The Salmon
River Watershed

An Evaluation of the Collaboration Towards Ecosystem Objectives and a Watershed Vision

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Based on an M. Sc. Thesis by
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Frequently Used Acronyms

CCME	Canadian Council of Ministers of the Environment
EOSC	Ecosystem Objectives Steering Committee
FRAP	Fraser River Action Plan
FRBC	Forest Renewal British Columbia
ICA	Institute of Cultural affairs
LRMP	Land and Resource Management Plan
MOELP	Ministry of Environment, Lands and Parks
NGO	Non-Governmental Organization
SRWR	Salmon River Watershed Roundtable
WQGTG	Water Quality Guidelines Task Group

Forward

This report is a summary of a much larger thesis examining and evaluating the collaboration to set ecosystem objectives in the Salmon River Watershed. In the interests of brevity, most of the details regarding data collection and analysis methods, and the actual presentation of data have been omitted. (Highlights of the main finding, conclusions, and recommendations are reported.) Further details can be found in:

> Grant, Kathy. 1996. Evaluating the Collaboration Towards a Future Vision and Ecosystem Objectives for the Salmon River Watershed (Thompson/Okanagan, B.C.). M.Sc. Thesis in the Department of Resource Management and Environmental Studies at the University of British Columbia. 297pp.

Executive Summary

In 1995, the Fraser River Action Plan (FRAP) funded the Salmon River Watershed Roundtable's (SRWR) project to establish community-developed ecosystem objectives, (part of a larger pilot project to develop goals, objectives and indicators of ecosystem health). This collaborative process was evaluated using mostly qualitative methods including document analysis, participant observation, interviews with process participants, and a survey of watershed residents. A comparison of the Salmon River case study to a 5-stage model of collaboration framed the description of events, revealed parallels between the case study and the model, and placed the case study in the "structuring" stage of collaboration.

Through evaluating the process from the participants' viewpoints, several conclusions were drawn:

(1) The overall goal of the pilot project was achieved: community developed ecosystem objectives were established.

(2) Process strengths included: wide-spread awareness and support for the project within the watershed; a clearly defined convenor role; a well organized and facilitated process which encouraged participation of people present; and the education of local residents about their watershed and their neighbours.

(3) Process weaknesses or areas for improvement included: unclear roles of watershed residents and government agencies; poor attendance at community meetings; long and repetitive meetings; mistrust over the use of government funds; and scepticism about the ability of the SRWR to implement the objectives developed.

Although the project cost $124, 955 in contributed funding, as well as huge commitments of time and energy, most process participants thought the benefits of the process out-weighed these costs[1]. Benefits included: anticipated improvements in ecosystem health; education of, and shared understanding among watershed stakeholders; information for use in other planning processes; and organizational direction for the SRWR. Successful elements of the case study provide a strong basis for continuing the pilot project into its next phases (developing ecosystem indicators and a monitoring program) and for cautiously attempting the process in other watersheds.

Further assessments should be conducted to determine the productivity of the process outcomes with respect to long term improvements in ecosystem health. Future efforts to develop ecosystem objectives should pay special attention to the cultural and social appropriateness of process methods, and power, authority and accountability within the process. Specific

[1] Note that this evaluation comments on the planning aspects of setting ecosystem objectives, and not the stream restoration activities of the SRWR. Restoration activities have their own associated costs and benefits--such as numerous volunteer hours, or improvements in the biophysical condition of the watershed.

recommendations made for the SRWR regarding roles and responsibilities, communications, process, skills development and future research are also applicable to future projects. Both the federal and provincial governments have roles to play in the future promotion and development of ecosystem objectives in collaboration with local community groups. In fact, Environment Canada is obligated under the Canadian Environmental Protection Act (CEPA) to formulate environmental quality objectives (either quantitative or qualitative in nature) (Sections 8(1) & (2)), and provisions are made under CEPA which encourage or allow the ministry to use consultative or collaborative processes in completing these tasks (Section 8(3), and Section 2).

1.0 Introduction

"Where do we want our children to be 50 years into the future?" "What type of lifestyle should we and future generations enjoy?" "In what sort of environment do we want to live?" These types of questions are typical of visioning exercises--exercises which a community can use to look at where it wants to be at some point in the future. The answers to these questions can provide guidance on actions required by individuals and whole communities *today* in order to reach desired future visions.

One method of articulating future visions on an ecosystem basis is through ecosystem objectives. "**Ecosystem objectives**" are narrative statements which describe the collective vision that different stakeholders have for the future of their ecosystem. Developing ecosystem objectives is a **collaborative process** which advocates consensus decision making and the inclusion of all affected parties. The collaborative aspects of this process entail diverse, sometimes opposing, and often traditionally segregated interests to work together towards articulating and implementing a common vision. These processes are, by nature, more time consuming and exhaustive in terms of human resources than a command and control approach. Ecosystem objectives enthusiasts anticipate an eventual pay-off in the long term through a healthier ecosystem as a result of more community partners jointly taking responsibility for protecting and using resources.

1.1 Research Goal and Objectives

The goal of this study was to evaluate the process to develop ecosystem objectives in the Salmon River Watershed, located in the Thompson / Okanagan region of B.C.'s interior. There were several more specific objectives:

(1) To review the relevant literature on ecosystem objectives and collaborative processes, and place the case study in the context of current theory on these topics.
(2) To describe the procedures used in the case study and compare them to a collaborative model derived from the academic literature.
(3) To evaluate the success of the process from the participants' point of view.
(4) To make recommendations regarding the applicability of the process to other watersheds and ecosystems in British Columbia and the rest of Canada, and for the future of the Salmon River watershed project.

1.2 Rationale

Since the process for developing ecosystem objectives (or a watershed vision) could have radical implications for the way planning and management of resources is conducted, and since the process has certain costs associated with it, it is crucial that the process is evaluated before it is extended to other watersheds. If changes to traditional planning processes are to be made in the

best ways possible, it is important to evaluate experiments and pilot projects so that what works well, what does not work, and what changes are worth making on a larger scale can be discerned. Through examination of the Salmon River watershed case study, insight was gained into both successful elements of the process and areas for improvement, and recommendations were made.

1.3 Scope of the Study

This study evaluates the *process* for developing ecosystem objectives--*not* the ecosystem objectives themselves. In other words, this study does not assess the role of ecosystem objectives in maintaining/restoring/ensuring healthy ecosystems. (Such a project would indeed be valuable to conduct in a few years time.) Additionally, the empirical data collected through this evaluation comes from a single case study: the Salmon River watershed. While the conclusions made are specific to this watershed, they provide a strong basis for making recommendations about this process' potential use in other regions.

1.4 Overview of Research Methods

The types of questions involved in determining what makes a process successful are largely qualitative in nature. It is hard to quantify what people like or dislike about a process, especially when these likes or dislikes are intricately linked to the context in which the expression was made. Consequently, this research falls under a **qualitative research paradigm**. In order to provide for triangulation of qualitative data sources, several methods were used to collect case study data:

(1) **Document Analysis.** Documents produced by the SRWR or other organizations involved in the process under study were collected and reviewed. Records included meeting minutes, technical reports, planning documents, and public education materials.

(2) **Participant Observation.** The researcher attended 30 relevant meetings held in the watershed pertaining to the development of ecosystem objectives. Field notes were recorded during meetings to document general attendance, issues raised, unusual or significant events, and the researcher's impressions of events.

(3) **Personal Interviews with Process Participants.** A total of 25 interviews were conducted with a diverse cross-section of people from the case study who had each attended at least one community meeting. These interviews were conducted in order to find out participants' views on how well the process worked, what they liked or disliked, what suggestions they had for improving the process, and how they thought the results of the process would be used.

