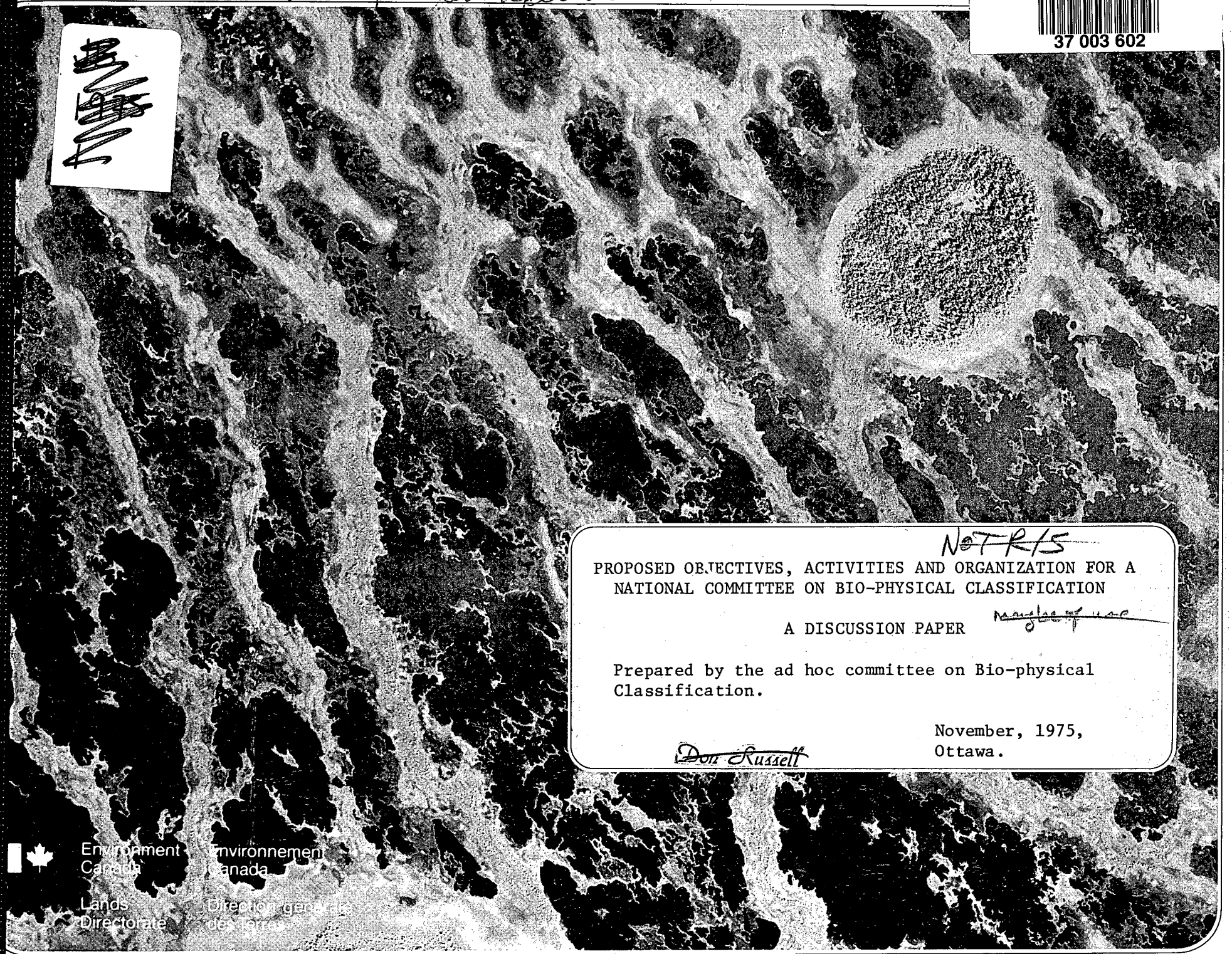

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PROPOSED OBJECTIVES, ACTIVITIES AND ORGANIZATION FOR A NATIONAL COMMITTEE ON BIO-PHYSICAL CLASSIFICATION

A DISCUSSION PAPER

Prepared by the ad hoc committee on Bio-physical Classification.

November, 1975,
Ottawa.

Don Russell

Environment Canada
Environnement Canada

Lands Directorate
Direction générale des terres

PROPOSED OBJECTIVES, ACTIVITIES, AND ORGANIZATION FOR A NATIONAL COMMITTEE ON BIO–PHYSICAL CLASSIFICATION

Prepared by the ad hoc committee on Bio-physical Classification

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CONTENTS:

Note to the reader: It is the purpose of this paper to form a basis for the discussion of the objectives, scope, activities, membership, etc. for a National Committee on Bio-physical Classification. Any comments and suggestions you have would be very much appreciated. Please send these to Mr. J. Thie, Lands Directorate, EMS, Environment Canada. (Phone:997-2321).

