REACHING NEW HEIGHTS

A Handbook for Developing Community Based Ecosystem Health Goals, Objectives and Indicators

Environment Canada
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Foreword

Who should use this manual?

This manual was prepared to aid ***community groups, roundtables,*** **and** ***interested individuals*** create healthier, sustainable ecosystems using ecosystem health goals, objectives and indicators. This process will work best if it is undertaken by a community based group, with partnerships among government, business, and local residents.

What's inside?

The process described in this manual is based largely on the experiences of the Salmon River Watershed Roundtable (SRWR), a community based group from British Columbia's interior which has been working to improve the health of their ecosystem. The SRWR developed goals, objectives and indicators of ecosystem health using a process (described herein) published by the Canadian Council of Ministers of the Environment. The manual is divided into five chapters, each describing building blocks needed to develop and use ecosystem health goals, objectives and indicators. Chapter 1 defines these tools as well as some key terms used throughout the manual. Chapter 2 provides suggestions to get ready for this process. Chapter 3 proposes methods which your community could use to develop ecosystem health goals, objectives and indicators, and Chapter 4 goes on to suggest how these tools could be used in monitoring, action planning, and reporting. Finally, Chapter 5 gives you some hints on customizing this process for your own community. Additional resources are provided in the appendices.

How should you use this manual?

The process described in this manual is broadly applicable to a variety of situations. Every detail or suggestion may not be appropriate to your community. ***The intent is to guide you and stimulate you to think about what kind of process is right for your community. Use your good judgement in deciding what is relevant and useful.***

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This manual would not have been possible without the hard work and dedication of the Salmon River Watershed Roundtable who have contributed immeasurably to the advancement of ecosystem health goals, objectives and indicators.

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CHAPTER 1

Celebrating and Creating an Ecosystem's Future

Tools for Working Towards Ecosystem Health

Celebrating and Creating an Ecosystem's Future

Tools for Working Towards Ecosystem Health

The long term benefits of a healthy ecosystem are worth your investment.

This manual describes a process for creating healthier, sustainable ecosystems using ecosystem health goals, objectives, and indicators.

Developing and using these tools involves:

- assessing current ecosystem conditions and knowledge;
- describing your community's vision of a healthy future;
- selecting indicators to tell you if your community is "on-track"; and
- developing action plans and monitoring programs.

Under taking this process is no easy task! Although there are challenges (and rewards) at every step, the long term benefits of a healthy society, economy, and ecosystem are worth your investment.

The basic process described in this manual was used in the Salmon River watershed by the Salmon River watershed Roundtable (SRWR). (The Salmon River Watershed is located in British Columbia's interior and covers approximately 1510 km^2 in the region between Salmon Arm and Merritt. The 110 km long Salmon river empties into the Salmon Arm of Shuswap Lake.) This manual reflects the philosophy of the SRWR in presenting a method for sustainability planning which draws heavily on concepts from the field of ecosystem management. Many of the sugges-

tions and examples provided here are from the Salmon River watershed. Other suggestions come from a number of projects, manuals, and handbooks listed in the appendices.

Before going any further, there are two questions you should keep in mind while reading this manual:

What is your ecosystem of interest?

What is your community of interest?

To help you answer these questions, the terms ecosystem and community are explained in the following sections.

An ecosystem is all the living organisms and nonliving material interacting within a geographical area.

1.1 A Few Key Concepts

1.1.1 Ecosystem

Today, the word ecosystem is commonly used in the following way:

An **ecosystem** is all the living (plants, animals, humans) and nonliving (rocks, soil, water, air) material interacting within a geographical area.

Ecosystems don't have clearly defined boundaries. Air, water, earth, plants, animals and people move and affect several different ecosystems. In fact, the entire Earth and its atmosphere could be considered one ecosystem called the ecosphere!

How can you define an ecosystem for planning purposes?

This may be easier than you think: natural boundaries may jump out at you. For example, in the Salmon River watershed, the watershed was the best way to define the ecosystem. The watershed had a strong unifying ecological characteristic: water moves within the entire ecosystem and fish, wildlife and humans alike are dependent upon it. As well, many of the SRWR's concerns related

specifically to water quality and water quantity, making the watershed useful from a human perspective.

While the watershed is a useful ecosystem unit for the SRWR, it is not the only unit that can be used. The issues with which your community is dealing may be on a different geographic scale, such as the sustainability of a forest ecosystem. Alternately, you could be concerned with the health of a small marsh or wetland. Your ecosystem could even include urban areas. Perhaps you want to focus on the health of a city using air quality as your unifying ecological factor.

Another consideration in defining ecosystem boundaries for planning purposes is the cultural cohesion of the human population. Landscape units (such as a community watershed) may facilitate a willingness for the people involved to work together. People may be more inclined to enter a planning process with their neighbours than people who are physically very distant from them.

There are three main questions to keep in mind when defining your ecosystem of interest:

What is/are the unifying ecological characteristic(s) of your ecosystem?

Are the ecosystem boundaries practical ones for addressing your problems, issues or concerns?

Do the ecosystem boundaries encompass human populations in ways that take advantage of established communities?

1.1.2 Community

In order to develop ecosystem health goals, objectives and indicators, you will need to define your community because—as you will see in the following chapters—it is the community who must do the work! In this context, "community" refers entirely to human relationships and

organizations. A **community** is,"A dynamic whole that emerges when a group of people:

- participate in common practices;
- depend upon one another;
- make decisions together;
- identify themselves as part of something larger than the sum of their individual relationships; and
- commit themselves for the long term to their own, one another's, and the group's well-being."[1]

To define your **community of interest**, you should consider how it relates to your ecosystem, and if there is more than one community involved. For example, in the Salmon River watershed, the larger community of interest included every resident of the watershed plus all government agencies, businesses or other people who had an interest in the watershed—more than 7000 people! A smaller community of interest, composed of individuals willing to work together for the common interests of the larger community, became known as the Salmon River Watershed Roundtable (SRWR) which has 20-200 attending members.

To define your community of interest, ask yourself the following questions:

Who is impacted by the health of your ecosystem? This will define the larger community of interest.

Who is willing to actively plan and work toward achieving a sustainable, healthy ecosystem? This will define your smaller, working community. This may be an existing organization, a collaboration of several organizations, or an entirely new group.

In some cases, it may also be useful to refer to the **residential community** which includes the residents of your ecosystem whose "economic, social and environmental lives are intimately intertwined as neighbours.[2] "

Your community of interest includes very one affected by the ecosystem's health, and everyone willing to work towards your collective, sustainable future.

1.1.3 Ecosystem Health and the Ecosystem Approach

Ecosystem health is an analogy to human medicine. Just like a person, an ecosystem can be considered healthy if its parts are functioning well, and the ecosystem appears as a healthy integrated whole. The term ecosystem health describes desired ecosystem conditions. The desired health of an ecosystem can be determined through processes that combine societal expectations with current scientific and traditional knowledge.

Humans are part of the ecosystems in which they live, work, or obtain food and other resources. Because we are part of ecosystems, our actions affect ecosystem health. The growth, decline, or general activity of human systems (society and the economy) occur within ecosystems, influence each other as well as the non-human biophysical attributes of ecosystems, and contribute to overall ecosystem health.

In order to plan for healthy, sustainable ecosystems, there are three realms of influence to consider (depicted in Figure 1).

An **ecosystem approach** is a way of pursuing your interests, or addressing your problems in which the inter-relationships among the biophysical attributes of an ecosystem, the economy and society are explicitly recognized. You try to live so that your actions in one part of the ecosystem don't hurt the other parts. An ecosystem approach is a way of working towards ecosystem health!