(4) **Mail Survey of Watershed Residents.** 1, 991 surveys were sent to households in the watershed (approximately every household). The intent was to reach those people who had not actively participated in the case study but who, nonetheless, are affected by the results and may have an opinion about the process. Overall, 10.4% (207) of the households responded to the survey, (though the response rate varies for different questions as respondents were not obligated to answer the entire survey).

2.0 Background

There are four conceptual building blocks for understanding the case study and evaluation. These four concepts are reviewed briefly below.

2.1 The Ecosystem Approach

An "ecosystem approach" in environmental, resource or community planning, advocates the consideration of three systems in defining and planning actions towards a future vision: the environment (referring to the biophysical elements of an ecosystem: earth, water, plants, animals, and the complex interactions amongst these elements); the economy (referring to the human system of goods production, exchange and use); and society (referring to human social needs, constructs, and interactions) (modified from various sources, e.g., Hancock 1993 and Hartig and Vallentyne 1989). Under such a philosophy, human systems are considered to be inextricable from the environment. Humans are part of natural systems and, as such, affect and are affected by the biophysical environment in which they live, or work, or from which they receive use-able products. Practising an ecosystem approach (in developing or implementing future visions) could be done at a variety of different spatial scales, depending on how "ecosystem" is defined. Today, an "ecosystem" is largely defined using a combination of ecological relationships and human purpose (i.e., ecologically-defined boundaries which make sense for the planning or management activity at hand).

2.2 Ecosystem Objectives

One example of how an ecosystem approach can be applied in planning and decision making is through the development of ecosystem objectives. **Ecosystem objectives** have been formally defined as, "A description of a desirable living environment (as defined by stakeholders) that balances social, economic and environmental goals," (DOE FRAP 1995). They should represent a common vision of the future; a future in which all ecosystem residents and users work co-operatively to reach their common objectives.

2.2.1 History of Ecosystem Objectives Initiatives

Over the last ten years, there have been a number of government led initiatives related to ecosystem objectives. The concept was first piloted in the Great Lakes, where it evolved into a process which explicitly recognised human concerns and needs in providing guidance for ecosystem management (Reynolds 1985, Bertram and Reynoldson 1992). Ecosystem objectives were developed for both Lake Ontario (Ecosystem Objectives Work Group 1992), and Lake Superior (Lake Superior Binational Program 1993). The process for developing ecosystem objectives was further refined by the CCME WQGTG (1996) who advocated a participative role for community members within a framework to set ecosystem health goals, objectives, and indicators. This new process garnered interest in British Columbia where an intergovernmental

group known as the Ecosystem Objectives Steering Committee (EOSC) held a conference on ecosystem objectives (Marmorek et al 1993) and then sought a pilot project for setting ecosystem objectives in B. C. The Salmon River Watershed (in the Thompson drainage basin) became this pilot project, supported largely by FRAP.

2.2.2 A Framework for Developing Ecosystem Health Goals, Objectives and Indicators

Influenced by emerging trends in environmental management, the Water Quality Guidelines Task Group (WQGTG) of the Canadian Council of Ministers of the Environment (CCME), developed a four step framework for developing ecosystem health goals, objectives, and indicators (CCME WQGTG 1996):

(1) Identify and Assess the Issues and Collate the Existing Ecosystem Knowledge Base.
(2) Develop and Articulate Ecosystem Health Goals and Objectives (completed through a community participation process).
(3) Select or Develop Ecosystem Health Indicators (related to the goals and objectives).
(4) Conduct targeted research and monitoring.

2.3 Community Participation Processes

In order to integrate social, economic, and environmental concerns into one management framework (such as the framework described above) diverse, sometimes opposing interests must sit at the same table. There are many dangers associated with these types of processes (the "nothing will get done" criticism--participants talk around the issues without ever reaching consensus, or consensus decisions result in actions that are too weak to have any observable impact). Yet there is also the potential for great rewards (agreements that are long lasting, have widespread support, and which more people implement).

Although the idea of including community members in decisions which affect them is not new (e.g., Connor 1974, Arnstein 1969), community involvement (stakeholder processes or public involvement) initiatives have exploded over the last decade. This type of process has been characterized in the following way:

> "...one in which those affecting or those affected by a particular plan, policy, or project come together to assist the proponent with the design, planning and perhaps implementation of that plan, policy or project" (Donaldson 1994).

2.4 Collaboration Theory

Because of their collaborative nature, community participation processes (such as those used to develop ecosystem objectives) can be described and evaluated under the auspices of collaboration theory. **Collaborative processes** are those in which "parties who see different aspects of a problem can constructively explore their differences and search for solutions that go

Figure 1: The Collaborative Process

STAGE 1: Antecedents
- motivation (conflict or vision based)
- origins (mandated or grassroots)
- intended outcome
- balance of power
- leadership/convenor characteristics

STAGE 2: Problem Setting
- identification and legitimacy of stakeholders
- problem definition
- clarity of stakeholder's expectations about outcomes
- commitment to collaborate
- identification of resources

STAGE 3: Direction Setting
- establishing ground rules
- developing shared understanding and values
- agenda setting
- organizing subgroups
- joint information search
- exploring options
- evaluating options
- reaching agreement and closing the deal
- dispersing power among stakeholders

STAGE 4: Structuring
- formalizing relationships
- assigning roles
- monitoring the agreement and ensuring compliance
- dealing with constituencies/external mandates
- building external support

STAGE 5: Outcomes
- programs
- impacts
- benefits derived
- external support

beyond their own limited vision of what is possible" (Gray 1989). The "problem" explored in a collaborative venture could be a source of conflict between the different parties involved (conflict-based collaborations), or it could be the needs associated with a common goal or concern (vision-based collaborations--like setting ecosystem objectives) (Gray 1989, BCRTEE 1994, and Kofinas and Griggs 1996).

Although the development of collaboration theory is relatively new, its roots lie in the merger of case study research on interorganizational behaviour with a number of more established theoretical perspectives including resource dependence theory, corporate social performance theory/institutional economics theory, strategic management theory/social ecology theory, microeconomics theory, institutional theory/negotiated order theory, and political theory (Gray and Wood 1991). Gray (1989) notes that although there is no clearly prescribed pattern for a collaborative process, common issues arise in most collaborative efforts which have lead to a general sequence of events. A 5-stage collaborative model, identified by Selin and Chavez (1995), is provided in Figure 1. The descriptive elements or "tasks" identified for each stage have been culled from various sources (Selin and Chavez 1995, Gray 1989, and Kofinas and Griggs 1996), and are used to guide the description of the case study collaboration in section 4.1.

3.0 Case Study Overview

The Salmon River Watershed is located in British Columbia's interior, and covers approximately 1510km² in the region between the urban centres of Kamloops, Salmon Arm, Vernon and Merritt

(Quadra Planning Consultants Ltd. 1996). Within the watershed, there is a mix of rural and urban residents, heavy reliance (or at least perceived heavy reliance) on resource based activities like farming and forestry, a mix of good and bad stories with respect to environmental conditions, and there is potential for great conflict over resource use/conservation, First Nations land claims, and urban/rural development issues.

3.1 Social and Economic Profile

The largest urban area is the town of Salmon Arm (population 14,500), however, only a portion of the town actually overlaps the watershed's boundaries. The total population of the watershed is 7, 845 (1991 census data taken from Quadra Planning Consultants Ltd. 1996), with 4, 460 living in Salmon Arm, and 3, 384 living in the rural portion of the watershed. The rural portion of the watershed contains a number of small communities along the valley bottom. The upland areas and the region near the headwaters are more sparsely populated. The watershed's current population growth rate (4%) is higher than the provincial average (3%).