SUMMARY

PROPOSED OBJECTIVES

1. *To coordinate the continued development of a Canadian Bio-physical Classification System.*

2. *To provide national technical coordination and stimulate operational cooperation of Bio-physical type surveys.*

3. *To make recommendations and provide advice to federal and provincial government agencies and private industry as to the technical feasibility, methodology, benefits and costs of bio-physical type surveys for resource planning and management purposes.*

ACTIVITIES (Modified and abbreviated)

- bi-annual meetings of National Committee, more frequent meetings of working groups,
- reviewing methods, techniques, nomenclature,
- recommending changes for improvement and uniformity, writing and updating a manual,
- organizing problem-solving sub-committees and working groups to further develop methodology and increase comprehensiveness,
- providing a national forum for presentation and discussion of results of integrated type surveys at national, regional and provincial levels,
- sponsoring regional workships to improve technical and logistical cooperation,
- publishing proceedings of meetings and distribution of newsletter,
- recommending research,
- monitoring and recommending application of bio-physical type surveys,
- recommending integration of programs.

ORGANIZATION

NATIONAL COMMITTEE
includes small steering committee

—Permanent sub-committees
—Problem-solving term working groups.

Advise to and liaison .....with:

.Federal Dept.
.Provincial Dept.
.Industry
e.g. CSSC
North. Basel. Comm.
Nat. Land Use Comm.

MEMBERSHIP

National Committee:

Members should have scientific knowledge and experience in environmental type surveys as well as represent federal, provincial and university interest; proposed are, about 28-35 members.

Sub-Committees:

Any scientist that can make a contribution is free to take part in activities. Chairmen will invite participation on a regional or national basis depending on the type of concern.

BUDGET: Lands Directorate, EMS, plans to cover the cost of organizing the national meetings and the publications of manuals, proceedings and newsletter.

PREAMBLE

During its life span (1966-1972), the National Committee on Forest Land (NCFL) provided effective guidance to the Canada Land Inventory Program and served as a forum for the discussion and introduction of new trends in integrated environmental management. One of its sub-committees chaired by Dr. D.S. Lacate, developed an ecologically based classification for "wildlands" which was called the Bio-physical Land Classification. Under leadership of S.C. Zoltai a wetland classification compatible with the bio-physical system was designed.

The NCFL and its sub-committees were dissolved at the termination of the CLI program; however, the concepts of this ecologically based system have continued to receive growing acceptance. This is demonstrated by the fact that systematic bio-physical surveys at different levels of detail are on-going or planned by federal and provincial agencies and private industry in almost all provinces and territories.

In April 1974, a Toronto workshop which was attended by 75 representatives from federal and provinvial governments, universities and private industry working in or managing environmental surveys, recommended:

> *"that a national technical coordination committee (similar to the Canada Soil Survey Committee) be formed in order to generate guidelines for integrated surveys, to standardize methods and terminology and to coordinate approaches nationally, provincially, and regionally".*

A small ad hoc committee, representing the Lands Directorate (DOE), Soil Research Institute (CDA), Terrain Sciences (EMR), and the Water, Lands, Forest and Environment Branch (DINA) was formed to draft a proposal for terms of reference, membership, modes of operation etc. of such a committee.

The following material has been prepared by the ad hoc committee and is intended as a discussion paper for agencies interested in participating in a National Committee. It is based on the discussion members of the ad hoc committee had with specialists across the country. To avoid misunderstandings, it is important to make clear at the outset that the committee foreseen is a technical committee. The general purpose of the committee would be to provide coordination for the continued development of a canadian system for bio-physical classification and stimulate applications and technical and operational cooperation.

OBJECTIVES

1) *To coordinate the continued development of a Canadian System for Bio-physical Classification.*

2) *To provide national technical coordination and stimulate technical and operational cooperation of bio-physical type surveys.*

3) *To make recommendations and provide advice to federal and provincial government agencies and private industry as to the technical feasibility, methodology, benefits and costs of bio-physical type surveys for resource planning and management purposes.*