Figure 1: Considerations for Planning Sustainable, Healthy, Ecosystems

BIOPHYSICAL ATTRIBUTES	SOCIETY	ECONOMY
earth water air plants animals interactions (biological, physical, chemical)	social needs organizations (cultural, political, etc.) values human health (physical, mental, emotional, spiritual)	goods production goods exchange goods distribution resource use

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

Developing ecosystem health goals, objectives and indicators can help you practice an ecosystem approach. In 1996, the Canadian Council of Ministers of the Environment (CCME) published a framework to explain how these tools could be used.[3] This framework has four steps (more detailed discussions of these four steps are given in Chapters 3 and 4):

***Step 1*: Identify and assess the issues and compile an ecosystem knowledge base.**

An **ecosystem knowledge base** is a collection of scientific, traditional and folk knowledge about an ecosystem. The information contained in this knowledge base should provide information about the problems and issues in the ecosystem, suggest where more research is needed, and may provide a basis on which you can outline options for addressing problems or building on strengths.

***Step 2*: Develop and write ecosystem health goals and objectives**.

Ecosystem health goals and objectives are written statements which describe the conditions people want to see in their ecosystem. The difference between a goal and an objective is that a goal is a very general statement of what you want, and an objective is a more specific statement which suggests a management strategy for getting what you want.

***Step 3*: Select or develop ecosystem health indicators.**

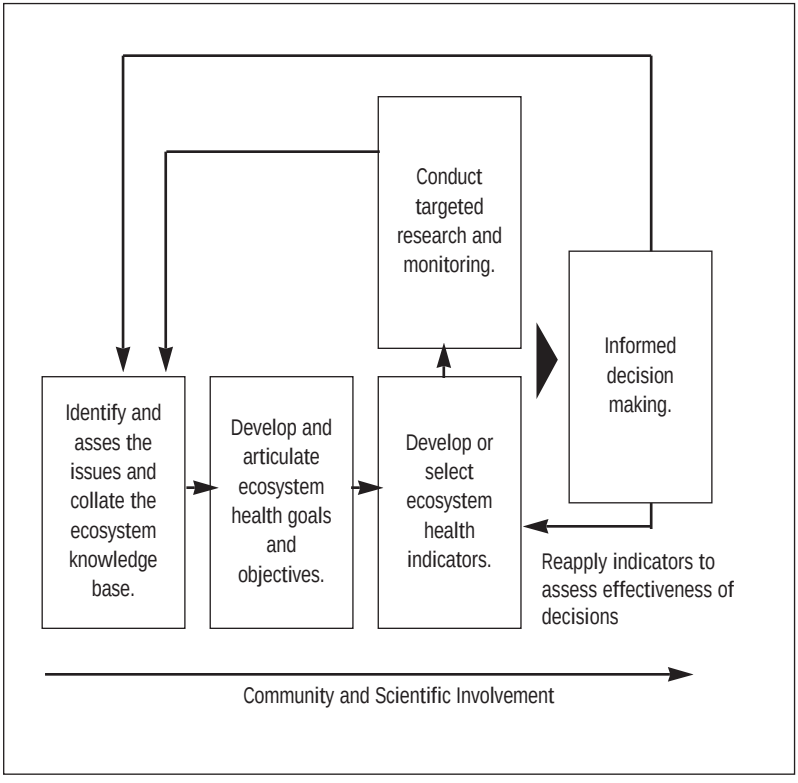
An **ecosystem health indicator** is a measurable feature or characteristic of the ecosystem which can help you determine whether you are achieving your goals and objectives, and whether your ecosystem is healthy. Several indicators are needed to get a good picture of ecosystem health.

***Step 4*: Conduct targeted research and monitoring**.

During steps 1-3, you may find that there are a lot of things you would like to know about your ecosystem. You can target your research and resources into these areas. Also, once you have indicators, you will need to establish a monitoring program to refine and utilize them.

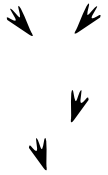
Although these activities are written as steps, they do not always follow one after the other. You may have one foot on step one, and one foot on step two, and still remain upright! When you get to step four, you may discover information that you didn't have during step 1, and need to revisit the earlier steps. In other words, there are *feedback loops* in this framework (see Figure 2). It is also very important to realize that ecosystem health goals, objectives and indicators will not, by themselves, ensure your ecosystem's healthy future. You must embark on a course of action to support your goals and objectives.

Figure 2: A Framework for Developing Ecosystem Health Goals, Objectives and Indicators. (Source: CCME 1996)



1.3 Collaborative Processes and Community Involvement

Creating a healthy, sustainable future, which we can all celebrate, requires everybody's effort and good will. Since everyone participates—in some way—in our society, economy and ecosystems, ***everybody affects ecosystem health***.



Since everyone affects ecosystem health, everyone has a role in creating a healthy future.

Often, ecosystem-based projects start because some people or government agencies are concerned about environmental conditions. Often, the course of action is to try to make somebody else change their behaviour. These types of projects, while they may draw attention to an issue, usually meet with limited success. Different interests feel threatened by one another, and opposite sides look for evidence to support their current actions, rather than jointly working towards a future that is better than today.

In order to change actions, you must change beliefs about the way the world operates. People make lasting changes to their behaviour when they believe it will improve their lives, not when someone says, "You should do this", or, worse yet, "Do it or else!".

The Alternative is Working Together

Working together may sound both naively utopian, and overwhelming in the beginning. You should not fool yourself into thinking that it is an easy solution to all your problems: it's not! In fact, your first difficulty might be getting other people interested your project.

For example, when the SRWR first started meeting (before it developed goals, objectives and indicators), the group wondered if any riverside land owners would ever be interested in pursuing restoration projects such as river bank stabilization, tree planting and cattle fencing. By

persisting to work with the few land owners who had expressed interest, the SRWR finally established one restoration project, then another, then another. Now the SRWR has over 30 landowners with restoration projects on their properties and a waiting list of those who want to work with the SRWR.

Working together has the other advantage that "two heads are better than one". Each person brings a different perspective to problem solving. Collaborating with other people leads to a better appreciation of problems, and to creative solutions which go beyond any individual's limited vision of what is possible.[4]

Some tips for building support and working together are given in Chapters 2 and 5. For now, try to keep the following points in mind while thinking about how to develop ecosystem health goals, objectives and indicators for your ecosystem:

• ***Inclusiveness —*** Everyone interested in, or residing in your ecosystem has a role in creating its future. Information should be shared and made accessible to all parties.

• ***Educational —***Everyone has something to learn from others. You may think you know just what your ecosystem needs, only to discover that someone else has a better idea.

• ***Collaborative —*** Decisions that have the support of a great number of people have the power to affect change.

Chapter Summary

- ***Ecosystem health goals, objectives and indicators*** are tools which can be developed and used by community groups working towards a healthy, sustainable future.
- An ***ecosystem*** is all the living organisms (including humans) and non-living material interacting within a defined geographical area. An ecosystem's boundaries can be defined by looking at a unifying ecological characteristic and at what makes sense for the problems or issues of your community.
- The ***community of interest*** includes all the people affected by the ecosystem's health, and everyone willing to work towards a collective, sustainable future.
- A ***healthy ecosystem*** has an environment, economy and society which are all healthy, sustainable, and don't "hurt" one another.
- Developing and using ecosystem health goals, objectives and indicators involves assessing current ecosystem conditions and knowledge, describing your community's vision of a healthy future, selecting indicators to tell you if your community is "on track", and developing action plans and monitoring programs.
- Everyone has a role to play in creating and celebrating an ecosystem's future. Processes to develop and use ecosystem health goals, objectives and indicators should be ***inclusive, educational, and collaborative***.

1. Shaffer, C. and K. Anundsen. 1993. Creating Community Anywhere. Finding Support and Connection in a Fragmented World. Jeremy P. Tarcher/Perigee. 334pp.

2.Romaine, M.J. and N. Christiansen. 1997. States of Readiness for Sustainable Community Development. A Discussion Paper for the Watershed Stewardship Alliance Forum. May 8-10, 1997. Salmon Arm, B.C. 12pp.