Economically, the historical mainstays of the watershed have been agriculture and forestry. Beef and hay dominate in the upper watershed, and dairy and some row crops are grown in the lower watershed. The upland areas are mostly designated for forestry purposes and managed under three forest districts (Salmon Arm, Vernon, and Merritt). Although agriculture and agriculture-related work is still dominant in the rural areas of the watershed, the government/health/ education sector, along with wholesale and retail sales and other businesses, comprise the largest portion of the workforce in the entire watershed. The largest single source of income (1/3 of the total income for the watershed) comes from non-employment sources (e.g., pensions, unemployment insurance, social assistance, investment income, etc.). This may be a reflection of the large retiree population migrating to the Salmon Arm area. In the future, retiree income, tourism, and the service industry will likely drive the watershed's economy (Quadra Planning Consultants Ltd. 1996).

3.2 Resource Uses and Environmental Issues

There are a number of water and land based resource uses which have different requirements and impacts on the watershed, some of which may be conflicting (e.g., domestic use and irrigation from river, domestic use and irrigation from groundwater, fish spawning, recreation--fishing, swimming, tubing, hunting, camping, bird watching, snowmobiling, dog-sledging, cross-country skiing--, forestry, farming, mining, trapping, wildlife, and residential development) (Quadra Planning Consultants 1996). These resource uses have led to several perceived issues/problems in the watershed including water quality and quantity problems, lack of fish spawning habitat, increased nutrient loads in the river, eroding river banks, and residential development threatening the agricultural nature of the valley (summarized from Argent and Christiansen 1995 pp. 2-3).

3.3 The Salmon River Watershed Roundtable

The SRWR grew out of a project initiated in 1991 by landowners in the Salmon River valley near Salmon Arm. (Argent and Christiansen 1995, and Personal Communication with Roundtable Members.) In 1991, a few concerned Salmon Valley landowners brought some of the issues listed in the preceding section to the Environmental Management Committee of the District of Salmon Arm (DSA). The committee sought other interested parties to join them in discussing these issues. Momentum grew for the project as more agencies and more landowners became involved. In January 1993, the interested parties undertook a strategic planning exercise, out of which the SRWR emerged.

The SRWR is a multi-party organization comprised of landowners, First Nations, citizens, government agency representatives, and industry, and is open to anyone in the watershed. Members can join as individuals or as representatives of other organizations or agencies. Over the past two years, the Roundtable has made a concerted effort to make more people aware of the Roundtable through mail-outs to all watershed residents, and by holding meetings in different regions of the watershed.

The Roundtable operates through consensus and is organized into a number of subcommittees (e.g., executive committee, planning committee, field action committee, legislation committee, education and awareness committee). Members are all volunteers, however, they have one paid co-ordinator as well as co-op students or students of other funded work-experience programs when available. Currently, the chair of the Roundtable (since April 1996) is Mr. Dennis LaPierre, a sheep farmer from Falkland. Prior to Mr. LaPierre, Ms. Dorothy Argent held this position since the inception of the project. The Roundtable has also set up a Watershed Resource Centre (in Silver Creek) which provides the chair, co-ordinator and volunteers with office space and a place to keep resources, information, displays, etc. The Roundtable funds itself mainly through government grants for research and studies, field action activities, and core administration costs (Argent and Christiansen 1995).

4.0 The Case Study Evaluation

4.1 Comparison to the Five Stage Model of Collaboration

In 1995 the Salmon River Watershed Roundtable (SRWR) embarked on a project to establish community-developed ecosystem objectives for the Salmon River Watershed. Key events in this process, and noteworthy events preceding formal commencement of this project, have been organized into the five stages of collaboration presented in section 2.4. The key events are summarized in Figure 2, and the achievement of the main "tasks" are discussed below.

4.1.1 Antecedents. Antecedents to collaboration are those factors which describe the context from which a collaboration emerges. The antecedents to the watershed vision / ecosystem objectives project is the whole collaborative history of the Roundtable. The Roundtable is a vision based, grass-roots, collaboration. Its mission is to be a catalyst towards achieving a

healthy Salmon River watershed. The balance of power within the Roundtable is such that everyone can be heard, but some--due to the roles they play within the Roundtable--have more influence on the work conducted. The few strong leaders within the SRWR are highly supported by members, but have received a somewhat cooler reception in the larger watershed community.

Figure 2: Key Events in the Collaboration Towards Ecosystem Objectives

ANTECEDENTS

1991 DSA's Salmon River Restoration Project
1992 Salmon River Restoration Committee established
1993 Visioning workshop results in Mission Statement
EOSC seeks a pilot project for ecosystem objectives

PROBLEM SETTING

Dec 93-Nov 94 EOSC and SRWR hold ongoing meetings
Jan 1994 SRWR is officially formed
Oct 1994 SRWR adopts the Salmon River Watershed Planning Guide
Nov 1994 Letter of Agreement (facilitation contract) between SRWR and Environment Canada initiates ecosystem objectives project

DIRECTION SETTING

Knowledge Base Development

Feb 1995 Technical Co-ordination Meeting
May 1995 Terms of Reference for Knowledge Base Contract
July 1995 Seeking Agency Co-operation in the Salmon River Watershed (report)
Sept 1995 Verbal History and Problem Perceptions (report)
Nov 1995 The Salmon River Watershed: An Overview of Conditions, Trends and Issues. Public Summary Report
Mar 1996 The Salmon River Watershed: An Overview of Conditions, Trends and Issues. Technical Report

Community Development of Ecosystem Objectives

Jan 1995 SRWR Work Plan Workshop
Feb 1995 Facilitator Training by ICA
May-Nov 1995 Monthly community meetings in Mt. Ida, Silver Creek, Falkland and Westwold
Dec 1995 Falkland Workshop
Feb 1996 Work Planning Workshop for 1996
Mar 1996 Interim ecosystem goals and objectives adopted by SRWR

STRUCTURING AND OUTCOMES

Apr-May 1996 Follow-up community meetings in Mt. Ida, Silver Creek, Falkland and Westwold
June 1995-Present
SRWR involvement with Forest Renewal BC
July 1995-Present
SRWR involvement in the LRMP
Present Continuation of CCME framework pilot project (developing indicators and a citizen's monitoring program)

Other Outcomes: guidance to other SRWR projects
ammunition for funding proposals
more credibility for the SRWR

4.1.2 Problem Setting. Problem setting is the stage of collaboration in which stakeholders are identified and convened to agree on their common problems or reasons for working together. In the Salmon River watershed case study, the problem setting stage consisted of a few key

meetings and documents through which the SRWR and the EOSC learned about one another and agreed on a mutually beneficial work project. The purpose of the project was to establish community developed ecosystem objectives for the Salmon River watershed, the main participants in the process being the SRWR, certain government agencies, and watershed residents. A letter of agreement between Environment Canada and the SRWR outlined the work required for the project, as well as provided some of the financial resources (from Environment Canada FRAP and the Ministry of Environment, Lands and Parks). Financial resources were later augmented by the Environmental Partners Fund, and the Vancouver Foundation.

4.1.3 Direction Setting. In direction setting, stakeholders agree on procedures (for approaching their problems) and then set to work tackling the substantive issues of the collaboration. The January 1995 "Work Plan Workshop" officially started the project by setting an agenda of actions. These actions were supported by the development of a knowledge base for the Salmon River watershed which included both scientific and folk knowledge. The knowledge base was used to aid in the exploration and evaluation of options in the community meetings and Falkland workshop. The final result of the community meetings and Falkland workshop--reflecting the shared understanding of the participants--was a list of "Interim Ecosystem Goals and Objectives for the Salmon River Watershed" (see Appendix A). As a result of the process, the SRWR has probably gained some power or influence with other organizations, but the power relationships within the Roundtable have not noticeably changed.

