							
Advisory Capacity	•	•	•	•	•	•	•
Development Capacity	•	•	•	•		•	
Reporting	•		•	•	•	•	•
Scope			•			•	•
Impact Potential	•					•	
Analytical Capacity		•	•	•		·.	•
Initiation Capacity		•			•		•
Planning Capacity	•	•	•	•			
Management Capacity		•			•		
Contacts Capacity		٠					•
Decision Capacity	•		•	•	•	•	:
Knowledge	•	•			•	•	
	Ab	 Ab	l- Ab ili	 Ab ili ty	Ab ili ty to	ili ty to Pla	Ability to Adapt and Create ility to Communicate ty to Direct to Control Organize n e and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO ES-4 INVOLVEMENT IN TYPE D PROJECTS.

GRAPH NO. 140 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76 Participatory Requirements For ES-4 - Type D Projects.

CLASSIF:	ICATION.	CAPACITIES	

Classification Capacities/Resource Ability Characteristics -

Advisory Capacity Development Capacity Reporting Scope Impact Potential Analytical Capacity Initiation Capacity Planning Capacity Management Capacity Contacts Capacity Decision Capacity Knowledge Ability to Adapt and Create Ability to Communicate Ability to Direct Ability to Control Ability to Organize 1 Ability to Plan Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO ES-4 INVOLVEMENT IN TYPE D PROJECTS.

GRAPH NO. 141 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76 Classification Capacities/Resource Ability Characteristics - Leadership Requirements For ES-4 - Type D Projects.

CLASSIFICATION CAPACITIES

	· · ·
Advisory Capacity	• • • • • • •
Development Capacity	
Reporting	· · · · · ·
Scope .	
Impact Potential	
Analytical Capacity	
Initiation Capacity	· · · · · · ·
Planning Capacity	· · · · · · · ·
Management Capacity	· · · · · · ·
Contacts Capacity	
Decision Capacity	
Knowledge	
	<pre> Ability to Adapt and Create Ability to Communicate Ability to Direct Ability to Control Ability to Organize Ability to Plan Ability to Analyze and Evaluate</pre>

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO ES-4 INVOLVEMENT IN TYPE D PROJECTS.

GRAPH NO. 142 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Developemental Capacities For ES-4 - Type D Projects.

RESOURCE ABILITY CHARACTERISTICS			•	. •					•		,			
Ability to Adapt and Create		•	•	•	•		-	•	•	•			•	
Ability to Communicate		•		•	•	•	•			•	•	•		2
Ability to Direct				•	•		•			•		•	•	
Ability to Control	•				•		•	•			•	•		
Ability to Organize	•	•	•	•	•	•	•	•		•				
Ability to Plan	•	•			•	•	.•	•	•		•	•	•	
Ability to Analyze and Evaluate		•	•	•	•	•	•	•	•	. •	-			
			Ope		rk	iti Seg	iti al mer	ima ial Con	fin ry Inf tac ion	eme Ang orm t an	orki ow U ent alys nati nd D	ima ng p (is on ist	Jal Pa Pa Con De	Final Recommendations ormal Output Formulation uation and Discussion of Outputs Output Formulation per Development tact and Discussion velopment bution
· · · · · · · · · · · · · · · · · · ·	 Ini		anni atic											

WORK SEGMENTS

COMMENTS: NO ES-4 INVOLVEMENT IN TYPE D PROJECTS.

GRAPH NO. 143

DATE PRINTED28-Jun-76. DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Participatory Capacities For ES-4 - Type D Projects.

																			,				
RESOURCE ABILITY CHARACTERISTICS								,															
Ability to Adapt and Create		-								-													
Ability to Communicate	•	•												•									
Ability to Direct		•			•				· • .	•		•			-								
Ability to Control	•	•			•	•		•	•	•	•			•	-								
Ability to Organize								•		•	-			•	•				、			,	
Ability to Plan	•	•		•		•		•	•					•	•								
Ability to Analyze and Evaluate			•		•					•				•	•								
· · · · · · · · · · · · · · · · · · ·	Tn		Opnati	era ing	rk tio	iti Seç	iiti al men	ima al Cor tat	efir ary Inf itac	ill An Tor t	lork ow lent aly: mat nd	rin ing Up sis ior Dis	iva nar Co D D Str	Fori lua y O ape nta eve ibu	mal tior utpu r De ct a	it Fo Ivelo Ind D Ment	ut) Di: rmu pmel	Forn scus lati nt	nula sion lon	tion	Ou:	tputs	

WORK SEGMENTS

COMMENTS: NO ES-4 INVOLVEMENT IN TYPE D PROJECTS.

GRAPH NO. 144 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics	/Work Segments - Leadership	Capacities For 1	ES-4 - Type D	Projects.
----------------------------------	-----------------------------	------------------	---------------	-----------

RESOURCE ABILITY CHARACTERISTICS			• •	•		
Ability to Adapt and Create						
Ability to Communicate		• • •		. 		
Ability to Direct	• • •			· · · · ·		·
Ability to Control						
Ability to Organize	• • • •			• • • •	· · ·	
Ability to Plan						
Ability to Analyze and Evaluate						
	Ope Planni	Initi Work Seg erational Ing	l Follo Refineme Primary Ana litial Inform al Contact mentation ar Approach De	Form Evaluat Primary Ou orking Paper ow Up Contac ent alysis mation Devel nd Distribut		D n .
	Initiatio				· ·	

WORK SEGMENTS

COMMENTS: NO ES-4 INVOLVEMENT IN TYPE D PROJECTS.

GRAPH NO. 145 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Developemental Roles For ES-3 - Type A Projects.

CLASSIFICATION CAPACITIES

Final Recommendations			•					•	•					
Formal Output Formulation		•	•		•		-	•				•		
Evaluation and Discussion of Outputs											•	•		
Primary Output Formulation				•							•			
Working Paper Development	•						5			•		•		
Follow Up Contact and Discussion							•		•					
Refinement								•						
Primary Analysis			•		•	•					•			
Initial Information Development	•	•	•			•	•				•	•		
Initial Contact		•			•		•			,				
Work Segmentation and Distribution		DP	DP	DP	DP	DP				•	DP			
Operational Approach Development		DP		DP	DP	DP	•				DP	DP		
Planning		DP			DP	DP		•		•	DP			
Initiation		DP				DP		•						
	X X	Di now	eci	ont sio	ana act:	i In Jann Jeme S Ca apac	itia ing nt (pac:	lmp aly aly Cap Cap	tic: on pac	op t al Cal íti	Di epol Poti Cal pac	evelop rting ential pacity	oment	Capacity Capacity
	- 0	ເມນາມ	나도니	นธ										

WORK SEGMENTS

COMMENTS: PRIMARY PHASE DEVELOPMENTAL PARTICIPATION ONLY.

GRAPH NO. 146 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Participatory Roles For ES-3 - Type A Projects.

CLASSIFICATION CAPACITIES	÷,						•						•						
Final Recommendations	•	Р	P	Р	•				•	•	•	Р							
Formal Output Formulation	•	Р	•	Р	٩	•	P	•		•	Р	Р						÷	
Evaluation and Discussion of Outputs		P	P		P		P	•			P	P ·							
Primary Output Formulation	•	Ŗ	•	P	Ρ	P	P	•	•		P	P							
Working Paper Development		•	•		•	•	•	ŧ	•		•	•							
Follow Up Contact and Discussion	•	•		٩	•		•	٠	•	•									
Refinement	•	•		•	•			•	•	•	•	•							
Primary Analysis	•	•	•	•	•	•	•			ŧ		•							
Initial Information Development	٠	۲	٠	•		•	•	•	•	•	•	•							
Initial Contact	٠	٠		•		•	•	•	•		•	•				۰.	•		
Work Segmentation and Distribution	•	•	•			•			-		•	•							
Operational Approach Development	•	•	÷	•	ŗ	•	;	•	٠	•	•	•							
Planning	•	•				•	•	•	÷	•	•	•							
Initiation	•	•	•	٠	•	•	•	;	•	•	•								
		ן שפ וסשנ	cis	nta ior	ana <u>c</u> acts	Ir anr geme s Ca	niti nin <u>c</u> ent apac	nali iati car car	npac itic lon apac paci	cope t F al Cap itu	por ote Cap	evelop rting ential pacity	mènt	Capac Capac	city city			÷.,	

WORK SEGMENTS

COMMENTS: PARTICIPATION ROLES PHASE THREE ONLY.

GRAPH NO. 147 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Leadership Roles For ES-3 - Type A Projects.

CLASSIFICATION CAPACITIES

Final Recommendations	•	•		•	•		•	•	•	•	•	
Formal Output Formulation	•	•			•	•		•	•	•	•	•
Evaluation and Discussion of Outputs	•	•			•			•	•		•	
Primary Output Formulation	•	•	•		•	•	•	•	•	•	•	
Working Paper Development	•	L	•	L	L	L	L	•		•	L	L
Follow Up Contact and Discussion	•	L	L				•	•	•	•	• '	L
Refinement	•	L	•	L	L	•	L	•	•	•	L	L
Primary Analysis		L	•	L	L		L	•	•	•	L	L
Initial Information Development		L	L	L	L	L	L		•		L	L
Initial Contact		L	L					•	•		•	L
Work Segmentation and Distribution			•		•	•				•	•	
Operational Approach Development			•		•	•	•		•	•	•	• '
Planning	•		•		•		•	•	•		•	•
Initiation	•	•		•	•	•		•	•	•	•	
	Kn	De	cis	nta ion	inag icts	anr Jeme Ca	Ani ing ing pac ity	aly ati Ca Cap ity	Sc pac tic on pac aci	ope t P al Cap ity	por ote Cap aci	evelopment Capacit <u>u</u> ting ential pacity

WORK SEGMENTS

COMMENTS: LEADERSHIP ROLES-PHASE TWO ONLY.

Classification Capacities/Resource Ability Characteristics - Developemental Requirements For ES-3 - Type A Projects.

		•		•	•				· · ·		•	•	5 X	
	CLASSIFICATION CAPACITIES	•												
	Advisory Capacity	DP	· .	DP		•		DF	P ·					
	Development Capacity	DP	DP	DP		•	•	DF	P					
	Reporting	•				•								
	Scope	•		•		•	•				•			
	Impact Potential	•		•		•			•					
	Analytical Capacity	DP	DP	DP	DP	٠	•	DF	P					
	Initiation Capacity	DP		•		•	•	DF	P					
	Planning Capacity	DP	DP	DP	DP		•		•					
	Management Capacity	•	-				•							
	Contacts Capacity	•	•						•					
•	Decision Capacity	DP	DP	DP					•					
	Knowledge		•		•		•	,	,					
	· · · · · · · · · · · · · · · · · · ·		l l A	bil	bili ity	ity to	Al sil ity to Pl:	bil itu to Or an	Ability to Adapt and lity to Communicate y to Direct o Control rganize and Evaluate	3 0	Create			

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: DEVELOPMENTAL REQUIREMENTS IN PHASE ONE ONLY.

GRAPH NO. 149 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Participatory Requirements For ES-3 - Type A Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity	P	Ρ	P	Ρ	P	P	Ρ
Development Capacity	P	P			P	•	P
Reporting				•		•	
Scope		•	•	•			
Impact Potential					•	•	•
Analytical Capacity	Р	P	P	Ρ	Ρ		Р
Initiation Capacity	P	P					
Planning Capacity	P	P	P	P	P		P
Management Capacity	P	P	P	P	P		
Contacts Capacity	Р	P	•	P		Ρ	
Decision Capacity	Р	P	P	P	P	P	
Knowledge			•				. ,
	Ab)ili	ili ty	Ab ili ty to	Ab ili ty to Pla	Ability to Adapt and Create pility to Communicate ty to Direct to Control Organize m e and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: PARTICIPATION IN PHASE THREE ONLY.

GRAPH NO. 150

DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76 Classification Capacities/Resource Ability Characteristics - Leadership Requirements For ES-3 - Type A Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity	L	L	•	L	L	L	•
Development Capacity	L	L	L	L	•	L	L
Reporting	•	-	•		•	•	•
Scope	•	•		•			
Impact Potential	٠	•	•	•	•	•	•
Analytical Capacity	L	•	L	L	L	L	L
Initiation Capacity	•	•	٠	•	•	•	
Planning Capacity	L	L	L	L	L	L	L
Management Capacity	L	L	L	L	L	L	•
Contacts Capacity	L	•	L	Ľ	•	L	
Decision Capacity	L	L	L	L	L	÷	L
Knowledge	•	•	·	•		•	
· · · · · · · · · · · · · · · · · · ·	 Ab	Ab ili	 Ab	Ab ili tu	Ab ili ty to	Ab ili ty to Pla	Ability to Adapt and Create ility to Communicate ty to Direct to Control Organize n e and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: LEADERSHIP REQUIREMENTS IN PHASE TWO ONLY.

GRAPH NO. 151 DATE PRINTED28-Jun-76

DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Developemental Capacities For ES-3 - Type A Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create Ability to Communicate . DP DP Ability to Direct Ability to Control Ability to Organize . DP DP DP Ability to Plan . DP DP DP Ability to Analyze and Evaluate . DP DP DP | Final Recommendations | Formal Output Formulation Evaluation and Discussion of Outputs 1 Primary Output Formulation 1 | | Working Paper Development | Follow Up Contact and Discussion Refinement Primary Analysis Initial Information Development Initial Contact Work Segmentation and Distribution Operational Approach Development Planning Initiation

WORK SEGMENTS

COMMENTS: DEVELOPMENT CAPACITIES-PHASE ONE ONLY.

GRAPH NO. 152 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Participatory Capacities For ES-3 - Type A Projects.

RESOURCE ABILITY CHARACTERISTICS	
Ability to Adapt and Create	P . P .
Ability to Communicate	
Ability to Direct	
Ability to Control	
Ability to Organize	
Ability to Plan	
Ability to Analyze and Evaluate	
	<pre> Final Recommendations Formal Output Formulation </pre>

WORK SEGMENTS

COMMENTS: PARTICIPATORY CAPACITIES-PHASE THREE ONLY.

GRAPH NO. 153 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Leadership Capacities For ES-3 - Type A Projects.

RESOURCE ABILITY CHARACTERISTICS													
Ability to Adapt and Create	•			•		L		•	•	L		•	
Ability to Communicate	•	•	•	•	L	L	•	L	L	L	•	•	• •
Ability to Direct				•		•	L	•	-				
Ability to Control	•		•	•	•		L	•	-		•		
Ability to Organize	•				L	L	L.	L	•	L.			
Ability to Plan	•		•	•	L	L	L	L		L			· ·
Ability to Analyze and Evaluate				•		L	L	L	L	L			
			ann	era ing	rk tio	iti Seg	Pr iti al	Re ima Con	Fo fin Iry Inf itac	Ho Llo Ana orm t	Pr wU nt lys ati dD	ima ng p C is on ist	l Final Recommendations Formal Output Formulation aluation and Discussion of Outputs ry Output Formulation Paper Development ontact and Discussion Development ribution ent

WORK SEGMENTS

COMMENTS: LEADERSHIP CAPACITIES-PHASE TWO ONLY.

GRAPH NO. 154 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments -Developemental Roles For ES-3 -Tupe B Projects. CLASSIFICATION CAPACITIES Final Recommendations . DL . . DL . . DL DL Formal Output Formulation . DL . DL DL . DL DL Evaluation and Discussion of Outputs . DL DL . DL DL DL Primary Output Formulation . DL . DL DL DL . . . DL

Follow Up Contact and Discussion Refinement Primary Analysis Initial Information Development Initial Contact Work Segmentation and Distribution . DL DL DL DL DL . DL Operational Approach Development . DL . DL DL DL . DL . Planning . DL . DL DL DL . DL .

. DL

| | | | | | | | | Advisory Capacity
| | | | | | | | | Development Capacity
| | | | | | | | Reporting
| | | | | | | Scope
| | | | | | | Impact Potential
| | | | | | Analytical Capacity
| | | | Planning Capacity
| | | Planning Capacity
| | | Management Capacity
| Contacts Capacity
| Decision Capacity
Knowledge

WORK SEGMENTS

DL

COMMENTS: DEVELOPMENTAL ROLES-PHASES ONE AND THREE ONLY.

Working Paper Development

Initiation

GRAPH NO. 155 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Participatory Roles For ES-3 - Type B Projects.

CLASSIFICATION CAPACITIES

Final Recommendations		P			P						P	P
Formal Output Formulation		Ρ		P	P						P	P
Evaluation and Discussion of Outputs		P	P	Ρ		P	Ρ					P
Primary Output Formulation	•	Ρ		Ρ	Ρ	Ρ	P			•	P	
Working Paper Development					•					•	•	•
Follow Up Contact and Discussion			•	•		•		•		•	•	
Refinement					•	•		•			•	
Primary Analysis					•	•	•	•	•			
Initial Information Development		•	•			•	•					•
Initial Contact			•			•	•	•	•			
Work Segmentation and Distribution		Ρ	P	P	P	P	•	•	•		P	•
Operational Approach Development		Ρ		P	P	Ρ			•	•	Ρ	
Planning	•	Ρ	•	P	P	Ρ		•	•	•	P	
Initiation	•	Ρ	•			Ρ	•	•	•	•	•	
	Kr	De De	ecis	onta Sior	nac acts	anr Jeme Ca	iti ing nt pac	aly ati Cap ity	pac tic on pac aci	ope t P al Cap	De por ote Cap	Advisory Capacity evelopment Capacity ting ential pacity ty

WORK SEGMENTS

COMMENTS: PARTICIPATION ROLES-PHASES ONE AND THREE ONLY.

GRAPH NO. 156 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Leadership Roles For ES-3 - Type B Projects.

CLASSIFICATION CAPACITIES

	L L L	L	L L	- - - L L	L	L	•	• • •	•	- - - L	L	· .
	L	L		L	L	L	•	•	•	- - L	• • • L	•
	L	L		L	L	L	•		•	L	· · L	•
	L	L		L	L	• L	•	•	•	L	L	· ·
	L	L		L	L	L	•	•	•	L	L	·
•	L	L			•							
•		•	T.	-			•	•	•	•	L	
•	т		~	L	L	L	•	•		L	L	
	بلا		L	Ļ	L	L	•	•	•	L	Ļ	
•	Ĺ	•	•	L	L	L	•	•	•	L	•	
	Ļ	Ļ	•	•	Ļ	•	•		•	•	L	
•	•	•	•	•	•	. •	•	•	•	•	•	
•	-		•		٠	•	•	•	•	•	•	
	•	•	•	•	٠	•	•	•	•		•	
	•	•	•	•		,	•	•		•	•	
		cis	inta ion	inag icts	ann Ieme : Ca	iti ing nt pac	aly ca Cap ity	pac tic on pac aci	ope t P al Cap ity	por ote Cap aci	evelopment ting ential bacity	
		· · ·	. L . . L L 	. L . L L . 	. L L . L L 	. L L L . L L L 	. L L L L . L L	. L L L L . . L L L 	. L L L L	. L . L L L	L L L L L L L L L L	L . L L L L

WORK SEGMENTS

COMMENTS: LEADERSHIP ROLES-PHASE TWO ONLY.

GRAPH NO. 157 DATE PRINTED28-Jun-76

DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Developemental Requirements For ES-3 - Type B Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity	DL DL DL DL DL .
Development Capacity	DL DL DL DL . DL
Reporting	
Scope	
Impact Potential	
Analytical Capacity	DL DL DL DL DL DL DL
Initiation Capacity	DL
Planning Capacity	DL DL DL DL . DL
Management Capacity	. DL DL DL
Contacts Capacity	. DL . DL . DL .
Decision Capacity	DL DL . DL DL
Knowledge	
	Ability to Adapt and Create Ability to Communicate Ability to Direct Ability to Control Ability to Organize Ability to Plan Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: DEVELOPMENTAL REQUIREMENTS-PHASES ONE AND THREE ONLY.

GRAPH NO. 158

DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76 Classification Capacities/Resource Ability Characteristics - Participatory Requirements For ES-3 - Type B Projects.

•	CLASSIFICATION CAPACITIES							
	Advisory Capacity	P	P	P	P	P	P	•
	Development Capacity	Р	P	P	Ρ	P	•	P
	Reporting	•	•	•	•		•	•
	Scope	•	•	•	•		•	•
	Impact Potential	•		•	•	•		
	Analytical Capacity	Р	P	P	P	P	Ρ	P ·
	Initiation Capacity	-	•		•	•		P
	Planning Capacity	Р	P	P	P	Ρ	•	P
	Management Capacity		Ρ	Ρ	Ρ	Ρ	•	•
	Contacts Capacity		P	•	P	•	P	
	Decision Capacity	P	P	•	P.	Ρ		•
	Knowledge	•		•		•	•	
	· · ·	Ab		ili	ili ty	ili ty to	ili ty to Pla	Ability to Adapt and Create ility to Communicate ty to Direct to Control Organize n e and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: PARTICIPATION REQUIREMENTS-PHASES ONE AND THREE ONLY. Copyright (C) 1976 by The Minister of State for Science and Technology, Ottawa Ontario

GRAPH NO. 159 DATE PRINTED28-Jun-76

DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Leadership Requirements For ES-3 - Type D Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity	L	L	L	L	L	L	
Development Capacity	L	L	L	L	L	L	L
Reporting	•	•			•	•	
Scope							
Impact Potential	•	-		•			
Analytical Capacity	L	•	L	L	L	L	L
Initiation Capacity	•	L		•	•	•	L
Planning Capacity	L	L	L	L	L		L
Management Capacity		L	L	L	L	-	
Contacts Capacity		L	L	L		L	
Decision Capacity	L	L	•	L		L	•
Knowledge			•				
	******	Ak		¦ Ab ili	¦ Ab ili ty	Ab ili ty	Ability to Adapt and Create mility to Communicate ty to Direct to Control Organize an

Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: LEADERSHIP REQUIREMENTS-PHASE TWO ONLY.

GRAPH NO. 160 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Developemental Capacities For ES-3 - Type B Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create	DL DL
Ability to Communicate	DL DL . DL DL DL . DL
Ability to Direct	DL
Ability të Control	. DL DL
Ability to Organize	DL DL DL DL DL DL .
Ability to Plan	DL DL DL DL . DL .
Ability to Analyze and Evaluate	. DL DL DL DL DL DL
· · · · ·	<pre> Final Recommendations Formal Output Formulation Evaluation and Discussion of Outputs Primary Output Formulation Working Paper Development Follow Up Contact and Discussion Refinement Refinement Primary Analysis Initial Information Development Initial Contact Work Segmentation and Distribution Operational Approach Development Planning Initiation</pre>

WORK SEGMENTS

COMMENTS: DEVELOPMENTAL CAPACITIES-PHASES ONE AND THREE ONLY.

GRAPH NO. 161

DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76 Resource Ability Characteristics/Work Segments - Participatory Capacities For ES-3 - Type B Projects. RESOURCE ABILITY CHARACTERISTI Ability to Adapt and Create P P Ability to Communicate Ρ Ability to Direct Ability to Control P Ability to Organize P P Р Ρ P Ρ. Ρ Ability to Plan P Ρ Ρ Ρ Ρ. Ability to Analyze and Evaluate PP P Ρ 1 Final Recommendations | Formal Output Formulation Evaluation and Discussion of Outputs Primary Output Formulation | Working Paper Development | Follow Up Contact and Discussion Refinement | Primary Analysis Initial Information Development Initial Contact | Work Segmentation and Distribution Development Approach Development | Planning Initiation WORK SEGMENTS COMMENTS: PARTICIPATION CAPACITIES-PHASES ONE AND THREE ONLY. Copyright (C) 1976 by The Minister of State for Science and Technology, Ottawa Ontario 500 mile.

GRAPH NO. 162 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Leadership Capacities For ES-3 - Type B Projects.

		•													,						
RESOURCE ABILITY CHARACTERISTICS						•															
Ability to Adapt and Create			•	•	•	•	L	L _.	L	•	L	-	•		-						
Ability to Communicate		•	•		•	L			L	L.	-	•	•	•							
Ability to Direct	:		•		•							•									
Ability to Control		•	•				L	L	L	•	L				•						
Ability to Organize					•		L	L	L	L.	L		-	,	-						
Ability to Plan				•			L	L	L	L	L		•	•	•						
Ability to Analyze and Evaluate			•				L	L	L	•	L	•	•		•	•					
		1	1	1	1	1	ł	1.	ļ	ļ	ļ	Ì	1	T	Fin	al Re		endatio	ns		
		ł	1	1		i		ł	1	ļ	1	1	Ë	val	uatio	n and	Disc	ussion	n of	Outputs	
· · · · ·		1		i		Ì	;	ł	i	;	MD	rĸı	ng	Pa	aper v	evelc	ipmen t	-			
		1		1	I		1	1					p	Cor	ntact	and I	piscus	sion			
$= \left\{ \left\{ \left\{ x_{i}^{2}, x_{i}^{2}, y_{i}^{2}, \dots, y_{i}^{2}, y_{i}^{2}, \dots, y_{i}^{2}, y_{i}^{2}, \dots, y$		i I	j			i	i	Pr		efin Aru			is							•	
		i	i	í	-	į	İn								evelop	ment					
·		1	1	1	1		iti	al	Con	itac	:t								`		
· .		ł		1											ibutio	n					
		i	; 101				nal	цΗ	pro	ach	ne	vel	op	mer	1L						
,		In		ann ati																	
		-		~ ~ ~																	

WORK SEGMENTS

COMMENTS: LEADERSHIP CAPACITIES-PHASE TWO ONLY.

GRAPH NO. 163 DATE PRINTED28-JU DATE ENTERED 1-JU

 \mathbf{N}

Classificatior	∩ Capacities/Work	Segments -	Developemental	Roles For	· ES-3 -	Type C	Projects.
----------------	-------------------	------------	----------------	-----------	----------	--------	-----------

CLASSIFICATION CAPACITIES																		•	. [.]			
Final Recommendations		•				•		-														
Formal Output Formulation	· .				•				•	-		•										
Evaluation and Discussion of Outputs				-	•							•	•									
Primary Output Formulation						•						•				•						
Working Paper Development						•	•	•					•									
Follow Up Contact and Discussion			•							•			•									
Refinement				•			•	•	•													
Primary Analysis							•		•													
Initial Information Development	•						•															
Initial Contact			-									•										
Work Segmentation and Distribution		DL		DL	DL	DL			•		Ð	L										
Operational Approach Development	-	DL		DL	DL	DL	•	•			D	L	•									
Planning	.•	DL		DL	DL	DL	•			•	D	L										
Initiation		DL			•	DL	•	•	•			•	•									
			ec i	ont sio	ana act	l In Jann gemei s Caj apac	iti ing nt pac	aly ati Ca Cap	pac tic on pac	cop ct Cal Ca cit	ep e Po pa y	or te ap	ve ti nt ac	ial itu	iry int	Capa Capa	acitų acitų	·				

WORK SEGMENTS

COMMENTS: DEVELOPMENTAL ROLES-PHASE ONE ONLY.

.

GRAPH NO. 164 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Projects.

CLASSIFICATION CAPACITIES Final Recommendations Formal Output Formulation Evaluation and Discussion of Outputs Primary Output Formulation Working Paper Development Follow Up Contact and Discussion Refinement Primary Analysis Initial Information Development Initial Contact Work Segmentation and Distribution Operational Approach Development P Planning P Ρ Initiation | Advisory Capacity Development Capacity Reporting Scope Impact Potential Analytical Capacity Initiation Capacity Planning Capacity Management Capacity Contacts Capacity Decision Capacity

WORK SEGMENTS

COMMENTS: PARTICIPATORY ROLES-PHASE ONE ONLY.

Copyright (C) 1976 by The Minister of State for Science and Technology, Ottawa Ontario

Knowledge

Classification Capacities/Work Segments - Participatory Roles For ES-3 - Type C

GRAPH NO. 165 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Leadership Roles For ES-3 - Type C Projects.-

CLASSIFICATION CAPACITIES		÷											•	
Final Recommendations		L	•	-	L	-	-		•		-	L		
Formal Output Formulation		L		L	L	L	L				L	L		
Evaluation and Discussion of Outputs	•	L	L	L	L		•	•	•	•	•	L		
Primary Output Formulation		L		L	L	L	L				L	L		
Working Paper Development	•	L		L	L	L	L		-		L			
Follow Up Contact and Discussion	•	L	L				•				•	L		
Refinement	-	L	•	L	L		L	•		•	•	L		
Primary Analysis		L		L	L		L			•	L	L		
Initial Information Development	-	L		L	L	L	٠				L			
Initial Contact		L	L		L	L				•		L		
Work Segmentation and Distribution	-	-												
Operational Approach Development	•							•			•	•		
Planning	•								•		•			
Initiation		•										•		
		De Domr	cis	nta ion	nag icts	ann Jeme : Ca	iti ing nt pac	alu ati Cap itu	pac itic on pac ipac	ope t P al Cap	por ote Cap	Advisory evelopment ting ential pacity ty		

WORK SEGMENTS

COMMENTS: LEADERSHIP ROLES-PHASES TWO AND THREE ONLY.

GRAPH NO. 166 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76 Classification Capacities/Resource Ability Characteristics - Developemental Requirements For ES-3 - Type C Projects.

CLASSIFICATION CAPACITIES Advisory Capacity . DL . Development Capacity DL DL DL DL DL . DL Reporting Scope Impact Potential Analytical Capacity Initiation Capacity DL DL DL DL DL . DL Planning Capacity DL DL DL DL DL . DL Management Capacity DL DL DL DL DL . DL Contacts Capacity . . . • . Decision Capacity DL DL . DL DL . DL Knowledge Ability to Adapt and Create Ability to Communicate Ability to Direct Ability to Control 1 Ability to Organize -Ability to Plan

Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: DEVELOPMENTAL REQUIREMENTS-PHASE ONE ONLY.