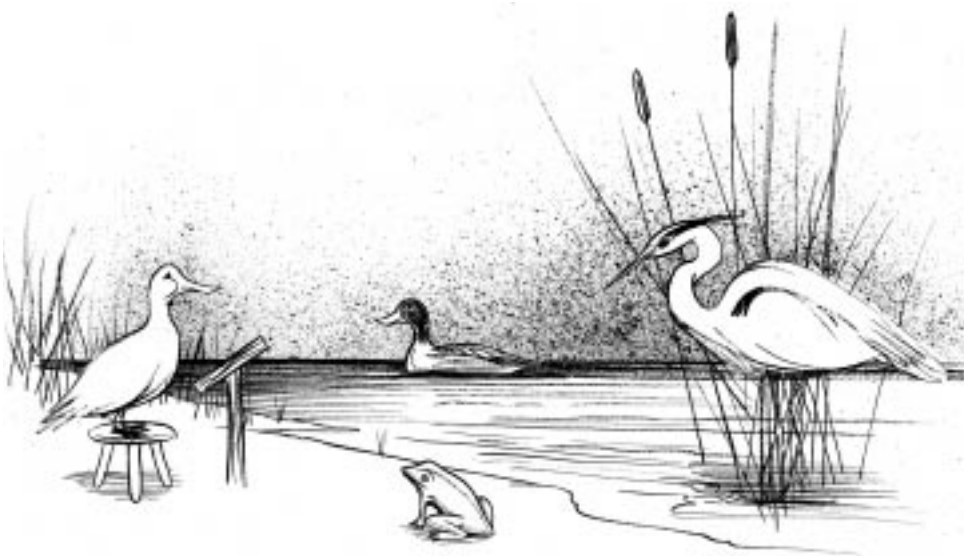
3. Canadian Council of Ministers of the Environment. 1996. A Framework for Developing Ecosystem Health Goals, Objectives, and Indicators: Tools for Ecosystem-Based Management. 24pp.

4.Gray, Barbara. 1989. Collaborating. Finding Common Ground for Multiparty Problems. Jossey-Bass Inc. Publishers. San Francisco. 329pp.

CHAPTER 2

Preparing to Fly

Determining if Your Community is Ready to Undertake This Process



Preparing to Fly

Determining If Your Community is Ready to Undertake this Process

Developing ecosystem health goals, objectives and indicators is a learning experience. You can't prepare for everything, or anticipate every problem. You can, however, develop skills within your community which will help you deal with problems as they arise. And you can start today! This chapter discusses the types of skills and circumstances you'll want to cultivate in your community group.

2.1 Convenor Characteristics

A group which hosts or facilitates a planning process is often called the convenor since it convenes meetings or brings people together to talk about, and act on issues.

If your community group hopes to use the process of developing ecosystem health goals, objectives and indicators, it should first attempt to cultivate the conditions of a successful convenor group (outlined on the next page). Don't worry if all these strengths are not visible in your community now: they are ideals to work towards! Start with the skills you have now and add to them as your group evolves.

Conditions Promoting Success:

1. **Common Issues or Concerns** — While respecting a diversity of opinions, there should be a common understanding in your community about why you are working together. For example, everyone is concerned about land use conflicts or everyone is concerned about declining wildlife populations.

2. **Inclusion of All Interested Parties** — As stated in Chapter 1, since everyone affects ecosystem health, everyone has a role to play in creating a healthy future. Are all the affected people represented? Those people who will be responsible for implementing decisions made by your group *must be part of the group*.[1] For some tips on how to identify potential participants, see Atlantic Coastal Action Program 1993, and Fraser Basin Management Program *et al* 1995 in Appendix A.

3. **Enthusiasm and Incentives to Work Together** — Not only do you need an inclusive process and common concerns—you also need to be willing to work together! Members of your community must feel that the result of working together will be better than that which they could achieve on their own.[2] Some common incentives for working together in community groups are given in Figure 3.

4. **A Strong Local Leader** — Case studies often point to key individuals who made all the difference in bringing people together and motivating them to action. The emergence of such a leader in your community is a brilliant asset. The person may be either a volunteer or staff person, should be a local person, and MUST be highly skilled in communication and organization (although formal training in these areas is not necessary).

5. **A Positive Approach** — People don't work well in hopeless, gloomy situations. Be sure to celebrate your accomplishments and promote the beauty of your ecosystem and community. While acknowledging that you have a long way to go, take time to be thankful for what you already have.

6. **Tangible Group Projects** — Group commitment, support and awareness are most readily generated through projects. Each project establishes your history of working together as a group and provides you with

a learning experience to assess how you could work together better. As well, projects show others that your community group gets things done.

7. **Government Support** — Many successful case studies include some form of government support and participation. Government agencies are a wealth of knowledge and technical expertise, as well as an occasional source of funds. Furthermore, agency representatives can often provide a policy context for your work, and assist you in legal matters (such as obtaining permits). Your community should be working to establish ties with government agencies who share your interests. Remember, the government is a public interest organization; public interest in the government's work can lead to mutually beneficial partnerships.

8. **Facilitation, Organization, and Communication Skills** — These skills are necessary to any successful group process, and are particularly essential when diverse personalities sit at the same table.

9. **Operating Principles or a Code of Conduct** — Your group needs to know how it will make decisions, who will be responsible for implementing decisions, and what group members expect of one another. Some groups outline a code of conduct in which rules or guidelines are formally adopted.

Many of the characteristics above are related. For example, enthusiasm for working together will increase if meetings are well facilitated and fun, and if positive, tangible projects show the potential of what can be accomplished.

2.2 Developing Your Skills

Although many guide books and workshops are available to teach you the skills of effective organization, communication and facilitation[3], nothing can substitute for natural

aptitude and experience. Try to find people in your community who,

- have that ability to relate to anybody;
- have successfully organized events in the past;
- are articulate, good at focusing discussions and keeping people on track; and
- have a good sense of humour and are generally fun to be around.

Figure 3: Incentives for Participating in Comunity Stewardship Groups

MODIFIED FROM FRASER BASIN MANAGEMENT PROGRAM ET AL 1995

The environment benefits as a result of:

- direct investment of knowledge, energy and skills of people at the local level leading to immediate and longer term improvements to environmental health;
- increased awareness of ecosystem needs; and
- the ethic of responsible citizenship that is established and passed on to future generations.

Individuals benefit since people involved:

- learn about their natural surroundings;
- meet people and get to know the values and interests of their neighbours;
- acquire new skills;
- get the pride and satisfaction of contributing to the well-being of their community;
- have fun; and
- improve their health in both body and spirit.

Communities benefit as a result of:

- learning through experience how to help themselves;
- practicing cooperative approaches to decision making which can extend to other aspects of community life, such as managing growth;
- drawing in marginalized or disadvantaged people such as the unemployed; and
- finding opportunities to bridge cultural differences and build understanding between First Nations peoples and non-aboriginal people.

An effective communicator:

- recognizes that individuals have different ways of learning and processing information;
- develops a rapport through appropriate use of body language and posture;
- practises active listening (listening, questioning or encouraging, and then paraphrasing); and
- uses language understandable to his or her audience.[4]

All members of your group should work to develop communication skills.

An effective facilitator:

- ensures that everyone participates to the best of his or her ability;
- notices and rectifies potential conflict areas, personality issues or process breakdown;
- seeks consensus and recognizes closure; and
- acts as a counsellor (when necessary) to individuals feeling disempowered.[5]

You need at least one, preferably a few, good facilitators to successfully go through the process of developing ecosystem health goals, objectives and indicators.