4.1.4 Structuring and Outcomes. Structuring, the fourth stage of collaboration, is the stage in which the relationships made, and agreements reached during direction setting are formalized, monitored and supported. The last stage of collaboration, outcomes, delineates the impacts or changes that have occurred as a result of the collaboration. Since the Roundtable is currently in the "structuring" stage of this collaboration, most of the events in this stage are ongoing, and most of the outcomes are still to be realized. The 1996 Work Plan attempted to describe actions aimed at achieving the vision set through ecosystem objectives. One of the areas to concentrate on in the next few year is formalizing relationships with other organizations which influence (or are influenced by) the Roundtable's actions. There is general support among watershed residents for the Roundtable's work, however, this support would be augmented with strong government support for the Roundtable's vision. Continuation of the CCME WQGTG's framework for developing ecosystem health goals, objectives and indicators will result in indicators and a monitoring program for the watershed. Other anticipated outcomes include the provision of guidance to other SRWR projects, increased awareness of watershed residents, and more credibility for the SRWR speaking on behalf of watershed residents.

4.2 Evaluation by Case Study Participants

In many ways, the success of a collaborative process hinges on the sense of accomplishment and satisfaction of the participants. If participants feel that the process met their needs and was carried out in a legitimate, credible and productive way, the results of the process will be more positively received and stand a better chance of being implemented. The likes, dislikes,

concerns, and expectations of process participants can be used to recommend improvements or changes to the methods used and to suggest new foci for substantive issues. In this section, interview data was used to capture the insights of those people who actively participated in the case study, and survey data was used to both augment these views, and add scope by assessing views held by watershed residents. Questions asked of in interviews and surveys are given in Appendix B. Numbers in brackets (e.g., [4]) indicate the number of individuals making a similar observation.

4.2.1 General Approach of the Roundtable. Interview participants commented on four themes: community involvement, government involvement, process format or meeting structure, and the uniqueness/newness of this type of experience to them. These observations are given in Figure 3.

Figure 3: Observations about the Roundtable's General Approach

Community Involvement:
1. General citizens are developing the vision and goals rather than being informed of the government's vision. It's a bottom-up process. [6]
2. The public has not been consulted enough in the past. [3]

Government Involvement:
3. Government agencies and general citizens are working together. [4]
4. Previously, agencies were working in isolation from one another, with much duplication of efforts. Now there is more co-operation among agencies. [2]
5. Too much work is being placed on government departments; limited funding to do work. [2]

Process Format or Meeting Structure:
6. Consensus based methods are used [1]
7. The process and actual meeting formats are highly literate [1] and may not be reflective of the way local rural residents learn and make decisions [2]

Newness or Novelty of Involvement:
8. The meeting structure and facilitation methods are new to many of the people participating. [6]
9. More people are becoming educated through the communications effort associated with this process. [1]
10. This is a holistic approach which considers economic, social and environmental concerns. [1]

4.2.2 Problems and Issues. In general, interview participants felt that the problem categories identified by Christiansen and Romaine (1995) reflected the issues of concern in the watershed. The most important problems identified by interview participants are given in Figure 4. Interestingly enough, no-one mentioned fish, salmon, or lack of spawning habitat as the most important problem, despite the "return of the salmon" being an early goal of the Roundtable.

In the mail survey, 56 respondents also listed important problem areas (see Figure 4). Other than noting these areas, it is very difficult to draw conclusions about what exactly the survey participants perceive to be problems.[2]

[2] Unlike in the interviews, survey participants cannot be asked to expand on answers such as "Young Offenders Law", or "Metered

Figure 4: Important Problem Areas

Interview Participants:

(1) Water flow / quantity [6]
(2) Land-use or development planning [6]
(3) Educating stakeholders / residents [2]
(4) Water quality [2]
(5) Lack of community [2]
(6) Native land claims [2]
(7) All problems are related; can't pick a "most important" [2]
(8) Clearing of riparian zones [1]]
(9) Greed [1]

Survey Respondents:

Social:	apathy and education
	crime and justice
	population pressures
	community participation and co-operation
	lifestyles
Economic:	viability of traditional resource-based jobs
	unemployment / under-employment
Environmental:	cattle in or near the river
	fish or fish habitat
	water quality and quantity
	shoreline, banks and river channel
	general pollution
	co-operation to solve problems
	logging

As in other studies (Christiansen and Romaine 1995 and Quadra Consulting Ltd. 1996), water quantity and quality (and associated problems like erosion) were very important to both interview and survey participants. This is not surprising. Water quality and quantity issues--along with salmon habitat enhancement--were the earliest foci of the Roundtable, and still continue to be important. Participants did not emphasize ecosystem health in either the interviews or surveys. The overwhelming majority of comments on any biophysical element of the watershed related to strict utilitarian values: e.g., modifying the river to get the "best" use of water for agriculture and domestic use[3]. Some social and economic problems were also identified. Interview participants discussed land use and development and lack of knowledge and awareness. Survey participants noted population pressures, crime, and also noted awareness and apathy as significant issues.

4.2.3 Underlying Philosophy of the Roundtable. There were seven main motives or philosophies attributed to the Roundtable, given in Figure 5. Those people with a special role in the Roundtable (e.g., committee member) emphasized community involvement in decision making [7], collective visioning [2], an ecosystem or holistic approach [2], and education and awareness [2] in their answers. While a couple participants without special roles mentioned community involvement [1], or an holistic approach [1], those without special roles emphasized the use of consensus [3], the issues of water quality and quantity [4], and the promotion of

water supply for users direct from river". Does the person who wrote "Young Offenders Law" think that the law is too lenient? Too strict? Is there another problem with it? Is the other survey respondent in favour or against metering the water supply? The context is simply not available to answer these questions.

[3] A few survey respondents did mention the importance of restoring fish habitat, however, these references might relate more to a desire to enhance the fishery resource than to restoring ecosystem health.

Figure 5: The Roundtable's Underlying Philosophy

1	Community involvement in decision-making, local control, or bottom-up decision- making [8]
2.	Using "consensus" [3]
3.	Promoting collective visioning [3]
4.	Ecosystem approach or holistic approach [5]
5.	Water quality and quantity as the important issues [4]
6.	Promoting environmental work (restoration, or improving environmental conditions) [3]
7.	Educating the public [1]

environmental work [3].

4.2.4 Roles of Different Participants. There were four main roles of the **Roundtable**, each identified by at least five different participants: (1) *Facilitator and/or Leader* [9] to provide guidance, and organization to the process as well as to collate disparate views; (2) *Problem Solving Body* [7] to generate ideas and be some sort of alternative problem solving body; and (3) *General Forum for Discussion* among residents with differing views [5], or a "go-between" government agencies and general citizens [5].

There were three main roles attributed to **government agencies:** (1) To provide funding for Roundtable and restoration activities [12]; (2) To provide scientific or technical expertise [9]; and (3) To recognize and respect plans generated by the Roundtable [6].[4] Many interview participants also made references to different types of "sharing" that should be (is being) done by government agencies within this process: sharing information with stakeholders and other agencies, explaining their mandates or explaining policy, and also co-operating with other agencies.

Most interview participants, especially the watershed residents themselves, were more hesitant in describing the role of **watershed residents**. The most cited role for residents was to provide their opinions, knowledge and experiences to the process [7], though many people also noted the need for residents to take responsibility for good watershed stewardship actions [5].