GRAPH NO. 167 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Participatory Requirements For ES-3 - Type C Projects.

Advisory Capacity	-	P			•		
Development Capacity	P	P	Ρ	P	Ρ		P
Reporting	•						
Scope	•			-	-		•
Impact Potential		•			• .		
Analytical Capacity		-	•		-		
Initiation Capacity	P	P	P	Ρ	P		P
lanning Capacity	P	Ρ	P	Ρ	Ρ		P
1anagement Capacity	Р	P	Ρ	Ρ	Ρ		P
Contacts Capacity		-			-	•	
Decision Capacity	Р	P	-	Ρ	Ρ	•	Р
Snowledge			-				•
				 	bili	ili tu	Ability to Adapt and Create Tility to Communicate ty to Direct to Control Organize

Ability to Plan Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: PARTICIPATION REQUIREMENTS-PHASE ONE ONLY.

GRAPH NO. 168 DATE PRINTED28-Jun-76

DATE ENTERED 1-JUN-76 Classification Capacities/Resource Ability Characteristics - Leadership Requirements For ES-3 - Type C Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity	. •	L	L	L	L	L	L
Development Capacity	L	L	L	L	L		L
Reporting	•					•	•
Scope			•	•	•	•	•
Impact Potential					•		•
Analytical Capacity	L	L	L	L	L	•	L
Initiation Capacity	L	L	L			•	•
Planning Capacity	L	L	L	L	L	L	L , ,
Management Capacity	L	L	L	L	L	L	
Contacts Capacity		L	•	.Г	L	L	
Decision Capacity	L	L		L	L		L
Knowledge							•
		Ab	Ab	Ab ili	¦ Ab ili ty	Ab ili ty to	Ability to Adapt and Create Allity to Communicate ty to Direct to Control Organize n

Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: LEADERSHIP REQUIREMENTS-PHASES TWO AND THREE ONLY.

GRAPH NO. 169

DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Developemental Capacities For ES-3 - Type C Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create	DL
Ability to Communicate	DL DL
Ability to Direct	. DL DL
Ability to Control	. DL DL
Ability to Organize	. DL DL
Ability to Plan	DL DL DL
Ability to Analyze and Evaluate	DL DL DL
	<pre> Final Recommendations Formal Output Formulation Evaluation and Discussion of Outputs Primary Output Formulation Vorking Paper Development Follow Up Contact and Discussion Follow Up Contact and Discussion Follow Up Contact and Discussion </pre>

WORK SEGMENTS

COMMENTS: DEVELOPMENTAL CAPACITIES-PHASE ONE ONLY.

GRAPH NO. 170 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Participatory Capacities For ES-3 - Type C Projects.

RESOURCE ABILITY CHARACTERISTICS						•								•
Ability to Adapt and Create	Ρ	•	•	•	•	•	•	•	•	•	•	•	•	
Ability to Communicate	Ρ	Ρ	-	•	•	•	•	•	•	•	•		•	•
Ability to Direct	•	P	P	Ρ	•	•	•	•	•.	•	•	•	٠	•
Ability to Control	•	Ρ	P	P	•	•		•	•	•	•	•	٠	•
Ability to Organize	•	Ρ	Ρ	Ρ	•	•	•	•	•`	•	•	•	•	
Ability to Plan	P	P	Ρ	P	•	•	•	•	-	•	•	•	٠	•
Ability to Analyze and Evaluate	Ρ	Ρ	Ρ		•	•	•	•	•	•	•	•	•	•
					****		** ** ** **		Fo	Wo	ι Pr rki ω U	Ev ima ng c	Fo Fo alu ry Pap ont	Final Recommendations rmal Output Formulation ation and Discussion of Outputs Output Formulation er Development act and Discussion
	1	l		- 1	1	1	1	Re	fin ry I	eme	nt			
	-		 Op	l Wol era	In rk tio	In iți: Segi	iti: al ' men	al Con tat	Inf tac ion	orm t an	ati d D	on ist	rib	elopment ution
	l In	Pl iti		ing on										

WORK SEGMENTS

COMMENTS: PARTICIPATION CAPACITIES-PHASE ONE ONLY.

GRAPH NO. 171 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Leadership Capacities For ES-3 - Type C Projects.

RESOURCE ABILITY CHARACTERISTICS								1.						
Ability to Adapt and Create						L	•	L	•	•	L	L	•	•
Ability to Communicate		-	•		L		•		L	•		L		L
Ability to Direct	•	•	•		L	L	L	L	L	L	L	L	L	L ·
Ability to Control			•	•	L	L	•		L	L	L	L	L	
Ability to Organize		•			L	L	L	L	L	L	•		L	
Ability to Plan		•			L	L	L	L	L	L	•		L	
Ability to Analyze and Evaluate						L	L	L	•		L	L		
			ann	era ing	rk	iti Seg	iti al men	Re I Re I Ma al Con	Fo fin ry Inf tac ion	Wo llo Ana orm t an	ן Pr w U nt lys ati d D	ima ng p (is on ist	Fo Palu Pap Cont Dev	Final Recommendations ormal Output Formulation vation and Discussion of Outputs Output Formulation per Development cact and Discussion velopment

WORK SEGMENTS

COMMENTS: LEADERSHIP CAPACITIES-PHASES TWO AND THREE ONLY.

GRAPH NO. 172 DATE PRINTED28-JUN-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Developemental Roles For ES-3 - Type D Projects.

CLASSIFICATION CAPACITIES

									•				•					
Final Recommendations	•	•	•		•		•	•	•	•	•							
Formal Output Formulation	-	•	•	•		•	•	•	•	•	•							
Evaluation and Discussion of Outputs	•		•		•		•	• 、	•	•	•							
Primary Output Formulation		•		•	•	•	•		•	•	•		1					
Working Paper Development	•	•	•		•	•	•	•	•	•	•							
Follow Up Contact and Discussion		•	•		•	•	•	• •		• •			,	·				
Refinement	-	•	•	•	•	•	•	•		•							•	
Primary Analysis	٠	•	•		•	•			•	•	•							
Initial Information Development	•	•		•			•	•	•	•	۰.		1					
Initial Contact	•	•					•	•	•		۰.				•			
Work Segmentation and Distribution		•				•	•	•	•	•	•	•						
Opérational Approach Development	•	•	•	•	•	•	•	•	•		•							
Planning	•	•	•	•	•	•	•	•	•	•	•	•					•	
Initiation	•	÷		•	•		ì	•	•	. •	•		• .					
·	Kn			nta ion	nag cts	anr Ieme : Ca	niti nin <u>c</u> nt npac	naly iati g Ca Cap city	pac on pac aci	ope t f at Cap itu	por ote Cap oac	eve rti ent	elopment ing ial sity	Capacity Capacity		•.		

WORK SEGMENTS

COMMENTS: NO DEVELOPMENTAL ROLES REQUIRED.

GRAPH NO. 173 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Participatory Roles For ES-3 - Type D Projects.

CLASSIFICATION CAPACITIES

Final Recommendations	•		•		•	•	•	•	•	•	•		
Formal Output Formulation	•	•	•	•	•		•	•	•	•	•		
Evaluation and Discussion of Outputs		•		•		•	•	•	•	•		•	
Primary Output Formulation				•	•		•	•	•			•	
Working Paper Development		•		•		•	•	•	•	•		•	
Follow Up Contact and Discussion	•	•	•	•		•	•	•			•		
Refinement	•		•				•	•	•		•	•	
Primary Analysis		•	•	•		•	•		•		•	•	
Initial Information Development	•	•		•	•	•	•	•	•		•		
Initial Contact	•	•			•		•	•	•	•	•		
Work Segmentation and Distribution	•	•	•		•	•	•	•	•	•		•	
Operational Approach Development	•	•	•		•	•	•	•	•	•	•		
Planning	•	•	•	•	•		•	•	•	•	•	•	
Initiation	•	•	•		•	•	•	•	•	•	•	•	
		De	cis	nta ion	nag cts	ann eme Ca	Ana iti ing nt o pac ity	aly atio Cap Cap	oac tic on oac	ope t P al Cap ity	por ote Cap aci	Advisory velopment ting ntial acity ty	

WORK SEGMENTS

COMMENTS: NO PARTICIPATORY ROLES REQUIRED.

GRAPH NO. 174 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Leadership Roles For ES-3 - Type D Projects.

CLASSIFICATION CAPACITIES

Final Recommendations	•	L		•	•	•	•	•	•	•	L	L		
Formal Output Formulation	•	L	•	L	L	•	L	•	•	•	L	L		
Evaluation and Discussion of Outputs	•	L	L	L		L	Ļ	•		•	•	L		
Primary Output Formulation		L	•	L	L	L	L		•	•	L	•		
Working Paper Development	•	L		L	L	•	L			•	L	•		
Follow Up Contact and Discussion	•	L	L	•	•	•	•		•	•	•	L		
Refinement	•	L		L	L	L	L	•	•	٠	L	L		
Primary Analysis		L			L	L	L		•	•	L	L		
Initial Information Development	•	L			•	L	•		•	•	L	L		
Initial Contact	•	L	L	•	L	L	-		•	•	•	L		
Work Segmentation and Distribution	•	L	•	L	L	L	•	•	•	•	L	•		
Operational Approach Development	•	L	•	L	L	L	•		•	•	L	•		
Planning		L	•	L	L	L	•	•	•		L	•		
Initiation	•	L	•			L	•	•	•	•	•	•		
	Кn	De	cis	nta ion	nag cts	ann eme Ca	Ana iti ing nt pac ity	aly ati Cap Cap	oac tic on oac	Re ope t P al Cap ity	De por ote Cap aci	Advisory (velopment (ting ntial acity ty	Capacity Capacity	

WORK SEGMENTS

GRAPH NO. 175

DATE PRINTED28-Jun-76

.

Classification Capacities/Resource Ability Characteristics - Developmental Requirements For ES-3 - Type D Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity	•	•	•	-	•	•	•	
Development Capacity		•	•	-	•	•		
Reporting	•	•			•	•	•	
Scope	•	•	•		•	•	•	•
Impact Potential	•					•		
Analytical Capacity		•	•		•	•		
Initiation Capacity			•		•	•		
Planning Capacity	•		•		•			
Management Capacity		•	•	,	•	•		
Contacts Capacity			•				•	
Decision Capacity	•		-		•			
Knowl edge	•	•						
		l I Ab	 A il	bi itu	Ab li u	ili ty to	ty to Pl	Ability to Adapt and Create bility to Communicate ity to Direct to Control Organize an ze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO DEVELOPMENTAL REQUIREMENTS.

GRAPH NO. 176 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Participatory Requirements For ES-3 - Type D Projects.

CLASSIFICATION CAPACITIES Advisory Capacity Development Capacity Reporting Scope Impact Potentiat Analytical Capacity Initiation Capacity Planning Capacity Management Capacity Contacts Capacity Decision Capacitu Knowledge Ability to Plan Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO PARTICIPATORY REQUIREMENTS.

GRAPH NO. 177 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76 Classification Capacities/Resource Ability Characteristics - Leadership Requirements For ES-3 - Type D Projects.

CLASSIFICATION CAPACITIES							
Advisory Capacity	•	L	L	L	L	L	• •
Development Capacity	L	L	L	L	L		L
Reporting	•	•	•			-	
Scope	•				•	•	
Impact Potential		•		•	•	•	
Analytical Capacity	L	L	L	L	L		L
Initiation Capacity	L	L	L	L	L		L
Planning Capacity	L	L	L	L	L	•	L
Management Capacity	L	L	L	L	L	L	L
Contacts Capacity	•	L	L	L	L	L	
Decision Capacity	L	L		L	L		L
Knowledge	•						•
			oiti	ili ty	Ab ili ty to	Ab ili ty to Pla	Ability to Adapt and Create ility to Communicate ty to Direct to Control Organize In In and Furluate

Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

GRAPH NO. 178 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Developemental Capacities For ES-3 - Type D Projects.

RESOURCE ABILITY CHARACTERISTICS	
Ability to Adapt and Create	
Ability to Communicate	
Ability to Direct .	
Ability to Control	
Ability to Organize	
Ability to Plan	
Ability to Analyze and Evaluate	
	<pre> Final Recommendations Formal Output Formulation Evaluation and Discussion of Outputs Primary Output Formulation Follow Up Contact and Discussion Follow Up Contact and Discussion Refinement Refinement Refinement Initial Information Development Initial Contact Work Segmentation and Distribution Operational Approach Development Planning Initiation</pre>

WORK SEGMENTS

COMMENTS: NO DEVELOPMENTAL CAPACITIES REQUIRED.

GRAPH NO. 179 DATE PRINTED28-Jun-76

DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Participatory Capacities For ES-3 - Type D Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create Ability to Communicate Ability to Direct Ability to Control Abilitu to Organize Ability to Plan Ability to Analyze and Evaluate | Final Recommendations | Formal Output Formulation | Evaluation and Discussion of Outputs . | | Primary Output Formulation | Working Paper Development Follow Up Contact and Discussion Refinement l Primary Analysis Initial Information Development Initial Contact Work Segmentation and Distribution Operational Approach Development · | Planning Initiation

WORK SEGMENTS

COMMENTS: NO PARTICIPATORY CAPACITIES REQUIRED.

GRAPH NO. 180 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Leadership Capacities For ES-3 - Type D Projects.

RESOURCE ABILITY CHARACTERISTICS	
Ability to Adapt and Create	LL
Ability to Communicate	L L L L . L . L
Ability to Direct	LLLLLLLLL
Ability to Control	. L L L L L L L L .
Ability to Organizé	L L L L L L L L L .
Ability to Plan	LLLLLLL
Ability to Analyze and Evaluate	LLLL
	<pre> Final Recommendations Formal Output Formulation Evaluation and Discussion of Outputs Primary Output Formulation Working Paper Development Follow Up Contact and Discussion Refinement Primary Analysis Initial Information Development Initial Contact Work Segmentation and Distribution Operational Approach Development Planning Initiation</pre>

WORK SEGMENTS

Classification Capacities/Work Segments - Developemental Roles For ES-2 - Type A Projects.

CLASSIFICATION CAPACITIES

Final Recommendations	•	DP	DP	DP		•		•	•	•	٠	DP
Formal Output Formulation		DP		DP		•	DP	•			DP	DP
Evaluation and Discussion of Outputs	•	DP	DP	•	DP	•	DP				DP	DP
Primary Output Formulation	•	DP		DP	DP	DP	DP		•		DP	DP
Working Paper Development		DL	•	DL	DL	DL	DL	•		•	DL	DL
Follow Up Contact and Discussion		DL	DL	•					-	•	•	DL
Refinement		DL	•	DL	DL	•	DL	•			DL	DL
Primary Analysis	•	DL		DL	DL		DL	•	•	•	DL	DL
Initial Information Development	•	DL	DL	DL	DL	DL	DL		•	•	DL	DL
Initial Contact		DL	DL						•	•	•	DL
Work Segmentation and Distribution			•				-		•	•	-	
Operational Approach Development	•		•	•	•	•	•	•	•			•
Planning							•	•		•	•	
Initiation	•			•			•	•	•			
	K	Di now	eci.	ont: sio	ana act:	lan gem s C		aly ati Cap ity	tic on pac aci	R op t al Ca it	De epoi Poti Caj pac	-

WORK SEGMENTS

COMMENTS: DEVELOPMENTAL ROLES-PHASES TWO AND THREE ONLY.

GRAPH NO. 182 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Participatory Roles For ES-2 - Type A Projects.

CLASSIFICATION CAPACITIES

Final Recommendations	•	•	•	•	•	•	•	•	•	•	•	•	
Formal Output Formulation	•	•	•		•	•	•		•	•	•	•	
Evaluation and Discussion of Outputs	•	•		•		•		•	•	•	•	-	
Primary Output Formulation	•	-	•	•		•	٩	•	•		•	•	
Working Paper Development	•	P		P	Ρ	P	P		•	•	Ρ	P	
Follow Up Contact and Discussion	•	Р	Ρ	•	•	•	•	•	•	•	•	Р	
Refinement	•	Ρ	•	Ρ	Ρ	•	Ρ	•	•	•	P	P	
Primary Analysis	•	P	•	P	Ρ	•	Ρ	•	•		P	P	
Initial Information Development	•	P	Ρ	Ρ	Ρ	P	P	•	•	•	P	P	•
Initial Contact	·	Ρ	P	•	•	٠		•	•	•	•	Р	
Work Segmentation and Distribution	٩		•	•	•	•	•	•	•	•	•	•	
Operational Approach Development	•	•	•	•	•	•	•	•	•	•	•	•	
Planning	•	ę	•	·	•	•	•	•	•	•	٠		
Initiation	٩	÷	•	•	•	•	.	•	•	•	•	•	
	Kn	De	cis	ntạ ion	nag cts	ann eme Ca	Ana itia nt (pac: ity	aly ati Cap Cap	pac tic on pac	ope t P al Cap ity	por ote Cap aci	velopment ting ntial acity	Capacity Capacity

WORK SEGMENTS

COMMENTS: PARTICIPATION ROLES-PHASE TWO ONLY.

Classification Capacities/Work Segments - Leadership Roles For ES-2 - Type A Projects.

CLASSIFICATION CAPACITIES

с	
Final Recommendations	
Formal Output Formulation	••••••••••••••••
Evaluation and Discussion of Outputs	
Primary Output Formulation	· · · · · · · · · · · · · · · · · · ·
Working Paper Development	· · · · · · · · · · · · · · · · · · ·
Follow Up Contact and Discussion	· · · · · · · · · · · · · · · · · · ·
Refinement	
Primary Analysis	
Initial Information Development	
Initial Contact	
Work Segmentation and Distribution	· · · · · · · · · · · · · ·
Operational Approach Development	
Planning	
Initiation	
	<pre>/ Advisory Capacity / Development Capacity / Reporting / Scope / Impact Potential / Analytical Capacity / Analytical Capacity / Initiation Capacity / Planning Capacity / Management Capacity / Contacts Capacity / Decision Capacity Knowledge</pre>

WORK SEGMENTS

COMMENTS: NO LEADERSHIP ROLES REQUIRED.

Copyright (C) 1976 by The Minister of State for Science and Technology, Ottawa Ontario

3

GRAPH NO. 184 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Developemental Requirements For ES-2 - Type A Projects.

CLASSIFICATION CAPACITIES

	•
Advisory Capacity	DD . DD . DD
Development Capacity	DD DD DD . DD . DD
Reporting	· · · . · · · ·
Scope	
Impact Potential	• • • • • •
Analytical Capacity	DD DD DD DD . DD DD
 Initiation Capacity 	DD DD
Planning Capacity	DD DD DD . DD DD
Management Capacity	DD DD DD
Contacts Capacity	DD .
Decision Capacity	DD DD DD
. Knowledge	en en en en en en en en en en en en en e
	/ / / / / Ability to Adapt and Create / / / / / Ability to Communicate / / / / Ability to Direct
	Ability to Control Ability to Organize Ability to Plan
	Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: DEVELOPMENTAL REQUIREMENTS IN PHASES TWO AND THREE ONLY.LEADERSHIP-PHASE TWO, PARTICIPATION-PHASE THREE.BOTH DEVELOP Copyright (C) 1976 by The Minister of State for Science and Technology, Ottawa Ontario

GRAPH NO. 185 DATE PRINTED28-Jun-76

DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Participatory Requirements For ES-2 - Type A Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity	Р	Ρ	Ρ	P	Ρ	•	
Development Capacity	P	Ρ	Ρ	P		•	• ·
Reporting	-	•	•		•		
Scope	-	•	•	-	•		•
Impact Potential					•		· ·
Analytical Capacity	P	P	Ρ	Р	•	Р	P
Initiation Capacity	-	•	•	•	•	•	P
Planning Capacity	Р	P	P	Ρ			
Management Capacity	P	P	P	P			• •
Contacts Capacity		P		Р		P	•
Decision Capacity	P	Ρ	P		•		
Knowledge						•	
	AL	 	rili	ili ty	ili ty to	ili ty to Pla	Ability to Adapt and Create Dility to Communicate Ity to Direct to Control Organize an te and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: PARTICIPATION REQUIREMENTS-PHASE TWO ONLY.

Classification Capacities/Resource Ability Characteristics -

GRAPH NO. 186 DATE PRINTED28-Jur-76 DATE ENTERED 1-Jur-76 Leadership Requirements For ES-2 - Type A Projects.

CLASSIFICATION CAPACITIES

									•			
Advisory Capacity		•	•		•	•	•	•			· ,	
Development Capacity		•			•	•	•	•				
Reporting				•	•		•	•				
Scope		•	•	•	•			•			• .	
Impact Potential			-	•	•			•			·	
Analytical Capacity		•	•	•	•							
Initiation Capacity			•	•	•	٠	•	•				
Planning Capacity	-	•	• .	•	•		• `	•.			· · ·	
Management Capacity		• .	•	•	•	•	•	•				
Contacts Capacity			•	•	•	•	•	•				
Decision Capacity			•	•		•	•	•				
Knowledge		•	•	•	•	•	•	•				
: ¹		Ap:		ilit	ili :y	ili ty to :	ili ty to Pla	ility tō ty to Di to Contr Organize) Commun rect ol	nicate	l Create	

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO LEADERSHIP REQUIREMENTS.

GRAPH NO. 187

DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Developemental Capacities For ES-2 - Type A Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create	DL DL DP . DP .
Ability to Communicate	DL DL . DL DL DL DP DP DP DP
Ability to Direct	DL
Ability to Control	DL
Ability to Organize	DL DL DL DL . DL DP DP DP DP
Ability to Plan	DL DL DL DL . DL DP . DP DP
Ability to Analyze and Evaluate	DL DL DL DL DP DP DP .
· · · · · · · · · · · · · · · · · · ·	<pre> Final Recommendations Formal Output Formulation </pre>

WORK SEGMENTS

COMMENTS: DEVELOPMENTAL CAPACITIES-PHASES TWO AND THREE ONLY.

GRAPH NO. 188 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Participatory Capacities For ES-2 - Type A Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create	•		•	•	•	P	•	•		P		•	•	•
Ability to Communicate		•		•	P	Ρ	•	P	P	P	•		•	•
Ability to Direct		•	•	•			P	•		•	•	•	•	•
Ability to Control		•		•			P	•			•	•		
Ability to Organize	•			•	P	P	P	P		P		•	•	
Ability to Plan		•		•	P	P	P	P		P		•	•	
Ability to Analyze and Evaluate		•		•	•	P	P	P	P	P	•	•	•	•
	ł	1	I	ļ	ł	Ì	1		1	ļ	ļ	1		Final Recommendations rmal Output Formulation
	1	1	i	1	1	1	1	1	ţ	+	1	EU	a l u:	ation and Discussion of Outputs
a second s	1	1	i	1	1	i I	ł	1	1	i Woi	rkir	ımaı ng 1	ry : Pap:	Dutput Formulation er Development
a tanàna ang kaominina dia kaominina dia kaominina dia kaominina dia kaominina dia kaominina dia kaominina dia	1	ļ	1	4	+ -				Fo	llou emei	ν Up	5 Ci	ont	act and Discussion
	-	1	-	1	ł		Pr	ima	ru i	Ana	Lus:	is		
	i.	İ	i	1	1	In	itia	a٤	Inf	orma	atio	on 1	Dev	elopment
		1	1	1	In	iti	al (Con	tac	t				
	ł			NON	rk :	Segi	men	tat	lon	ano	a D	IST	~10 ~~+	ution
,	1		anni			IIdl	нрі	or D	acn	Dev	Jell	սեստ	2116	
			atio											

WORK SEGMENTS

COMMENTS: PARTICIPATION CAPACITIES-PHASE TWO ONLY.

GRAPH NO. 189 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Leadership Capacities For ES-2 - Type A Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create	
Ability to Communicate	
Ability to Direct	
Ability to Control	
Ability to Organize	
Ability to Plan	
Ability to Analyze and Evaluate	
	<pre> Final Recommendations </pre>

WORK SEGMENTS

COMMENTS: NO LEADERSHIP CAPACITIES REQUIRED.

GRAPH NO. 190 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Developemental Roles For ES-2 - Type B Projects.

CLASSIFICATION CAPACITIES

Final Recommendations	•	-	•	•	•	•	•	•	•	•	•	•	
Formal Output Formulation		•	•	•	•		÷	•	•	•	`•	•	
Evaluation and Discussion of Outputs	•	•		•	•	•	•	•	•	•	•	•	
Primary Output Formulation	•				•	•	•	•	•	•	•	•	
Working Paper Development	•	DL			DL	DL	DL		•	•	DL	DŁ	
Follow Up Contact and Discussion	•	DL	DL	DL	DL		•		•	-	•	DL	
Refinement	•	DĻ		DL	DL	DL	DL	•	•		DL	DL	
Primary Analysis		DL	•	DL	DL	DL	DL		•	•	DL	DL	
Initial Information Development	•	DL		•	DL	DL	DL	•	•		DL	•	
Initial Contact		DL	DL			DL	•	•			•	DL	
Work Segmentation and Distribution	÷	DP	DP	DP	DP	DP		•	•		DP	-	
Operational Approach Development		DP	•	DP	DP	DP	•	•	•	•	DP	•	
Planning		DP	•	DP	DP	DP	•	•			DP	• .	
Initiation		DP				DP	•	•		•	•	•	
		Di Now	ec i	ont: sio	ana act:	lan gem s C	An An niti ning ent apac city	aly ati Ca Cap	Sc pac tic on pac aci	op t al Cal	epor Potr Car Jac	Advisory evelopment rting ential oacity ity	Capacity Capacity

WORK SEGMENTS

COMMENTS: DEVELOPMENTAL ROLES-PHASES ONE AND TWO ONLY.

GRAPH NO. 191 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Participatory Roles For ES-2 - Type B Projects.

CLASSIFICATION CAPACITIES

Final Recommendations											Р	P
Formal Output Formulation		P		P	Ρ				•	•	Ρ	Р
Evaluation and Discussion of Outputs		Р	Ρ	P		Ρ	Р		•			P
Primary Output Formulation		P		P	P	P	Р		•		Ρ	
Working Paper Development		P		•	Ρ	Ρ	P	•			Ρ	P
Follow Up Contact and Discussion		P	P	P	Ρ				•	•		Р
Refinement	•	P		Ρ	Ρ	P	P		•	•	Ρ	Р
Primary Analysis		P	•	Ρ	Ρ	Ρ	Р		•	•	P	P
Initial Information Development		P	•	4	P	Ρ	P	•		•	P	•
Initial Contact		P	P	•		P	•			•	•	P
Work Segmentation and Distribution	•			•				•				
Operational Approach Development		•	•	•			-	•	•		•	
Planning		•		•		•	-	•	•	•	•	
Initiation								•		•	•	
	Kr	De	cis	onta sior	ina <u>c</u> icts	anr Jeme Ca	An niti niti ning nt ipac	aly ati Ca Cap ity	pac tic on pac aci	ope t F al Cap	epor Pote Cap Daci	Advisory Capacity velopment Capacity ting ntial acity ty

WORK SEGMENTS

. COMMENTS: PARTICIPATION ROLES-PHASES TWO AND THREE ONLY.

GRAPH NO. 192 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Leadership Roles For ES-2 - Type B Projects.

CLASSIFICATION CAPACITIES

Final Recommendations	•	•	•	•	• •	•		•	•	•	-	•		·			
Formal Output Formulation	•	•	•	•	•	•	•	•	•	•	•	•					
Evaluation and Discussion of Outputs	•	•	•	•	•	•	•	• .	•	•	•	•					
Primary Output Formulation	•	•	•	•	•		•	•	•	•	•	•				÷	
Working Paper Development	•	•	•	•	•	•	•	•		•	•	•					
Follow Up Contact and Discussion	•	•	÷	•	•	•		•	•	•	•	•					
Refinement		•	•		÷	•	•	•	•	•	•	• .					
Primary Analysis	۰.	•	•	•	•	•	•	•	•	•	•	•					
Initial Information Development	•	•`	•		•	•	•	•	•	•	•	•					
Initial Contact	•	•		•	•	•	•	•	•		-						
Work Segmentation and Distribution		•	•		•	•	•		•	•	•	•					
Operational Approach Development	•	•	•	•	•	. •	•	•		•	-	•					
Planning			•	,	•	•.		•	٠	•.	•	• 2					
Initiation	•	•		•	۰.	•	•	•	•	•	•	•					
	Kne		Col cis edge	nta ion	nag cts	ann	iti ing nt pac	alı at Ca Iti	mpac ytic ion apac oaci	:op(:t] :al :Cap :it(epor e Pote Cap oaci	evelopm ting ential bacitu	ory ent	Capacity Capacity			

WORK SEGMENTS

COMMENTS: NO LEADERSHIP ROLES REQUIRED.

GRAPH NO. 193 DATE PRINTED28-Jun-76

DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Developemental Requirements For ES-2 - Type B Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity	DD DD DD DD .
Development Capacity	DD DD DD DD
Reporting	
Scope	
Impact Potential	· <i>· ·</i> · · · ·
Analytical Capacity	DD DD DD . DD DD
Initiation Capacity	DD DD
Planning Capacity	DD DD DD
Management Capacity	DD DD DD
Contacts Capacity	DDDD.
Decision Capacity	DD DD . DD
Knowledge	
	Ability to Adapt and Create Ability to Communicate Ability to Direct Ability to Control Ability to Organize Ability to Plan Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: DEVELOPMENTAL REQUIREMENTS-PHASES ONE AND TWO ONLY, PARTICIPATION-PHASE ONE, LEADERSHIP-PHASE TWO. Copyright (C) 1976 by The Minister of State for Science and Technology, Ottawa Ontario

GRAPH NO. 194 DATE PRINTED28-Jun-76

Classification Capacities/Resource Ability Characteristics - Participatory Requirements For ES-2 - Type B Projects.