If you cannot find the right skill set within your community, or if you want to enhance the skills you already have, training manuals and workshops can provide a starting point for you. As a last resort, you may be able to hire outside facilitators for your planning activities. This is advantageous when you do not have any skilled facilitators within your group, or when you are dealing with highly contentious issues and members of your own community cannot remain impartial. The disadvantages are that it's expensive; an outside facilitator may have more difficulty relating to local personalities (sometimes facing out-

right hostility) or does not have the local knowledge about issues; and it lessens the opportunity for you to build the facilitation capacity of your own community.

In the Salmon River watershed, both local and outside facilitators were used. Some local residents received training in facilitation techniques and were able to practice their skills in small community meetings. Highly experienced outside facilitators were hired for watershed wide workshops (attended by more than a hundred people). The hired facilitators provided a good model for local facilitators, and effectively filled a need when local experience was lacking.

For more information about developing communication or facilitation skills, refer to Appendix B.

Visible field projects, local champions and local communication networks raise the profile of, and support for your community project.

2.3 Raising Awareness and Support

Successful development of ecosystem health goals, objectives and indicators requires the support of the larger community: that is, the residents of your ecosystem, government agencies, businesses and other organizations. If you want these groups to participate in your planning process, you must first convince them you're serious and capable of good work. There are three key methods you can employ to generate support:

Conduct Visible Field Projects — The Salmon River Watershed Roundtable initially built its support through completing riverside restoration projects (e.g., planting stream-side vegetation and fencing cattle away from the river). The Roundtable also hosted two watershed celebrations in which they invited local residents to view displays about the watershed and take bus tours to visit restoration sites. These activities had the following benefits:

- The Roundtable gained credibility with local residents when residents viewed the Roundtable as a group who could get things done.
- The projects gave the Roundtable an opportunity to forge partnerships among government agencies, local businesses and First Nations groups[6], thus establishing a positive history of working together which was carried over into planning activities.

Identify Local Champions — Local champions are people who,

- live and work in your ecosystem;
- are affected by the work of your community group;
- support its work; and
- are willing to publicly proclaim their support to other members of the larger community.

The visible commitment of local champions encourages participation, adds importance to the goals of the project,and increases confidence in the process.

Every successful community based collaboration has local champions. They are the people whose visible commitment encourages participants, adds importance to the goals of the project, and increases confidence in the process.[7]

For example, in the Salmon River watershed, local farmers who had river bank restoration projects on their properties became local champions who could speak about the work of the Roundtable to other landowners. One local farmer who was sponsored by the Roundtable to attend a workshop on range land management, called "Cows verses Fish", became a vocal champion after his outlook became one of "Cows *and* Fish".

Use Local Communication Networks — Local communication networks are the ways in which the local people of your ecosystem obtain their news and keep in touch with one another. One way of tapping into informal networks is through local champions.

Others include:

- community associations and service groups
- schools and youth clubs
- local papers and community newsletters
- local radio and T.V.
- advertisements, posters or bulletins at community centres, recreation centres, and other local gathering places
- flyers and shopping guides
- the postal system
- the internet

Having a member of your group give presentations to community associations or schools is a good way to raise the profile of your group. As well as traditional media such as newspapers, radio and T.V., the postal system can provide a direct link to ecosystem residents. (For example, 90% of residents in the Salmon River watershed are aware of the Roundtable's activities, largely due to a series of flyers the Roundtable distributed through the mail[8]). The internet is also becoming an increasingly efficient way to contact people. You could develop a home page and link yourself to other groups with similar interests. For example, Environment Canada is developing an online compendium of ecosystem health goals, objectives and indicators for use by community groups (see Appendix D).

2.4 Roles and Responsibilities

There are often four types of participants in community-led ecosystem planning exercises: the convenor group, government agencies, interest organizations or business representatives, and individual citizens. A description of these different community participants is given below.

- **Convenor Group** — This is the group which identifies participants and brings them together (e.g., a Roundtable or community based planning group). This group provides a forum for discussion among all types of members, and should contain considerable facilitation skills. The convenor group itself is composed of the other types of participants discussed below. For example, in the Salmon River watershed, the SRWR was the convenor group.
- **Government Agencies** — Government agencies participate in community based initiatives in order to meet their mandates through partnerships. They can often provide explanations of their mandates and policies to other participants, scientific expertise, and occasionally funding for project activities. (For more information about how to identify or contact government agencies, see sources listed in Appendix F.) Examples of government agencies who participated in the SRWR include Environment Canada, Fisheries and Oceans Canada and the B.C. Ministry of Environment, Lands and Parks.
- **Organizations or Business Representatives** — These are members such as environmental groups, service groups, or local businesses. This membership is potentially very diverse, but all must have the common interest of working for a healthy ecosystem. In the Salmon River watershed, these types of members included Riverside Forest Products Ltd. and the Shuswap Environmental Action Society.
- **Individual Citizens or Residents** — Individuals can often provide expert knowledge based on their experience of local conditions. They also provide local perspectives, values and opinions. Landowners, farmers and other residents all participated in the Salmon River watershed.

Membership Through Representation

If your community of interest is very large (i.e., too large to have every interested individual participate in your meetings), you may need to use a representation system. Two examples of how representation can be achieved are:

- *Interest-based representation* in which every participant in your group acts as a formal representative of an organization or interest group and speaks solely on behalf of those interests; and
- *Value-based representation* in which people with a diverse background of values, experiences and skills are asked to sit at the table and work towards a common purpose.[9]

Most often, groups have a mixture of these types of representatives. In the Salmon River watershed, members of the Roundtable—for the most part—practised value based participation. While some members were officially representing a government agency or a local business, members were encouraged to look beyond their individual mandates so that they sat at the table not to represent single interests, but to bring the wealth of their collective experience to bear on a set of complex problems. Members of the SRWR have emphasized the importance of this type of representation in reaching agreements in the Roundtable. They felt that reaching agreements would have been much more difficult if an interest based approach or sector representation had predominated.

Special Roles

In order for group activities to progress smoothly, a number of special roles may be in order.

- *Facilitator* - ensures that events run smoothly (through the characteristics listed in section 2.2)
- *Community participant* - provides comments, advice and ideas based on values and experience; respects other participants

Roles and responsibilities must be clearly outlined to be effective and to build trust among participants.

- *Resource Person* - provides expert advice on various topics of interest to the group
- *Project Coordinator* - coordinates specific actions once they have been chosen (e.g., coordinates volunteers and other resources)
- *Volunteer Coordinator* - coordinates volunteers in large groups where the project coordinator cannot fulfil this role
- *Project Volunteers* - conduct work projects (e.g., tree planting, letter writing, research projects)
- *Fundraising Coordinator* - coordinates the financial strategy and efforts to raise funds

Often, one person may play more than one role. For example, your facilitator may also be your project coordinator, or a community participant may occasionally be a resource person or a project volunteer. Roles may rotate among many people and may be filled by either volunteers or paid staff.

Regardless of how you fill them, roles and their associated responsibilities should be clearly outlined and agreed upon. In fact it is imperative that employees have a clear job description. This has the following advantages:

1. Employees/volunteers understand what is expected of them and can work more efficiently.
2. People become responsible for decisions they make within their roles, and know the extent of their decision making domain.
3. Trust is fostered, and suspicion of over stepping boundaries is reduced.

2.5 Financial Resources

There are costs associated with developing ecosystem health goals, objectives and indicators. Much of the cost is volunteer time: time to organize meetings, conduct mail-outs or interviews, write reports, manage other volunteers, etc. However, at some point, work has to be undertaken by a paid staff member—it's too much to ask a volunteer! There are a number of other things your groups might need funding for, including:

- "correspondence and information distribution to the public;
- advertising of events and activities;
- logistics for events and activities (facilities rental, refreshments, child minding services);
- administration costs (rent, photocopying, office supplies, telephone);
- hiring of technical expertise or training of members to take on technical roles;
- compensation for members' expenses (especially in remote, rural areas where travel costs and communications costs are high);
- access to information (e-mail access, purchase of reports);
- supplies for projects such as building materials and tools for habitat rehabilitation."10

Many community based organizations depend on government grants to operate. Inevitable problems arise when government programs change and funding dries up. The best way for your group to become financially secure (i.e., able to survive a government funding cut) is to diversify your sources of income. There are a number of good reference books which suggest ways for non-profit groups to raise funds (see Appendix C). Here are a few key points:

Your group will be more financially secure if it diversifies its sources of income.