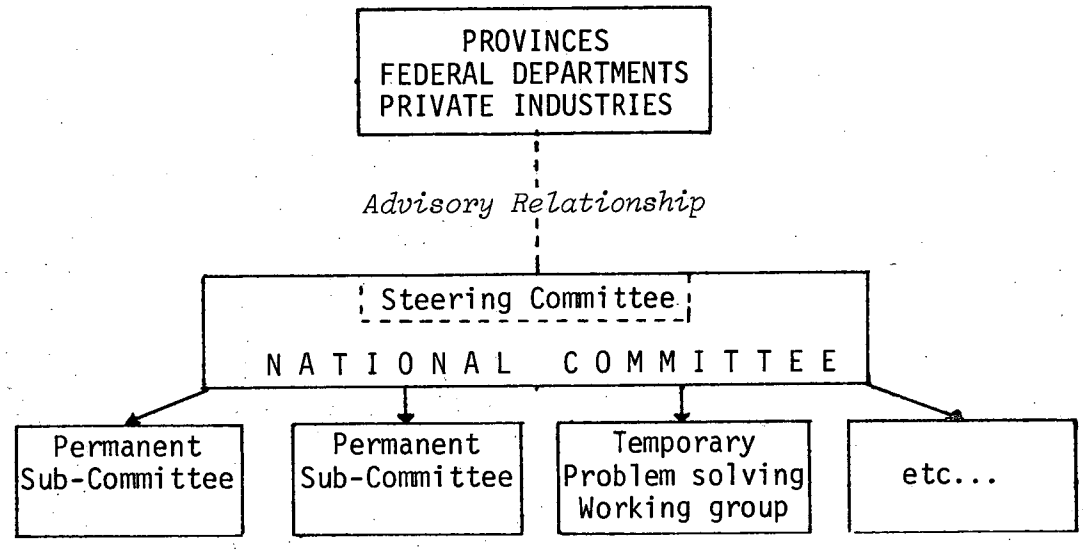
ORGANIZATION

The technical work of the National Committee on the further development of the Bio-physical Classification system is to be carried out by means of sub-committees and working groups. These will be established to provide solutions to scientific and technical problems as identified by the National Committee. For example, at present there is a need for the integration of water classification into the bio-physical and the development of a bio-physical approach to coastal zone classification.

The chairman of the National Committee would be a representative of the Lands Directorate, Environmental Management Service, DOE; membership would represent key federal and provincial agencies. As it is intended that the National Committee would only meet in alternate years, a small steering committee (4-5 members) would be constituted to plan meetings, activities, adjust membership etc. Members of the steering committee would be drawn from the National Committee and would represent key agencies (DOE, EMR, CDA, DINA and Provinces) which have a direct interest in bio-physical classification.

Working group and sub-committee chairman would be invited by the National Committee. These chairmen will organize their groups and invite participation by scientists according to objectives of the group and scope of the problem. Results of their work will be reported to the National Committee for evaluation and acceptance.

The National Committee would report through the Lands Directorate to the Environmental Management Service of the Department of Environment. It will report also on an advisory basis to designated officials of provincial and other federal departments.



ACTIVITIES

The National Committee would meet once every one or two years to provide a national forum for technical coordination, classification design and methodology evaluation.

The Committee would carry out the following activities by organizing meetings and working groups. They are listed as related to objectives:

1. Improvement of a National Classification Methodology for Bio-physical Surveys.

   - by assessing the present status of classification methodology,
   - by reviewing ecologically based classification activities,
   - by anticipating new developments in techniques for data gathering, classification, presentation and analysis,

- by reviewing methods, techniques and nomenclature used in bio-physical survey and recommending changes necessary for a greater measure of uniformity or for their improvement,
- by recommending investigations of problems affecting bio-physical classification, understanding of ecological relationships and the multi-disciplinary interpretation of bio-physical survey information,
- by proposing and initiating working groups and sub-committees to solve problems and increase the comprehensiveness of bio-physical classification,
- by evaluating sub-committee results and recommendations for modification and improvement of the bio-physical classification system,
- by publishing results of meeting in the form of proceedings and by up-dating a national manual with guidelines for bio-physical classification.

2. Coordination of Bio-physical Activities in Canada:

This is largely carried out by improving communication and discussions among the many agencies and individuals that are involved in bio-physical projects:

- by providing opportunity for project leaders to present results of ongoing and planned projects,
- by providing opportunity for provincial, federal, university and private industry people to discuss mutual concerns,
- by organizing special regional workshops in areas where better technical and logistical cooperation is required,
- by making recommendations as to the possible operational and technical integration of planned programs.

3. Provide Recommendations to Proper Authorities:

Based on the activities and achievements of working groups, sub-committees and the National Committee, new needs and concerns can be identified in areas such as research, coordination, financing, cost-sharing arrangements, use of compatible classification system, etc. These findings will be reported in the form of recommendations. The chairman of the National Committee will direct these to the agencies that may benefit from them and provide the necessary background material and follow-up.