DATE ENTERED 1-JUN-76

CLASSIFICATION CAPACITIES

Advisory Capacity	Ρ	•	P	•	•	P	•
Development Capacity	P	Р	Р	•	•	•	P
Reporting	•	•	•	•	•	•	
Scope	•	•	•	•	•	-	•
Impact Potential	•	•	•	•	•	•	•
Analytical Capacity	P	Ρ	P	P	•	P	Ρ .
Initiation Capacity	•	. •	•	•	•	P	P
Planning Capacity	P	Ρ	Ρ	P	•	P	•
Management Capacity	P	Ρ	P	P	·	•	•
Contacts Capacity		•	٠		•	P	•
Decision Capacity	Ρ	P	P		•	•	•
Knowledge	•		•	•	•	•	•
	<u>-</u>	Ab	ili	ili ty	ili ty to	Ab ili ty to Pla	Ability to Adapt and Create ility to Communicate ty to Direct to Control Organize n o and Euclusto

Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: PARTICIPATION REQUIREMENTS-PHASES TWO AND THREE ONLY.

GRAPH NO. 195

DATE PRINTED28-Jun-76 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76 Classification Capacities/Resource Ability Characteristics - Leadership Requirements For ES-2 - Type B Projects.

· ·	CLASSIFICATION CAPACITIES							
1.50	″Ad∨isory Capacity			•	•			
We de la	Development Capacity		•		•	•		
	Reporting	•	•			•		
	Scope	•	•			•		
	Impact Potential		•		•	•	•	
	Analytical Capacity					•		
	Initiation Capacity					•	•	
	Planning Capacity			•		•		
	Management Capacity				•		•	
	Contacts Capacity	•		•	•	•	•	
	Decision Capacity		•	•	-	•		
	Knowledge				•	•	•	
		Ap	 	ili	ili tu	ili ty to]	ili ty to (Pla	Ability to Adapt and Create ility to Communicate ty to Direct to Control Organize 1 e and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO LEADERSHIP REQUIREMENTS.

and the second

GRAPH NO. 196 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Developemental Capacities For ES-2 - Type B Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create	DP	DP	•	•	•	DL	DL	DL	•.	DL	•	•		•
Ability to Communicate	ĎP	DP	•	DP	DL	•	•	DL	DL	•	•	•		
Ability to Direct	-	•	•	-	•	•	•	-	÷			•		
Ability to Control	•	DP	DP	DP		DL	DL	DL	•	ĎL	•	÷	•	•
Ability to Organize	DP	DP	DP	DP	•	DL	DL	DL	DL	DL		•		• •
Ability to Plan	DP	DP	DP	DP	•	DL	DL	DL	DL	DL	•	•	•	
Ability to Analyze and Evaluate		DP	DP	÷	•	DL	ĎL	DL	•	DĹ			ì	
•			Lani	oera ning	ork ati	li Ji Tit Seg	Pi Pi ial gmei	Re Re rima ial Con	Fi Efin ary In tan tio	Wo Ulo neme Ana form ct	Pr rkii w U nt lýs ati	imá ng p C iš ön ist	ry Pap ont Dev rib	Final Recommendations rmal Output Formulation ation and Discussion of Outputs Output Formulation er Development act and Discussion elopment ution

WORK SEGMENTS

COMMENTS: DEVELOPMENTAL CAPACITIES-PHASES ONE AND TWO ONLY.

GRAPH NO. 197

.

A 4 4

DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Participatory Capacities For ES-2 - Type B Projects.

RESOURCE ABILITY CHARACTERISTICS														
Ability to Adapt and Create	٠	•			•	P	P	P	•	P	P	•	-	• ·
Ability to Communicate	•	•	•	•	P	•	•	Ρ	P	-	P	P	•	P
Ability to Direct	-		•			•			•		•	•	•	
Ability to Control	•	•	•			P	P	P	•	P		•	P	
Ability to Organize	•	•				P	Ρ	P	P	P	P	Ρ	Ρ	
Ability to Plan						P	Ρ	P	P	P	P		P	
Ability to Analyze and Evaluate		•			•	P	Ρ	P		P	P	P	P	P
	Ini		nn	era ing	rk	iti Seg	iti al men	ima al Con tat	find ry 1 Info tac ion	tto emen Ana orma t an	rki w Uj nt lys ati d D	iman ng 1 p Co is on 1 isto	For alua ry (Pape onta Deve	Final Recommendations mal Output Formulation ation and Discussion of Outputs Output Formulation er Development act and Discussion elopment ution

WORK SEGMENTS

COMMENTS: PARTICIPATION CAPACITIES-PHASES TWO AND THREE ONLY.

GRAPH NO. 198 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Leadership Capacities For ES-2 - Type B Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create	······································
Ability to Communicate	
Ability to Direct	
Ability to Control	
Abilitý to Organize	
Ability to Plan	
Ability to Analyze and Evaluate	
	<pre> Final Recommendations Formal Output Formulation </pre>

WORK SEGMENTS

COMMENTS: NO LEADERSHIP CAPACITIES REQUIRED.

GRAPH NO. 199 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Developemental Roles For ES-2 - Type C Projects.

CLASSIFICATION CAPACITIES

Final Recommendations		DL	-	•	DL		•	•	•	•		DL
Formal Output Formulation		DL	-	DL	DL	DL	DL			•	DL	DL
Evaluation and Discussion of Outputs		DL	DL	DL	DL		•		•	•	•	DL
Primary Output Formulation		DL		DL	DL	DL	DL				DL	DL
Working Paper Development	•	DL	•	DL	DL	DL	DL	•	•	•	DL	
Follow Up Contact and Discussion	•	DL	DL	DL	•			-	•			DL
Refinement		DL	•	DL	DL	•	DL	•	•		•	DL
Primary Analysis	•	DL	•	DL	DL		DL	•			DL	DL
Initial Information Development		DL		DL	DL	DL	•	•	•	•	DL	
Initial Contact	•	DL	DL	•	DL	DL	•	•	•	•	•	DL
Work Segmentation and Distribution		-		•	•			•	•	•		
Operational Approach Development	•	•	•	•	•		•	•	•	•		
Planning		-	•					•	•	•		
Initiation	-		•	•	-		•	•	•			•
	XX	D D D	ec i	ont sio	anag acti	lan gem s C	An: An: niti: ning ent c apac city	Im aly ati Ca Cap	tic on pac aci	R op t al Ca it	D epo Pot Ca pac	evelopmenť Capacitý rting ential pacity

WORK SEGMENTS

COMMENTS: DEVELOPMENTAL ROLES-PHASES TWO AND THREE ONLY.

GRAPH NO. 200 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Participatory Roles For ES-2 - Type C Projects.

CLASSIFICATION CAPACITIES							· ·						,	•	
Final Recommendations	-	Р			Р		•	•		•		P			
Formal Output Formulation	•	Р		Ρ	P	P	P			•	Ρ	Р			
Evaluation and Discussion of Outputs		P	Ρ	P	Ρ			•		•		P			
Primary Output Formulation		Ρ		P	Ρ	P	P				P	P			
Working Paper Development		Р		P	P	Ρ	P	•	•		Ρ	•			
Follow Up Contact and Discussion	•	P	Ρ	P	•	۰			•	•		P			
Refinement	•	Ρ.		Ρ	Ρ		P	•	•	•		P			
Primary Analysis	•	P	•	P	Ρ	•	P		•	•	Ρ	P			
Initial Information Development	•	Р	•	Ρ	P	, P	•		•	•	P	•			
Inįtial Contact		P	P		. P	P	•		•	•		Ρ			
Work Segmentation and Distribution		P		Ρ	Ρ	P	•		•	•	P	•			
Operational Approach Development	•	P		Ρ	P	P	•	•	•	•	P				
Planning		P	•	P	Ρ	P	•			•	P	•			
Initiation	•	Ρ			•	P	•	•	•	•	•	•			
	Kne	Dec	cis	nta ion	l Pl nag cts	In ann Ieme Ca	Ani iti ing nt pac ity	Im aly ati Ca Cap ity	Sc pac tic on pac aci	Re ope t P al Cap ity	por ote Cap aci	velo ting ntia acit	oment l	Capac Capac	city city

WORK SEGMENTS

	PH NO. 2	
DATE	PRINTE	D28-Jun-76
DATE	ENTERE	D 1-JUN-76

Classification Capacities/Work Segments - Leadership Roles For ES-2 - Type C Projects.

CLASSIFICATION CAPACITIES

					-								
Final Recommendations									•	•	•	•	
Formal Output Formulation		•			÷	•	-			•	•		
Evaluation and Discussion of Outputs			•		:	•	-		•		•		
Primary Output Formulation							•					•	
Working Paper Development				•				•	•		•	•	
Follow Up Contact and Discussion			•		•		-		•		•	•	
Refinement						•							
Primary Analysis				•				•	•				
Initial Information Development		•		•		•	•	•					
Initial Contact				•		•		•					
Work Segmentation and Distribution													
Operational Approach Development			•							•			
Planning	•	•	•			•			•				
Initiation			•					•					
	Kn	De Iowl	cis	onta Sior	inag icts	anr Ieme : Ca	An iti ing nt pac ity	aly ati Ca Cap ity	pac tic on pac aci	ope al Cap ity	por ote Cap aci	Advisory Cap velopment Cap ting ntial acity ty	acity acity

WORK SEGMENTS

COMMENTS: NO LEADERSHIP POLES REQUIRED.

GRAPH NO. 202 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Developemental Requirements For ES-2 - Type C Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity	•	DL	DL	DL	DL	DL	DL.
Development Capacity	DL	DL	DL	DL	DL		DL.
Reporting	•	•	•	•	•		
Scope		•	•	•	•		
Impact Potential	•	•	•	•	•	•	•
Analytical Capacity	DL	DL	DL	DL	DL	•	DL
Initiation Capacity	DL	DL	DL	•			
Planning Capacity	DL	DL	DL	DL	DL	DL	DL
Managément Capacity	DL	DL	DL	DL	DL	DL	•
Contacts Capacity		DL	•	DL	DL	DL	•
Décisión Capačity	DL	DL	•	DL	DL		DL
Kňowl edge		•					
	3			1 Al	ן Al Dil	oil ity	Ability to Adapt and Create bility to Communicate ity to Direct to Control

| | Ability to Organize | Ability to Plan Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: DEVELOPMENTAL REQUIREMENTS IN PHASES TWO AND THREE ONLY. Copyright (C) 1976 by The Minister of State for Science and Technology, Ottawa Ontario

GRAPH NO. 203 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Participatory Requirements For ES-2 - Type C Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity		Ρ	Ρ	Ρ	Ρ	Р	P
Development Capacity	Ρ	Ρ	Ρ	Ρ	Ρ		P
Reporting		•					
Scope		•	•	•	•		
Impact Potential	-	•					
Analytical Capacity	P	P	Ρ	Ρ	Ρ		P
Initiation Capacity	Ρ	P	Ρ	Ρ	Ρ		P
Planning Capacity	P	P	Ρ	Ρ	Ρ	Р	P
Management Capacity	Ρ	Ρ	Ρ	Ρ	Ρ	P	P
Contacts Capacity	•	P		Ρ	P	P	
Decision Capacity	Ρ	P		Ρ	Ρ		P
Knowledge					•		
	 Ab	l l Ab	Ab ili	Ab ili ty	Ab ili ty to	ili ty to Pla	Ability to Adapt and Create ility to Communicate ty to Direct to Control Organize n e and Evaluate

RESOURCE ABILITY CHARACTERISTICS

Copyright (C) 1976 by The Minister of State for Science and Technology, Ottawa Ontario

.

DATE PRINTED28-Jun-76

DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Leadership Requirements For ES-2 - Type C Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity Development Capacity Reporting Scope Impact Potential Analytical Capacity Initiation Capacity Planning Capacity Management Capacity Contacts Capacity Decisión Capačitu Knowledge | | Ability to Adapt and Create | Ability to Communicate Ability to Direct Ability to Control

Ability to Organize Ability to Plan

Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO LEADERSHIP REQUIREMENTS.

DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Developemental Capacities For ES-2 - Type C Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create	DL . DL DL DL
Ability to Communicate	DL DL . DL . DL
Ability to Direct	DL DL DL DL DL DL DL DL DL DL
Ability to Control	DL DL DL DL DL DL .
Ability to Organize	DL DL DL DL DL DL .
Ability to Plan	DL DL DL DL DL DL .
Ability to Analyze and Evaluate	DL DL DL DL DL
	<pre> Final Recommendations Formal Output Formulation Evaluation and Discussion of Outputs Primary Output Formulation Working Paper Development Follow Up Contact and Discussion Refinement Refinement Primary Analysis Initial Information Development Initial Contact Work Segmentation and Distribution Operational Approach Development Planning Initiation</pre>

WORK SEGMENTS

COMMENTS: DEVELOPMENTAL CAPACITIES-PHASES TWO AND THREE ONLY.

DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Participatory Capacities For ES-2 - Type C Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create	Ρ	•		•	•	Ρ	•	Ρ	•	•	Ρ	Ρ		
Ability to Communicate	Ρ	Ρ	•	•	Ρ			•	P		•	Ρ	•	P
Ability to Direct	•	Ρ	Ρ	Ρ	Ρ	P	P	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	P
Ability to Control		Ρ	P	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	P	
Ability to Organize	•	Ρ	Ρ	Р	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	•	•	Ρ	
Ability to Plan	P	Ρ	Ρ	Р	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	•	•	P	
Ability to Analyze and Evaluate	P	Ρ	Ρ	. •	•	Ρ	Ρ	Ρ	•	•	Ρ	P		
		ł	Op anr	era ning	In In Itio	 	¦ Pr iti al	Re ima al Con	Fo fin ry Inf tac	Uo Llo eme Ana orm t an	Pr w U nt lys ati	ima ng p C is on ist	ry Pap ont Dev	Final Recommendations wrmal Output Formulation ation and Discussion of Outputs Output Formulation wer Development act and Discussion velopment

WORK SEGMENTS

GRAPH NO. 207 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

`

Resource Ability Characteristics/Work Segments - Leadership Capacities For ES-2 - Type C Projects.

RESOURCE ABIL'ITY CHARACTERISTICS

Ability	to	Adapt and Create	•	•	•	•	-	•	·		•		•	•		•
Ability	to	Communicate		•	•			•	•	•		•		•		
Ability	to	Direct		•	•					•	•		•	•		
Ability	to	Control		•		•				•		•				
Ability	to	Organize		,		•		-	•	•	•		•			
Ability	to	Plan	•			•				•	-	•	•			
Ability	to	Analyze and Evaluate	•						•		•				•	
			Ini		n'n	≧ra† ing	٠k ۹	itia	itia al (nen†	iman al Con tat	fine Foi fine fine fine fion	l Wor Llou emer Ana orma t and	Pr rki w U nt lys ati d D	Exima ng p (is on is:	Fo Valu Pap Cont Dev trik	Final Recommendations ormal Output Formulation Jation and Discussion of Outputs Output Formulation Der Development tact and Discussion Velopment

WORK SEGMENTS

COMMENTS: NO LEADERSHIP CAPACITIES REQUIRED.

GRAPH NO. 208 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Developemental Roles For ES-2 - Type D Projects.

CLASSIFICATION CAPACITIES

Final Recommendations	•	DL	•			•		•	•	•	DL	DL
Formal Output Formulation	•	DL		DL	DL		DL		•		DL	DL
Evaluation and Discussion of Outputs	•	DL	DL	DL		DL	DL	•			•	DL
Primary Output Formulation		DL		DL	DL	ĎL	DL	•		•	DL	
Working Paper Development	•	DL		DL	DL		DL	•	•		DL	•
Follow Up Contact and Discussion		DL	DL	•		•		•	•	•	•	DL
Refinement		DL	•	DL	DL	DL	DL	•		•	DL	DL
Primary Analysis		DL		•	DL	DL	DL	•			DL	DL.
Initial Information Development	•	DL		•		DL	•	•	•	•	DL	DL.
Initial Contact	•	DL	DL		DL	DL	•	•	•	•	•	DL
Work Segmentation and Distribution	•	DL	•	DL	DL	DL	•	•	•	•	DL	•
Operational Approach Development		DL		DL	DL	DL	•	•	•	•	DL	
Planning	•	DL	•	DL	DL	DL	•	•	•	•	DL	•
Initiation	•	DL	•	•	•	ÐL	•	•	•	•	•	
		D now	eci	 M ont sio	ana act:	l I gem s C	An niti ning ent apac city	Im aly ati Ca Cap ity	tic on pac aci	R T T R T T R T R T T R T T T T T T T T	epoi Poti Caj pac	evelopmenť Capacitý rting ential pacity

WORK SEGMENTS

GRAPH NO. 209 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

 \mathbf{i}

Classification Capacities/Work Segments - Participatory Roles For ES-2 - Type D Projects.

.

CLASSIFICATION CAPACITIES

										•		
Final Recommendations		Ρ	•		•			•	•		P	P ·
Formal Output Formulation		Ρ		P	Ρ	•	Р	•	•		P	P
Evaluation and Discussion of Outputs		Ρ	P	Ρ		Ρ	Р		•		•	Р
Primary Output Formulation		Р		Ρ	Ρ	Р	Ρ				P	
Working Paper Development		Р		Ρ	Ρ	-	P	•			P	
Follow Up Contact and Discussion		Ρ	P			•		•	•			P
Refinement	•	P		P	P	Ρ	Ρ				P	P
Prīmary Analysis		P			Ρ	P	P		•		Ρ	P
Initial Information Development		Ρ			•	P			•		Ρ	P
Initial Contact		Ρ	P		Ρ	Ρ			•		•	P
Work Segmentation and Distribution		Ρ		P	P	Ρ					Ρ	
Operational Approach Development		Ρ	• .	Ρ	Ρ	Ρ		•	•		P	
Planning		Р		Ρ	Ρ	Ρ					P	•
Initiation	•	Р	•			Ρ		•				
	Kn	De	cis	nta ior	inag icts	ann Ieme Ca	An iti ing nt pac	aly ati Ca Cap ity	pac tic on pac aci	ope t P al Cap ity	por 'ote Cap aci	Advisory Capacity velopment Capacity ting ntial acity ty

WORK SEGMENTS

GRAPH NO. 210 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Leadership Roles For ES-2 - Type D Projects.

CLASSIFICATION CAPACITIES

Final Recommendations	-	-	•	•	•	•	•	•	•	-	•	•	
Formal Output Formulation			•		•			•		•		•	
Evaluation and Discussion of Outputs			•		•	•			•				
Primary Output Formulation		•	•	•		•			•				
Working Paper Development	•					•				•			
Follow Up Contact and Discussion					•		•	•	•	•			
Refinement			•		•	•		•	•		•		
Primary Analysis	•				•	•		•	•	•			
Initial Information Development	•								•	•	•		
Initial Contact									•	•			
Work Segmentation and Distribution			•			•		•			•		
Operational Approach Development									•		•		
Planning	•						• .	•				•	
Initiation		•					•				•	•	
		De	cis	nta ion	nag cts	ann eme Ca	Ana Itia Itia nt (pac Ity	aly ati Ca Cap	pac tic on pac aci	ope t P al Cap ity	por ote Cap aci	velopmént ting ntial acity	Capacity Capacity

WORK SEGMENTS

COMMENTS: NO LEADERSHIP ROLES REQUIRED.

GRAPH NO. 211 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Developemental Requirements For ES-2 - Type D Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity	-	DL	DL	DL	DL	DL	
Development Capacity	DL	DL	DL	DL	DL		
Reporting	-	•			•		
Scope				•		•	
Impact Potential				•	•	•	
Analytical Capacity	DL	DL	DL	DL	DL	•	DL
Initiation Capacity	DL	DL	DL	DL	DL		DL
Planning Capacity	DL.	DL	DL	DL	DL	•	DL
Management Capacity	DL	DL	DL	DL	DL	DL	DL
Contacts Capacity	-	DL	DL	DL	DL	DL.	
Decision Capacity	DL	DL		DL	DL	•	DL
Knowledge	•		•		•	•	
			 Al oil	ן Al bil ity	ا Al bil ity to	At bil: ity to Pla	Ability to Adapt and Create Dility to Communicate ity to Direct to Control Organize an ze and Evaluate

· RESOURCE ABILITY CHARACTERISTICS

GRAPH NO. 212 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76 Classification Capacities/Resource Ability Characteristics - Participatory Requirements For ES-2 - Type D Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity		Р	Ρ	Ρ	Ρ	P	
Development Capacity	P	Ρ	Р	. P	Ρ		
Reporting		•					
Scope		•		•			•
Impact Potential				•	•	•	
Analytical Capacitý	P	Ρ	P	Ρ	Р	•	Р
Initiation Capacity	Ρ	P	Ρ	Ρ	P		P
Planning Capacity	P	P	Ρ	P	P	•	P
Management Capacity	P	Ρ	Ρ	P	Ρ	P	P
Contacts Capacity	• '	P٠	Ρ	Ρ	Ρ	P	
Decision Capacity	Þ	Ρ		₽	Р		P ·
Knowledge		•				•	•
			ili	ili ty	ili ty to	ili ty to Pla	Ability to Adapt and Create ility to Communicate ty to Direct to Control Organize n

Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

GRAPH NO. 213 DATE PRINTED28-Jun-76

DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Leadership Requirements For ES-2 - Type D Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity	•	•	•	•	•		
Development Capacity	•	•				•	
Reporting		•				•	
Scope							
Impact Potential		•			•	•	
Analytical Capacity	•	-			•		
Initiation Capacity			•				
Planning Capacity		-		•	•		
Management Capacity			•				
Contacts Capacity							
Decision Capacity			•				
Knowledge		•		•			
	Ab	 Ab	ili	Ab ili tu	Ab ili ty to	Abi ilii ty t to (Plan	Ability to Adapt and Create ility to Communicate ty to Direct to Control Organize and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO LEADERSHIP REQUIREMENTS.

GRAPH NO. 214 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Developemental Capacities For ES-2 - Type D Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create	DL DL . DL
Ability to Communicate	DL DL DL DL . DL
Ability to Direct	DL DL DL DL DL DL DL DL DL DL DL DL DL
Ability to Control	. DL DL DL DL DL DL DL DL DL .
Ability to Organize	DL DL DL DL DL DL DL DL DL .
Ábility to Plan	DL DL DL DL DL DL DL DL DL .
Ability to Analyze and Evaluate	DL DL DL DL DL DL DL
	<pre> Final Recommendations Formal Output Formulation Evaluation and Discussion of Outputs Primary Output Formulation Working Paper Development Follow Up Contact and Discussion Refinement Primary Analysis Initial Information Development Initial Contact Work Segmentation and Distribution Operational Approach Development Planning Initiation</pre>

WORK SEGMENTS

GRAPH NO. 215 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Participatory Capacities For ES-2 - Type D Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create	P		•	•	•	P	•	P	•	•	P	P		
Ability to Communicate	Ρ	P	•	•	P	•	-		P	•		P		P
Ability to Direct	Р	P	P	P	Ρ	P	P	Р	Р	Ρ	P	P	Р	P
Ability to Control		Р	P	P	Ρ	Р		•	Р	P	P	P	Р	
Ability to Organize	P	Р	P	P	Ρ	P	P	Ρ	P	P			P	
Ability to Plan	Р	P	P	Р	P	Р	P	P	Р	P			P	• ·
Ability to Analyze and Evaluate	Р	Р			•	Ρ	P	Р		-	P	P		<u>.</u> .
			ann	iera ing	rk Itio	iti	iti al men	ima al Con tat	fin ry Inf tac ion	(lo eme Ana orm t an	orki Dw U Int Nys Nati Nd D	ima ng p C is on ist	alu Pap Cont Dev	Final Recommendations rmal Output Formulation ation and Discussion of Outputs Output Formulation er Development act and Discussion relopment ution

WORK SEGMENTS

Resource Ability Characteristics/Work Segments - Leadership Capacities For ES-2 - Type D Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create	· · · · · · · · · · · · · · · · · · ·
Ability to Communicate	· · · · · · · · · · · · · · · · · · ·
Ability to Direct	
Ability to Control	· · · · · · · · · · · · · · · · · · ·
Ability to Organize	
Ability to Plan	
Ability to Analyze and Evaluate	
·	<pre> Final Recommendations Formal Output Formulation Evaluation and Discussion of Outputs Primary Output Formulation Working Paper Development Follow Up Contact and Discussion Refinement Primary Analysis Initial Information Development Initial Contact Work Segmentation and Distribution Operational Approach Development Planning Initiation</pre>

WORK SEGMENTS

COMMENTS: NO LEADERSHIP CAPACITIES REQUIRED.



1

AS-GROUP

GRAPH NO. 217 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

.

.

Classification Capacities/Work Segments - Developemental Roles For AS-7 - Type A Projects.

• .

CLASSIFICATION CAPACITIES

•	•	•	•	•	-	•	•	•	•		•	
-	-			•	-	•		•		-	•	
	-			•	•		•	•		-	•	
•	-	•		•	•		•	•		-		
-	-				•	-	•			-	•	
	•		•	•	•			•	•		•	
•						•	-	•			•	
•	-					•	•		-		•	
	•	-			•	-	•	•			•	
•		•						•	•		•	
•	DP	DP	DP	DP	DP	•	•	•		DP	• ,	
•	DP	•	DP	DP	DP		•		•	DP	DP	
•	DP			DP	DP	•	•		•	DP		
	DP	-			DP		•					
		≥ci	ont sio	ana act	lanr geme s Ca	niti: ning ent apac	aly ati Ca Cap	pac tic on pac aci	opi ti al Cal	epor e Pote Car pac y	evelopment rting ential pacity	Capacity Capacity
		. DP . DP . DP	DP . DP . DP .	. DP . DP . DP . DP	DP DP	DP . DP DP DP DP . DP DP DP . DP DP DP . DP DP . DP DP . DP DP . DP DP DP . DP DP DP DP DP DP DP DP DP DP DP DP DP D	DP . DP DP DP . DP . DP DP DP . DP . DP DP . DP . DP . DP . DP . DP .	DP . DP DP DP DP . DP DP DP DP . DP DP DP . DP .	DP . DP DP DP DP . DP DP DP DP . DP	DP . DP DP DP DP . DP DP DP DP . DP DP DP . DP .	DP . DP DP DP DP DP . DP DP DP DP DP DP DP DP DP DP DP DP DP	DP . DP DP DP DP DP DP . DP DP DP DP . DP DP DP DP . DP

WORK SEGMENTS

COMMENTS: PRIMARY PHASE-DEVELOPMENTAL PARTICIPATION ONLY.

GRAPH NO. 218 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Participatory Roles For AS-7 - Type A Projects.

CLASSIFICATION CAPACITIES

Final Recommendations	•	P	P	P		•	•	•	• ·	•	•	P
Formal Output Formulation	•	P	•	Ρ	•	•	P	•	•	-	Ρ	Р
Evaluation and Discussion of Outputs	•	P	P		P		Р		•	•	Ρ	P
Primary Output Formulation	•	P	•	P	P	P	P	•	•	•	P	P
Working Paper Development	•	•	•	•		•	-	•	•			•
Follow Up Contact and Discussion	-	•	•		•	•	•	•	•	•	•	
Refinement	•		•	•	` :		•	•	•		•	
Primary Analysis	•	•	÷	•	٠	•	•	•	•	•	•	
Initial Information Development	•		•	•	•	•	•	•				
Initial Contact	•			•	•	•	•	•	•		•	•
Work Segmentation and Distribution	•			•	•	;	•	•	•	-	•	
Operational Approach Development	•		•					•		•	•	•
Planning	•	•			:	•	•	•	•	•	•	
Initiation		•	•		•	•	•	•	•	•	•	
-	Kr	De De	cis	nta ion	nag icts	anr Ieme Ca	An liti ing ent apac ity	aly ati Ca Cap ity	pac tic on pac aci	ope t P al Cap ity	por ote Cap aci	Advisory Capacity velopment Capacity ting ntial acity ty

WORK SEGMENTS

COMMENTS: PARTICIPATION ROLES-PHASE THREE ONLY.

GRAI	PH NO.	219	•
DATE	PRINTE	D28-J	un-76
DATE	ENTERE	D 1-J	UN-76
	÷		

Classification Capacities/Work Segments - Leadership Roles For AS-7 - Type A Projects.

CLASSIFICATION CAPACITIES

Final Recommendations					•	•		•		•	•	•
Formal Output Formulation	•		•		•				•		•	•
Evaluation and Discussion of Outputs					•	•			•			
Primary Output Formulation			•	•	•	•	•	•		•		
Working Paper Development		L	•	L	L	L	L	•	•		L	L
Follow Up Contact and Discussion	• ,	L	L	•	•	•	•	•	•	•	•	L
Refinement	•	L	•	L	L	•	L	•	•		L	L
Primary Analysis	•	L	•	L	L	•	L	•	•	•	L	L
Initial Information Development	•	L	L	L	L	L	L	-	•	•	L	L
Initial Contact	•	L	L	•		•	•	•	•	•	•	L
Work Segmentation and Distribution	•	•	•	•	•	•	•	•	•	•	•	
Operational Approach Development	•	•	•	•	•		•	•	•	•	-	•
Planning	•	•	•		•	•	•	•	•	•	•	•
Initiation	•	•	•	•	•	•	•	•	•	•	•	
		De owl	cis	nta ion	nag cts	ann Ieme Ca	An: ing nt pac ity	aly ati Ca Cap	Sc pac tic on pac aci	ope t P al Cap ity	por ote Cap aci	Advisory Capacity velopment Capacity ting ntial acity ty

WORK SEGMENTS

COMMENTS: LEADERSHIP ROLES-PHASE TWO ONLY.