- **A Realistic Budget.** A realistic budget should include all the resources you need to carry out the activities of your group for a designated period (usually a year). This includes both financial resources and aid-in-kind[11] (goods and services which are donated to your group). Including aid-in-kind in your budget, will stimulate you to think of nonmonetary sources of support, and hopefully lessen your dependence on financial resources.
- **A Fundraising Strategy.** A good fundraising strategy should be completed on a yearly basis. It should include a review of all potential funding sources along with the money you have from each source now, what you hope to have from them next year, and what you hope to have from them in 5 years. While developing your fundraising strategy, you should discuss what your group does well, evaluate your fundraisers that are not producing what you want, fix what can be fixed, eliminate what cannot be fixed, add new strategies to test over the year, and talk to other local groups that shine at fundraising.[12] Other things you will have to consider (especially when applying for grant money) are application schedules for funding agencies, eligibility criteria, your competition and likelihood of success, and how closely a funder's objectives match your own.[13] Developing a fundraising strategy is also an opportunity to review potential aid-in-kind.
- **A Fundraising Team.** "Fundraising is a team sport and you need a team of caring people to make it fun and profitable."[14] Fundraising should be given project status within your group; a fundraising coordinator and fundraising volunteers are in order.

Examples of Funding Sources:

- product sales
- membership fees
- special events fees (e.g., walk-a-thons, dinners)
- mail campaigns
- phone campaigns
- door to door canvassing
- pledges
- subscriptions (to newsletters, etc.)
- planned gifts: bequests, life insurance
- grants: foundations, corporations, religious congregations, government
- tuition from courses offered by your group

For further information about how to locate and access funding, refer to the sources in Appendix C.

2.6 A Code of Conduct

Before you begin to develop ecosystem health goals, objectives and indicators, you should have a clear method for documenting your decisions and evaluating your progress. Documenting and evaluating your progress are related to how you make decisions, and roles and responsibilities within your group. Many groups find it useful to outline a **code of conduct**, or constitution which spells out the rules and guidelines under which they operate. This code of conduct can be referred to whenever there is a dispute related to the behaviour of participants, or whenever someone is not sure of their responsibilities.

Typical things included in a code of conduct are:

- roles and responsibilities (e.g., of the facilitator, staff, general participants)
- what the group will do if someone does not live up to their responsibilities
- decision making mechanisms (e.g., consensus procedure, what to do if you are having difficulties reaching consensus)
- mission statement of the group
- mediation procedures
- any other special procedures that your group might need
- how decisions will be recorded
- an evaluation procedure

A code of conduct spells out the rules and guidelines under which your group operates.

It is a good idea to look at example codes of conduct (see IREE 1996 in Appendix A). The more you include in your code of conduct at the onset, the easier it will be to avoid and resolve procedural disputes.

Documenting decisions usually takes the form of meeting minutes, or reports such as action plans. An annual or bi-annual review process could be written into your code of conduct to ensure that your group sets aside some time to review past decisions and their outcomes. (References for evaluation procedures can be found in Appendix B.)

2.7 A Final Caution About Designing Appropriate Methods

SRWR members had some cautionary words for others designing similar processes:

- Don't make false assumptions about why people attend (or don't attend) meetings. While you may hope that people attend meetings with the intention of developing an ecosystem vision, their motives could be to dispel rumours they have heard about your group. Be prepared to encounter people who don't share your agenda!
- Use terminology and language understandable to people who live in the community. People will get frustrated and cease to attend your meetings if they don't understand you or are made to feel stupid.
- Field test your methods so that you do what is suitable for the community. Activities such as guided visualiza tion (see section 3.2.1) must be comfortable to the participants. Forcing people to try something they con sider weird or useless will only reflect badly on you. Sometimes you just need to re-work an exercise to find the right language, or explain it in a way that is familiar. Talk to people about what you want to do before you do it, and pay attention to their reaction.

Chapter Summary: Are You Ready?

Only you can decide if you're ready. Group processes move through learning cycles. The questions below can help you in determining whether or not you're ready to move on to another loop of the cycle.

Identity

- What is your ecosystem?
- What is your community of interest?
- What are your community's common concerns?

Skills

- Can you identify highly skilled people in your community?
- What skills does your community need to develop?

Support Building

- What are you doing to acknowledge the strengths and beauty in your ecosystem and community?
- What work projects have you already undertaken? Who is aware of this work? Will they support you in new ventures?
- Can you think of simple, worthwhile projects you could do to raise support in the near future?
- Can you identify local champions?
- What are the prominent communication networks in your community? How can you use them?

Roles and Responsibilities

- Does your group include the participation of government? Business? Interest groups? First Nations? Individual citizens?
- Is membership in your group through representation or individuals?
- How are the roles within your group defined?

Finances

- Does your group have a realistic budget? A fundraising strategy?
- Could your group survive without government grant money?

Decision Making and Documenting Progress

- How does your community make decisions? Who implements decisions?
- How do you document your progress and evaluate your plans?

1. Gray, Barbara. 1989. Collaborating. Finding Common Ground for Multi-Party Problems. Jossey-Bass Inc. Publishers. San Francisco. 329pp.

2. Fisher, Roger and William Ury. 1981. Getting to Yes. Negotiating Agreement Without Giving In. Penguin Books. Toronto. 200pp.

3. Spencer, Laura J. 1989. Winning Through Participation. Meeting the Challenge of Corporate Change with the Technology of Participation. The Group Facilitation Methods of the Institute of Cultural Affairs. Kendell/Hunt Publishing Co. Dubuque Iowa. 185pp.

4. Donaldson, Carole. 1994. Working in Multi-Stakeholder Processes. Environment Canada. 83pp.

5. Donaldson, Carole. 1994. Working in Multi-Stakeholder Processes. Environment Canada. 83pp.

6. It should be noted that First Nations groups were responsible for initiating the Salmon River Restoration Project in 1991 out of which the Salmon River Watershed Roundtable was born in early 1994.

7. Chrislip, David and Carl Larson. 1994. Collaborative Leadership. How Citizens and Civic Leaders Can Make a Difference. Jossey-Bass Publishers. San Francisco. 192pp.

8 .Grant, Kathy. 1997. The Salmon River Watershed. An Evaluation of the Collaboration Towards Ecosystem Objectives and a Watershed Vision. Summary Report. February 1997. Environment Canada, Fraser River Action Plan. DOE FRAP 1996-16. 29pp.

9. Institute for Research on Environment and Economy. 1996. Community Empowerment in Ecosystem Management. University of Ottawa. 136pp.

10.Fraser Basin Management Program, Canadian Wildlife Service, Fisheries and Oceans Canada, and Forest Renewal B.C. 1995. Community Stewardship: A Guide to Establishing Your Own Group. 80pp.

11.Fisher, John. 1986. Fundraising I: Getting Ready. Handbooks for Voluntary Organizations, No. 7. Voluntary Action Directorate, Multiculturalism and Citizenship Canada. Ottawa, ON. 99pp.

12.Flanagan, Joan. 1993. Successful Fundraising. A Complete Handbook for Volunteers and Professionals. Contemporary Books, Chicago, IL. 305pp.