4.2.5 Participation. Generally, interview participants thought that those people attending community meetings were the "right" people to do so. However, there were also critical groups of people missing (or not there often enough): Ministry of Forests [2], Ministry of Agriculture [2], Ministry of Health [1], the Columbia Shuswap Regional District [1], Community Associations [1], Native groups [2] and '"sawmills and big companies" [1]. Some participants said that the right people came to meetings, but their participation was not consistent, so all the groups were not represented at the same time. Many participants noted low attendance at community meetings. Specifically, general residents, landowners and farmers were not attending meetings in great enough numbers [7]. Almost all interview participants (24/25) thought that

[4] It seemed that these comments reflected the participant's view of the ideal role of government, not necessarily the actual current role.

everyone had an equal opportunity to express their views during meetings. In fact, some people said the methods used in meetings were especially good for encouraging participation from everyone, even the shy people [6].

Forty-five of the 197 survey respondents said that they had attended at least one of the 1995 community meetings. Reasons for participating provided by both interview and survey participants are listed in Figure 6.

Figure 6: Reasons for Participating in Community Meetings

Interview Participants:

(1) Want to make the world a better place / it feels good to be involved in this [6]
(2) It's my job [6]
(3) Environmental concern [4]
(4) General Interest [4]
(5) It's important to be involved in the community in which you live [3]
(6) Want to support the Roundtable / like the people [2]
(7) Have skills to offer [1]
(8) Want to stay on top of what they're going to regulate [1]

Survey Respondents:

(1) General interest [16]
(2) To acquire information [9]
(3) Curiosity [7]
(4) To restore the river [2]
(5) Simply to "participate" [3]
(6) Because they live by the river and felt obligated to attend [2]

Survey respondents gave five distinct reasons for not attending community meetings: they did not know about the meetings [25]; they were too busy, had other commitments, or were out of town during the meetings [44]; personal reasons such as disabilities, lack of child care, or no transportation to the meetings [14]; they thought the meetings were a waste of time, said they were not interested, did not think it concerned them, or questioned the motives of the meeting organizers [25]; and they had just recently moved to the watershed and either had not been living there when the meetings were held, or had not "settled in" yet [9].

Those respondents who did not attend any meetings said they would attend in the future if they had more information about the project prior to meetings [10]*;* if they thought they could contribute, it would not be a waste of time, they would be listened to, or if they were really interested [16]; if they were not busy [14]; if they had child care or transportation [2]; if they needed information [2]; if their friends went to a meeting [3]; or if they were against a proposal, policy or study of the Roundtable and wanted to voice their dissent [4].

4.2.6 Education and Preparation. About half of the interview participants (12/25) said they felt well prepared to participate, and many commented that the information provided to them by the Roundtable was very useful [7]. Some felt less prepared on account of there being too much information missing (data gaps) or the task of setting ecosystem objectives being over-whelming [7].

There were three main categories of information and training desired by interview participants: (1) a menagerie of general / lay information (e.g., historical information, maps, general explanations of ecological processes); (2) scientific / technical information (e.g., water use budget, effects of clear-cutting); and (3) skills training (e.g., facilitation or conflict resolution). Five participants commented that the best preparation for participating in a process like this is life experience. A couple of participants suggested that they would like to see more information given in alternative (to paper) formats, like videos, slides, and watershed tours [2].

4.2.7 Building Support. Support for the ecosystem objectives setting process was gauged through awareness of the project, opinions about the projects' legitimacy and worth, and expectations for the project.

AWARENESS. A huge majority of watershed residents, 90.7 ± 4.2 % (175/193) are aware of the Roundtable and its activities. As well, 69.1 ± 6.7 % (132/191) knew that the Roundtable was holding community meetings in Mt. Ida, Silver Creek, Falkland and Westwold. Despite this, a majority of the survey respondents, had not participated in any of the meetings (76.4%, 146/191) and did not consider themselves to be part of the Roundtable (84.9%, 141/166). The flyer was by far the most effective mechanism for generating awareness about the Roundtable's activities, though there was some success from other media such as newspapers, posters, and word of mouth.

LEGITIMACY AND WORTH. Eighty-four percent (± 6.7 %) of watershed residents (101/120) thought meetings and workshops were a good way to develop a watershed vision. Most interview participants [16] also thought the process was legitimate, citing its inclusiveness and accessibility to local residents. Others, while supporting the approach, noted low attendance, or inappropriate attendance, at the meetings, and said that the structure of the meetings produced a "forced" result, which was often too dilute to address the real problems.

Overall, interview participants thought the whole project, and most notably the community meetings, were well organized (in terms of preparation, set-up, and appropriate agendas) and well facilitated. Suggested improvements focused on the time-consuming, repetitive nature of the process, and strategies for securing greater involvement of community members. The survey respondents who had attended at least one of the community meetings (45/191) also liked the organization and facilitation of the community meetings, disliked the pace of the meeting-process (too slow), and thought there were not enough community members in attendance, and not enough actions resulting from meetings. Additional "likes" included: the informal, friendly atmosphere; the informative nature of the meetings; and the discussions about different issues.

EXPECTATIONS. When asked to look ahead to the end of the community meeting series, the majority [18] of interview participants said they would reach consensus on a watershed vision. Nearly all of them expressed some form of cautious optimism for the process, or at the very least, said they hoped the process would work. Four worries were also noted: worry about how interest in the project will be sustained, concern about increasing the divisions within the

watershed community (e.g., rural/urban split), difficulty working from the bottom-up when dealing with top-down government, and scepticism about whether or not there will be long terms actions resulting from the process.

4.2.8 Action Outcomes. While interview participants generally expected some sort of watershed vision to emerge from the process, they did not know what form this vision would take (in terms of a tangible product), nor how the product(s) could be used. (Over half of the participants could not even venture a guess!) The few suggestions for anticipated products included a set of guidelines for the Roundtable to follow, an action plan which prioritizes, guidance on where the Roundtable is "going", and a report like the monthly meeting summaries. It was postulated that the product could be used for planning purposes, targets, guidelines, threshold values, leverage for government funding, and reading material which will "just sit on a shelf".

Cynicism towards the final product was expressed by several interview participants (residents, government employees, and Roundtable staff). Some [3], especially in the rural areas of the watershed, expressed concern that the verbal or written vision developed through this process would favour urbanites, or people from Salmon Arm. Others [7] suggested that a vision would be achieved because the process was designed to result in a vision, not because people particularly wanted one.

Some participants talked about the possibility of setting up some sort of watershed authority to implement the vision or, the need for the Roundtable to have authority or a legal mandate. Because of the legal mandate issue, some interview participants thought that implementation, enforcement or monitoring of any plans would have to be conducted by government. However, some participants thought implementing, enforcing and monitoring the vision should be a collaborative effort of all those who live in the watershed and are affected by the project. When residents were questioned about their future behaviours, 92% (± 5.3 %) (96/104) of them said they would try to live in accordance with the vision developed through this process. As well, more than half of the survey respondents (65.2%, 73/112) said they would attend future SRWR meetings. Interview participants cautioned that future actions in the watershed are dependant on education and social pressure, and mentioned that changes will occur gradually (largely because of the learning people need to experience before changing their behaviour).

4.2.9 Perceived Benefits. With respect to "who" would benefit, interview participants gave a range of responses from no-one [1] to everyone [10], though some participants delineated more specific groups: people who live in the watershed [6]; everyone in the Fraser Basin [3]; future generations [3]; First Nations [1]; or "the environment" [1]. Interview participants said benefits would materialize in five main ways:

> (1) *An improved or healthier bio-physical environment* [12]. Participants noted there would be improvements in fisheries, water quality (and ability to swim in river), water quantity (and prevention of flooding and erosion), and just "healthier systems" in general.