.

GRAPH NO. 220 PRINTED28-Jun-76 DATE

DATE ENTERED 1-JUN-76 Classification Capacities/Resource Ability Characteristics - Developemental Requirements For AS-7 - Type A Projects.

Create

CLASSIFICATION CAPACITIES

Advisory Capacity	DP	•	DP			•	DP
Development Capacity	DP	DP	DP		-	•	DP
Reporting	•	•			•	•	
Scope	•	•		÷		÷	
İmpact Potential				•	•	•	
Ánálytical Capacity	DP	DP	DP	DP	÷		DP
Initiation Capacity	DŻ					•	DP
Plahning Capacity	DP	DP	DP	DP		•	
Managèment Capacity		÷				i	•
Contacts Capacity					-	•	
Dēčišiēn Capačity	DP	DP	DP			•	
Knowledge	•	•	•		•		
· · ·		H H H	 	l I AD	Ab ili ty	Al il ty to	Ability to Adapt and bility to Communicate ity to Direct to Control Organize an

Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: DEVELOPMENTAL REQUIREMENTS-PHASE ONE ONLY.

GRAPH NO. 221 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Participatory Requirements For AS-7 - Type A Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity	Ρ	Ρ	P	P	P	P	P
Development Capacity	Ρ	P	•	•	Ρ	•	P
Reporting	•	•	•	•			
Scope		•	•	•	•		
Impact Potential		•		•			
Analytical Capacity	P	Ρ	P	P	P		P
Initiation Capacity	Р	Ρ			•		
Planning Capacity	P	Ρ	Ρ	Ρ	P	•	P
Management Capacity	Ρ	P	P	P	P	•	
Contacts Capacity	Ρ	P	•	P		Ρ	
Decision Capacity	P	P	P	P	P	Ρ	
Knowledge	•		•		-	•	
	Ab		Ab ili	 Ab ili ty	Ab ili ty to	Ab ili ty to Pla	Ability to Adapt and Create ility to Communicate ty to Direct to Control Organize n e and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: PARTICIPATION REQUIREMENTS-PHASE THREE ONLY.

GRAPH NO. 222 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Leadership Requirements For AS-7 - Type A Projects.

CLASSIFICATION CAPACITIES	·						
Advisory Capacity	L	L		L	L	L	
Development Capacity	L	L	L	L		L	L
Reporting	•			-	•	•	
Scope		•			• .	•	
Impact Potential		•	•	•	•		
Analytical Capacity	L	•	L	L	L	L	L
Initiation Capacity		•			•	•	•
Planning Capacity	L	L	L	L	L	L	L
Management Capacity	L	L	L	L	L	L	
Contacts Capacity	L		L	L		L	
Decision Capacity	L	L	L	L	L		L
Knowledge		•	•	•	•		•
	 	Ab Dili	ili	ili tu	ili ty to	Ab ili ty to Pla	Ability to Adapt and Creaté ility to Communicate ty to Direct to Control Organize n e and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: LEADERSHIP REQUIREMENTS-PHASE TWO ONLY.

DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Developemental Capacities For AS-7 - Type A Projects.

RESOURCE ABILITY CHARACTERISTICS	
Ability to Adapt and Create	· · · · · · · · · · · · · · · · · · ·
Ability to Communicate	DP DP
Ability to Direct	·····
Ability to Control	
Ability to Organize	. DP DP DP
Ability to Plan	. DP DP DP
Ability to Analyze and Evaluate	. DP DP
	<pre> Final Recommendations Format Output Formulation Evaluation and Discussion of Outputs Primary Output Formulation Working Paper Development Follow Up Contact and Discussion Refinement Refinement Initial Information Development Initial Information Development Initial Contact Work Segmentation and Distribution Operational Approach Development Planning Initiation</pre>

WORK SEGMENTS

COMMENTS: DEVELOPMENT CAPACITIES-PHASE ONE ONLY.

GRAPH NO. 224 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Participatory Capacities For AS-7 - Type A Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create	P . P .	
Ability to Communicate	P P P	
Ability to Direct	· · · · · · · · · · · · · · · ·	
Ability to Control		
Ability to Organize	P P P	
Ability to Plan	P . P P	
Ability to Analyze and Evaluate	P P P .	
	<pre> Final Recommendations Formal Output Formulation Evaluation and Discussion of Outputs Primary Output Formulation Working Paper Development Follow Up Contact and Discussion Refinement Primary Analysis Initial Information Development Initial Contact Work Segmentation and Distribution Operational Approach Development Planning Initiation</pre>	

WORK SEGMENTS

COMMENTS: PARTICIPATORY CAPACITIES-PHASE THREE ONLY.

GRAPH NO. 225 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Leadership Capacities For AS-7 - Type A Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create	-	•		-	•	L	-	-	•	L	•		
Ability to Communicate	•				L	L		L	L	L			
Ability to Direct	•						L						
Ability to Control							L						
Ability to Organize				•	L	L	L	L		L		•	
Ability to Plan				-	L	L	L	L		L			
Ability to Analyze and Evaluate				•		L	L	L	L	L			
	In		ann:	era ing	rk (iti: Segi	iti: al (men	Re Imai al Con tat	Fo fin ry Inf tac ion	llo emer Ana orm t and	Pr rki w U nt lys ati d D	ima ng p C is on ist	! Final Recommendations Formal Output Formulation aluation and Discussion of Outputs ry Output Formulation Paper Development ontact and Discussion Development ribution ent

WORK SEGMENTS

COMMENTS: LEADERSHIP CAPACITIES-PHASE TWO ONLY.

GRAPH NO. 226 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Developemental Roles For AS-7 - Type B Projects.

CLASSIFICATION CAPACITIES

Final Recommendations	•	DL	•		DL	•	•	•		•	DL	DL
Formal Output Formulation	•	ÐL		DL	DL	•		-		•	DL	DL
Evaluation and Discussion of Outputs	•	DL	DL	DL	•	DL	DL	•	•	•	•	DL
Primary Output Formulation	•	DL	•	DL	DL	DL	DL	•		•	DL	
Working Paper Development	•	•	•	•		•	•	•		•	•	•
Follow Up Contact and Discussion	•	•	•	•	•	•	•	•	•	•	٠	• *
Refinement	•	•	•	•	. •	•	•.	-	•	•	•	•
Primary Analysis	•		•	•	•	•	. •	•	•	•	•	•
Initial Information Development	•	•	•	•	•		•	•	•	•	•	•
Initial Contact	•	•	•		•	•	•	•	•	•	•	
Work Segmentation and Distribution	•	DL	DL	DL	DL	DL	•	•		•	DL	
Operational Approach Development	•	DL	•	DL	DL	DL	÷	•	•	•	DL.	•
Planning	•	DL	•	DL	DL	DĹ	•	•	•	•	DL	•
Initiation ·	•	DL	•		•	DL	•	•	•		•	
		Di Di	eci	onta sio	ana act	lanı geme s Ca	An niti ning ent apac	aly ati Cap ity	Sc pac tic on pac aci	op t al Ca it	Di epoi Poti Caj pac	Advisory Capacity evelopment Capacity rting ential pacity ity

WORK SEGMENTS

COMMENTS: DEVELOPMENTAL ROLES-PHASE ONE AND THREE ONLY.

GRAPH NO. 227 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Participatory Roles For AS-7 - Type B Projects.

CLASSIFICATION CAPACITIES

Final Recommendations	•	P	•		Ρ	•		-	•	•	Ρ	P	
Formal Output Formulation		P		Ρ	Ρ		•	•	•		P	Ρ	
Evaluation and Discussion of Outputs	•	P	Ρ	P		Ρ	Ρ		•	•	•	P	
Primary Output Formulation		P		P	P	Ρ	Ρ	•	•		P	•	
Working Paper Development			•	•		•	•		•		•	•	
Follow Up Contact and Discussion				•	•	•	•		•	•		•	
Refinement		•	•	•	•	•			•		•	•	
Primary Analysis		•	•				•			•	•	•	
Initial Information Development	-		•				•	•	•	•	•	•	
Initial Contact		•					•	•	•		•	•	
Work Segmentation and Distribution		P	P	P	Ρ	P			•		P	•	
Operational Approach Development		Ρ	•	Ρ	Ρ	P	-		•	•	Ρ	•	
Planning		P		Ρ	Ρ	Ρ	•		•		Ρ	•	
Initiation		P		•		P					•		
		De Dowl	cis	onta sion	nac Icts	ann Jeme Ca	iti ing nt pac	aly ati Ca Cap ity	pac tic on pac aci	ope t P al Cap ity	por ote Cap aci	Advisory velopment ting ntial acity ty	

WORK SEGMENTS

COMMENTS: PARTICIPATION ROLES-PHASES ONE AND THREE ONLY.

GRAPH NO. 228 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Leadership Roles For AS-7 - Type B Projects.

CLASSIFICATION CAPACITIES

		•										
Final Recommendations	•	• '	•	•		•	•	•	•	•	•	•
Formal Output Formulation	•		•	•	•	•	•	•	•	•	•	
Évaluation and Discussion of Outputs	•				•	•	•	•	٠	•	•	•
Primary Output Formulation	•				•	•	•	•	•	•		•
Working Paper Development	•	L	•	•	L	L	L		•		L	L
Follow Up Contact and Discussion	•	L	L	L	L		•	•	•	•	٠	L
Refinement	•	L		L	L	L	L	•	•		L	L
Primary Analysis	•	L	•	Ŀ	L	L	L	•		•	L	L
Initial Information Development	•	L	•	•	L	L	L	•	•	•	L	
İnitial Contact	•	L	L	•	•	L	-	•	•	•	•	L
Work Segmentation and Distribution	•	•		÷		•	•	•	•	•	•	•
Óperatiónál Approach Development		•	•		•	-		•	•	•	•	
Planning	•	-			٠		•	• •	•	•		
Initiation	•		•	•	•		•	•	•	•	•	•
	Kn	De	cis	nta ion	nag cts	ann eme Ca	Ana iti: ing nt (pac ity	aly ati Cap Cap	oac tic on oac	ope t P al Cap ity	por ote Cap aci	Advisory Capacity velopment Capacity ting ntial acity ty

WORK SEGMENTS

COMMENTS: LEADERSHIP ROLES-PHASE TWO ONLY.

GRAPH NO. 229 DATE PRINTED28-Jun-76

DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Developemental Requirements For AS-7 - Type B Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity	DL DL DL DL DL .
Development Capacity	DL DL DL DL . DL
Reporting	
Scope	
Impact Potential	
Analytical Capacity	DL DL DL DL DL DL
Initiation Capacity	DL
Planning Capacity	DL DL DL DL . DL
Management Capacity	. DL DL DL
Contacts Capacity	. DL . DL . DL .
Decision Capacity	DL DL . DL DL
Knowledge	
	Ability to Adapt and Create Ability to Communicate Ability to Direct Ability to Control Ability to Organize Ability to Plan Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: DEVELOPMENTAL REQUIREMENTS-PHASES ONE AND THREE ONLY.

.

GRAPH NO. 230 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76 Classification Capacities/Resource Ability Characteristics - Participatory Requirements For AS-7 - Type B Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity	P	P	Р	Р	Р	Р	•
Development Capacity	Р	P	Р	Р	Р		Р
Reporting	•	•	-				•
Scope				•	•		-
Impact Potential			•		•	-	
Analytical Capacity	Р	P	P	P	P	P	Р
Initiation Capacity	•						P
Planning Capacity	Р	P	P	P	P		Ρ
Management Capacity	•	P	P	P	P		
Contacts Capacity		P		P		P	
Decision Capacity	P	P		P	P	•	•
Knowledge					•		
	Ab	l Ab	ili	ili ty	¦ Ab ili ty to	Ab ili ty to Pla	Ability to Adapt and Create ility to Communicate ty to Direct to Control Organize n e and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: PARTICIPATION REQUIREMENTS-PHASES ONE AND THREE ONLY.

DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Leadership Requirements For AS-7 - Type B Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity	L	L	L	L	L	L	
Development Capacity	L	L	L	L	L	L	L
Reporting	•	•		•			
Scope							
Impact Potential	-	•	•	•			
Analytical Capacity	L		L	L	L	L	L
Initiation Capacity		L					L
Planning Capacity	L	L	L	L	L		L
Management Capacity		L	L	L	L	•	
Contacts Capacity	•	L	L	L		L	
Decision Capacity	L	L		L		L	
Knowledge	-	•		•			
	ŭ	 At	 Atoili	 At ili ty	At ili ty to	ili ty to Pla	Ability to Adapt and Create Dility to Communicate ty to Direct to Control Organize an re and Evaluate

Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: LEADERSHIP REQUIREMENTS-PHASE TWO ONLY.

GRAPH NO. 232 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

- Resource Ability Characteristics/Work Segments - Developemental Capacities For AS-7 - Type B Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create	DL DL
Ability to Communicate	DL DL . DL DL DL . DL
Ability to Direct	DL
Ability to Control	. DL DL DL
Ability to Organize	DL DL DL DL DL DL .
Ability to Plan	DL DL DL DL . DL .
Ability to Analyze and Evaluate	. DL DL DL DL DL DL
	<pre> Final Recommendations Formal Output Formulation Evaluation and Discussion of Outputs Primary Output Formulation Working Paper Development Follow Up Contact and Discussion Refinement Primary Analysis Initial Information Development Initial Contact Work Segmentation and Distribution Operational Approach Development Planning Initiation</pre>

WORK SEGMENTS

COMMENTS: DEVELOPMENTAL CAPACITIES-PHASES ONE AND THREE ONLY.

GRAPH NO. 233 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Participatory Capacities For AS-7 - Type B Projects.

RESOURCE ABILITY CHARACTERISTICS

.

Ability to Adapt and Create	Ρ	Ρ					•		•		Ρ	•	•	•
Ability to Communicate	P	Ρ	•	P						•	Ρ	P		P
Ability to Direct		-			•	•				•	•	•		
Ability to Control	•	Ρ	Ρ	P		•	•				•		•	
Ability to Organize	Ρ	Ρ	Ρ	Ρ		•					Ρ	Ρ	Ρ	
Ability to Plan	Ρ	Ρ	Ρ	Ρ		•	•			•	Ρ		Ρ	
Ability to Analyze and Evaluate	•	Ρ	Ρ			•				•	Ρ	Ρ	Ρ	P
	на на селото на селото на селото на селото на селото на селото на селото на селото на селото на селото на село На селото на селото на селото на селото на селото на селото на селото на селото на селото на селото на селото на	PI Tit:	anr	era ning	rk tio	In In Seg	Pr iti al men	Re ima con tat	Fo Fo fin Inf Inf itac	l Wo eme Ana orm	Pr rki w U nt ilys ati d D	ima ng p is on	Foi Jalua Papi Papi Conta Deve	Final Recommendations rmal Output Formulation ation and Discussion of Outputs Output Formulation er Development act and Discussion elopment ution

WORK SEGMENTS

COMMENTS: PARTICIPATION CAPACITIES-PHASES ONE AND THREE ONLY.

GRAPH NO. 234 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Leadership Capacities For AS-7 - Type B Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create		•				•	L	L	L	•	L	•		•	•
Ability to Communicate				•	1	L	•		L	L		•	•		
Ability to Direct	•					•	•	•	•			•	•	•	
Ability to Control					1	•	L	L	L	•	L	•		•	
Ability to Organize						•	L	L	L	L	L				
Ability to Plan						•	L	L	L	L	L	•		•	•
Ability to Analyze and Evaluate			4			•	L	L	L		L	•	•	•	•
			lar		lori at: Ig	кS	itia Segi	iti al men	Re ima Con tat	Fo Fo Inf Inf tac	Wo Illo Ieme Ana Iorm	ן Pr w U nt lys ati	Ev ima ng p C is on ist	Fo ry Pap ont Dev	Final Recommendations rmal Output Formulation ation and Discussion of Outputs Output Formulation er Development act and Discussion Pelopment oution

WORK SEGMENTS

COMMENTS: LEADERSHIP CAPACITIES-PHASE TWO ONLY.

GRAPH NO. 235 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

.

.

Classification Capacities/Work Segments - Developemental Roles For AS-7 - Type C Projects.

CLASSIFICATION CAPACITIES

Final Recommendations			•	•		•	•		•	•		•	
Formal Output Formulation	•	-		•		•					•		
Evaluation and Discussion of Outputs		•	•		•				•			•	
Primary Output Formulation			•	•								•	
Working Paper Development									•		-	•	
Follow Up Contact and Discussion				•	•							•	
Refinement	•								•				
Primary Analysis	•	•	•		•	•			•			•	
Initial Information Development												•	
Initial Contact			•			•				•			
Work Segmentation and Distribution		DL		DL	DL	DL.				-	DL		
Operational Approach Development		DL		DL	DL	DL	•		•		DL		
Planning		DL.	•	DL	DL	DL				•	DL		
Initiation	•	DL	•	•		DL							
		De Dowl	ci	ont sio	ana act:	l In Lann geme s Ca apac	itia ing nt (pac	aly ati Ca Cap	pac tic on pac aci	op t al Ca it	epor ≞ Pote Cap paci	Advisory (velopment (ting ntial acity ty	apacity apacity

WORK SEGMENTS

COMMENTS: DEVELOPMENTAL ROLES-PHASE ONE ONLY.

GRAPH NO. 236 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Participatory Roles For AS-7 - Type C Projects.

CLASSIFICATION CAPACITIES

Final Recommendations	•	•	•	•	•	•	•	•		•	•	.				
Formal Output Formulation	•	•	•	•	•	•	•	•	•	•	•	•				
Evaluation and Discussion of Outputs		-	•	•	•	-	•	•	•	•	•	•				
Primary Output Formulation			• `	•	•	•	•	•	•	•	•	•				
Working Paper Development	-	•	•	•	•	•	•	•	•	•	•	•				
Follow Up Contact and Discussion	•	•		•		•			-	•	•					
Refinement	•	•	•	•		•		•	•			•				
Primary Analysis		•	•	•				•	•	•		•				
Initial Information Development		•	•	·	•	•	•			•	•					
Initial Contact	•	•		•		•		•	•	•						
Work Segmentation and Distribution	•	Ρ	•	Ρ	Ρ	P	•			•	P	•				
Operational Approach Development		P	•	Ρ	Ρ	P	•		•	•	P	•				
Planning	•	P	•	Ρ	Ρ	P	•		•	•	P	•				
Initiation	•	P	•	•		Р	•	•	•	•	•	•				
	Kn	De	cis	nta ion	nag cts	In ann eme Ca	iti ing nt pac	alı ati Cap :itu	npac utic ion apac ioaci	ope t H al Cap itu	ote Pote Cap Dac	evelopment rting ential pacity	Capacity Capacity			

WORK SEGMENTS

COMMENTS: PARTICIPATION ROLES-PHASE ONE ONLY.

1976 by The Minister of State for Science and Technology, Ottawa Ontario Copyright (C)

GRAPH NO. 237 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

· Classification Capacities/Work Segments - Leadership Roles For AS-7 - Type C Projects.

CLASSIFICATION CAPACITIES												
Final Recommendations	•	L			L	•		-	•	•		L
Formal Output Formulation		L		L	L	L	L	•	•	•	L	L
Evaluation and Discussion of Outputs		L	L	L	L			•				L
Primary Output Formulation		L	-	L	L	L	L		•		L	L
Working Paper Development		L		L	L	L	L	•	•	•	L	
Follow Up Contact and Discussion	•	L	L		•	•	•		•		•	L
Refinement	•	L	•	L	L	•	L		•			L
Primary Analysis		L	•	L	L	•	L	•	•	•	L	L
Initial Information Development	•	L		L	L	L	•		•		L	
Initial Contact	•	L	L	•	L	L	•	•	•	•	•	L
Work Segmentation and Distribution	•	•			•	•		•	•	•	•	
Operational Approach Development	•	•			•	•	-	•	•		•	
Planning		•	•	•	•	•	•	•		•		
Initiation		•	•		•	•	•	•				
		De Dowl	cis	onta Sior	inaç icts	ann Jeme S Ca	An iti ing nt pac	aly ati Ca Cap ity	Sc pac tic on pac aci	ope t F al Cap	De por Pote Cap Daci	velopmenť Capacitý ting ntial acity

WORK SEGMENTS

CO.IMENTS: LEADERSHIP ROLES-PHASES TWO AND THREE ONLY.

GRAPH NO. 238 DATE PRINTED28-Jun-DATE ENTERED 1-JUN-

Classification Capacities/Resource Ability Characteristics - Developmental Requirements For AS-7 - Type C Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity	. DL
Development Capacity	DL DL DL DL . DL
Reporting	
Scope	· · · · · · · · ·
İmpact Potential	·····
Analytical Capacity	· · · · · · ·
Initiation Capacity	DL DL DL DL . DL
Planning Capacity	DL DL DL DL . DL
Management Capacity	DL DL DL DL . DL
Contacts Capacity	
Ďečíšióň Capačity	DL DL . DL DL . DL
Knowledge	
· · · · · · · · · · · · · · · · · · ·	Ability to Adapt and Create Ability to Communicate Ability to Direct Ability to Control Ability to Organize Ability to Plan Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: DEVELOPMENTAL REQUIREMENTS-PHASE ONE ONLY.

GRAPH NO. 239 DATE PRINTED28-Jun-76

DATE ENTERED 1-JUN-76 Classification Capacities/Resource Ability Characteristics - Participatory Requirements For AS-7 - Type C Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity	•	Ρ		•	•	•	
Development Capacity	Ρ	Ρ	Ρ	Ρ	Ρ		P
Reporting	•	-	•		-	•	
Scope		•		•	-		
Impact Potential	•	-			•	•	
Analytical Capacity		-			-	•	
Initiation Capacity	Ρ	Ρ	Ρ	Ρ	P		P
Planning Capacity	Ρ	P	Ρ	Ρ	Ρ		P
Management Capacity	Ρ	Ρ	P	Ρ	Ρ	•	P
Contacts Capacity							
Decision Capacity	Ρ	Ρ		Ρ	Ρ	•	Р
Knowledge					•	•	
		 Ab	Ab ili	Ab Ab ili ty	Ab ili ty to	Ab ili ty to Pla	Ability to Adapt and Create fility to Communicate ty to Direct to Control Organize n e and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: PARTICIPATION REQUIREMENTS-PHASE ONE ONLY.

DATE PRINTED28-Jun-76

DATE ENTERED 1-JUN-76 Classification Capacities/Resource Ability Characteristics - Leadership Requirements For AS-7 - Type C Projects.

CLASSIFICATION CAPACITIES

.

Advisory Capacity		L.	L	L	Ľ	L.	L
Development Capacity	L	L	I.	L	L.	•	L
Reporting			•			•	•
Scope		•	•	•	•		
Impact Potential		• •					
Analytical Capacity	I.	L	L	L	L	•	L
Initiation Capacity	L	L	L	•			
Planning Capacity	Ĺ	L	L	L	L	L	L
Management Capacity	L.	L	L	L	L	L	
Contacts Capacity		L	•	L	L	L.	•
Decision Capacity	L	L		L	L	•	L
Knowledge							
	AL		¦ Ab ili	ili ty	Ab ili ty to	Ab ili ty to Pla	Ability to Adapt and Create Mility to Communicate ty to Direct to Control Organize M e and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: LEADERSHIP REQUIREMENTS-PHASES TWO AND THREE ONLY. Copyright (C) 1976 by The Minister of State for Science and Technology, Ottawa Ontario

. .

DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Developemental Capacities For AS-7 - Type C Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create	DL
Ability to Communicate	DL DL
Ability to Direct	. DL DL DL
Ability to Control	. DL DL DL
Ability to Organize	. DL DL DL
Ability to Plan	DL DL DL
Ability to Analyze and Evaluate	DL DL DL
	<pre> Final Recommendations Formal Output Formulation Evaluation and Discussion of Outputs Primary Output Formulation Follow Up Contact and Discussion Follow Up Contact and Discussion Follow Up Contact and Discussion </pre>

WORK SEGMENTS

COMMENTS: DEVELOPMENTAL CAPACITIES-PHASE ONE ONLY.

GRAPH NO. 242 DATE PRINTED28-Jun-76

DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Participatory Capacities For AS-7 - Type C Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability	to	Adapt and Creat	e	Ρ	•	•	•	-	•	•	•	•	•	•	•	•	•
Ability	to	Communicate		P	P		•	•	•	•	•	•	•		•	•	• *
Ability	to	Direct	•		P	Ρ	Ρ		•	•	•	•	•	•	•		•
Ability	to	Control			P	P	P	•	•	•	•			•	•	•	
Ability	to	Organize			Ρ	P	Ρ		•	•			•	•		•	
Ability	to	Plan		Ρ	Ρ	Ρ	P		•			•				•	
Ability	to	Analyze and Eva	luate	Ρ	P	P				•	•		•	•		•	•
						an'n	era ing	I In tio	In Itia	Pr: iti: al u	l Re iman al Con tat	Fo fin ry Inf tac ion	l Wor Emer Ana orma t and	Pr rkin ω U nt lys atio d D	ima ng p C is on ist	For Faluary Par Conf Dev Trik	Final Recommendations ormal Output Formulation Jation and Discussion of Outputs Output Formulation Der Development tact and Discussion Velopment Dution

WORK SEGMENTS

COMMENTS: PARTICIPATION CAPACITIES-PHASE ONE ONLY.

DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Leadership Capacities For AS-7 - Type C Projects.

RESOURCE ABILITY CHARACTERISTICS

1

Ability to Adapt and Create	•	•		•		L		L	٠	•	L	L	-	
Ability to Communicate		•		•	L		•	•	L	•		L	•	L
Ability to Direct					L	L	L	L	L	L	L	L	L	L
Ability to Control		•			L	L	•	•	L	L	L	L	L	
Ability to Organize			•		L	L	L	L	L	L			L	
Ability to Plan					L	L	L	L	L	L			L	
Ability to Analyze and Evaluate		•				L	L	L			L	L		
			ope ann atio	⊇ra ing	rk tio	iti	iti al men	ima al Con Itat	Fo Fo Fo Inf Inf tac	Wo Wo We Me Ana Or Mana I an	ן Pr w U nt ilys ati	Ev ima ng p C is on	Fo Palu Pap Cont Dev	Final Recommendations Final Output Formulation Nation and Discussion of Outputs Output Formulation Formulation Fact and Discussion Relopment

WORK SEGMENTS

COMMENTS: LEADERSHIP CAPACITIES-PHASES TWO AND THREE ONLY.

.

GRAPH NO. 244 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Developemental Roles For AS-7 - Type D Projects.

CLASSIFICATION CAPACITIES

1.

Final Recommendations	•	•	•	•	•	•	• '	•	•	•	•	•		
Formal Output Formulation	•	•	•	•	•	•	•	•	•		•	•		
Evaluation and Discussion of Outputs	•	÷	•			•	•	•	•	•	•	•		
Primary Output Formulation	•	•	•	•	•	•	•	•	•	•	•	•		
Working Paper Development	•			•	•	•	•	•	•	•	•			
Follow Up Contact and Discussion	•		•.	•	•	-	-	•	•	•	•			
Refinement	•	•	•	•	•		•	•	•	•	•	•		
Primary Analysis	• `	•	•	ì	•	•	•	•	•	•	•	•		
Initial Information Development	•	•	•	•	•	•	•	•	•	•	•	•		
Initial Contact		•	•	•	•	•'	•	•	•	•	•			
Work Segmentation and Distribution	•	-	•	•	•	•	•	•	•	•	•			
Opérational Approach Development	•	•	•	•	•	•	•	•	•	•	•	•		
Planning	•	•	•	•	•	•	-	•	÷		•	•		
Initiation	•	•	•		•	•	•	•	•	•	•	•		
	Kne	Dec	;isi	ntac ion	nage	anni emer Cap	itia ing nt C paci	ilyt itic Cap Capa	ica n (ac	ope P al Capa ity	oor oter Capa	Advisorý velopment ting ntial acity ty	Capacit Capacit	ប្

WORK SEGMENTS

COMMENTS: NO DEVELOPMENTAL ROLES REQUIRED.

GRAPH NO. 245 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Participatory Roles For AS-7 - Type D Projects.

CLASSIFICATION CAPACITIES

Final Recommendations	•	-		-	•	•	•	•		•	-	•	
Formal Output Formulation			•		•	•	•	•			•	•	
Evaluation and Discussion of Outputs	•		•	•	•			•	•	•		•	
Primary Output Formulation		•							•	•	•	•	
Working Paper Development	•		•		•	•	•	•	•	•	•	•	
Follow Up Contact and Discussion		•		•		•	•	•	•	•	•	-	
Refinement		•		•	•	•	•	•	•	•	•	•	
Primary Analysis	•	•	:	•			-		•		•		
Initial Information Development		•		•		•	•	•	•		•	•	
Initial Contact		•		•		•		•	•		•	•	
Work Segmentation and Distribution	•	•	•	•	•					•	•	•	
Operational Approach Development			•	•	•	•	•	•	•	• .	•	•	
Planning			•	•	•	•	•	•		•	•	•	
Initiation		•	•		•		•		•		•	•	
	Kno	Dec	cisi	ntac ion	nage sts	anni emer Cap	itia Ing nt C Daci	Imp ilyt itio Cap	ica n (aci	pe Po l Capa ty	oor Otei Capi	velopment ting ntial acity	Capacity Capacity

WORK SEGMENTS

COMMENTS: NO PARTICIPATORY ROLES REQUIRED.