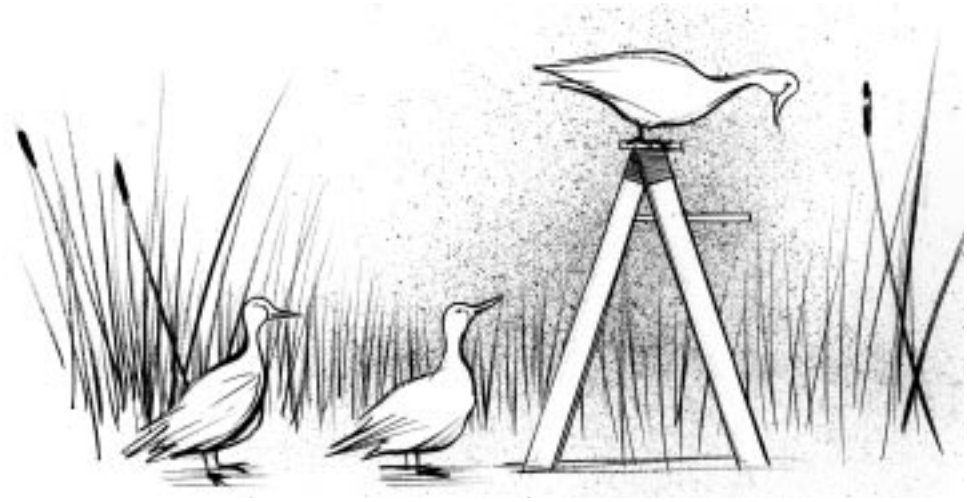
13.Fraser Basin Management Program, Canadian Wildlife Service, Fisheries and Oceans Canada, and Forest Renewal B.C. 1995. Community Stewardship: A Guide to Establishing Your Own Group. 80pp.

14.Flanagan, Joan. 1993. Successful Fundraising. A Complete Handbook for Volunteers and Professionals. Contemporary Books, Chicago, IL. 305pp.

CHAPTER 3

Getting Off the Ground

Developing Ecosystem Health Goals, Objectives and Indicators for Your Community



Getting Off the Ground

Developing Ecosystem Health Goals, Objectives and Indicators for Your Community

This chapter focuses on steps 1, 2 and 3 of the framework for ecosystem health goals, objectives and indicators presented in Chapter 1. Specifically:

- compiling an ecosystem knowledge base (step 1);
- developing ecosystem health goals and objectives based on an ecosystem vision; (step 2) and
- developing ecosystem health indicators (step 3).

Steps 1 and 2 usually occur simultaneously. As you will see below, in developing a knowledge base, it is necessary to have some idea about what you want to know! Deciding what you need in your knowledge base becomes clearer as your vision of a healthy ecosystem emerges.

3.1 What Do We Know? Preparing an Accessible Ecosystem Knowledge Base

An **ecosystem knowledge base** is a collection of scientific, traditional and folk knowledge about an ecosystem which provides information about the problems, issues, and assets of your community. It also suggests where more research is needed and may provide a basis for you to identify options for addressing problems. The general content of the knowledge base should include biophysical, economic, and social information.

Initially, the knowledge base is a collection of information already available, rather than an effort to collect new data. Although it is probably useful to summarize the data into a report, there are a variety of formats you could explore for presenting information.

A good ecosystem knowledge base:

- includes technical and scientific information, traditional and folk knowledge
- has a venue for adding information and is updated in a timely manner
- provides clarification of why something is an issue, problem or asset
- addresses multiple issues (i.e., does not have a single resource focus)
- includes information about the environment, economy and society
- is accessible to everyone who has an interest in the ecosystem (This may imply different formats for different audiences.)
- provides you with historical reference points for determining what is possible for your ecosystem
- allows you to make scientific predictions about future trends and states limits on scientific certainty
- provides information about current ecosystem health (what is good about your ecosystem and what needs improvement)
- allows you to outline options for addressing problems and issues

An ecosystem knowledge base contains scientific information, traditional and folk knowledge about the environment, economy and society.

3.1.1 What Should be Included?

You could collect information forever and never know enough! Information and topics to include in the knowledge base can be prioritized by relating them to your problems and issues (i.e., your common concerns), and what you already know about local resources and conditions.

Examples from the Salmon River watershed are provided below to give you ideas about what to include in your knowledge base, and how you might collect this information. As well, Environment Canada's Atlantic Coastal Action Program (ACAP) produced a manual specifically to assist community groups in conducting environmental profiles of their areas, (see ACAP 1993, Volume II in Appendix A). Useful information on assembling and managing information is also provided by the Fraser Basin Management Program *et al* 1995 (see Appendix A).

Scientific Information

Scientific information for the Salmon River watershed was obtained through government agencies, and published reports. Each relevant government agency (municipal, provincial, federal) had to be contacted and asked for data. This task was completed by hired consultants.

Information was collected on the following topics:

- socio-economic profile (e.g., population and employment)
- landuse (e.g., settlement, agriculture, forestry, and recreation)
- aquatic and terrestrial ecosystems (e.g., major bio-geoclimatic zones, wildlife resources)
- water quantity (e.g., hydrology, demand)
- water quality (e.g., conditions, concerns)
- a summary of major trends
- identification of key problems
- barriers and incentives to action

Traditional or Folk Knowledge

Traditional and folk knowledge was collected mainly through verbal histories. Fifty-two long-term residents of

the watershed were interviewed for their thoughts, memories and opinions.[1] As well, meetings were held in which local residents were invited to discuss the history of the watershed. These residents reviewed information collected during interviews and added their own memories to the collection. These tasks were completed by a hired summer student and volunteer Roundtable members.

Information collected included:

- interview quotes used to tell the history of the watershed from the time prior to European settlement to present day
- a description of current resident concerns (farming viability, wetlands drainage, condition of riparian areas, and population and urbanization)
- a description of recent improvements

Visual media make your knowledge base accessible to more community members.

3.1.2 What Should the Knowledge Base Look Like?

There are a number of ways you could present your knowledge base, for example:

- paper reports
- interactive internet sites
- videos
- slide shows or presentations at workshops, community meetings, schools or other forums
- fact sheets, report cards or posters
- news stories in various media
- maps

At a minimum, you should produce a paper report written in language understandable by *all* your community participants (i.e., minimize the technical jargon). Further presentations will depend on the audiences you want to reach, and the prominent communication networks in

your community.

Members of the Salmon River Watershed Roundtable stressed the importance of using visual media to present information to general community members. For example, a video could present facts about the ecosystem while pictures of the conditions are shown. Paper reports should be visually appealing and include photographs and other graphical information such as maps.

The internet is becoming an increasingly popular way to present information, allowing feedback and large potential audiences (the whole world!). It is easy to start a home page on the internet. Even if you're not sure how many people from your community use the internet now, you can prepare to use this medium in the future.

3.1.3 Who Should Do the Work?

In the Salmon River watershed, a consultant team was hired to collect and present data for the knowledge base. Not every community based group will have the funds to hire consultants. Some of this work can be done by volunteers with research experience, or paid summer students who are more affordable than consultants.

If funding is a concern for your group, try to build partnerships with other organizations who may need (or already be collecting) similar information. For example, social service groups, charities, your local chamber of commerce, or your local government (i.e., municipality, township, district) may be willing to help you gather socio-economic data about your ecosystem. Similarly, agricultural alliances or collectives may be interested in helping with information about current agricultural practises, soil quality, etc. Tourism based businesses may fund information searches that can predict future trends in tourism. As well, academic institutions such as local schools or universities may be willing to do some of the work for their own interest, or research experience.

Explore your options!

Set Up A Steering Committee

A good working size for your steering committee is five to six people selected from your community group. Membership on this committee should include both residents and government agency representatives, since residents are most likely to know where the wealth of traditional knowledge is stored, and agencies are more likely to know what technical data exists. Other members could include people who you expect to do the data collecting (consultants or volunteers), and possibly academics.