These types of benefits were suggested as long term benefits of the process.
(2) *Organizational direction* would be provided to the Roundtable by carrying out this process.
(3) *Better position to influence* the regional districts or to leverage government departments (either for funding or for convincing higher level bureaucrats to support watershed based planning).
(4) *Greater education and awareness* of issues in the watershed [4]. Some mentioned education and awareness as a stepping stone to other beneficial activities, like restoration work (which in turn results in a better place to live.)
(5) *Greater sense of community identity*, making the watershed a better place to live [4].

4.3 Other Issues Raised

Several themes and issues emerged from the data which were not anticipated, and did not relate solely to any of the nine areas of investigation listed above. These issues are noted below.

(1) Racism, fear and misunderstandings surrounding native issues. Although there were no explicit questions regarding Native issues or Native land claims in either the interviews or surveys, there were several comments made in these areas--especially on the surveys--with disturbingly racist overtones.

(2) Dominance of government employees during meetings. Several people noted this phenomenon. As one government employee stated: "Sometimes when people walk in, they're not used to public speaking...they tend to shy away from it...some of us who are the most seasoned sages tend to speak out or knock someone's head off or something ." Another Roundtable member pointed out that government employees are "paid sitters and talkers" and consequently are better at it than watershed residents. Other resident participants said they felt they did not know enough (in comparison to agency representatives) to contribute meaningfully in meetings.

(3) Neglect of the urban community. The rural agricultural communities were the primary target of the ecosystem objective and vision setting process. Urban dwellers were not excluded from the process, but they were not actively sought, nor was it made convenient for them to attend (the community meetings were all held in rural areas of the watershed). Some urban survey respondents said specifically that they did not know that the meetings concerned them, because they live in Salmon Arm, and no meetings were held there. The urban perspectives were not entirely missing from the meetings, as some of the Roundtable staff, general members, and government agency members provide that perspective.

(4) Under-use of the ICA trained community facilitators during the ecosystem objective setting process. The stated purpose of the training was to build capacity within the watershed so that the community could conduct its own facilitation, yet, only four of the

20 people who attended the facilitation training actually helped out in the community meetings; in fact, most of the meetings were facilitated solely by one person. Hopefully, the other trainees will benefit the SRWR in the future.

(5) **Cultural and social appropriateness of methods.** Interviews and surveys revealed a few important cultural observations about the rural residents of the Salmon River Watershed--the main participant group in the visioning exercise--which could have some implications for the way in which planning processes are conducted in the future. Firstly, a very vocal fraction of the residents are conservative, individualistic, and against government intervention in their lives. Secondly, there is also suspicion and distrust of people viewed as "outsiders". Thirdly, the residents (those observed in community meetings) were not open to discussing their feelings about issues in meetings and seemed more comfortable commenting on something than creating something new. Finally, meetings are not the usual way of conducting business in the watershed.

(6) **The use of tax-payer's money.** A (vocal) minority of residents discussed how money should (or should not) be used, and expressed suspicion that grant money was being sought for the personal benefit of people involved in the Roundtable. The perception that money is being wasted is a huge barrier to generating additional support in the watershed community, and in encouraging greater involvement in the Roundtable's general activities.

5.0 General Conclusions

Four general conclusions regarding the success of the process to establish community developed ecosystem objectives in the Salmon River Watershed are given below:

(1) **The success of the collaboration towards ecosystem objectives does not hinge on the success of individual component meetings or events, but on the whole process including both its formal and informal elements.**

The goal of this project was to establish community developed ecosystem objectives. This goal was achieved. There were a few key components of the process for which the SRWR had clear objectives. Most of the objectives of the 1995 Work Plan Workshop, the Facilitator Training, the Community Meetings, the Falkland Workshop, and the Development of the Knowledge Base were achieved. However, "shoe-horning" the discussion of the process into its main component events does not account for the many continuous, tangential, and informal events which are just as important as the formal components in terms of the final outcomes. Informal dialogue and relationship-building occurs continuously before, after, and between meetings. Ongoing activities or tasks related to organization, and personal relationships and discussions--which may have nothing to do with the collaboration--all work to strengthen (or in some cases weaken)

working relationships.

(2) The case study collaboration towards ecosystem objectives demonstrated several strengths and weaknesses in its approach and application of that approach.

Strengths and weakness of the case study collaboration are depicted in Figure 7.

Figure 7: Strengths and Weaknesses of the Case Study

Strengths:	**Weaknesses:**
(1) Generating awareness of the project (2) Generating support for the project (3) A clearly defined convenor role (4) Well organized (5) Facilitation methods encouraged participation (6) Generating understanding and education among local process participants	(1) Unclear role of watershed residents and government agencies (2) Poor attendance (by locals) at community meetings (3) Frustration expressed over too many meetings: too long and too repetitive (4) Mistrust expressed over the use of government funds (5) Cynicism and doubts about the ability of the Roundtable to implement the vision developed due to lack of authority

(3) In the opinion of most process participants the benefits of setting ecosystem objectives outweigh the costs.

Besides the direct monetary expenditures depicted in Table 1, the process is highly time and energy consumptive. As well, the process carries the risk of backlashes from those persons who fear they will lose from the process in the short term, or those who are not familiar with planning culture (i.e., meetings, consultations, agendas, time-lines, etc.). The benefits of the process to develop ecosystem objectives in the Salmon River watershed cannot easily be described in quantitative terms since nearly all of the benefits are intangible and qualitative in nature. These

Figure 8: Benefits of Ecosystem Objective Setting

- Education of local watershed residents about the linkages between their actions and ecosystem health
- Anticipated improvements in ecosystem health in the long term
- Shared understanding between diverse stakeholders in the watershed, leading to a greater sense of community identity and making the watershed a better place to live
- Organizational direction for the SRWR
- Information to use in the LRMP and FRBC projects
- Ecosystem objectives to use in the continued testing of the CCMEWQGTG's framework for developing goals, objectives, and indicators of ecosystem health
- More credibility for the Roundtable as an NGO working on behalf of the watershed community

benefits are shown in Figure 8. In this study, although some of the costs have been described in quantitative terms ($), they *should not* be compared quantitatively to the benefits. An assessment of whether or not the benefits of the case are worth the costs is a *qualitative value judgement*.

(It should also be noted that this study looked only at the planning/visioning side of the SRWR's activities, NOT the field-oriented restoration work. That side of the SRWR's activities has its own costs and benefits such as the expense of restoration materials and numerous volunteer hours, and the benefits of more than 26 restored sites along the river, and the co-operation of several landowners.)

Table 1. The Financial Costs of Setting Ecosystem Objectives.

Project	**Source of Funding**	**Amount of Funding**
Community Establishment of Ecosystem Objectives (work plan workshop, facilitator training, community meetings and Falkland Workshop)	(a) Environment Canada FRAP and MOELP	35,000
	(b) Environmental Partners Fund	21,555
	(c) Vancouver Foundation	12,400
Communications (publishing fact sheets and flyers)	(a) Environment Canada FRAP	6,000
Developing the Knowledge Base	(a) Environment Canada FRAP	50,000
		Total: $124, 955

(4) The strengths and benefits identified in the process both warrant the continuation of the pilot project into its next phases (developing ecosystem indicators and a monitoring program) and the cautious application of the process in other ecosystems.

Further testing of the process may be warranted in watersheds which are significantly different in character from this case study, (e.g., a more populated urban setting).