GRAPH NO. 246 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Leadership Roles For AS-7 - Type D Projects.

CLASSIFICATION CAPACITIES

Final Recommendations	•	Ĺ	•		•	•	•	•	•	•	L	L
Formal Output Formulation	•	Ľ.		L	L	•	L		•	•	L	L
Evaluation and Discussion of Outputs		L	L	L	•	L	L	•	•	•	•	L
Primary Output Formulation	•	Ļ	• •	L	L	L	L	•			Ļ	•
Working Paper Development		L	•	L	L	•	L	•		•	L	
Follow Up Contact and Discussion		L	L		•			•	•		•	L
Refinement	•	L		L	Ļ	Ļ	L	•		•	L	L
Primary Analysis		L	•	•	L	L	Ľ		•	•	L	L
Initial Information Development	•	L	•		•	L		•	•	•	L	L
Inițial Contact	•	L	L	•	L	L	•	•	•	•	•	L
Work Segmentation and Distribution		L	. •	L	L	L	•	•	•	•	L	
Operational Approach Development	•	L	•	L	L	L	•	•	•	•	L	
Planning	-	L		L	L	L	•	•	•	•	L	•
Initiation	•	Ļ	•		•	L	-	•	•	•	•	
	Kr	De	cis	ion ion	inag icts	ann Ieme Ca	An iiti ing nt ipac	aly ati Ca Cap itu	Sc ipac itic ipac ipaci	ope t P al Cap	por ote Cap aci	velopmenť Čapäčitý ting ntial acity

WORK SEGMENTS

DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Developemental Requirements For AS-7 - Type D Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity	· · · · · · ·
Development Capacity	
Reporting	
Scope	· · · · · · · ·
Impact Potential	
Analytical Capacity	
Initiation Capacity	
Planning Capacity	
Management Capacity	
Contacts Capacity	
Decision Capacity	
Knowledge	
	Ability to Adapt and Create Ability to Communicate Ability to Direct Ability to Control Ability to Organize Ability to Plan Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO DEVELOPMENTAL REQUIREMENTS.

Classification Capacities/Resou	rce Ability Characteristics -	Participatory Requirements For AS-7	GRAPH NO. 248 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76 - Type D Projects.
CLASSIFICATION CAPACITIES		· · · · · · · · · · · · · · · · · · ·	
Advisory Capacity			
Development Capacity			
Reporting			
Scope	· · · · · · ·		
Impact Potential			
Analytical Capacity			
Initiation Capacity			•
Planning Capacity	• • • • • • • •		
Management Capacity			
Contacts Capacity			

Decision Capacity

Knowledge

| | | | | Ability to Adapt and Create
| | | | Ability to Communicate
| | Ability to Direct
| | Ability to Control
| Ability to Organize
| Ability to Plan
Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO PARTICIPATORY REQUIREMENTS.

DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Leadership Requirements For AS-7 - Type D Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity		L	T	T	L	Ŧ	
	•	مل	مد	مىل	مل		•
Development Capacity	L.	L	L	L	L	•	L
Reporting	•		•	•	•	•	
Scope		•	•	•	•		
Impact Potential	•	•	•		•	•	
Analytical Capacity	L	L	L	L	L	•	L
Initiation Capacity	L	L	L	L	L	•	L
Planning Capacity	L	L	L	L	L	•	L
Management Capacity	L	L	L	L	L	L	L
Contacts Capacity		L	L	L	L	L	
Decision Capacity	L	L	•	L	L	•	L
Knowledge		•	•	•	•	•	
		 Ab	¦ Ab ili	¦ At ili ty	Ab Ab ili ty to	ty to Pla	Ability to Adapt and Create Fility to Communicate ty to Direct to Control Organize an e and Evaluate

RESOURCE ABILITY CHARACTERISTICS

DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Developemental Capacities For AS-7 - Type D Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create	· · · · · · · · · · · · · · ·
Ability to Communicate	
Ability to Direct	
Ability to Control	· · · · · · · · · · · · · · · · · · ·
Ability to Organize	
Ability to Plan	· · · · · · · · · · · · · · ·
Ability to Analyze and Evaluate	
	<pre> Final Recommendations Formal Output Formulation Evaluation and Discussion of Outputs Primary Output Formulation Working Paper Development Follow Up Contact and Discussion Refinement Refinement Primary Analysis Initial Information Development Initial Contact Work Segmentation and Distribution Operational Approach Development Planning</pre>
	Initiation

WORK SEGMENTS

COMMENTS: NO DEVELOPMENTAL CAPACITIES REQUIRED.

DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Participatory Capacities For AS-7 - Type D Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create Ability to Communicate Ability to Direct Ability to Control Ability to Organize Ability to Plan Ability to Analyze and Evaluate | | | Final Recommendations | | | Formal Output Formulation | | Evaluation and Discussion of Outputs . 1 | | Primary Output Formulation 1 | | Working Paper Development | Follow Up Contact and Discussion 1 l Refinement | Primary Analysis Initial Information Development Initial Contact Į Work Segmentation and Distribution 1 1 | Operational Approach Development Planning Initiation

WORK SEGMENTS

COMMENTS: NO PARTICIPATORY CAPACITIES REQUIRED.

GRAPH NO. 252 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Leadership Capacities For AS-7 - Type D Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create	L
Ability to Communicate	L L L L . L
Ability to Direct	LLLLLLLLL
Ability to Control	. L L L L L L L L .
Ability to Organize	L L L L L L L L L .
Ability to Plan	L L L L L L L L L .
Ability to Analyze and Evaluate	L L L L L L L
	<pre> Final Recommendations Formal Output Formulation </pre>

WORK SEGMENTS

GRAPH NO. 253 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Developemental Roles For AS-6 - Type A Projects.

CLASSIFICATION CAPACITIES

Final Recommendations		-			-	•	-	•		•	٠	
Formal Output Formulation					•				•	-	•	•
Evaluation and Discussion of Outputs			•		•	•	-		•	•		•
Primary Output Formulation	•	-			•	•	•	•	•	•	•	
Working Paper Development		DL		DL	DL	DL	DL	•	•	•	DL	DL
Follow Up Contact and Discussion		DL	Dl			•	•	•	•		•	DL
Refinement	•	DL		DL	DL		DL		•	-	DL	DL
Primary Analysis	•	DL		DŁ	DL		DL	•			DL	DL
Initial Information Development	•	DL	DL	DL	DL	DL	DL	•	•	•	DL	DL
Initial Contact		DL	DL		•		•	•	•		•	DL
Work Segmentation and Distribution		•					•		•		•	
Operational Approach Development		-			•	•	•	•				
Planning	•	•		•	•	•		•		•	•	
Initiation		•					•	•	•		٠	
		now	eci	ont sio	ana act n C	lan gem s C	Ar niti apac cit <u>u</u>	aly ati Cap cap	Sc pac tic on pac aci	R op t al Ca	Di epoi Poti Ca pac	Advisory Capacity evelopment Capacity rting ential pacity ity

WORK SEGMENTS

COMMENTS: DEVELOPMENTAL ROLES-PHASE TWO ONLY.

٠

GRAPH NO. 254 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Participatory Roles For AS-6 - Type A Projects.

CLASSIFICATION CAPACITIES

Final Recommendations	•	P	•	•	•		•		•	•	•	•		
Formal Output Formulation	•	P	•	•	•	P	•	•	-	•	P	P	•	
Evaluation and Discussion of Outputs	•	P	P	•	•	•	P	•	•	•	•	P		
Primary Output Formulation	•	P	•	•	P	P	P	•	•	•	Ρ	P		
Working Paper Development	•	P		P	Ρ	P	P	•	•	•	P	P		
Follow Up Contact and Discussion	•	P	P		•	•	•	•	•	•	•	P		
Refinement	•	P	•	P	P		P	•	•	•	P	P		
Primary Analysis	•	P		P	P	•	P	•	•	•	P	P		
Initial Information Development		P	P	P	P	P	P	•	•	•	P	P .		
Initial Contact	•	P	P	•	•	•	• ·	•	•	•	•	P .		
Work Segmentation and Distribution		•	•	•	•	•	-	•	•	•	•	•		
Operational Approach Development	•	•	•	•	•	•	-	•	•	•	•	•		
Planning	•	•	•		•	•	•	•	•	•	•	•		
Initiation	•	•	•	•	•	•	•	•		•	•			
	Kn	De	cis	nta ion	nagi cts	ann emei Caj	itia ing nt (pac:	aly atio Cap Cap	Sco pac tic: pac	ope t P al Cap ity	por ote Cap aci	velopment ting ntial acity	Capacity Capacity	

WORK SEGMENTS

COMMENTS: PARTICIPATION ROLES-PHASES TWO AND THREE ONLY.

GRAPH NO. 255 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Leadership Roles For AS-6 - Type A Projects.

CLASSIFICATION CAPACITIES				×								
Final Recommendations												
Formal Output Formulation	•											•
Evaluation and Discussion of Outputs	•			•				-			•	
Primary Output Formulation			•	•	-		•	•				•
Working Paper Development			•	•	•							
Follow Up Contact and Discussion								•	•			
Refinement		•			•	•	•	•			•	•
Primary Analysis		•			•		•					•
Initial Information Development		•		•						•		
Initial Contact				•					•	•	•	•
Work Segmentation and Distribution		•		•			•	•	•	•		
Operational Approach Development		-					•				•	
Planning					•		•				•	
Initiation				•	•				•			•
· ·	Kn		Cor cis	nta ion	nag: cts	ann emei Cai	iti; ing nt (pac	aly ati Cap Cap	pac tic on pac aci	ope t P al Cap ity	por ote Cap aci	Advisory Capacity velopment Capacity ting ntial acity ty

WORK SEGMENTS

COMMENTS: NO LEADERSHIP ROLES REQUIRED.

GRAPH NO. 256 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Developemental Requirements For AS-6 - Type A Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity	DL	DĿ		DL	DL	ĎL	•
Development Capacity	DL	DL	DL	DL	•	DL	DL
Réporting				•			
Scopé							•
Impact Potential	-		•	۰.			
Analytical Cápacity	DL	DL	DL	DL	DL	DL	DL
Initiation Capacity	-	•				:	
Planning Capacity	DL	DL	DL	ĎL	DL	DL	DL.
Management Capacity	DL	DL	DL	DL	DL	DL	
Contacts Capacity	DL	i	DL	DL	•	DL	
Decision Capacity	ĎL	DL	DL	DL	DL	•	DL.
Knowledge	•		:	•			
				l. Al	¦ Al Dil	Al bil ity	Ability to Adapt and Create bility to Communicate ity to Direct to Control Organize

Ability to Plan

Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: DEVELOPMENTAL REQUIREMENTS-PHASE TWO ONLY.

GRAPH NO. 257 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Participatory Requirements For AS-6 - Type A Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity	P	Ρ	Ρ	Ρ	Ρ	Ρ	
Development Capacity	Ρ	•	•	Ρ	Ρ		P
Reporting	•						
Scope	•	-		• .	•		
Impact Potential		-		•			
Analytical Capacity	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	
Initiation Capacity		•				•	P
Planning Capacity	Ρ	Ρ	Ρ	P	•		P
Management Capacity	P	P	Ρ				
Contacts Capacity	Ρ	Ρ		P		Ρ	
Decision Capacity	Ρ	Ρ	•	Ρ	Ρ		
Knowledge						•	
	l l Ab	 Ab	ili	Ab ili ty	Ab ili ty to	Ab ili ty to Pla	Ability to Adapt and Create ility to Communicate ty to Direct to Control Organize n e and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: PARTICIPATION REQUIREMENTS-PHASES TWO AND THREE ONLY. Copyright (C) 1976 by The Minister of State for Science and Technology, Ottawa Ontario

DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Leadership Requirements For AS-6 - Type A Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity Development Capacity Reporting Scope Impact Potential Analytical Capacity Initiation Capacity Planning Capacity Management Capacity Contacts Capacity Decision Capacity Knowledge Ability to Adapt and Create Ability to Plan Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO LEADERSHIP REQUIREMENTS.

DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Developemental Capacities For AS-6 - Type A Projects.

.

RESOURCE ABILITY CHARACTERISTICS

. ,	
Ability to Adapt and Create	DL DL
Ability to Communicate	DL DL . DL DL DL
Ability to Direct	DL
Ability to Control	DL
Ability to Organize	DL DL DL . DL
Ability to Plan	DL DL DL . DL
Ability to Analyze and Evaluate	DL DL DL DL
	<pre> Final Recommendations Formal Output Formulation Evaluation and Discussion of Outputs Primary Output Formulation Working Paper Development Follow Up Contact and Discussion Refinement Refinement Initial Information Development Initial Information Development Initial Contact Work Segmentation and Distribution Operational Approach Development Planning Initiation</pre>

WORK SEGMENTS

COMMENTS: DEVELOPEMENTAL CAPACITIES-PHASE TWO ONLY.

DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Participatory Capacities For AS-6 - Type A Projects.

RESOURCE ABILITY CHARACTERISTICS Ability to Adapt and Create P P P . P . Ability to Communicate P P P P P P P P Р Ability to Direct Ρ Ability to Control Ability to Organize 🧼 Ρ P Ρ Р Ability to Plan 👵 🐰 P P ΡP . P Ability to Analyze and Evaluate Р P P Ρ . P . Р I Final Recommendations : Formal Output Formulation Evaluation and Discussion of Outputs | Primary Output Formulation | Working Paper Development | Follow Up Contact and Discussion | Refinement | Primary Analysis Initial Information Development Initial Contact 1 Work Segmentation and Distribution | Operational Approach Development | Planning Initiation

WORK SEGMENTS

COMMENTS: PARTICIPATION CAPACITIES-PHASES TWO AND THREE ONLY.

GRAPH NO. 261 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Leadership Capacities For AS-6 - Type A Projects.

RESOURCE ABILITY CHARACTERISTICS															
Ability to Adapt and Create			•	•	•				•	•	•		•	-	•
Ability to Communicate	•	•	•	-	•	•	•	•	•	•	٠		•	•	
Ability to Direct		•			•		•	•	•	•	•			•	
Ability to Control	•	•	•	•			•	•	•	•			•	•	
Ability to Organize	•	•		•	•			•		•	-		•	•	
Ability to Plan	•	•	•	•		•	•	•	•	•	•	'n	•	•	
Ability to Analyze and Evaluate	•	•	•	•		•	•	•	•	•	•		•	•	•
			an'n	era ing	In In rk tio	niti	iti al men	ima al Con itat	fin Iry Inf Itac	illo Ana orm t ar	ארא שע ו יחד ווטי חמד ו	rin in Up sis io Dis	Eva mar g I Co s n I str	alu Yap ont Dev	Final Recommendations mal Output Formulation lation and Discussion of Outputs Output Formulation per Development cact and Discussion Pelopment

WORK SEGMENTS

COMMENTS: NO LEADERSHIP CAPACITIES REQUIRED.

GRAPH NO. 262 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Developemental Roles For AS-6 - Type B Projects.

CLASSIFICATION CAPACITIES

Final Recommendations	•	•	•	-	•	•	•	•	•	•	•	
Formal Output Formulation	•	•	٠	•	•	•	•	•	•	•	•	
Evaluation and Discussion of Outputs	•	•	•	•	•	•	•	•	•	•	•	
Primary Output Formulation	•	•	•			•	•	•	•	•	•	
Working Paper Development	•	DL		DL	DL	DL	DL	•	•		DL	DL
Follow Up Contact and Discussion	•	DL	DL	•	•			•	•			DL
Refinement	•	DL		DL	DL	•	DL	•	•		DL	DL
Primary Analysis		DL	•	DL	DL	•	DL	•		•	DL	DL
Initial Information Development	•	DL	DL	DL	DL	DL	DL	•	•	•	DL	DL.
Initial Contact	•	DL	DL		٠	•	•	•	•		•	DL
Work Segmentation and Distribution	•				•	•			-	•		
Operational Approach Development	•	•	. •	•	•	•		•	•	•		
Planning	•		•		•	•	•		•		•	•
Initiation	•	•			•	•		•	•			
		Di Di	eci	ont: sio	ana: act:	lanı gem s C:	An hiti ning ent apac city	aly ati Ca Cap ity	pac tic on pac	cope ct 1 cal Cap cit	≥pol ≥ Pot Cal oac	Advisory Capacity evelopment Capacity rting ential pacity ity

WORK SEGMENTS

COMMENTS: DEVELOPMENTAL ROLES-PHASE TWO ONLY.

GRAPH NO. 263 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Participatory Roles For AS-6 - Type B Projects.

CLASSIFICATION CAPACITIES

Final Recommendations	•	P	•	•	P	•	•			•	P	P
Formal Output Formulation		P		P	Ρ	•		•			Ρ	Р
Evaluation and Discussion of Outputs	•	P	P	P		Ρ	P	•			•	Р
Primary Output Formulation		Ρ		Ρ	P	Ρ	Ρ		•	•	Р	•
Working Paper Development	•	Ρ		Ρ	Ρ	Ρ	Ρ		•		Ρ	Р
Follow Up Contact and Discussion	•	Ρ	Ρ		•	•	•	•	•	•	•	Р
Refinement		Ρ		Ρ	Ρ	•	Ρ	•	•	•	Ρ	Р
Primary Analysis	•	Ρ	÷	P	Р	•	Ρ	•		•	P	Р
Initial Information Development		Ρ	P	Ρ	Ρ	Ρ	Р	•		•	Ρ	Р
Initial Contact	•	Ρ	Ρ	•	•		•		•	•	•	Р
Work Segmentation and Distribution	•	Ρ	Ρ	P	Ρ	Ρ	•	•	•	•	Ρ	
Operational Approach Development	•	Ρ		Ρ	Ρ	P		•		•	Ρ	
Planning	•	Ρ	•	Ρ	Р	Ρ	•	•	•	•	Ρ	
Initiation	•	Ρ	•	•		Ρ	•	•	•	•		
	Kn		cisg	nta ion	nagı cts	In In ann emei Ca	itia ing nt (pac	aly atio Cap Cap	bac tic: on pac aci	Re ppe t P al Cap ity	por ote Cap aci	velopmenť Capacitý ting ntial acity

WORK SEGMENTS

COMMENTS: PARTICIPATION ROLES-PHASES ONE, TWO AND THREE ONLY.

GRAPH NO. 264 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Leadership Roles For AS-6 - Type B Projects.

CLASSIFICATION CAPACITIES

•	•	•	•	•	•	•	•	•	•	•	•	
•		•	•	•	•	•		•		•		
•	•	•	•	•	•	•	•	•	•	٠		
•		•	•	•				•	•	•	•	
•		•			•		•	•	•	•	• .	
•	•	•		•	•		•	•	•	• ,	•	
	•	•	•	•	•	•	•	•			•	
•	•	•	•		•	•	• •	•	•	•	•	
•	•			•		-	•	•	•		•	
•	-	•	•	•		•		•	•	•	•	
•		•	•	•	•	•	•		•	•	•	
•	•	•	•	•	•	•			•	•	•	
•	•	•		•		•	•				•	
•		•		•	•		•	•	•	•	•	
	De	cis	nta ion	nag cts	ann Ieme Ca	iti ing nt pac	aly ati Ca Cap	pac tic on pac aci	ope t P al Cap ity	por ote Cap aci	velopment ting ntial acitu	Capacity Capacity
			i Decis	l I Conta	Manag Contacts Decision Ca	Plann Manageme Contacts Ca Decision Capac	Initi Planning Management Contacts Capac Decision Capacity	Analy Initiati Planning Ca Management Cap Contacts Capacity Decision Capacity	Impac Analytic Initiation Planning Capac Management Capaci Contacts Capacity Decision Capacity	Scope Impact P Impact P Analytical Analytical Initiation Cap Planning Capacity Planning Capacity Management Capacity Contacts Capacity Decision Capacity	I I I I I I I De I I I I I I I I I De I I I I I I I I Scope I I I I I I I I Scope I I I I I I I I Impact Pote I I I I I I Analytical Cap I I I I I Initiation Capacity I I I I Initiation Capacity I I I I I Initiation Capacity I I I I I I Initiation Capacity I	<pre> Development Reporting Scope Impact Potential Analytical Capacity Initiation Capacity Planning Capacity Management Capacity Contacts Capacity Decision Capacity</pre>

WORK SEGMENTS

COMMENTS: NO LEADERSHIP ROLES REQUIRED.

.

DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Developmental Requirements For AS-6 - Type B Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity	DL DL . DL DL DL .
Development Capacity	DL DL DL . DL DL
Reporting	
Scope	
Impact Potential	
Analytical Capacity	DL DL DL DL DL DL DL
Initiation Capacity	
Planning Capacity	DL DL DL DL DL DL DL
Management Capacity	DL DL DL DL DL .
Contacts Capacity	DL . DL DL . DL .
Decision Capacity	DL DL DL DL . DL
Knowledge	
	Ability to Adapt and Create Ability to Communicate Ability to Direct Ability to Control Ability to Organize Ability to Plan Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: DEVELOPMENTAL REQUIREMENTS-PHASE TWO ONLY.

GRAPH NO. 266 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76 Classification Capacities/Resource Ability Characteristics - Participatory Requirements For AS-6 - Type B Projects.

·

CLASSIFICATION CAPACITIES

Advisory Capacity	Ρ	Р	Р	Ρ	Ρ	Р	•
Development Capacity	Р	Ρ	Ρ	Ρ	Ρ	Ρ	P
Reporting	•	•	•	•	•	•	
Scope	•	•	•	•			•
Impact Potential			•			•	
Analytical Capacity	Р	Р	Р	Р	P	Р	P
Initiation Capacity	Р	Ρ	Ρ	Ρ	Ρ	Ρ	P
Planning Capacity			•	•	•		P
Management Capacity	Р	Р	Ρ	P	Ρ	Ρ	P
Contacts Capacity	Р	·P	Ρ	P	Ρ	Р	
Decision Capacity	P	Р	Р	Ρ	•	Ρ	
Knowledge	Р	P	Ρ	Ρ	Ρ	•	P
	At		 Ab	ili ty	Ab ili ty to	Ab ili ty to Pla	Ability to Adapt and Create ility to Communicate ty to Direct to Control Organize n e and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: PARTICIPATION REQUIREMENTS-PHASES ONE, TWO AND THREE. Copyright (C) 1976 by The Minister of State for Science and Technology, Ottawa Ontario

GRAPH NO. 267 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Leadership Requirements For AS-6 - Type B Projects.

CLASSIFICATION CAPACITIES

.

Advisory Capacity	•		•		•	•	
Development Capacity	-	•	•	•			
Reporting				•			
Scope	•		•		•		
Impact Potential	•	•			•	•	
Analytical Capacity							
Initiation Capacity		•					
Planning Capacity							
Management Capacity	-						•
Contacts Capacity			:				
Decision Capacity	-					•	•
Knowledge	•				•		
	Ab:		ili	ili ty	l Ab ili ty to :	ili ty 1 to (Plar	Ability to Adapt and Create ility to Communicate ty to Direct to Control Drganize and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO LEADERSHIP REQUIREMENTS.

GRAPH NO. 268 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Developemental Capacities For AS-6 - Type B Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create	DL DL
Ability to Communicate	DL DL . DL DL
Ability to Direct	DL
Ability to Control	DL
Ability to Organize	DL DL DL . DL
Ability to Plan	DL DL DL . DL
Ability to Analyze and Evaluate	DL DL DL DL
· · · · · · · · · · · · · · · · · · ·	<pre> Final Recommendations Formal Output Formulation Evaluation and Discussion of Outputs Primary Output Formulation Working Paper Development Follow Up Contact and Discussion Refinement Primary Analysis Initial Information Development Initial Contact Work Segmentation and Distribution Operational Approach Development Planning Initiation</pre>

WORK SEGMENTS

COMMENTS: DEVELOPMENTAL CAPACITIES-PHASE TWO ONLY.

DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Participatory Capacities For AS-6 - Type B Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create	Ρ	•	•	•	•	P	•	•	• '	Ρ	P	-	P	•
Ability to Communicate	P	Ρ			Ρ	P	•	Ρ	Ρ	P	P	P	P	P
Ability to Direct		P	Ρ	Ρ		•	P		•			•		
Ability to Control		Ρ	Ρ	Ρ		•	P				•			
Ability to Organize	•	Ρ	Ρ	P	P	Ρ	Ρ	P		Ρ		Ρ		
Ability to Plan	Ρ	P	Ρ	Ρ	Ρ	P	P	Ρ	•	P	Ρ			P
Ability to Analyze and Evaluate	Ρ	Ρ	Ρ			P	Ρ	Ρ	Ρ	Ρ	Ρ	•	P	
		14	ann	era ing	rk tio	iti Seg	iti al men	ima al Con tat	Fo Fo fin fin fin fin ion	Wo llo eme Ana orm t an	ן Pr w U nt lys ati d D	Ev ima ng p C is on	Fo alu Pap Cont Dev	Final Recommendations rmal Output Formulation ation and Discussion of Outputs Output Formulation er Development act and Discussion elopment ution

WORK SEGMENTS

COMMENTS: PARTICIPATION CAPACITIES-PHASES ONE, TWO AND THREE.

GRAPH NO. 270 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76 Resource Ability Characteristics/Work Segments - Leadership Capacities For AS-6 - Type B Projects.

RESOURCE ABILITY CHARACTERISTICS Ability to Adapt and Create Ability to Communicate Ability to Direct Ability to Control Ability to Organize Ability to Plan Ability to Analyze and Evaluate I Final Recommendations | Formal Output Formulation | Evaluation and Discussion of Outputs | Primary Output Formulation | Working Paper Development | Follow Up Contact and Discussion Refinement l Primary Analysis Initial Information Development Initial Contact Work Segmentation and Distribution 1 | Operational Approach Development Planning Initiation

WORK SEGMENTS

COMMENTS: NO LEADERSHIP CAPACITIES REQUIRED.

GRAPH NO. 271 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

0

Classification Capacities/Work Segments - Developemental Roles For AS-6 - Type C Projects.

CLASSIFICATION CAPACITIES

.

Final Recommendations	•			•	•	•	•	•				•
Formal Output Formulation		•	•	•	•	•	•		•		•	• •
Evaluation and Discussion of Outputs	•	•			•		-	•	•	•	•	•
Primary Output Formulation	•	•	•	•	•		•	•	•	•	•	
Working Paper Development	•	•		•	•		•	•	•	•	•	
Follow Up Contact and Discussion	•	•		•	•	•	•		•			
Refinement	•	•		•	•	•	•	•	•	•	•	
Primary Analysis	•	•			•		•	•		•	•	
Initial Information Development		•	•		•	•	•	•	•	•		
Initial Contact		•		•	•	•		•	•	•	•	
Work Segmentation and Distribution	•		•	•	•		•	•	•	•	•	
Operational Approach Development		-		•	•		•	•	•	•	•	
Planning	•	•		•	•		•	•	•	•	•	
Initiation	•	-	•	•	•	•	•	•	•	•	•	
1	Kn	Der	cis	nta ion	nag cts	ann eme Ca	Ana iti ing nt pac ity	aly ati Cap Cap	pac tic on pac	ope t P al Cap ity	por ote Cap aci	Advisory Capacity velopment Capacity ting ntial acity ty

WORK SEGMENTS

COMMENTS: NO DEVELOPMENTAL ROLES REQUIRED.

GRAPH NO. 272 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

CLASSIFICATION CAPACITIES

•													
Final Recommendations	•	•	•	•'	•	•	•	•	•	•	•	•	
Formal Output Formulation	•	•		•	•		•	•	•			•	
Evaluation and Discussion of Outputs		•		•	•		•	•	•	•	•	•	
Primary Output Formulation	•	•	•		•	•		•	•	•	•		
Working Paper Development	•	•	• .	•	•	•	•	•	•	•	•	•	
Follow Up Contact and Discussion		•	•	-	۰.	•	•	. •	•	•	•	•	
Refinement	•		•	•			•	•	•	•			
Primary Analysis	•	•		•	•			•	•	•	۰	•	
Initial Information Development	•	•	•	•	•	• .		•	•	•		•	
Initial Contact			•		•		•		•		•	•	
Jork Segmentation and Distribution	•	P		P	P	Р				•	P		
Operational Approach Development	•	P		P	P	P					P	•	
Planning	•	P		P	P	P			•		P	•	
Initiation	•	Ρ	•	•	•	۳		•		•	•	•	
· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·		cis	nta ìon	nag cts	In ann emei Cal	iti ing nt pac	aly ati Ca Cap ity	Sc pac tic on pac aci	ope t P al Cap ity	De por ote Cap aci	Advisory velopment ting ntial acity ty	۵
	- กก	ວພເ	ยนต	ピ									

Classification Capacities/Work Segments - Participatory Roles For AS-6 - Type C Projects.

WORK SEGMENTS

COMMENTS: PARTICIPATION ROLES-PHASE ONE ONLY.

GRAPH NO. 273 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Leadership Roles For AS-6 - Type C Projects.