One cannot expect the National Committee itself to develop new methodology. This part of the activities should be done at the sub-committee level, working groups and individual research. The National Committee would be a forum for evaluation and approval. There would be permanent as well as temporary sub-committees and working groups. The former ones could be disciplinary in nature e.g. Soil Classification, Terrain Classification. The latter ones would direct themselves to solving particular problems (e.g. wetland classification). The number of working groups should be kept to a minimum and only those supported where a distinct need exists and where significant progress can be made within the framework of this committee.

For discussion purposes, the following problem areas are suggested for temporary sub-committees' activities:

- integration of water classification into the Bio-physical Classification system,
- coastal zone classification,
- potential productivity classification (biomass),
- impact of remote sensing on bio-physical surveys.

A permanent sub-committee on Applications of Bio-physical Classificaton is suggested, chaired by the chairman of the National Committee. It would have the task of preparing application manuals, looking into new applications (e.g. urban areas) and monitoring the changing data needs, data inventory and data presentation requirements.

Publications: Results of the national meeting would be published in the form of proceedings. Working group reports may be part of these, but also may be published as separate papers, interim reports and publications. The Lands Directorate will attempt to support such publication as much as it can; sub-committee reports and publications may have to be supported by agencies of participating scientists.

Recommendations: It is important that recommendations of the Committee reach those organizations and individuals that can benefit from the. It will be the task of the chairman and steering committee to assure that they are distributed, that necessary background information is provided and that recommendation are given proper consideration by the "user" agencies.

MEMBERSHIP

The National Committee should operate at the working level. To achieve the three major objectives the membership of the committee should be based on a) scientific knowledge and experience in environmental-type surveys and b) representation from a wide range of interested and leading agencies from federal and provincial government agencies and universities.

Technical competence and/or active participation in the execution and management of environmental surveys should be given priority in the selection of members. The above criteria for membership could easily result in a large, cumbersone and relatively ineffective committee. Therefore it is proposed that the National Committee itself has the smallest membership possible.

As a guide for discussion, the following membership is proposed:

1 - Chairman, Lands, Environmental Management Service, DOE

1 - Canadian Forestry Service, DOE

1 - Canadian Wildlife Service, DOE

1 - Inland Waters Directorate, DOE

1 - Lands Directorate, DOE

1 - Soil Research Institute, CDA

1 - Terrain Sciences, Geological Survey, EMR

1 - Canada Centre for Remote Sensing, EMR

1 - Atmospheric Environment Service, DOE

1 - Fisheries and Marine Service, DOE

1 - Department of Indian and Northern Affairs

10 - one provincial representative for each of the provinces (10)

1-3- university specialists (expenses covered by federal money)

5-8- bio-physical leaders, or of major bio-physical projects (federal/provincial)

1-5- specialist or chairmen of sub-committees (most likely the chairmen will be already represented in the above members and their place could be taken by provincial and regional expertise.

28-35 TOTAL membership.

It is suggested that selection of members by the participating agencies is done in consultation with the ad hoc committee in the first instance and by the steering committee in future situations. In the formation phase, letters requesting participation will be sent to the agencies involved with suggestions as to whom might be considered for nomination.

The chairmen of the sub-committees and working groups will invite specialists to participate in the problem solving activities. These sub-committees could be fairly small in size (e.g. 5 members) or quite large structures like the wetland classification committee (about 5 or 6 provincial or regional chairman supported by provincial working groups each with about 5-6 members). Working group activities and membership may also reflect provincial, regional or departmental concerns. In these working level committees, most scientists that at present work in bio-physical type surveys or carry out research in related areas can make their contribution.

BUDGET

The Lands Directorate will attempt to cover the cost of organizing the National Committee meetings, expenses incurred by invited university representatives and the publication of manuals and proceedings. All other expenses should be born by the agencies of the individuals that participate in the Committee's activities. It is anticipated that research and working groups activities would be mainly financed through budgets of participating agencies, as any work undertaken would probably be an integral part of their program.

RELATIONSHIP WITH OTHER COMMITTEFS

The National Committee should liaise and cooperate with other groups and committees that have related interests like Polar Continental Shelf (EMR), Advisory Committee on Northern Baseline Studies, National Land Use Policy, Canadian Advisory Committee on Remote Sensing, Canada Soil Survey Committee, Advisory Committee on Northern Development etc. The relationship would be advisory in most instances. However with some committees close technical cooperation is required. At present the most important one of this group is the Canada Soil Survey Committee. This Committee has functioned since 1940 and made a significant contribution to a uniform classification methodology for soils in Canada. In many ways the National Committee on Bio-physical Classification (NCBC) is modelled after this committee, but will look at a wider spectrum than soils. It is expected that an intensive working cooperation will start between the two groups i.e. the soil classification methodology, description etc. developed and modified by the CSSC will be adopted by the NCBC. Members of the CSSC are expected to be active in the National Committee and its working groups and vice versa.