The steering committee should be responsible for the following:

- outlining what information is needed
- deciding who will collect it
- providing ideas on how data will be stored and maintained
- providing ideas on how reporting of data will take place
- ensuring that the knowledge base is adequately reviewed by both scientific experts and local residents
- over-seeing contracts let to complete the knowledge base

3.2 What Do We Want? Expressing a Vision Through Ecosystem Health Goals and Objectives

An ecosystem goal is a broad written statement about what you want to see or do in your ecosystem in the future. It applies to your ecosystem as a whole, for example, "managing human activities to promote ecosystem

health". An ecosystem objective is also a written statement about what you want for your ecosystem's future, however, it is more specific than a goal in that it clarifies and refines a goal into a specific management strategy. For example, an overall goal of managing for ecosystem health could be refined into several more specific objectives which suggest ways of achieving that goal (see examples in Figure 4).

It should be clarified that an "ecosystem health objective" as defined by the CCME (1996) and as used in the Salmon River watershed is *not* synonymous with "environmental quality objective" which specifies a desired condition for a particular medium in terms of a numerical target (e.g., a desired concentration level for bacteria in drinking water).[2] (Environmental quality objectives may be used in determining target values for indicators.)

Visioning is a creative process which inspires the imagination.

Ecosystem health goals and objectives are synonymous with sustainability goals and objectives aimed at promoting a sustainable environment, economy and society.[3] They are based on a vision of what is possible for an ecosystem. You start by developing your vision of sustainability, and then articulate that vision through your goals and objectives.

Reasons for developing visions, goals, and objectives:

- Visioning starts your planning process on creative footing. Creative thinking enables groups to find new ways of using or marshalling resources, and to discover new and better solutions to problems.[4]
- If you ignore visioning and objective setting in your planning sessions—focusing entirely on defining actions—you won't have milestones with which to measure your progress and assess the effectiveness of your actions.[5]

3.2.1 Vision Setting

"Visioning is a process which invites people to look into, dream about, or imagine a preferred future. Visioning most often asks people to be optimistic about what they would like to see happen." [6]

Figure 4: Sample Ecosystem Health Goals, Objectives and Indicators from the Salmon River watershed. (Note: In the Salmon River watershed, a total of three goals were written, all with associated objectives and indicators.)

GOAL: MANAGING FOR ECOSYSTEM HEALTH					
OBJECTIVES:					
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)	**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

EXAMPLES OF INDICATORS TO MEASURE PROGRESS TOWARDS OBJECTIVES: (ON PREVIOUS PAGE)					
• annual allowable cut by age and class of tree • percentage of watershed revenue generated through non-timber harvestables • population trends through wildlife counts	• local farm market sales • fragmentation of farm land based on land titles • km of class A riparian zone per km of stream • ground water quality measures • number of people looking for work	• number of retirees • percentage of people who own their own homes • number of new businesses in watershed • diversity of economic sectors	• water clarity and temperature • bioindicators • stream discharge measures • number of agreements with licensees to achieve voluntary water use reductions	• crime rates • perceived well being • number of cultural activities • suicide rates • average income • rates of absenteeism from various employment sectors	• depth and width of stream channel at mouth • number and extend of land stewardship covenants • population densities of benthic invertebrates

In an ecosystem planning exercise, the purpose of visioning is to discover how people in your community envision their ecosystem in a healthy state.

There are different methods for developing group visions. You could explore your vision through questionnaires and personal interviews at ***kitchen-table-meetings***, or through brainstorming and guided imagery exercises in ***community meetings or workshops***.[7]

In some cases, you may want to use a combination of these methods. For example, you could conduct some initial kitchen-table interviews (perhaps as you gather the folk knowledge described above) from which you could outline a draft vision. This draft could then be circulated in your community to raise interest in attending a vision building workshop. A combination method would give you an opportunity to field test your ideas for vision building with community members, and to acquire local champions for the process. You may also want to use kitchen-table meetings after a vision building workshop to confirm the vision.

Kitchen-Table Methods:

Participants either complete questionnaires (mailed or hand delivered to them), or they have an interviewer "chat" with them about what they'd like to see in the future. Information gathered is compiled and summarized into a vision statement. The advantage to this method is that people who are not comfortable participating in community meetings provide input. The disadvantages are that it is much harder to include large numbers of people in these types of encounters, and, fragmented, contradictory visions could emerge because people are developing their visions in isolation from one another.

Community Workshop Methods:

In these methods, members of the larger community are invited to attend a visioning workshop. Participants are led by a facilitator through exercises designed to elicit a collective vision of sustainability. One extensively used method is "guided imagery".[8]

Design your visioning methods to encourage the participation of as many people as possible.

An example agenda for a vision building workshop, using guided imagery, is given below:

- *Introductions*
- *Story telling* - each person reflects on something they like about the ecosystem and shares it with the group
- *Guided imagery exercise* - led by facilitator (see next page)
- *Individual image recollection* - participants write down their impressions from the guided imagery exercise
- *Small group discussions and listing of vision elements* - in groups of 6 to 8 people, each group makes a common list of the things found in their visions (if the group is inclined, it may express this collection as a drawing, but words are sufficient)
- *Group presentations* - each group presents their common vision to the larger group

- *Checking for common themes* - the facilitator leads the groups through identifying common themes in all the visions
- *Consensus* - the group agrees on common elements of their vision for a healthy ecosystem

Figure 5: Guided Imagery Exercise

(From Hancock, Trevor, 1993. Seeing the Vision, Defining Your Role. Healthcare Forum Journal. May/June 1993: 10-36.)

In a quiet setting, have people sit comfortably, relax, and close their eyes (if desired). This exercise should be timed to take approximately 15 minutes.

Example text for facilitator:

"It is the year 2020 and you are hovering in a balloon above your own community. During the past 20 years, it has transformed itself into an ideally healthy community.

Imagine yourself floating down to the centre of this place, where you climb out of the balloon and move around the community. Take your time as you go into and out of stores, workplaces, streets, parks, neighbourhoods, houses, healthcare and educational settings.

In what way are the places you visit and the people you see healthy? What makes them healthy?

Notice the colours and shapes and textures around you. What sounds do you hear? What smells do you notice?

Pay attention to how people move from place to place.

Observe the settings where ill people receive care and the places where people learn.

Take the time to experience this community at different times of day and night. At different seasons.

Try to imagine yourself as an elderly person living in this environment as a child, as a woman/man, as a disabled person.

Now spend a few minutes revisiting places you have seen that struck you most forcibly or that you like the best. Then re-enter the balloon, ascend back into the sky, and return to the present."

Some tips:

- You may want to add into this script questions to elicit images of wild spaces, agricultural operations, or other areas of concern in your community.
- Explain that guided imagery is not a strange, 'way out' experience but is used frequently, especially in sports psychology and increasingly in business, to help people improve their performance and achieve clarity about their goals and plans.
- Avoid leading questions, or those that refer to our present conditions. For example, instead of asking about cars or office buildings, ask about transportation and work places.

3.2.2 Using Your Knowledge Base to Review Your Vision

Vision building inspires the imagination. People are encouraged to imagine their ideal, healthy future without regard for what is scientifically or realistically feasible. Imagining without constraints is essential to stimulating the creative thinking process.

Through examining your vision in tandem with your knowledge base, you can ground your vision in reality. This step involves assessing your vision with respect to what you know about your ecosystem. This assessment can take place either within a workshop setting (after you have consensus on your vision), or by a smaller work-group. The intent is to find out:

- What are the elements of your vision towards which you can feasibly work?
- Can vision elements be sorted into short term and long term?
- Are there common themes in the vision and in the knowledge base? What are areas of agreement? What are areas of disagreement?
- What does the vision tell you about the way you are living now?

This assessment can be used in action planning, and in organizing your vision into themes that can be written as goals and objectives.

3.2.3 Expressing Your Collective Vision Through Ecosystem Health Goals and Objectives

Once you have grounded your vision in reality, it's time to write some clear ecosystem health goal and objectives which capture the essence of your vision, and express it in terms that can be realistically worked towards.