CLASSIFICATION CAPACITIES

Final Recommendations	•	L	•	•	L	•	•	•		•	-	L	
Formal Output Formulation	•	L	•	L	L	L	L	•			L	L	
Evaluation and Discussion of Outputs		L	L	L	L	•	•	•	•		•	L	
Primary Output Formulation		L	•	L	L	L	L	•	•		L .	L	
Working Paper Development	•	L	•	L	L	L	L	•	•		L		
Follow Up Contact and Discussion		L	L		•			•		٠	•	L	
Refinement		L		L	L		L		•	•		L	
Primary Analysis	•	L		L	·L		L	•	•		L	L	
Initial Information Development	•	L		L	L	L		•	•	•	L		
Initial Contact		L	L	•	L	L						L	
Work Segmentation and Distribution	•				•		•	•			•	•	
Operational Approach Development		•			•		•	•	•	•	•		
Planning	•	-		•				•	•	•	•	•	
Initiation	•	•	•			•	-		•		•	•	
		De	cis	nta ior	nag Icts	ann Ieme	itia ing nt pac	aly ati Ca Cap	pac tic on pac aci	ope t P al Cap ity	por ote Cap aci	Advisory velopment ting ntial acity ty	Capacity Capacity

WORK SEGMENTS

COMMENTS: LEADERSHIP ROLES-PHASES TWO AND THREE ONLY.

GRAPH NO. 274 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Developemental Requirements For AS-6 - Type C Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity	· · · · · · ·
Development Capacity	· · · · ·
Reporting	· · · · · · · ·
Scope	
Impact Potential	
Analytical Capacity	
Initiation Capacity	
Planning Capacity	· · · · · · · ·
Management Capacity	• • • • • • • •
Contacts Capacity	· · · · · · ·
Decision Capacity	
Knowledge	• • • • • • • •
· · · · ·	Ability to Adapt and Create Ability to Communicate Ability to Direct Ability to Control Ability to Organize

l Ability to Plan Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO DEVELOPMENTAL REQUIREMENTS.

DATE ENTERED 1-JUN-76 Classification Capacities/Resource Ability Characteristics - Participatory Requirements For AS-6 - Type C Projects.

GRAPH NO. 275 DATE PRINTED28-Jun-76

CLASSIFICATION CAPACITIES

1	Advisory Capacity	•	Ρ	•	•	•	•	•
	Development Capacity	P	P	Ρ	P	Ρ	•	Ρ
	Reporting	•		•		•	•	•
	Scope			•	•	-		
	Impact Potentiat	•	•	•		•	•	•
	Analytical Capacity	•	•	•			•	
	Initiation Capacity	P	P	Ρ	P	Ρ		P
	Planning Capacity	P	P	Ρ	Р	P	•	P
	Management Capacity	P	Ρ	P	P	P	•	P
	Contacts Capacity	٠		•	•	•	-	
	Decision Capacity	P	P	•	P	Ρ	•	P
•	Knowledge		•				•	
		Ab	Ab ili	 Ab ili	 Ab ili ty	Ab ili ty to	Ab ili ty to Pla	Ability to Adapt and Create ility to Communicate ty to Direct to Control Organize n e and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: PARTICIPATION REQUIREMENTS-PHASE ONE ONLY.

GRAPH NO. 276 DATE PRINTED28-Jun-76

DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Leadership Requirements For AS-6 - Type C Projects.

Create

CLASSIFICATION CAPACITIES

	-		•				
Advisory Capacity	•	L	L	F.	L	L	L
Development Capacity	L	L	L	L	L	•	L
Reporting	•	•	•	•	•		•
Scope	•			•			•
Impact Potential	•	•	•				•
Analytical Capacity	L	L	L	L	L		L
Initiation Capacity	L	L	L		•	•	•
Planning Capacity	L	L	Ł	L	Ľ	Ŀ.	L
Management Capacity	L	L	L	L	L	L	•
Contacts Capacity	•	L	•	L	L	L	
Decision Capacity	L	Ł		L	L		L
Knöwledge						-	•
	1 6 1 1 1 1 4 3		Ab	ili	¦ Ab ili	ili ty to	Ability to Adapt and ility to Communicate ty to Direct to Control Organize

Ability to Plan Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: LEADERSHIP REQUIREMENTS-PHASES TWO AND THREE ONLY.

GRAPH NO. 277 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Developemental Capacities For AS-6 - Type C Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create	
Ability to Communicate	· · · · · · · · · · · · · · · · · · ·
Ability to Direct	
Ability to Control	· · · · · · · · · · · · · · · · · · ·
Ability to Organize	· · · · · · · · · · · · · · ·
Ability to Plan	
Ability to Analyze and Evaluate	
	<pre> Final Recommendations </pre>

WORK SEGMENTS

COMMENTS: NO DEVELOPMENTAL CAPACITIES REQUIRED.

GRAPH NO. 278 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Participatory Capacities For AS-6 - Type C Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create	P
Ability to Communicate	P P
Ability to Direct	. P P P
Ability to Control	. P P P
Ability to Organize	. F F F
Ability to Plan	РРР
Ability to Analyze and Evaluate	P P P
	<pre> Final Recommendations Formal Output Formulation Evaluation and Discussion of Outputs Primary Output Formulation Working Paper Development Follow Up Contact and Discussion Refinement Primary Analysis Initial Information Development Initial Contact Work Segmentation and Distribution Operational Approach Development Planning Initiation</pre>

WORK SEGMENTS

COMMENTS: PARTICIPATION CAPACITIES-PHASE ONE ONLY.

GRAPH NO. 279 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Leadership Capacities For AS-6 - Type C Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create	•	•	•	•	•	L.	-	L	•	•	L	L.	•	•
Ability to Communicate	-	٠	•	•	L	-		•	L	•	•	L	•	L
Ability to Direct		•	•	•	L	L.	L	L	L	Ľ.	L	Ľ	L	L
Ability to Control	•		•		L	L		•	L	Ł	L	L	L.	
Ability to Organize					L	L	L	L	L	L			Ľ	
Ability to Plan	•				Ł	L	L	L	L	L			L	
Ability to Analyze and Evaluate						L	L	L		•	L	L		
			anr	ing ing	ork atic	niti Seg	niti al mer	ima al Con itat	fin Fy Inf itac	l Wo llo Ana orm t an	ן Pr w U nt ועפ ועפ ומל D	ima ng p C is on	For alua ry C Pape onta Deve	Final Recommendations mal Output Formulation ation and Discussion of Outputs Output Formulation er Development act and Discussion elopment

WORK SEGMENTS

COMMENTS: LEADERSHIP CAPACITIES-PHASES TWO AND THREE ONLY.

GRAPH NO. 280 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

CLASSIFICATION CAPACITIES Final Recommendations Formal Output Formulation Evaluation and Discussion of Outputs Primary Output Formulation Working Paper Development Follow Up Contact and Discussion Refinement Primary Analysis Initial Information Development Initial Contact Work Segmentation and Distribution Operational Approach Development Planning Initiation Advisory Capacity Development Capacity Reporting Scope Impact Potential Analytical Capacity Initiation Capacity Flanning Capacity Management Capacity Contacts Capacity Decision Capacity Knowledge

Classification Capacities/Work Segments - Developemental Roles For AS-6 - Type D Projects.

WORK SEGMENTS

COMMENTS: NO DEVELOPMENTAL ROLES REQUIRED.

GRAPH NO. 281 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Participatory Roles For AS-6 - Type D Projects.

CLASSIFICATION CAPACITIES Final Recommendations Formal Output Formulation Evaluation and Discussion of Outputs Primary Output Formulation Working Paper Development Follow Up Contact and Discussion Refinement Primary Analysis Initial Information Development Initial Contact Work Segmentation and Distribution Operational Approach Development Planning Initiation | | Advisory Capacity | Development Capacity 1 ł Reporting 1 1 I I Scope I I I I I Impact Potential I I I I Impact Potential I I I I I Analytical Capacity I I I I Initiation Capacity I I Planning Capacity I Management Capacity I Contacts Capacity I Decision Capacity | Decision Capacity

WORK SEGMENTS

COMMENTS: NO PARTICIPATORY ROLES REQUIRED.

Copyright (C) 1976 by The Minister of State for Science and Technology, Ottawa Ontario

Knowledge

GRAPH NO. 282 DATE PRINTED28-Juri-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Leadership Roles For AS-6 - Type D Projects.

CLASSIFICATION CAPACITIES

Final Recommendations		L.	•		•	•	•			•	L	L
Formal Output Formulation		L	•	L	L		L	•	•	•	L	L
Evaluation and Discussion of Outputs		L.	L	L		L	L		•		•	· L
Primary Output Formulation	•	L	•	L	L	L	L	•			L	
Working Paper Development	•	L	•	L	L	•	L	•	•		L	
Follow Up Contact and Discussion	•	L	L			•	•					L
Refinement	•	L		L	L	L	L	•			L	L
Primary Analysis	•	L		•	L	L	L	•			L	L
Initial Information Development	•	L			•	L	•		•		L	L ·
Initial Contact	•	L.	L	•	L	L.		•				L'
Work Segmentation and Distribution	•	L		L	L	L		•	•		L	
Operational Approach Development	•	L	•	L	L	L	•				L	
Planning	•	L	•	L	L	L				•	L	
Initiation	•	L	•	•		L					•	
		De	cis	nta ion	nag	ann eme Ca	iti ing nt pac	aly ati Ca Cap ity	pac tic on pac	ope t P al Cap ity	por ote Cap aci	evelopment Capacity rting ential pacity

WORK SEGMENTS

GRAPH NO. 283 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76 Classification Capacities/Resource Ability Characteristics - Developemental Requirements For AS-6 - Type D Projects.

CLASSIFICATION CAPACITIES	
Advisory Capacity	
Development Capacity	
Reporting	
Scope	· · · · · · · ·
Impact Potential	· · · · · · · ·
Analytical Capacity	
Initiation Capacity	
Planning Capacity	
Management Capacity	• • • • • • • •
Contacts Capacity	
Decision Capacity	· · · ·
Knowledge	
	Ability to Adapt and Create Ability to Communicate Ability to Direct Ability to Control Ability to Organize Ability to Plan Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO DEVELOPMENTAL REQUIREMENTS.

GRAPH NO. 284 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76 - Tupe D Projects.

Classification Capacities/Resource	Abilit	y Cha	arac	teri	stics	- Parti	cipatory	, Requir	ements	For	AS-6	DATE - Type	ENT D	Proje	1-JUN- cts.	-76
CLASSIFICATION CAPACITIES					•					·						
Advisory Capacity		• •														
Development Capacity	•			•	• •											
Reporting	-															
Scope				• •	·											
Impact Potential	•															
Analytical Capacity	•	• •	•	-		•										
Initiation Capacity		• •		•				•								
Planning Capacity	•	• •		-	•••											
Management Capacity			•	•												
Contacts Capacity	•									•						
Decision Capacity	•	• •		•												
Knowledge	•	• •	•	-												
	Abi	Abil	bili ity	ity to to P	Abilit Lity to y to C D Orga Lan	y to Com 5 Direct ontrol	Adapt ar municate te	nd Creat	e							

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO PARTICIPATORY REQUIREMENTS.

GRAPH NO. 285 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76 Classification Capacities/Resource Ability Characteristics - Leadership Requirements For AS-6 - Type D Projects.

Advisory Capacity		L	L	L	L	L	
Development Capacity	L	L	L	L	L		L
Reporting							
Scope							
Impact Potential			•				•
Analytical Capacity	L	L	L	L	L		L
Initiation Capacity	L	L	L	L	L		L
Planning Capacity	L	L	L	L	L		L
Management Capacity	L	L	L	L	L	L	L
Contacts Capacity	•	L	L	L	L	L	
Decision Capacity	L	L	•	L	L		L
Knowledge							
	Ab	 Ab ili	ili	 Ab ili tu	ili ty to	Ab ili ty to Pla	ility to Communicate ty to Direct to Control Organize

RESOURCE ABILITY CHARACTERISTICS

GRAPH NO. 286 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Developemental Capacities For AS-6 - Type D Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create Ability to Communicate Ability to Direct Ability to Control Ability to Organize Ability to Plan Ability to Analyze and Evaluate Final Recommendations Formal Output Formulation Evaluation and Discussion of Outputs ! Primary Output Formulation
Working Paper Development 1 I Follow Up Contact and Discussion Refinement | | Primary Analysis | Initial Information Development Initial Contact Work Segmentation and Distribution Operational Approach Development Planning Initiation

WORK SEGMENTS

COMMENTS: NO DEVELOPMENTAL CAPACITIES REQUIRED.

GRAPH NO. 287

DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Participatory Capacitiés For AS-6 - Type D Projects.

1

Ĉ

é

RESOURCE ABILITY CHARACTERISTICS													, , ,		
Ability to Adapt and Create		•		•	•	•	•		•				- / -	•	•
Ability to Communicate	•	•	•												
Ability to Direct													•		
Ability to Control	•				•				•				•	•	
Ability to Organize											•				
Ability to Plan						-			•						
Ability to Analyze and Evaluate	•				•						•				•
	на на на на на на на на на на на на на П		ann	erai ing	rk !	itia	iti: al 1 nen	ima al Cor tat	fir Inf Inf itac	illo ieme Ana forr st i ar	ork ow ent aly nat	ri Up si Di	ma g c s n st	alu Pap on: Dev	Final Recommendations ormal Output Formulation uation and Discussion of Outputs Output Formulation per Development tact and Discussion velopment oution

WORK SEGMENTS

COMMENTS: NO PARTICIPATION CAPACITIES REQUIRED.

GRAPH NO. 288 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Leadership Capacities For AS-6 - Type D Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create	L			•	•	L		Ľ		•	L	L	•	
Ability to Communicate	L	L			L		•	-	L	•	•	L		L
Ability to Direct	Ľ	Ł	L	L	L	L	L	L	L	L	L	L	L	L
Ability to Control	•	L	L	L	L	Ľ	•	•	L	L	L	L	L	
Ability to Organize	L	L	L	L	L	L	L	L	L	L	٠	•	L	•
Ability to Plan	L	L	L	L	L	L	L	L	L	L	•		r.	
Ability to Analyze and Evaluate	L	L			•	L	Ľ	L	-	•	L	L		•
			op ann ati	Wo	In rk S	In Iti: Segi	Pr iti al	Re ima al Con tat	I Fo fin ry I Infi tac ion	Wo llo eme Ana orm t an	Pr rki w U nt lys ati d D	EV ima ng p C is on ist	alu ry Pap ont Dev rib	Final Recommendations rmal Output Formulation ation and Discussion of Outputs Output Formulation er Development act and Discussion elopment ution

WORK SEGMENTS

GRAPH NO. 289 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Developemental Roles For AS-5 - Type A Projects.

CLASSIFICATION CAPACITIES

0

Final Recommendations	•	DP	DP	DP			-	•	•	•		DP g
Formal Output Formulation		DP		DP		•	DP	•			DP	DP"
Evaluation and Discussion of Outputs		DP	DP		DP	•	DP				DP	DP
Primary Output Formulation	•	DP		DP	DP	DP	DP	•			DP	DP
Working Paper Development			•	•		•	•		•	•	•	
Follow Up Contact and Discussion		-		•		•	•		•	•		
Refinement	•				•			•		•		
Primary Analysis	•						•					
Initial Information Development	•	-		•				•				
Initial Contact											•	
Work Segmentation and Distribution	-	-				•	•					
Operational Approach Development		-					-	•				
Planning		•	•	•				•				•
Initiation		-										
		D now	eci	M ont sio	l P ana act	lan ger s C	nit nin	nal iat g C Ca cit	mpac utic ion apaci	:op :t :al :Ca :it	epo Pot Ca pac Y	Advisory Capacity evelopment Capacity rting ential pacity ity

WORK SEGMENTS

COMMENTS: DEVELOPMENTAL ROLES-PHASE THREE ONLY.

GRAPH NO. 290 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Participatory Roles For AS-5 - Type A Projects.

CLASSIFICATION CAPACITIES .

Final Recommendations		•					•.						
Formal Output Formulation						•							
Evaluation and Discussion of Outputs												•	
Primary Output Formulation		•	•	•		•							
Working Paper Development		Р	•	Ρ	P	P	P	•			P	P	
Follow Up Contact and Discussion	•	Ρ	P	•		•	•					P.	
Refinement		P	•	Ρ	P	•	P	•			P	P	
Primary Analysis		P		Ρ	P	•	P		•	•	P	P	
Initial Information Development	•	P	Ρ	Ρ	P	Ρ	Р	•			P	P	
Initial Contact		P	Ρ	•	•		•	•			•	P	÷
Work Segmentation and Distribution	•	•	•	•	•			•	•		•		
Operational Approach Development		•	•	•	•	•	•	•	•			•	
Planning	•	•	•	•	•	•	•	•	•	•	•	•	
Initiation		•	•	•	•	•	•	•			•	•	
\$		De	cis	nta ion	nag cts	ann eme Ca	An: iti ing nt pac ity	aly ati Ca Cap	pac tic on pac aci	ope t P al Cap ity	por ote Cap aci	Advisory Ca velopment Ca ting ntial acity ty	

WORK SEGMENTS

COMMENTS: PARTICIPATION ROLES-PHASE TWO ONLY.

GRAPH NO. 291 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Leadership Roles For AS-5 - Type A Projects.

											á.	
			•		•	•	-	•				
	•		•				•		•	•	•	
з.	•			•	•	•		•	•		•	
•			•					•	•		•	
						•					•	
					•			•	•		•	
				•	•		•	•			•	
			•	•	•	•	•	•				
					•							
				•					•		. `	
	•				•	•			•			
					•	•			-		•	
											•	
		ecis	onta sior	anac acts	lanr geme 6 Ca	niti ning ent apac	aly ati Cap ity	pac on pac aci	ope t F cap cap	por ote Cap	velopment ting ential bacity	Capacit <u>u</u> Capacit <u>u</u>
	s		· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·				<pre></pre>	<pre></pre>	<pre></pre>	<pre></pre>

WORK SEGMENTS

COMMENTS: NO LEADERSHIP ROLES REQUIRED.

Copyright (C) 1976 by The Minister of State for Science and Technology, Ottawa Ontario

3

GRAPH NO. 292

DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Developmental Requirements For AS-5 - Type A Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity	DP	DP	DP	•		DP	•
Development Capacity	DP	DP	DP	• .	•	•	
Reporting	•	•	•		•		•
Scope	•	•			•	-	
Impact Potential	-	•			•		•
Analytical Capacity	DP	DP	DP	DP		DP	
Initiation Capacity		•		•		DP	DP
Planning Capacity	DP	DP	DP	DP			DP
Management Capacity			DP	DP	•	•	•
Contacts Capacity		DP	•			DP	•
Décision Capacity	DP	DP	•	•	•		
Khöwledge	•	•	•	•			•
· • .	P = = = = = = = = = = = = = = = = = = =		 	Ab bili	¦ A il	A bil ity	Ability to Adapt and Create bility to Communicate ity to Direct to Control Organize

Ability to Plan Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: DEVELOPMENTAL REQUIREMENTS-PHASE THREE ONLY.

GRAPH NO. 293 DATE PRINTED28-Jun-76

DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Participatory Requirements For AS-5 - Type A Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity	P	P	P	Ρ	Ρ	•	
Development Capacity	P	P	P	Ρ		•	
Reporting	•	•	•	•	•		•
Scope		•	•			•	
Impact Potential	•	•	•	•			
Analytical Capacity	P	Ρ	P	Ρ	•	Ρ	P
Initiation Capacity		•		•		•	P
Planning Capacity	P	P	P	Р		•	
Management Capacity	Ρ	P	Ρ	P	•	•	
Contacts Capacity	•	Ρ		Ρ		P	
Decision Capacity	•	•				•	
Knowledge	•	Ρ	P	Ρ	•		
	- - Ab	 Ab	¦ Ab ili	ili ty	Ab ili ty to	Ab ili ty to Pla	Ability to Adapt and Create ility to Communicate ty to Direct to Control Organize n e and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: PARTICIPATION REQUIREMENTS-PHASE TWO ONLY.

Classification Capacities/Resource Ability Characteristics - Leadership Requirements For AS-5 - Type A Projects.

294 ED28-Jun-76 RED 1-JUN-76 DATE -ENTER

CLASSIFICATION CAPACITIES

	Advisory Capacity		•	•	•	•	•	-	-
	Development Capacity		•	•		•	•	• .	•
	Reporting		•	•	•	•	•	•	
	Scope		• ·	•	•	• '	•	-	•
	Impact Potential	•	•		•	•	•	•	
	Analytical Capacity		•	•	•		•	•	•
	Initiation Capacity					•	•	•	•
	Planning Capacity			•	•	•	•	•	
	Management Capacity		•			•	•	•	•
	Contacts Capacity		•				•	•	
	Decision Capacity		•			•	•	•	
	Knowledge					•		•	•
•	·			s 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		ili	ili ty	Ab ili ty to	Ability to Adapt and Create ility to Communicate ty to Direct to Control Organize
				чα	111	τu	τo	Pla	n

Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO LEADERSHIP REQUIREMENTS.

GRAPH NO. 295

DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Developemental Capacities For AS-5 - Type A Projects.

ê. RESOURCE ABILITY CHARACTERISTICS Ability to Adapt and Create . DP . DP . Ability to Communicate . DP DP DP DP Ability to Direct Ability to Control Ability to Organize . DP DP DP . Ability to Plan . DP . DP DP Ability to Analuze and Evaluate . DP DP DP . I Final Recommendations | Formal Output Formulation Evaluation and Discussion of Outputs 1 Primary Output Formulation | Working Paper Development Follow Up Contact and Discussion 1 Refinement Primary Analysis Initial Information Development Initial Contact Work Segmentation and Distribution Operational Approach Development 1 Planning Initiation

WORK SEGMENTS

COMMENTS: DEVELOPMENTAL CAPACITIES-PHASE THREE ONLY.

GRAPH NO. 296 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work	Segments - Participatory Capacities For AS-5 - Type A Projects.
RESOURCE ABILITY CHARACTERISTICS	
Ability to Adapt and Create	· · · · · · · · · · · · · · · · · · ·
Ability to Communicate	P P
Ability to Direct	•••• P P P P P ••••
Ability to Control	P
Ability to Organize	P
Ability to Plan	• . • P P P P . P
Ability to Analyze and Evaluate	· · · · P P P P P
	<pre> </pre>

WORK SEGMENTS

COMMENTS: PARTICIPATION CAPACITIES-PHASE TWO ONLY.

GRAPH NO. 297 DATE PRINTED28-Jun-76

DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Leadership Capacities For AS-5 - Type A Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create Ability to Communicate Ability to Direct Ability to Control Ability to Organize Ability to Plan Ability to Analyze and Evaluate | | | | | Final Recommendations
| | | | Formal Output Formulation
| | | Evaluation and Discussion of Outputs
| | Primary Output Formulation
| Working Paper Development
| Follow Up Contact and Discussion Refinement | Primary Analysis Initial Information Development Initial Contact Work Segmentation and Distribution Operational Approach Development 1 Planning Initiation

WORK SEGMENTS

COMMENTS: NO LEADERSHIP CAPACITIES REQUIRED.

GRAPH NO. 298 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Developemental Roles For AS-5 - Type B Projects.

CLASSIFICATION CAPACITIES

Final Recommendations	
Formal Output Formulation	
Evaluation and Discussion of Outputs	
Primary Output Formulation	· · · · · · · · · · · ·
Working Paper Development	
Follow Up Contact and Discussion	
Refinement	
Primary Analysis	
Initial Information Development	
Initial Contact	· · · · · · · · · · · · · · · · · · ·
Work Segmentation and Distribution	. DP DP DP DP DP .
Operational Approach Development	. DF . DF DF DF DF .
Planning	. DP . DP DP DP DP .
Initiation	. DP DP
	Advisory Capacity Advisory Capacity

WORK SEGMENTS

COMMENTS: DEVELOPMENTAL ROLES-PHASE ONE ONLY.

GRAPH NO. 299 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

CLASSIFICATION CAPACITIES												•	
Final Recommendations					-	•	•		-	• .	Ρ	P	
Formal Output Formulation		Ρ		Ρ	Ρ		•		•	•	Ρ	P	
Evaluation and Discussion of Outputs	-	Ρ	Ρ	Ρ	•	Ρ	Ρ	•	•		Ρ	P	
Primary Output Formulation	•	Ρ		P	Ρ	Ρ	Ρ	•	•		Ρ		
Working Paper Development		Ρ	•		Ρ	Ρ	Ρ	•	•		Ρ	P	
Follow Up Contact and Discussion		Ρ	Ρ	Ρ	Ρ		•	•		•		P	
Refinement	•	Ρ	•	Ρ	Ρ	Ρ	Ρ			•	Ρ	P	
Primary Analysis		Ρ		Ρ	Ρ	Ρ	Ρ	•			Ρ	P	
Initial Information Development		Ρ	•		Ρ	Ρ	Ρ				Ρ		
Initial Contact	•	Ρ	Ρ		•	Ρ						P	
Work Segmentation and Distribution			•		•		•	•		•			
Operational Approach Development		•	•	-				•			•	•	
Planning						•		•	•		•		
Initiation	•			•	•	•		•		•	•		
				nta ion	nag Icts	ann Jeme : Ca	iti ing nt pac	aly ati Ca Cap ity	ipac itic on ipac iaci	ope t F al Cap	De por ote Cap Jaci	Advisory Capacity revelopment Capacity rting rential pacity ity	

WORK SEGMENTS

COMMENTS: PARTICIPATION ROLES-PHASES TWO AND THREE ONLY.

GRAPH NO. 300 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification	Capacities/Work	Segments -	Leadership	Roles Fo	rf

eadership Roles For AS-5 - Type B Projects.

	۰.																•			
CLASSIFICATION CAPACITIES																				
Final Recommendations	•	•	•	•	•	•		•	-	•			•							
Formal Output Formulation	•	•		•	•	•	•	•	•	•			•							
Evaluation and Discussion of Outputs		•	•		•	•			÷	•	•									
Primary Output Formulation	•	•		•		•		•		•										
Working Paper Development	•	•	•	•		•	•			•	•		. .			•				
Follow Up Contact and Discussion	•	•			•	•		•	•		•		•							
Refinement	•	•		•	•	•	•	•	•	•			•							
Primary Analysis		•	•	•	•	• :	•		•				•							·
Initial Information Development	-	•		•	•	•	•		•	•										
Initial Contact	•	•	•		•	•				•	•		•						· · .	
Work Segmentation and Distribution	•		•		•				•		. •		•							
Operational Approach Development	•	•		•	•	•	•	•	•	•			•							
Planning	•	•		•	•	•	•	•	•	•	•		•							
Initiation	•	•	•	•	•	•	•	•	•	•	•		•							
· · ·	Kn	De owl	Co cis	nta ion	nag cts	ann eme Ca	iti ing nt pac	aly ati Ca Cap ity	pac tic on pac aci	ope al Car itu	D 2002 Pot Ca 3ac	ev rt en pa	elopm ing tial city	ory ent	Capacity Capacity					

WORK SEGMENTS

COMMENTS: NO LEADERSHIP ROLES REQUIRED.

GRAPH NO. 301 DATE PRINTED28-Jun-76

DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Developemental Requirements For AS-5 - Type B Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity	DP DP	
Development Capacity	· · · · · · · ·	
Reporting	· · · · · · · ·	
Scope		
Impact Potential		
Analytical Capacity	DP	
Initiation Capacity	DP .	
Planning Capacity	DP DP DP	
Management Capacity	. DP DP DP	
Contacts Capacity	DP	
Decision Capacity	· · · · · · · ·	
Knowledge		
	Ability to Adapt and Create Ability to Communicate Ability to Direct Ability to Control Ability to Organize Ability to Plan Ability to Analyze and Evaluate	

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: DEVELOPMENTAL REQUIREMENTS-PHASE ONE ONLY.

.

302 NO. DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76 Classification Capacities/Resource Ability Characteristics - Participatory Requirements For AS-5 - Type B Projects.

CLASSIFICATION CAPACITIES

•							
Advisory Capacity	P	•	P	•.		P	
Development Capacity	P	P	P	•			P
Reporting	•	•					
Scope		.•	÷	•			•
Impact Potential	•		:		•		
Analytical Capacity	P	Ρ	Ρ	Ρ		P	P
Initiation Capacity					•	Ρ	P
Planning Capacity	P	P	Ρ	Ρ		P	•
Management Capacity	P	Ρ	Ρ	Ρ			•
Contacts Capacity		•	•		÷	Ρ	•
Decision Capacity	P	P	Р	•	٠	•	
Knowledge	• .	•	•		•	•	
	dA		ili	ili ty	Ab ili ty to	Ab ili ty to Pla	Ability to Adapt and Create ility to Communicate ty to Direct to Control Organize n e and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: PARTICIPATION REQUIREMENTS-PHASES TWO AND THREE ONLY. Copyright (C) 1976 by The Minister of State for Science and Technology, Ottawa Ontario

GRAPH NO. 303 DATE PRINTED28-Jun-76

DATE ENTERED 1-JUN-76 Classification Capacities/Resource Ability Characteristics - Leadership Requirements For AS-5 - Type B Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity	-	•	•	•	•	•	•
Development Capacity	•	•	•	•	•	•	•
Reporting		•		•	•		•
Scope		-		•	-	•	
Impact Potential	•	•	•		•	•	•
Analytical Capacity		•				•	
Initiation Capacity	•	-	•		•	•	•
Planning Capacity	•	•	•	•	•	•	
Management Capacity	•	•	•		•.	•	
Contacts Capacity	•		•	•	•	•	
Decision Capacity	•			•	•	•	
Knowledge	•	•			•	•	
	Ab	 	¦ ¦ Ab ili	 Ab ili ty	Ab ili ty to	At ili ty to Pla	Ability to Adapt and Create fility to Communicate ty to Direct to Control Organize n e and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO LEADERSHIP REQUIREMENTS.