6.0 Recommendations

The project to establish community developed ecosystem objectives for the Salmon River watershed was a pilot project under FRAP. The evaluation of this project concluded that the process has enough merit to be attempted again. In this section, recommendations build on the

strengths identified in the case study (to reap the perceived benefits), address case study weaknesses (to increase the productivity of the process), and identify areas where future research is required. These recommendations are presented and discussed according to three themes (below). As well, proposed future roles for federal and provincial governments in ecosystem objective setting are given in Figure 9. Recommendations specific to the Salmon River watershed case study have been summarized in Figure 10.

6.1 Future Assessment of Productivity

The most significant reason for undergoing the process to establish community-developed ecosystem objectives is the anticipated reward of a healthier ecosystem in the long term. In the future, it is important to document whether or not a healthier ecosystem results. Do the residents of the Salmon River watershed manage their ecosystem resources more sustainably than they would have if they had not undergone this process? Furthermore, how do the long term affects of this process compare to traditional approaches in watershed management in which government agencies take the lead role in outlining the vision for resource management? Periodic "check-ups" on the pilot project (over several years) would be necessary to document the real effect of ecosystem objectives on the "natural", social, and economic environment of the Salmon River watershed.

> **Recommendation 1:** Continual ***documentation of changes*** in the Salmon River watershed over time: changes in ecosystem health, resource use, and management practices. Development of ecosystem health indicators and a monitoring program would facilitate this type of documentation.

> **Recommendation 2:** ***Assessment of the productivity*** of ecosystem objectives conducted in 10 years time. This study should focus on whether or not the perceived benefits of ecosystem objectives were achieved (or are being achieved), and whether or not these benefits could have been more efficiently accomplished in another way.

6.2 Power, Authority and Accountability

In the case study, issues surrounding power, authority and accountability were raised in relation to mistrust over use of government funds and the responsibilities of government and certain Roundtable members. These issues also relate to the decision making fora used by the Roundtable. The issues of who has the power to make decisions, and who has the authority or the responsibility to enact those decisions are intricately linked to some of the frustrations and concerns expressed by watershed residents and process participants (specifically, suspicion and concern over grant money), and the number and length of meetings. Addressing power, authority and accountability issues could go a long way towards alleviating these concerns. Some of the suspicion surrounding power abuses might be lessened by formally building decision making power into individual roles within the Roundtable (and publicizing what the roles and responsibilities are) and making these individuals accountable for their decisions (through either

election or employer-employee relationships). Concern surrounding the amount of time devoted to consensus processes (and the cost that this incurs to tax-payers) might be lessened by clearly delineating the types of decisions on which consensus is necessary within the organization (e.g., broad visions), and those which can be more efficiently undertaken by knowledgable persons who become accountable through their clearly defined roles. Consensus should be used only when it is really needed. When the consensus forum is used for "obvious" answers, people feel that it is a waste of time and money, and/or that they are being used to confirm a pre-determined agenda.

> **Recommendation 3:** ***Power roles should be formally acknowledged*** as such within the process' organizational structure, ***and accountability should be built into these roles*** (e.g. paid or elected positions). In the SRWR, power roles are ones which give certain members more influence over decisions made, or more control over work products, (e.g., committee chairs). Explicitly acknowledging power imbalances (and the reasons for them) should help to alleviate some of the suspicions (held by some watershed residents) about power abuses.
>
> **Recommendation 4:** The ***roles and responsibilities of organizational members*** (such as government agencies) should be clearly stated in protocols / agreements. If the extent of influence--especially of government agencies--is clearly delineated, this may reduce the fears of people who are suspicious of government involvement.
>
> **Recommendation 5:** Clearly and explicitly ***distinguish between issues requiring a consensus decision, and those which can be better dealt with by an accountable individual***. By prioritizing issues that must be dealt with in a meeting, (or which need a consensus decision), the consensus model of decision making would be used only when it is necessary, alleviating some of the frustration community members feel over the number and length of meetings they attend.

6.3 Cultural Sensitivity and Appropriateness

Collaborative methods for setting ecosystem objectives should be chosen or adapted specifically for the community which will use them. Future endeavours could build on those elements of the Salmon River Watershed process which the participants liked the most--such as encouraging participation from everyone present--but modify both the subject matter to appeal to the watershed population at large, and the specific exercises to provide enough "cultural comfort" that community participation is not plagued with disinterest. Perhaps more effort could go into collecting and collating views before meetings are held (e.g., in this evaluation, lots of views were acquired from people who had not been to a single meeting, through the mail survey); meetings could be used to critique, correct, and augment the compiled views; and educational components could be built into the process to help foster a future cultural environment which is

more open to creative discussion.[5] This would encourage watershed residents to provide input to the visioning process today, while building the community's capacity for more socially-creative[6] processes in the future.

Recommendation 6: Develop a ***socially sensitive communication strategy*** in order to educate residents and other stakeholders about leadership roles and responsibilities within the lead organization (e.g., SRWR); clarify--for participants--the importance of understanding others' views, the purpose, rational and expectations of meetings and other process-oriented events which may be culturally unfamiliar to them; give examples of real, tangible actions which residents can do to improve the "health" of their ecosystem; and publicize the benefits, and incentives for residents to attend meetings, and make changes in their lives.

Recommendation 7: Outline a ***tangible role for general citizens***. In the Salmon River watershed, participating in a meeting is not considered to be "real work" with real results by many of the locals. By giving individuals tangible, culturally-meaningful tasks, the SRWR could capitalize immediately on new interest. Volunteer statements of commitment could also be developed to help volunteers know what is expected of them.

Recommendation 8: Make ***use of existing community organizations.*** In the case study, participants suggested the need for ties to community associations, where existing networks of people are already established .

Recommendation 9: ***Experiment with other methods*** (alternatives to meetings) for acquiring community feedback. For example, a mail survey could be a way to generate feedback and address specific concerns of the non-meeting attending segment of the community.

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[5] Training, and with time, familiarity with methods will likely lessen suspicion of results, and generate comfort with the process.

[6] "Socially-creative" as opposed to "individually-creative": expression in a group environment allows an immediate exchange of ideas not available when submitting an individual, written response.

Figure 9: The Proposed Role of Federal and Provincial Governments in Future Development of Ecosystem Objectives

Federal Government

(1) The federal government should take a lead role in communicating and promoting the development of ecosystem objectives, especially where it has clear authority to do so (e.g., Boundary Waters Treaty of 1909 with the United States, and on Federal Lands or land under federal care such as Indian Reserve Land). (Note: Under CEPA, Environment Canada is obligated to develop environmental quality objectives (Section 8)). Specific actions could include:

(a) Developing, in co-operation with other stakeholders (provincial agencies, community multi-stakeholder groups and NGOs), advice documents, protocols, methods, guidance manuals, etc. to aid groups interested in undertaking a visioning process or establishing community developed ecosystem objectives.

(b) Promoting ideas through education materials and workshops aimed at an audience of community leaders.

(c) Providing funding to multi-stakeholder community groups to develop the skills necessary to successfully undertake collaborative visioning exercises.

(2) The federal government should collate and exchange knowledge on a Canada-wide basis. This should not be a one way exchange from government to community groups, rather the federal government should serve a facilitative role. Specific actions could include:

(a) Developing forums for the exchange of learning experiences from ecosystem-based groups across the country who have attempted to develop ecosystem visions or ecosystem objectives.

(b) Researching and documenting new methods or ideas emerging around the world in the area of consensus-based management coupled with an ecosystems approach, and making this information available to multi-stakeholder projects.

(c) Assessing the common information needs of multi-stakeholder processes and looking for opportunities to fill them.