GRAPH NO. 304 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Developemental Capacities For AS-5 - Type B Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create	DP DP
Ability to Communicate	DP DP . DP
Ability to Direct	
Ability to Control	. DP DP DP
Ability to Organize	DP DP DP
Ability to Plan	DP DP DP DP
Ability to Analyze and Evaluate	. DP DP
·	<pre> </pre>

WORK SEGMENTS

COMMENTS: DEVELOPMENTAL CAPACITIES-PHASE ONE ONLY.

Copyright (C) 1976 by The Minister of State for Science and Technology, Ottawa Ontario

٠

GRAPH NO. 305 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUn-76

Resource Ability Characteristics/Work Segments - Participatory Capacities For AS-5 - Type B Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create	•	•	•	•	•	P	Ρ	Ρ	•	Ρ	Ρ	•	÷	•
Ability to Communicate				•	Ρ	•	•	P	Ρ		Ρ	Ρ	٠	P
Ability to Direct					•		•		•					•
Ability to Control						P	Ρ	P		Ρ			Ρ	
Ability to Organize						P	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	•
Ability to Plan		•				P	P	P	Ρ	P	P		Ρ	
Ability to Analyze and Evaluate	•					P	Ρ	Ρ		Ρ	Ρ	Ρ	P	P
				era: ing	rk !	itia Segi	iti: al 1 men	iman al Con tat	fine ry (Info tac ion	llo emei Ana ormi t ani	ן Pr w U nt lys ati d D	Ev ima ng p C is on ist	For alua ry (Pape onta Deve	Final Recommendations rmal Output Formulation ation and Discussion of Outputs Output Formulation er Development act and Discussion elopment ution

WORK SEGMENTS

COMMENTS: PARTICIPATION CAPACITIES-PHASES TWO AND THREE ONLY.

GRAPH NO. 306 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Leadership Capacities For AS-5 - Type B Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create	
Ability to Communicate	
Ability to Direct	
Ability to Control	
Ability to Organize	
Ability to Plan	
Ability to Analyze and Evaluate	
	<pre> Final Recommendations Formal Output Formulation Evaluation and Discussion of Outputs Primary Output Formulation Working Paper Development Follow Up Contact and Discussion Refinement Primary Analysis Initial Information Development Initial Contact Work Segmentation and Distribution Operational Approach Development Planning Initiation</pre>

WORK SEGMENTS

COMMENTS: NO LEADERSHIP CAPACITIES REQUIRED.

GRAPH NO. 307 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Developemental Roles For AS-5 - Type C Projects.

CLASSIFICATION CAPACITIES

Final Recommendations	•	DL	•		DL	• .			•	•		DL
Formal Output Formulation		DL	•	DL	DL	DL	DL	•		•	DL	DL
Evaluation and Discussion of Outputs	•	DL	DL	DL	DL			•	•	•	•	DL
Primary Output Formulation	•	DL		DL	DL	DL	ÐL	•	-	•	DL	DL
Working Paper Development		DL	•	DL	DL	DL	DL	•	•	•	DL	
Follow Up Contact and Discussion		DL	DL	DL	•	•	•	•	•	•	•	DL
Refinement	•	DL		DL	DL	•	DL		•	•	•	DL
Primary Analysis	•	DL	•	DL	DL		DL	•	•	•	DL	DL
Initial Information Development		DL	•	DL	DL	DL		•	•	•	DL	
Initial Contact	•	DL	DL	•	DL	DL	•	•	•	•	•	DL
Work Segmentation and Distribution	•	•		•	•	•	•	•	•	•	•	
Operational Approach Development		•	•	•		•	•	•	•	•	•	
Planning	•	•		•	•	•		•				
Initiation	•	•	•	•		•	•		•		•	
	K	D now	eci	 M ont sio	ana act	lan gem s Ci	An niti ning ent city	Im aly ati Cap ity	pac tic on pac aci	R R R t t a C a t t	epo Pot Ca pac Y	evelopmenť Capacitý rting ential pacity

WORK SEGMENTS

COMMENTS: DEVELOPMENTAL ROLES-PHASES TWO AND THREE ONLY.

Copyright (C) 1976 by The Minister of State for Science and Technology, Ottawa Ontario

.

.

GRAPH NO. 308 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Projects.

Classification Capacities/Work Segments - Participatory Roles For AS-5 - Type C

CLASSIFICATION CAPACITIES

		•											
Final Recommendations	•	P	• '	•	P	•	•	•	•	•	•	P	
Formal Output Formulation	•	Ρ	•	Ρ	Ρ	P	Р	•	•	•	P	P	
Evaluation and Discussion of Outputs	•	Ρ	P	Ρ	Ρ	•	•	•	•	•		Р	
Primary Output Formulation	•	Ρ	•	P	P	P	Ρ	•	•	•	Ρ	P ·	
Working Paper Development	•	Ρ		P	F	Ρ	Ρ	P			P	•	
Follow Up Contact and Discussion	•	Ρ	Ρ	Ρ	•	•	•	•			•	Р	
Refinement		Ρ	•	P	P	•	P		•			Р	
Primary Analysis	•	Ρ	•.	P	P	•	P	•	•	•	P	P	
Initial Information Development		P	•	P	P	P	•	•			P		
Initial Contact	•	P	P		P	P	•			•		P	
Work Segmentation and Distribution		Ρ		P	P	P	•		•		P	•	
Operational Approach Development		Ρ	•	P	P	P					P	•	
Planning	•	Ρ	•	P	P	P	•	•	•	•	P		
Initiation		Ρ	٠	•	•	P	•	•	•		•		
· ·	Kr.	l l De powl	cis	inta ion	nac	ann eme Ca	An liti ing nt pac	aly ati Ca Cap ity	pac tic on pac aci	ope t F al Cap ity	por l lote Cap laci	velopmen ting ntial acity	y Capacity Capacity

WORK SEGMENTS

GRAPH NO. 30 DATE PRINTED2 DATE ENTERED

Classification Capacities/Work Segments - Leadership Roles.For AS-5 - Type C Projects.

CLASSIFICATION CAPACITIES

Final Recommendations			•	•	•			•		•	•	•	
Formal Output Formulation			٠	•	•		•		•	•		•	
Evaluation and Discussion of Outputs	•			•				•			•		
Primary Output Formulation		•						•			-		
Working Paper Development		-		•	•		•			•	•		
Follow Up Contact and Discussion		•				•			•		.•		
Refinement	•						•	•			•	•	
Primary Analysis					•	٠						•	
Initial Information Development				•	•	•	•			. #			
Initial Contact	-				•				•				
Work Segmentation and Distribution	-	-						•					
Operational Approach Development		-							•				
Planning			•			•		•	•			•	
Initiation						•						•	
		De Iowl	cis	nta ion	nag	ann Ieme Ca	An iti ing pac ity	aly ati Ca Cap ity	pac tic on pac aci	ope t P al Cap ity	por ote Cap aci	velopment ting ntial acity	Capacity Capacity

WORK SEGMENTS

COMMENTS: NO LEADERSHIP ROLES REQUIRED.

DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Developemental Requirements For AS-5 - Type C Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity	. DL DL DL DL DL DL
Development Capacity	DL DL DL DL . DL
Reporting	· · · · · · ·
Scope	· · · · · · · ·
Impact Potential	· · · · · · ·
Analytical Capacity	DL DL DL DL . DL
Initiation Capacity	DL DL DL
Planning Capacity	DL DL DL DL DL DL DL
Management Capacity	DL DL DL DL DL .
Contacts Capacitý	. DL . DL DL DL .
Decision Capacity	DL DL . DL DL . DL
Knowledge	· · · · · · ·
	Ability to Adapt and Create Ability to Communicate Ability to Direct Ability to Control Ability to Organize Ability to Plan

; Ability to Plan Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: DEVELOPMENTAL REQUIREMENTS-PHASES TWO AND THREE ONLY. Copyright (C) 1976 by The Minister of State for Science and Technology, Ottawa Ontario

DATE PRINTED28-Jun-76 DATE PRINTED28-Jun-76 DATE ENTERED 1-Jun-76 Classification Capacities/Resource Ability Characteristics - Participatory Requirements For AS-5 - Type C Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity	•	P	P	P	P	P	P -
Development Capacity	Ρ	P	P	P	Ρ	•	P
Reporting	•				•		
Scope		•			•	•	
Impact Potential		•		•		•	•
Analytical Capacity	P	P	P	P	P	•	P .
Initiation Capacity	P	P	P	P	P	•	P
Planning Capacity	P	P	P	P	P	P	P
Management Capacity	Р	Ρ	P	P	P	Р	P
Contacts Capacity		P	•	P	P	P	
Decision Capacity	Р	Ρ	•	P	P		P
- Knowledge	•		•				
	Ab		 Ab	ili ty	Ab ili ty to	Ab ili ty to Pla	Ability to Adapt and Create ility to Communicate ty to Direct to Control Organize n e and Evaluate

RESOURCE ABILITY CHARACTERISTICS

DATE PRINTED28-Jun-76 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76 Classification Capacities/Resource Ability Characteristics - Leadership Requirements For AS-5 - Type C Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity						•					
	•	•	•	•	•	•	•				
Development Capacity	•	•		•	•	•	•				
Reporting	•	•	•	•	•	•	•				
Scope	•	•		•		۰,	•				
Impact Potential	•			•	•	•	•				
Analytical Capacity		•			-	•					
Initiation Capacity		•	•	•		•				x	
Planning Capacity	•	•		•		•					•
Management Capacity	•	•	•	•	•	•					
Contacts Capacity		•		•			•				
Decision Capacity	•	٠		•	•	•	٠				
Knowledge	•	•	•	•	•	•	•				
	Ab	 	ili	ili ty	ili ty to :	Ab ili ty to Pla	ility to ty to Dire to Contro Organize	L .	l Create		

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO LEADERSHIP REQUIREMENTS.

GRAPH NO. 313 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

.

.

Resource Ability Characteristics/Work Segments - Developemental Capacities For AS-5 - Type C Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create	DL . DL DL
Ability to Communicate	DL DL . DL . DL
Ability to Direct	DL DL DL DL DL DL DL DL DL
Ability to Control	DL DL DL DL DL DL .
Ability to Organize	DL ĐL DL DL DL DL .
Ability to Plan	DL DL DL DL DL DL .
Ability to Analyze and Evaluate	DL DL DL DL DL
	<pre> </pre>

WORK SEGMENTS

COMMENTS: DEVELOPMENTAL CAPACITIES-PHASES TWO AND THREE ONLY.

GRAPH NO. 314 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76 Resource Ability Characteristics/Work Segments - Participatory Capacities For AS-5 - Type C Projects.

RESOURCE ABILITY CHARACTERISTICS

	Ability	to	Adapt and Cr	reate	Ρ	•	•	•	•	P	•	P	•	•	P	P	•	•
•	Ability.	to	Communicate		P	P	•	•	P	•		•	Р		•	P	•	P
	Ability	to	Direct		-	P	P	P	P	P	P	P	P	P	Ρ	P	P	P .
	Ability	to	Control			P	Р	P	P	P	Р		P	P	P	P	Ρ	
	Ability	to	Organize	x		P	P	P	P	P	P	P	Р	P		•.	P	•
•	Ability	to	Plan		P	P	Р	P	P	P	P	P	Р	P			Р	•
	Ability	to	Analyze and	Evaluate	Р	P	P			P	P	P			P	P		•
	·•	•	• • •			Pti iti	oppi ann ati	erai ing	rk ! tion	itia Segr	itia al (ima al Con tat	fin ry (Info tac ion	llo eme Ana orma t and	ן Pr w U nt lys ati d D	Eva iman ng I p Co is on I istr	Foi alu: ry r Papi ont: Devi cibi	Final Recommendations rmal Output Formulation ation and Discussion of Outputs Output Formulation er Development act and Discussion elopment ution

WORK SEGMENTS

GRAPH NO. 315 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Undefined Capacities For AS-5 - Type C Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create Ability to Communicate Ability to Direct Ability to Control Ability to Organize Abilitu to Plan Ability to Analyze and Evaluate 1 | Final Recommendations | | Formal Output Formulation | Evaluation and Discussion of Outputs | Primary Output Formulation | Working Paper Development I Follow Up Contact and Discussion Refinement 1 Primary Analysis Initial Information Development Initial Contact - ! | | Work Segmentation and Distribution 1 Operational Approach Development Planning Initiation

WORK SEGMENTS

COMMENTS: NO LEADERSHIP CAPACITIES REQUIRED.

GRAPH NO. 316 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Developemental Roles For AS-5 - Type D Projects.

CLASSIFICATION CAPACITIES

Final Récommendations		DL									DL	DL
Formal Output Formulation		DL		DĹ	ÐL	•	DL	•	•		ÐL	DL
Evaluation and Discussion of Outputs		DL	DL	DL	•	DL	DL		•	•	•	DL
Primary Óùtput Formulation	•	DL	÷	DL	DL	DL	DL	•	•	•	DL	
Working Paper Development		DL	•	DL	DL	•	DL		•	•	DL	•
Follow Up Contact and Discussion		ĎL	DL	•	•	•	•	•	•	. •		DL
Refinement	•	DL		DL	DĹ	DL	DL	•	•		DL	DL
Primary Analysis	-	DĹ	•	•	DL	DL	DL		•		DL	DL
Initial Information Development		DL				DL			•		DL	DL
İhitial Contact	•	ĎĹ	DL		ÐL	DL		÷	•		•	DL
Work Segmentation and Distribution		ÐL	÷	ÐL	DĹ	DL		•	•		DL	•
Opërational Approach Development	i	ÐĹ		DL	DL	DL		•			DL	•
Planning	•	DL		DL	ĎL	DL	•	•	•		DL	
Initiation	•	DL			•	DÌ	• ·	•	•	÷		•
	Σ	D now	eci	 M ont sio	ana act	l In Jan gem s C	1 1 1	aly Ca Cap ity	Sc pac tic pac aci	R iop it Cat	Di epoi Poti Caj pac	Advišory Capacity evelopment Capacity rting ential pacity ity

WORK SEGMENTS

GRAPH NO. 317 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Participatory Roles For AS-5 - Type D Projects.

CLASSIFICATION CAPACITIES

Final Recommendations		P		•		•	•	•	•	•	Р	P
Formal Output Formulation		Ρ		Р	Р		Р		•	•	Ρ	P
Evaluation and Discussion of Outputs		Р	Ρ	P		Ρ	Р		•	•		P
Primary Output Formulation		Р		Ρ	Ρ	Ρ	Ρ				Ρ	
Working Paper Development	•	Ρ	•	Ρ	Ρ	•	Ρ		•		Ρ	•
Follow Up Contact and Discussion	•	Ρ	Ρ			•	•		•		•	P
Refinement		Ρ		Ρ	Ρ	Ρ	Ρ			•	P	Р
Primary Analysis		Ρ			Ρ	Ρ	Ρ			•	Ρ	Р
Initial Information Development		Ρ				Ρ	•	•		•	Ρ	P
Initial Contact		Ρ	Ρ		Ρ	Ρ	•				•	Р
Work Segmentation and Distribution	•	Ρ	•	Ρ	Ρ	Ρ					Ρ	•
Operational Approach Development		Ρ		Ρ	Ρ	Ρ	•		•		Ρ	•
Planning	•	Ρ		Ρ	Ρ	Ρ		•	•		Р	
Initiation	•	Ρ			•	Ρ		•				
	K	De	cis	onta sior	nac	lanr yeme s Ca	An Aniti ent apac	aly ati Cap ity	pac tic on pac aci	ope t F al Cap	por Pote Cap	evelopment Capacity ting ential pacity

WORK SEGMENTS

GRAPH NO. 318 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

CLASSIFICATION CAPACITIES Final Recommendations Formal Output Formulation Evaluation and Discussion of Outputs Primary Output Formulation Working Paper Development Follow Up Contact and Discussion Refinement Primary Analysis Initial Information Development Initial Contact Work Segmentation and Distribution Operational Approach Development Planning Initiation 1 Advisory Capacitu Development Capacity 1 Reporting Scope Impact Potential Analytical Capacity I I Analytical Capacity I Initiation Capacity Planning Capacity Management Capacity Contacts Capacity Decision Capacity Knowledge

Classification Capacities/Work Segments - Leadership Roles For AS-5 - Type D Projects.

WORK SEGMENTS

COMMENTS: NO LEADERSHIP ROLES REQUIRED.

GRAPH NO. 319 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76 Classification Capacities/Resource Ability Characteristics - Developemental Requirements For AS-5 - Type D Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity	. DL DL DL DL .
Development Capacity	DL DL DL DL
Reporting	
Scope	
Impact Potential	
Analytical Capacity	DL DL DL DL . DL
Initiation Capacity	DL DL DL DL . DL
Planning Capacity	DL DL DL DL . DL
Management Capacity	DL DL DL DL DL DL
Contacts Capacity	. DL DL DL DL .
Decision Capacity	DL DL . DL DL . DL
Knowledge	
	Ability to Adapt and Create Ability to Communicate Ability to Direct Ability to Control Ability to Organize Ability to Plan Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

GRAPH NO. 320 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76 Classification Capacities/Resource Ability Characteristics - Participatory Requirements For AS-5 - Type D Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity	•	Ρ	Ρ	Ρ	Ρ	Ρ	
Development Capacity	Ρ	Ρ	Ρ	Ρ	Ρ	•	
Reporting				•			
Ścope		•		•	•	•	•
Impact Potential	•	•			•		
Analytical Capacity	Ρ	Ρ	Ρ	Ρ	P	•	P
Initiation Capacity	Ρ	P	Ρ	P	Ρ		P
Planning Capacity	Ρ	Ρ	Þ	P	Ρ		P ·
Management Capacity	P	Ρ	Ρ	Ρ	Ρ	Ρ	Р
Contacts Capacity		Ρ	Ρ	Ρ	Ρ	Ρ	
Decision Capacity	P	Ρ		P	Ρ		Р
Knowtedge					•		
	At	Ab Nili	oili	 Ab ili ty	l Ab ili ty to	Ab ili ty to Pla	Ability to Adapt and Create fility to Communicate ty to Direct to Control Organize n e and Evaluate

RESOURCE ABILITY CHARACTERISTICS

GRAPH NO. 321 DATE PRINTED28-Jun-76 DATE ENTERED (1-JUN-76 Classification Capacities/Resource Ability Characteristics - Leadership Requirements For AS-5 - Type D Projects. CLASSIFICATION CAPACITIES $\frac{1}{2}$ Advisory Capacity Development Capacity Reporting . . < Scope Impact Potential Analytical Capacity Initiation Capacity Planning Capacity Management Capacitu Contacts Capacity . . Decision Capacitu Knowledge . . Ability to Adapt and Create ! Ability to Communicate 1 ł Ability to Direct Ability to Control Ability to Organize Ability to Plan

Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO LEADERSHIP REQUIREMENTS.

GRAPH NO. 322 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76 Résource Ability Characteristics/Work Segments – Developemental Capacities For AS-5 – Type D Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create	DLDL.DLDL.
Ability to Communicate	DL DL DL DL . DL . DL
Ability to Direct	DL DL DL DL DL DL DL DL DL DL DL DL DL
Ability tõ Control	. DL DL DL DL DL DL DL DL DL .
Ability to Organize	DL DL DL DL DL DL DL DL DL .
Ability to Plan	DL DL DL DL DL DL DL DL DL .
Ability to Analyże and Evaluate	DL DL DL DL DL DL DL
· · ·	Image: Second structure Image: Second structure Image: Second structure Image: Second structure

WORK SEGMENTS

¢

DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Participatory Capacities For AS-5 - Type D Projects.

RESOURCE ABILITY CHARACTERISTICS

.

Ability to Adapt and Create	Ρ	•			•	P	-	P			P	Ρ		•
Ability to Communicate	P	P		•	Ρ		•	•	Ρ	•		Ρ		P
Ability to Direct	P	Ρ	P	Ρ	P	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	Р	P
Ability to Control		Ρ	Ρ	P	Ρ	Ρ	-	•	Ρ	P	Ρ	Ρ	Ρ	
Ability to Organize	Ρ	Ρ	P	Ρ	Ρ	P	Ρ	Ρ	Ρ	Ρ		•	Ρ	
Ability to Plan	Ρ	Ρ	Ρ	Ρ	P	Ρ	Ρ	Ρ	Ρ	Ρ			Ρ	
Ability to Analyze and Evaluate	Ρ	Ρ	•	•	•	Ρ	Ρ	Ρ	•	•	P	Ρ	•	
	i i i i i i i i i i i i i i i i i i i	Pt Iti	anr)era Ning	rk Itio	In In Seg	Pr iti al men	ima al Con itat	Fo fin ry Inf tac	l Wo rllo Ana orm t an	ן Pr וע U ועs ועs שלו ול D	Ev ima ng p c is on	Fo alu Pap Cont Dev	Final Recommendations rmal Output Formulation ation and Discussion of Outputs Output Formulation er Development act and Discussion elopment ution

WORK SEGMENTS

DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Leadership Capacities For AS-5 - Type D Projects.

RESOURCE ABILITY CHARACTERISTICS Ability to Adapt and Create Ability to Communicate Ability to Direct Ability to Control Ability to Organize Ability to Plan Ability to Analyze and Evaluate | Final Recommendations Formal Output Formulation 1 | | Evaluation and Discussion of Outputs | Primary Output Formulation | | Working Paper Development | Follow Up Contact and Discussion Refinement l Primary Analysis Initial Information Development Initial Contact 1 Work Segmentation and Distribution

1 Planning Initiation

WORK SEGMENTS

Operational Approach Development

COMMENTS: NO LEADERSHIP CAPACITIES REQUIRED.

GRAPH NO. 325 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

÷

Classification Capacities/Work Segments - Developemental Roles For AS-4 - Type A Projects.

CLASSIFICATION CAPACITIES

Final Recommendations	•	•	•	•	•	•	•	•	•	•	•	•	
Formal Output Formulation	•	-	•	•			•	•	•	•	•		
Evaluation and Discussion of Outputs						•	•					•	
Primary Output Formulation	-		•		•								
Working Paper Development	-	-				•		•			•	•	
Follow Up Contact and Discussion		-	•	•				•				-	
Refinement	•	•					-	•	•				
Primary Analysis		•	•	•			•		•	•		•	
Initial Information Development	•						-	•	•	•		•	
Initial Contact				•		•						•	
Work Segmentation and Distribution	•		•	•	•	•	•	•	•	•		•	
Operational Approach Development	•			•	•	•	•		•			•	
Planning					•	•			•	•	•	•	
Initiation					•	•	•		•		•	•	
		Der	cis	nta ion	nag cts	ann eme Ca	An Iti Iti pac Ity	aly ati Ca Cap	pac tic on pac aci	ope t P al Cap itu	por ote Cap aci	Advisory velopment ting ntial acity ty	Capacity Capacity

WORK SEGMENTS

COMMENTS: NO DEVELOPMENTAL ROLES REQUIRED.

GRAPH NO. 326 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Participatory Roles For AS-4 - Type A Projects.

CLASSIFICATION CAPACITIES

						•						
Final Recommendations	•	•	•	•	•	•	•	-	•	•	•	•
Formal Output Formulation	•	•	•	•	•	•	• ·	•		•	•	•
Evaluation and Discussion of Outputs		•			٠	•	-		•	•		•.
Primary Output Formulation	•	•	•		•	•		•	•		•	•
Working Paper Development	•	Р	•	P	Ρ	Ρ	P	•	•		P	P
Follow Up Contact and Discussion	•	Р	Ρ		•	•		•	•		•	Р
Refinement	•	P		Ρ	Ρ	•	Р			•	P	P
Primary Analysis	•	P		Ρ	P		Ρ	•		•	Ρ	P
Initial Information Development	•	P	P	P	Ρ	Ρ	P	•		•	Ρ	P
Initial Contact		Ρ	P			•	•			•		P
Work Segmentation and Distribution		•	•			•	•		•		•	•
Operational Approach Development		•		•	•	•			•			•
Planning		•		•	•			•	•		•	•
Initiation	•	•		•		•	•	•	. •	•	•	
	Kr	De	cis	nta sion	inag icts	ann Ieme Ca	Ani iti ing nt ipac	aly ati Ca Cap ity	l Sc pac tic on pac aci	ope t F al Cap ity	por Vote Cap Jaci	Advisory Capacity velopment Capacity ting ntial acity ty

WORK SEGMENTS

COMMENTS: PARTICIPATION ROLES-PHASE TWO ONLY.

GRAPH NO. 327 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

4

Classification Capacities/Work Segments - Leadership Roles For AS-4 - Type A Projects.

CLASSIFICATION CAPACITIES

.

Final Recommendations	•	•		•		•	•	•	•	•	•	• .	
Formal Output Formulation		•	•	•	-	•				•	•		
Evaluation and Discussion of Outputs			•				•		•		•		
Primary Output Formulation		•	•	-	•	•	•	•	•		•		
Working Paper Development		-	•		•					•			
Follow Up Contact and Discussion		-	•			•					•		
Refinement		-				•	-	•			•	•	
Primary Analysis						•	•		•		•		
Initial Information Development	•	-	•				•	•	•	•	•		
Initial Contact		-					•	•	•		•		
Work Segmentation and Distribution	•	•			-	•			•				
Operational Approach Development			•	•	•	•	•	•		•	•		
Planning .			•		•	•	•	•					
Initiation	•	-	•	-	-	•		•					
	Kn	Der	cis	nta ion	Pla nage cts Cap	ann 2mei Cai	iti ing nt Jac	aly Ca Cap ity	pac tic on pac	ope t P al Cap ity	por ote Cap aci	Advisory Capacity evelopment Capacity rting ential pacity ity	

WORK SEGMENTS

COMMENTS: NO LEADERSHIP ROLES REQUIRED.

٠

GRAPH NO. 328 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Developemental Requirements For AS-4 - Type A Projects.

CLASSIFICATION CAPACITIES	
Advisory Capacity	
Development Capacity	
Reporting	· · · · · · ·
Scope	
Impact Potential	· · · · · · ·
Analytical Capacity	
Initiation Capacity	· · · · · · ·
Planning Capacity	· · · · · · · ·
Management Capacity	· · · · · · ·
Contacts Capacity	· · · · · · ·
Decision Capacity	· · · · · · ·
Knowledge	· · · · · · ·
	Ability to Adapt and Create Ability to Communicate Ability to Direct Ability to Control Ability to Organize Ability to Plan Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO DEVELOPMENTAL REQUIREMENTS.

DATE PRINTED28-Jun-76

DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Participatory Requirements For AS-4 - Type A Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity	Ρ	Ρ	Ρ	Ρ	Ρ	•	•
Development Capacity	Ρ	P	Ρ	P			
Reporting		•	-	•	•		
Scope		-			•		•
Impact Potential			•		•		
Analytical Capacity	Ρ	P	P	Ρ	•	Ρ	P
Initiation Capacity				•	•		P
Planning Capacity	Р	P	Ρ	P	•	•	•
Management Capacity	Ρ	Ρ	P	P	•	÷	
Contacts Capacity		Ρ	-	P	•	Ρ	
. Decision Capacity		Р	Ρ	P			
Knowledge		•					
	H H H		 Ab ili	ili ty	Ab ili ty to	Ab ili ty to Pla	Ability to Adapt and Create ility to Communicate ty to Direct to Control Organize n e and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: PARTICIPATION REQUIREMENTS-PHASE TWO ONLY.

GRAPH NO. 330 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Leadership Requirements For AS-4 - Type A Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity Development Capacity Reporting Scope Impact Potential Ahalytical Capacity Initiation Capacity Planning Capacity Management Capacity Contacts Capacity Décision Capacity Knowledge 1 Ability to Adapt and Create Ability to Communicate Ability to Direct Ability to Control Ability to Organize ł Ability to Plan Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO LEADERSHIP REQUIREMENTS.

DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Developemental Capacities For AS-4 - Type A Projects.

RESOURCE ABILITY CHARACTERISTICS

	· · · · · · · · · · · · · · · · · · ·	
Ability to Adapt and Create	· · · · · · · · · · · · · ·	
Ability to Communicate		
Ability to Direct		
Ability to Control		
Ability to Organize		
Ability to Plan		
Ability to Analyze and Evaluate		
	<pre> Final Recommendations Formal Output Formulation Evaluation and Discussion of Primary Output Formulation Working Paper Development Working Paper Development Follow Up Contact and Discussion Refinement Refinement Refinement Initial Information Development Initial Information Development Initial Contact Work Segmentation and Distribution Operational Approach Development Planning Initiation</pre>) [™] Outputs

WORK SEGMENTS

COMMENTS: NO DEVELOPMENTAL CAPACITIES REQUIRED.

GRAPH NO. 332 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Participatory Capacities For AS-4 - Type A Projects.

RESOURCE ABILITY CHARACTERISTICS

•	
Ability to Adapt and Create	•••••
Ability to Communicate	P P
Ability to Direct	P P . P P P
Ability to Control	P
Ability to Organize	P
Ability to Plan	P P P P . P
Ability to Analyze and Evaluate	P P P P P
	<pre> Final Recommendations </pre>

WORK SEGMENTS

COMMENTS: PARTICIPATION CAPACITIES-PHASE TWO ONLY.

GRAPH NO. 333 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

えいないをうちになるので、ころうろいろしてきないとういうう

je. .

ź

Resource Ability Characteristics/Work Segments - Leadership Capacities For AS-4 - Type A Projects.