Provincial Government

(1) The provincial government should take a lead role (in cooperation with multi-stakeholder groups) in local application of the ecosystem objectives model. Specific action could include:

(a) Determining where, within the provincial planning framework, vision-setting and ecosystem objectives development are most appropriately situated; directing information and resources (of both federal and provincial origin) to these areas; and institutionalizing a mechanism for delivering the results of local-level visioning exercises (like the project described in this study) to the appropriate place within the provincial planning framework (e.g., should the results feed into LRMP processes?).

(b) Providing support for regional level employees to form partnerships and participate in multi-stakeholder groups (i.e., donating transportation, employee time, and in-kind support to projects).

(c) Working cooperatively with the federal government to publicize, promote and communicate the benefits of the ecosystem objectives project.

(2) The provincial government should provide locally appropriate advice to multi-stakeholder processes on regulations, and scientific information through assessing the local information needs of multi-stakeholder processes and looking for opportunities to fill them.

Figure 10: Recommendations for the Salmon River Watershed Case Study

Roles and Responsibilities

(1) Power roles should be formally acknowledged as such within the SRWR's organizational structure, and accountability should be built into these roles (e.g. paid or elected positions)

(2) Committed government Roundtable members should take on the initial responsibility of educating their organizations about the Roundtable's vision.

(3) The SRWR should outline a tangible role for general watershed residents.

(4) The roles and responsibilities of organizational members of the SRWR (such as government agencies) should be clearly stated in protocols / agreements.

Communications

(1) The SRWR should develop a socially sensitive communication strategy.

(2) The SRWR should attempt to cultivate and communicate the conditions under which residents said they would attend meetings.

Process-Related Recommendations

(1) The SRWR should make more use of existing community organizations in future initiatives in the watershed.

(2) The purpose of all future process-oriented events should be clearly defined and supported by all participants.

(3) The Roundtable should clearly and explicitly distinguish between issues requiring a consensus decision, and those which can be better dealt with by an accountable individual.

(4) The SRWR should experiment with other methods (alternatives to meetings) for acquiring community feedback.

Skills Development

(1) The Roundtable should continue to build its conflict resolution capacity and garner trust among all potential stakeholders in the watershed.

(2) The SRWR should build in opportunities in future projects to make use of the members it had trained as facilitators.

Future Research

(1) The SRWR should ensure that its future projects and the next phases of the pilot project to test the CCME WQGTG framework are reviewed for cultural sensitivity and appropriateness.

(2) Government agencies thinking of funding and promoting these types of processes should investigate their productivity.

(3) The SRWR should document the results of its field work (restoration) projects over time in order to demonstrate long term benefits to watershed residents.

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APPENDIX A: Ecosystem Objectives for the Salmon River Watershed, Adopted March 20, 1996.

The intention of the Salmon River Watershed Project is to achieve and maintain a healthy, sustainable Salmon River Watershed ecosystem through:

<u>Managing for ecosystem health with</u>:

1. Forests managed for human and natural needs:
   - 1.1 Sustained yield of all forest products (timber, range, medicinal herbs, etc.) based on realistic inventories and growth and yield projections.
   - 1.2 Maintenance of all life forms by maintaining all stages of plant succession (from bare ground to old growth forest).
2. Agriculture managed for human and natural needs:
   - 2.1 Encouraging local consumption.
   - 2.2 Use of best agricultural practices.

2.3 Maintenance of the agricultural land base.
2.4 Agriculture which is ecologically sustainable and diverse.

3. A diverse and sustainable economy through:
   3.1 Encouraging products and services of high value added.
   3.2 Supporting new initiatives on products, marketing and training.
   3.3 Encouraging diverse, local control of economic resources.
4. A healthy river having:
   4.1 Clean water.
   4.2 Reduced peaks and troughs in surface and ground water flow patterns.
   4.3 Re-established riparian corridors and wetlands.
5. Mentally, physically, emotionally and spiritually healthy people through:
   5.1 An empowered citizenry.
   5.2 Medical, environmental and social preventative and curative health care.
   5.3 Clean air, water and food.
   5.4 A spiritual approach to living as individually expressed.
6. Healthy and diverse natural species and their habitats through:
   6.1 Maintenance and increase of habitats to support all life forms.
   6.2 Maintenance and restoration of species and populations.

Active community social life including:

7. A strong sense of the watershed as a community with:
   7.1 Resource management recognizing watershed boundaries when resource use overlaps into adjacent watersheds.
   7.2 Residents and others recognizing and taking responsibility for their actions on the watershed.
   7.3 Collective empowerment and involvement in watershed planning and action.
   7.4 Participation and cooperation in watershed-wide events and celebrations.
8. Accessible and appropriately located recreation opportunities through:
   8.1 A recreational plan for the watershed.
9. Community pride in rural roots and lifestyle with:
   9.1 Residents expressing their pride in the watershed.
10. Cooperation to control local resources with:
   10.1 Community members participating in shared land use and resource management decision-making.

Developing knowledge and support with:

11. Government supporting watershed community needs through:
   11.1 Providing information for watershed decision-making. (example: water withdrawals)
   11.2 Continuity of technical and financial support of community groups in watershed management and resource use.
   11.3 Training and quality control and quality assurance for community monitoring of watershed development.
   11.4 Supporting community empowerment leading to shared decision making.
12. Sustaining the visioning process for the watershed with:
   12.1 Regular feedback to residents on progress towards vision.
   12.2 Community participation in vision, goals and objectives adjustment.
13. Gaining and spreading knowledge of the watershed with:
   13.1 Pro-active education and awareness programs.
   13.2 Open communications between citizens and agencies.
   13.3 Citizen data gathering.
   13.4 Encouragement of innovative programs. (example: demonstration programs)

APPENDIX B: Interview and Survey Questions Reported in Section 4.2

GENERAL APPROACH OF THE ROUNDTABLE

I: Is there anything new or significant about the process to develop a watershed vision and ecosystem objectives?

PROBLEMS AND ISSUES

I: Do you agree with the problem categories identified by Christiansen and Romaine (1995)? Are there any additional problems? What is the most important problem?

S: List the most important social, economic and environmental problems.

UNDERLYING PHILOSOPHY OF THE Roundtable

I: Is the Roundtable promoting any particular philosophy or agenda or giving any special attention to particular issues in meetings? If so, what?

ROLES OF DIFFERENT PARTICIPANTS

I: What were /are the roles of the Roundtable, government agencies, and watershed residents in the process to

develop ecosystem objectives?

PARTICIPATION

I: Did the "right" people participate? Does everyone involved in a particular meeting have an equal opportunity to express their views within that meeting? Why are you participating?

S: Why did you attend these meetings? OR, Why did you not attend these meetings? Under what circumstances would you attend a meeting?

EDUCATION AND PREPARATION

I: Do you feel well prepared to participate in the process to develop ecosystem objectives? What types of information or training would you like to receive? What can you contribute to the process?

BUILDING SUPPORT

S: Have you heard of the Salmon River Watershed Project? Did you know that the Salmon River Watershed Roundtable held community meetings in Mound, Silver Creek, Falkland and Westwold from June to November of last year? Did you attend any of these meetings? Are you a Roundtable member? How did you hear about the Salmon River Watershed Roundtable? Are meetings and Workshops a good way to develop a community vision? What did you like about the meetings? What did you dislike?

I: Is the process being used to develop ecosystem objectives legitimate? Can you identify things that were done well or areas where improvements are needed? What are your expectations for this project?

ACTION OUTCOMES

I: Describe the final product of this visioning exercise. How will the products of the community meetings and Falkland Workshop be used? How will the actions of people living or working in the watershed change as a result of ecosystem objectives?

S: Will you try to live in accordance with the vision developed through this process? Will you attend Roundtable meetings in the future?

PERCEIVED BENEFITS

I: Who would benefit from the development of ecosystem objectives? How would they benefit?