RESOURCE ABILITY CHARACTERISTICS Ability to Adapt and Create Ability to Communicate Ability to Direct Ability to Control Ability to Organize Ability to Plan Ability to Analyze and Evaluate Final Recommendations Formal Output Formulation 1 Evaluation and Discussion of Outputs 1 1 Primary Output Formulation ! 1 Working Paper Development Follow Up Contact and Discussion Refinement - 1 Primary Analysis Initial Information Development Initial Contact Work Segmentation and Distribution Operational Approach Development Planning Initiation

WORK SEGMENTS

COMMENTS: NO LEADERSHIP CAPACITIES REQUIRED.

GRAPH NO. 334 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Developemental Roles For AS-4 - Type B[.] Projects.

CLASSIFICATION CAPACITIES

Final Recommendations	•	-	•	•	•	•	•	•	•	•	•	•	
Formal Output Formulation	•	DP		•	DP	•	•	DP	DP	•		•	
Evaluation and Discussion of Outputs	•	DP	DP		DP	•	DP	•	DP	•	•	•	
Primary Output Formulation	•	DP	•	DP	DP	₽P	DP	DP	DP	•	•		
Working Paper Development	•		•	•			•				•	•	
Follow Up Contact and Discussion		-	•		•	•	•		•		•	•	
Refinement			•		•	•	•			•	•	•	
Primary Analysis	•	•		•	•	•		•	•		•	•	
Initial Information Development	•	•	•		•	•					•	•	
Initial Contact		•	•		•	•	•	•	•		•	•	
Work Segmentation and Distribution		•		•						•	•	•	
Operational Approach Development		-	•		•	•				•	•	•	
Planning		•	•	•	•	•			•				
Initiation		•	•				۰.		•				
	** ** ** ** ** ** ** ** ** * K	L De now	eci	ont ∋io		lanı gem s C:	nit nin ent apa	nalı iat g C: Cap cit	Sc Sc mpac ytic ion apac paci	ope t P al Cap ity	por ote Cap aci	velopment ting ntial acity	Capacity Capacity

WORK SEGMENTS

COMMENTS: DEVELOPMENTAL ROLES-PHASE THREE ONLY.

	PH NO.		
DATE	PRINT	ED28-Jun	-76
DATE	ENTER	ED 1-JUN	-76

لالمتركي يغاطيهما ليوبع بالمتحاف لالماء

Alter Alterna

5

Classification Capacities/Work Segments - Participatory Roles For AS-4 - Type B Projects.

CLASSIFICATION CAPACITIES

Final Recommendations					•	-	-	•	•		•	
Formal Output Formulation												
Evaluation and Discussion of Outputs		-					-					
Primary Output Formulation				•		•	•				•	
Working Paper Development	•	Ρ		•	P	Ρ	Р	•	•		Ρ	P
Follow Up Contact and Discussion		Ρ	P	P	Ρ			•	•		•	P
Refinement		P		Ρ	Ρ	Ρ	Ρ	•			Ρ	P
Primary Analysis		Ρ		P	P	Ρ	P				Ρ	P
Initial Information Development		Ρ	•	•	P	P	P				P	
Initial Contact		Ρ	Ρ			P	-					P
Work Segmentation and Distribution							-			•		
Operational Approach Development										•		
Planning												
Initiation			•							•		
		De	cis	onta Sior	inac icts	anr Jeme S Ca	An hiti ning pac ity	aly ati Ca Cap ity	Sc pac tic on pac aci	ope t P al Cap ity	por ote Cap aci	Advisory Capacity velopment Capacity ting ntial acity ty

WORK SEGMENTS

.

COMMENTS: PARTICIPATION ROLES-PHASE TWO ONLY.

GRAPH NO. 336 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Leadership Roles For AS-4 - Type B Projects.

CLASSIFICATION CAPACITIES

							•				
Final Recommendations	•	•	•	•	•	•	•	• •	•	•	•
Formal Output Formulation	•	•	•		•	•	•		•	•	•
Evaluation and Discussion of Outputs	•		•	•		•			•		
Primary Output Formulation	•		•		•		•	• •			•
Working Paper Development		•		•	•	•	•				•
Follow Up Contact and Discussic			•	•		•					•
Refinement			٠	•	•	•	•			•	•
Primary Analysis	•	•	•	•		•	•		÷		•
Initial Information Development	•		•		•	•					•
Initial Contact		•	•		•	•	•		-	•	
Work Segmentation and Distribution			•	•	•	•	•	• `•	-		•
Operational Approach Development	•		•	•	•	•	•		-		
Planning	•	•	•	•	•	•	•		•		
Initiation	•		•	•	•	•	•		•	•	•
· · ·	Kn	De	cis	nta ion	nag cts	ann eme Ca	iti ing nt pac	Impa alyti ation Capa Capac ity	Scop Ict Ical I Ca Icit	epor e Pote Cap paci y	Advisory Capacity velopment Capacity ting ntial acity ty

WORK SEGMENTS

COMMENTS: NO LEADERSHIP REQUIREMENTS.

DATE PRINTED28-Jun-76

DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Developemental Requirements For AS-4 - Type B Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity	DF	' -		•	DP	•	
Development Capacity	DF	DP	DP	•		DP	
Reporting				•	•		
Scope					•	•	
Impact Potential			-			•	
Analytical Capacity	DF	DP	DP	DP		DP	
Initiation Capacity		-	-			DP	•
Planning Capacity	DI	P DP	DP	•		•	
Management Capacity		-				•	
Contacts Capacity				•	DP	•	
Decision Capacity	DI	••••	•		•	•	
Knowledge		•	•	•	•	•	
	f		 A bil	¦ A bil ity	Al bil ity to	bili ity to Pla	Ability to Adapt and Create bility to Communicate ity to Direct to Control Organize an ze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: DEVELOPMENTAL REQUIREMENTS-PHASE THREE ONLY.

GRAPH NO. 338 DATE PRINTED28-Jun-76

DATE ENTERED 1-JUN-76 Classification Capacities/Resource Ability Characteristics - Participatory Requirements For AS-4 - Type B Projects.

CLASSIFICATION CAPACITIES							· · ·
Advisory Capacity	Р	Ρ	•	Ρ			•
Development Capacity	Р	Ρ	•			Ρ	
Reporting		•	-				
Scope	-	•					
Impact Potential							
Analytical Capacity	P	Ρ	Ρ	Ρ		Ρ	
Initiation Capacity			•			P	•
Planning Capacity	P	Ρ	P			•	
Management Capacity	•			•			
Contacts Capacity	•	•	•		•		
Decision Capacity	Р	Ρ	•		•	Ρ	•
Knowledge		•	•	•	•	÷	
	Ab	Ab	ili	 Ab ili tu	 Ab ili ty to	Ab ili ty to Pla	Ability to Adapt and Create ility to Communicate ty to Direct to Control Organize n e and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: PARTICIPATION REQUIREMENTS-PHASE TWO ONLY.

DATE PRINTED28-Jun-76 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76 Classification Capacities/Resource Ability Characteristics - Leadership Requirements For AS-4 - Type B Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity	
Development Capacity	• • • • • • •
Reporting	· · · · · · ·
Scope	
Impact Potential	
Analytical Capacity	
Initiation Capacity	
Planning Capacity	
Management Capacity	· · · · · · · ·
Contacts Capacity	
Decision Capacity	
Knowledge	
	Ability to Adapt and Create Ability to Communicate Ability to Direct Ability to Control Ability to Organize Ability to Plan Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO LEADERSHIP REQUIREMENTS.

.

DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Developemental Capacities For AS-4 - Type B Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create	DP
Ability to Communicate	DP DP . DP
Ability to Direct	
Ability to Control	DP .
Ability to Organize	DP DP .
Ability to Plan	DP . DP .
Ability to Analyze and Evaluate	DP DP DP DP
	<pre> </pre>

WORK SEGMENTS

COMMENTS: DEVELOPMENTAL CAPACITIES-PHASE THREE ONLY.

GRAPH NO. 341 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Participatory Capacities For AS-4 - Type B Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create	•	•	• '	•		P		Ρ	•	P	•	•		
Ability to Communicate				•	P	•		Ρ	P			•		
Ability to Direct					•									
Ability to Control			•			P	P	P		P		•		
Ability to Organize			•			P	P	P	P	Р				
Ability to Plan					•	P	Р	P	P	P				
Ability to Analyze and Evaluate						P	P	P		P			•	
			ann	era ing	rk tio	iti Seg	iti al men	ima al Con tat	fin ry Inf tac ion	Wo Illo Ana orm	rki w U nt tys ati d D	Ev ima ng p C is on ist	Fo alu Pap ont Dev rib	Final Recommendations rmal Output Formulation ation and Discussion of Outputs Output Formulation er Development act and Discussion elopment ution

WORK SEGMENTS

COMMENTS: PARTICIPATION CAPACITIES-PHASE TWO ONLY.

GRAPH NO. 342 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Leadership Capacities For AS-4 - Type B Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to	Adapt and Create	•	•	•	•	•	•	•	•	•	٠	•	•	*	
Ability to) Communicate	•	•	•	•	•	•	•	•	•		•	•		
Ability to	Direct	•	•	•		•	•	•	•	•	•	•	•	•	•
Ability to	o Control	:	•		•	•		•		•	•	•	•		
Ability to	Organize	•	•	•	•	•	•		•	•	•	•	•	•	
Ability to	Plan	•	•	•	-	•	•	•	•	•	•	•	•	•	
Ability to	Analyze and Evaluate	•	•	•	•	•	•	•	•	•	•	•	•	•	
		Ini		Ope Inni	erat .ng	rk S tior	itia	itia al (men:	ima al Con tat	fine ry f Info tac ion	llou emer Anal orma t ano	rkir v Up nt lys atir d D	EV ima o C is on ist	For For Pap Dev rik	Final Recommendations ormal Output Formulation Jation and Discussion of Outputs Output Formulation Der Development cact and Discussion Pelopment

WORK SEGMENTS

COMMENTS: NO LEADERSHIP CAPACITIES REQUIRED.

GRAPH NO. 343 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Developemental Roles For AS-4 - Type C Projects.

CLASSIFICATION CAPACITIES

Final Recommendations	•	•	•	•		•	•	•	•	•	•	•				
Formal Output Formulation	•	•	•		•		•			•	•					
Evaluation and Discussion of Outputs			٠	•	•	•	•	•								
Primary Output Formulation			•					•			•					
Working Paper Development		•			•			•		•	•					
Follow Up Contact and Discussion		•	•					•			•	•				
Refinement			•		•											
Primary Analysis	•				-				•							
Initial Information Development	•				•	•		•						·		
Initial Contact					•						-					
Work Segmentation and Distribution																
Operational Approach Development				•		•		•	•							
Planning			•							•	•					
Initiation		•	•	•	•	•		•	•							
			Co cis	nta ion	nag cts	ann eme Ca	iti ing nt pac	aly ati Ca Cap	pac tic on pac aci	ope t P al Cap itu	De por ote Cap	Advisory Capa velopment Capa ting ential vacity ty	acity acity			

WORK SEGMENTS

COMMENTS: NO DEVELOPMENTAL ROLES AT THIS RESOURCE PROJECT LEVEL-IN TERMS OF ROLE CHANGE(PARTICIPATION TO LEADERSHIP) Copyright (C) 1976 by The Minister of State for Science and Technology, Ottawa Ontario

GRAPH NO. 344 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Participatory Roles For AS-4 - Type C Projects.

CLASSIFICATION CAPACITIES

Final Recommendations	•	Ρ	•	•	P	٠	•	•	•	•.	•	Р
Formal Output Formulation	•	Р	•	Ρ	Ρ	Ρ	Р	•	•	•	Ρ	Р
Evaluation and Discussion of Outputs	•	Р	Ρ	Ρ	Ρ	•	•	•	•	•	•	P
Primary Output Formulation	•	P	•	Ρ	Ρ	Р	Р	•		٠	Ρ	P .
Working Paper Development	•	Ρ		Ρ	Ρ	Ρ	P	•	•	•	Ρ	P
Follow Up Contact and Discussion	•	Ρ	Ρ	Ρ	•	-	•	•	•		•	P
Refinement	•	Ρ	•	Ρ	Ρ		Р	•		•	•	P
Primary Analysis	•	Р	•	Ρ	P	•	Р	•	•	•	P	P
Initial Information Development	•	P	•	P	Ρ	P	•	•	•	•	P	•
Initial Contact	•	Ρ	Ρ	•	Ρ	Ρ	•	•	•	•	•	P
Work Segmentation and Distribution		P	•	P	P	Р	•	•	•	•	Ρ	
Operational Approach Development	•	Р	•	P	Ρ	Ŗ	•	•	•	•	Ρ	•
Planning	•	P	•	Ρ	P	P	•	•	•	•	Ρ	•
Initiation	•	Р	•	•	•	Р	•	•	•	•		
	Kn	De De	cis	nta ion	nag cts	In ann eme Ca	iti ing nt pac	aly ati Ca Cap ity	pac tic on pac aci	ope t P al Cap ity	por ote Cap aci	Advisory Capacity velopment Capacity ting ntial acity ty

WORK SEGMENTS

COMMENTS: PARTICIPATION ROLES-ALL PHASES.

GRAPH NO. 345 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Leadership Roles For AS-4 - Type C Projects.

CLASSIFICATION CAPACITIES

Final Recommendations		•							•		•	
Formal Output Formulation		•		•			•		•	•	•	
Evaluation and Discussion of Outputs									•			
Primary Output Formulation							-		•			
Working Paper Development					•		-					
Follow Up Contact and Discussion		•	•		•					•		
Refinement	-			•				•		•	•	
Primary Analysis				•	•	•		•	•	•	•	
Initial Information Development		•		*	•		-			•		
Initial Contact	-	•	•	•	•	•			•	•		
Work Segmentation and Distribution			•	•			•		•	•	•	•
Operational Approach Development	•	•				•				•	•	
Planning			•			•	•	•		•	•	
Initiation	•	•	•			•	•	•	•	•	•	*
	Kn	De	cis	onta SiOn	nag	ann Ieme Ca	An iti ing nt pac	aly Ca Cap íty	pac tic on pac aci	ope t P at Cap ity	por ote Cap aci	Advisory Capacity velopment Capacity ting ntial acity ty

WORK SEGMENTS

COMMENTS: NO LEADERSHIP ROLES REQUIRED.

GRAPH NO. 346 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Developemental Requirements For AS-4 - Type C Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity Development Capacity Reporting . Scope Impact Potential Analutical Capacitu Initiation Capacity Planning Capacity Management Capacity Contacts Capacity Decision Capacity Knowledge | | | | Ability to Adapt and Create | | Ability to Communicate | Ability to Direct | Ability to Control | Ability to Organize Ability to Plan Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO DEVELOPMENTAL REQUIREMENTS AT THIS WORK/RESOURCE LEVEL-IN TERMS OF ROLE CHANGE (PARTICIPATION/LEADERSHIP) Copyright (C) 1976 by The Minister of State for Science and Technology, Ottawa Ontario

GRAPH NO. 347 DATE PRINTED28-Jun-76

DATE ENTERED 1-JUN-76 Classification Capacities/Resource Ability Characteristics - Participatory Requirements For AS-4 - Type C Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity		Ρ	Ρ	Ρ	Ρ	Ρ	P
Development Capacity	P	Ρ	Ρ	Ρ	P	•	P
Reporting		•		•			
Scope				•			
Impact Potential					•		
Analytical Capacity	Ρ	Ρ	Ρ	Ρ	Ρ		P
Initiation Capacity	Ρ	Ρ	Ρ	Ρ	Ρ		Р
Planning Capacity ·	Ρ	Ρ	P	P	Ρ	Ρ	P
Management Capacity	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	P
Contacts Capacity		Ρ		Ρ	Ρ	Ρ	• ,
Decision Capacity	Ρ	Ρ		P	Ρ		P
Knowledge		•					
	 Ab	 Ab ili	ili	ili ty	ili ty to	ili ty to Pla	Ability to Adapt and Create ility to Communicate ty to Direct to Control Organize n e and Evaluate

RESOURCE ABILITY CHARACTERISTICS

GRAPH NO. 348

DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Leadership Requirements For AS-4 - Type C Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity Development Capacity Reporting Scope Impact Potential Ánalytical Capacity Initiation Capacity Planning Capacity Management Capacity Contacts Capacity Decision Capacity Knowledge Ability to Adapt and Create | | Ability to Communicate | | Ability to Direct | Ability to Control | Ability to Organize l Ability to Plan Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO LEADERSHIP REQUIREMENTS.

GRAPH NO. 349

DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Developemental Capacities For AS-4 - Type C Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create	· · · · · · · · · · · · · ·
Ability to Communicate	
Ability to Direct	
Ability to Control	
Ability to Organize	
Ability to Plan	
Ability to Analyze and Evaluate	
	<pre> </pre>

WORK SEGMENTS

COMMENTS: NO DEVELOPMENTAL CAPACITIES AT THIS RESOURCE/WORK LEVEL IN TERMS OF ROLE CHANGE (FROM PARTICIPATION TO DEVELOP.LE Copyright (C) 1976 by The Minister of State for Science and Technology, Ottawa Ontario

GRAPH NO. 350 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Participatory Capacities For AS-4 - Type C Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create Р...Р.Р. . P P Ability to Communicate P P P P Ρ Ρ Ability to Direct . P P P P Р PP Р Ρ Ρ Ρ Ρ P Ability to Control PP. . P P Р P P P P P P P Ability to Organize P P Ρ Ρ Ρ P Ρ P Ρ P . Ability to Plan P Ρ Ρ Р Ρ. P P. P P P Ρ Ability to Analyze and Evaluate Р P P Ρ Р Р ΡP | Final Recommendations Formal Output Formulation Evaluation and Discussion of Outputs 1 | Primary Output Formulation Working Paper Development Follow Up Contact and Discussion Refinement | Primary Analysis Initial Information Development Initial Contact Work Segmentation and Distribution Operational Approach Development Planning Initiation

WORK SEGMENTS

GRAPH NO. 351 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Leadership Capacities For AS-4 - Type C Projects.

.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create	•	•		•	•	•	•	•	•	•	-	•	•	
Ability to Communicate	-	•				•		•	-	•	•	•	•	•
Ability to Direct		•	•	•.		•		•	•		•	•		
Ability to Control	-	-			•			•				•		
Ability to Organize		•	•		•	•		•	•		•	•		
Ability to Plan	•	•									•			
Ability to Analyze and Evaluate	-	•	•			•			•	•		•	•	
				era ing	rk tio	I I In Seg	Pr iti: al	Re ima Con tat	Fo fin ry Infi tac ion	¦ llo eme Ana orm t an	Pr ki w U nt lys ati d D	ima ng p (is on isi	Fo Valu Pap Cont Dev	Final Recommendations ormal Output Formulation lation and Discussion of Outputs Output Formulation per Development lact and Discussion velopment

WORK SEGMENTS

COMMENTS: NO LEADERSHIP CAPACITIES REQUIRED.

Copyright (C) 1976 by The Minister of State for Science and Technology, Ottawa Ontario

 \sim

GRAPH NO. 352 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Developemental Roles For AS-4 - Type D Projects.

CLASSIFICATION CAPACITIES

Final Recommendations	-	•	-		-	•	•	•	•	•	•	•		
Formal Output Formulation	•	•		•	•	•	•	•		•		•		
Evaluation and Discussion of Outputs	•			•	•	•	•	•		•	•	•	·	
Primary Output Formulation	-	-	•			` •		•		•	•	•		
Working Paper Development	•	•				•		•				•		
Follow Up Contact and Discussion		•			•	•	•	•	•	•	•	•		
Refinement	•	•	•	•	•		•				•	•		
Frimary Analysis	-			•	•	•		•	•	•	•	•		
Initial Information Development	•		•	•	•	•	•	•		•		•		
Initial Contact	•		•		•		•			•	•	•		
Work Segmentation and Distribution		•	•				•	•	•	•	•	•		
Operational Approach Development			•.					•.	•	•				
Planning	•	•	•		•		•	•		•		•		
Initiation									•	•	•	•		
· · ·	Kn	De	cis	nta ion	nag cts	ann eme Ca	iti; ing nt u pac	aly ati Ca Cap	pac tic on pac aci	ope t P al Cap ity	De por ote Cap aci	velopment ting ntial acity	Capacity Capacity	

WORK SEGMENTS

COMMENTS: NO DEVELOPMENTAL ROLES REQUIRED AT THIS RESOURCE/WORK LEVEL IN TERMS OF ROLE CHANGE(FROM P TO DL) Copyright (C) 1976 by The Minister of State for Science and Technology, Ottawa Ontario

GRAPH NO. 353 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

4

Classification Capacities/Work Segments - Participatory Roles For AS-4 - Type D Projects.

CLASSIFICATION CAPACITIES

Final Recommendations	•	Ρ	•	•	•	•	-	•	•	•	Ρ	P	
Formal Output Formulation	•	P	•	P	P	•	P	•	•	•	Ρ	P	
Evaluation and Discussion of Outputs	•	Ρ	P	P	•	P	P	•	•		•	P	
Primary Output Formulation	•	P	•	Ρ	Ρ	Ρ	P	•			Ρ		
Working Paper Development	•	Ρ	•	Ρ	Ρ	•	Ρ	•	•		Ρ		
Follow Up Contact and Discussion	•	Ρ	Ρ	•		•	•	•	•		•	P	
Refinement		Ρ	•	Ρ	P	P	Ρ	•	•	•	P	P	
Primary Analysis	•	Ρ	•		Ρ	P	Ρ	•	•	•	Ρ	P .	
Initial Information Development		Ρ		•	•	Ρ	•	•	•	•	Ρ	Р	
Initial Contact	•	Ρ	P	•	P	P	-	•	•	•	•	Р	
Work Segmentation and Distribution		P	•	P	P	P	-	•	•	•	Ρ		
Operational Approach Development	•	P	•	P	P	P	-	•	•	•	Ρ	•	
Planning	•	Ρ	•	P	P	Ρ	-	•	•		Ρ		
Initiation	•	Ρ	•		•	P		•		•	•		
	Kn	De	cis	nta	nag cts	ann Ieme : Ca	An: iti ing nt pac ity	aly ati Ca Cap ity	pac tic on pac aci	ope t P al Cap ity	por ote Cap aci	Advisory Capacit velopment Capacit ting ntial acity ty	

WORK SEGMENTS

GRAPH NO. 354 DATE PRINTED28-JUN-76 DATE ENTERED 1-JUN-76

Classification Capacities/Work Segments - Leadership Roles For AS-4 - Type D Projects.

CLASSIFICATION CAPACITIES

Final Recommendations	•	•	•		•	•	•	•	•	•	•	•					
Formal Output Formulation	•	•	•	•		•	•	•	•	•	•	•					
Evaluation and Discussion of Outputs	•	•	•			•		•	•	•	•	•					
Primary Output Formulation		•				•	•					•					
Working Paper Development			•	•		•						•				•	
Follow Up Contact and Discussion						•	•										
Refinement			•			•		•			•						
Primary Analysis											-	•					
Initial Information Development							•	•									
Initial Contact	•				•	•		•			•						
Work Segmentation and Distribution				•	•							•					
Operational Approach Development								•									
Planning											-						
Initiation					•			•		•	-	•					
	Kn			nta ion	inag icts	anr Ieme Ca	niti Ning	ati ati Cap citu	npac ion apac baci	ope t I al Cap	≥po ≥ Pot Ca	Adviso Developme orting Cential Apacity Sity	ry Capaci nt Capaci	ty [.] ty			

ι.

WORK SEGMENTS

COMMENTS: NO LEADERSHIP ROLES REQUIRED.

GRAPH NO. 355 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Classification Capacities/Resource Ability Characteristics - Developemental Requirements For AS-4 - Type D Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity	•	-		-			
Development Capacity			•		•		
Reporting	•	-		•			
Scope		•					
Impact Potential		-					
Analytical Capacity	•						
Initiation Capacity		•		•			
Planning Capacity		•			•	• •	
Management Capacity	-		•	•	•		
Contacts Capacity	•	•		•			
Decision Capacity	•				•		
Knowledge			•				
	Ab		 Ab ili	 Ab ili ty	Ab ili ty to	Abil ility ty to to Or Plan	bility to Adapt and Create ity to Communicate y to Direct Control ganize and Evaluate

RESOURCE ABILITY CHARACTERISTICS

COMMENTS: NO DEVELOPMENTAL REQUIREMENTS AT THIS RESOURCE/WORK LEVEL IN TERMS OF ROLE CHANGE (FROM P TO PL) Copyright (C) 1976 by The Minister of State for Science and Technology, Ottawa Ontario

GRAPH NO. 356 DATE PRINTED28-Jun-76

DATE ENTERED 1-JUN-76 Classification Capacities/Resource Ability Characteristics - Participatory Requirements For AS-4 - Type D Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity	•	P	Ρ	Ρ	P	P	
Development Capacity	Ρ	Ρ	Ρ	Ρ	P		
Reporting			•	•	•	•	
Scope		•	•		•	•	
Impact Potential	•	•			•	•	•
Analytical Capacity	Р	Ρ	P	P	P	•	P
Initiation Capacity	Ρ	Ρ	Ρ	Ρ	Ρ	•	Ρ
Planning Capacity	Ρ	Ρ	Ρ	Ρ	Ρ	•	P
Management Capacity	P	Ρ	Ρ	F	Ρ	Ρ	P
Contacts Capacity	• `	Ρ	P	P	P	P	
Decision Capacity	P	P		P	P	•	P
Knowledge		•	•	•		•	
	Ab		l Ab ili	ili ty	Ab ili ty to	ili ty to Pla	ility to Communicate ty to Direct to Control Organize

RESOURCE ABILITY CHARACTERISTICS

GRAPH NO. 357 DATE PRINTED29-Jun-76 DATE ENTERED 1-JUN-76 Classification Capacities/Resource Ability Characteristics - Leadership Requirements For AS-4 - Type D Projects.

CLASSIFICATION CAPACITIES

Advisory Capacity	
Development Capacity	
Reporting	
Scope	
Impact Potential	
Analytical Capacity	
Initiation Capacity	
Planning Capacity	
Management Capacity	
Contacts Capacity	· · · · · · ·
Decision Capacity	
Knowledge	
	Ability to Adapt and Create Ability to Communicate Ability to Direct Ability to Control Ability to Organize Ability to Plan Ability to Analyze and Evaluate

RESOURCE ABILITY CHARACTERISTICS

.

COMMENTS: NO LEADERSHIP REQUIREMENTS.

.

GRAPH NO. 358 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Developemental Capacities For AS-4 - Type D Projects.

RESOURCE ABILITY CHARACTERISTICS

Ability to Adapt and Create Ability to Communicate Abilitu to Direct Ability to Control Ability to Organize Ability to Plan Ability to Analyze and Evaluate | | Final Recommendations | Formal Output Formulation | Evaluation and Discussion of Outputs | | Primary Output Formulation | | Working Paper Development | Follow Up Contact and Discussion l Refinement l Primary Analysis Initial Information Development Initial Contact | | Work Segmentation and Distribution | Operational Approach Development l Planning Initiation

WORK SEGMENTS

COMMENTS: NO DEVELOPMENT CAPACITIES REQUIRED AT THIS RESOURCE/WORK LEVEL IN TERMS OF ROLE CHANGE(FROM P TO DL) Copyright (C) 1976 by The Minister of State for Science and Technology, Ottawa Ontario

GRAPH NO. 359 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics Work Segments - Participatory Capacities For AS-4 - Type D Projects.

.

RESOURCE ABILITY CHARACTERISTICS													
Ability to Adapt and Create	P					P		P	•		P	Ρ	
Ability to Communicate	P.	Ρ		.	Ρ				P		-	Ρ	. P
Ability to Direct	Ρ	P	Ρ	P	Ρ	P	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	P P
Ability to Control		Ρ	Ρ	P	Ρ	P		•	Ρ	Ρ	Ρ	Ρ	Ρ.
Ability to Organize	P	Ρ	Ρ	P	Ρ	P	Ρ	Ρ	P	P	•	•	Р.
Ability to Plan	P	Ρ	Ρ	P	Ρ	P	Ρ	Ρ	Ρ	Ρ	•	•	Ρ.
Ability to Analyze and Evaluate	P	P	•			P	Ρ	Ρ	•		P	P	
and the second second second second second second second second second second second second second second second	in the second se	F F F F F F	ani		ork atic	niti Seg	iti al Mer	ima ial Cor itat	fin Iry Inf Itac Ion	ollo Neme Ana Torm t Nar	orki ow U ent alys náti náti	ima ng ip C is on ist	Final Recommendations Formal Output Formulation aluation and Discussion of Outputs ry Output Formulation Paper Development ontact and Discussion Development ribution ent

WORK SEGMENTS

Massale

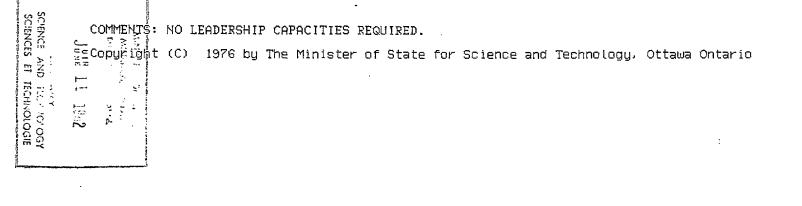


GRAPH NO. 360 DATE PRINTED28-Jun-76 DATE ENTERED 1-JUN-76

Resource Ability Characteristics/Work Segments - Leadership Capacities For AS-4 - Type D Projects.

RESOURCE ABILITY CHARACTERISTICS	
Ability to Adapt and Create	
Ability to Communicate	·
Ability to Direct	
Ability to Control	· · · · · · · · · · · · · · · · · · ·
Ability to Organize	
Ability to Plan	
Ability to Analyze and Evaluate	
	<pre> </pre>

WORK SEGMENTS



10025