Ecosystem goals and objectives express your vision in terms that can be realistically worked towards.

Good ecosystem health goals and objectives:

- are specific enough that people know what you're talking about, yet avoid numerical targets
- can be used in reporting or explaining your work to other groups, government, funding agencies, etc.
- are inspirational and reflect a positive feeling towards the ecosystem
- reflect your common vision
- imply tangible actions (through objectives)
- integrate scientific and community expectations

Here is the example of how ecosystem goals and objectives were written in the Salmon River watershed. After holding a community visioning workshop, the planning committee of the Roundtable took the workshop results, reflected on them, and over a few meetings, wrote and rewrote goals and objectives until everyone on the committee felt they were a good reflection of the community's vision. These goals and objectives were then taken to the Roundtable where they were discussed and adopted as interim objectives. Further community meetings were held in the watershed to present these interim objectives and get feedback from the larger community before they were formally adopted by the Roundtable.

Keep the momentum and interest in goals and objectives alive by preparing them as soon as possible after your visioning workshop. If possible, design your workshop so that goals and objectives can be easily drafted from the results, or even during the workshop itself. Either way, the community at large must be given an opportunity to review and revise the objectives before they are finalized.

3.3 How Will We Know if We Are Achieving Our Objectives? Developing Ecosystem Health Indicators

It is impossible to measure or evaluate everything in your ecosystem. It is therefore necessary to determine the information that will provide a representative picture of ecosystem health. These are called indicators, and when observed over time, should be able to tell you specific information about progress towards your goals and objectives, and indirectly comment upon the effectiveness of existing programs and policies. Ecosystem health indicators are measures (e.g. chemical, physical, biological, sociological, economic, etc.) which provide evidence about the state of the environment, economy or society.

Good indicators:

- are understandable and meaningful to the local community
- relate to your ecosystem goals and objectives
- inspire actions to restore or maintain ecosystem health
- can be easily measured
- are cost effective

In the Salmon River watershed, a list of selection criteria was prepared to aid community members in choosing indicators (see Appendix D). Although these criteria were not used strictly (i.e., indicators chosen were not required to meet every criteria), they served as useful guidelines.[9] Some examples of the indicators selected are given in Figure 4.

Indicators tell you about your ecosystem's health: Is it getting better? Worse? Not changing?

3.3.1 Preparing to Select Indicators

If you have already gone through the process of compiling an ecosystem knowledge base and writing goals and objectives, much of your background research is done. Now you need to prepare materials that will aid you in selecting indicators:

- Prepare a list of potential indicators based on your knowledge base, ecosystem health goals and objectives, and indicators used in similar ecosystems. You could form a work committee to get this underway.
- Prepare a list of selection criteria to propose to workshop participants (an example is given in Appendix D).

3.3.2 An Indicators Workshop

In an indicators workshop, participants from the larger community choose indicators which will tell them if they are successfully moving towards their ecosystem goals and objectives. Here is an example of how your workshop could unfold:

- *Introductions* - explain why indicators are needed and what they are
- *Story telling* - as a whole group, or in smaller groups (depending on the number of participants) encourage a discussion about what is changing in the community. This stimulates people to think about things which indicate change.
- *Revision of proposed methods* - review and agree on a selection process for choosing indicators
- *Small group brainstorming* - groups could use the focus question, "What do we want to keep an eye on?" to brainstorm indicators. These groups should be organized by ecosystem health goals and objectives. Your list of potential indicators could be used as a discussion piece.

- *Initial screening* - have groups choose a few of their best indicators for their topic area
- *Group presentations* - compile indicators on a board at the front of the room so that they can be seen and read by everyone
- *Check for duplicates, additions or deletions*
- *Group assessment* - have the facilitator lead the group through a quick first assessment of the proposed indicators, asking the questions "who already has data about this indicator?", and "who wants to work on this indicator in the future?"
- *Follow-up plan* - obtain a group consensus on the next step. Who is going to further screen and prioritize these indicators? You may want to select a working group.

3.3.3 Deciding on Priority Indicators

An indicators workshop part 2, or a meeting of delegates from your first workshop can work to narrow your list down to a manageable size. This second look would fine-tune your selection criteria and reapply it to the indicators. Often, during the first look, everything seems important, *how could you possibly leave anything off your list?* By setting priorities, you can start working on some indicators now, and return to work on others when you have more resources, time, skills, etc.

Things to consider:

- What are your current resources for monitoring?
- What do you want to work on the most?
- With whom can you establish partnerships to collect and evaluate data on these indicators?
- Can you establish target values (or acceptable ranges) for quantitative indicators?

- Will these indicators really tell you what you think they can? For example, "meeting attendance" may seem like a good indicator of support for your group, yet, perhaps many people who support your group hate attending meetings! This indicator could be misleading. Find knowledgable people to review your indicator choices, (e.g., people who have lots of knowledge about your community due to long-term residence or academic study about linkages and interactions in your ecosystem).

Your prioritized list should have the support of the community. If you do this in a workshop, make sure you have consensus on your short list. If you are drafting the list in a small working group, have the community review the list through another meeting, kitchen-table methods, or a mail survey.

Events should ideally be timed to fit the natural rhythms of the community.

3.4 How Long Will It Take?

There are no hard and fast rules about how long it should take you to develop ecosystem health goals, objectives and indicators. Despite this, there are some timing concerns which are critical to the success of the process:

- The entire process from start to finish should not take so long that momentum for, and interest in the project is lost. Two or three years is probably a good length of time.
- The timing of events such as workshops should consider other events or activities taking place in your community. For example, if yours is an agricultural community, will the farmers be too busy in their fields to attend a workshop? Are there other festivals, trade fairs, etc. which will reduce attendance at your event?
- The completion of each step and the move onward to the next step should feel right to the local community.

Events should not be forced due to agendas of external organizations, or even to keep on the schedule you have outlined for yourselves. The process you follow should ideally be flexible enough for you to recognize when you have achieved enough that you feel you can move on. While considering this, you should also recognize that funding agencies may not be as flexible as your own organization with respect to timelines and deadlines, and you may occasionally have to work under less-than-ideal schedules in order to maintain your relationships with other organizations.

Keeping these points in mind, draft a rough schedule based on a two year time frame. During the first year, you should compile and present your knowledge base, and develop your ecosystem health goals and objectives. In year two, develop your indicators and start work on a monitoring program (discussed in the next chapter).

Chapter Summary: Points to Check!

Knowledge Base

- What do you want to include?
- Who is the audience? How could you best present the information?
- Who will coordinate the work? Will you set up a steering committee? Who will sit on the committee?
- Who will collect and present the information? Can you hire a consultant? Student? Use volunteers?
- How can you make partnerships with other groups in your community?

Goals and Objectives

- How will you determine your community's vision?
- What are the common themes in your vision and knowledge base?
- How will you write goals and objectives based on your vision?

Indicators

- What sorts of indicators do your goals and objectives suggest?
- What indicators have been used in similar ecosystems?
- What types of measures are meaningful to the local community?
- How will you select indicators? Through a workshop? What are your selection criteria?
- How will you prioritize indicators to apply in a monitoring program?

Timing

- Do you have a timeline for events?
- Is your timeline flexible enough to accommodate unexpected delays?
- Have you considered the timing of other local events?

1.Christiansen, Neils and Todd Romaine. 1995. Verbal History of the Salmon River Watershed. Salmon River Watershed Roundtable, Box 3308, Salmon Arm, BC, V1E 4S1.

2.Canadian Council of Ministers of the Environment. 1996. A Framework for Developing Ecosystem Health Goals, Objectives, and Indicators: Tools for Ecosystem-Based Management. Winnipeg, Manitoba. 24pp.

3.Salmon River Watershed Roundtable. 1994. The Salmon River Watershed Planning Guide. SRWR, Box 3308, Salmon Arm, BC, V1E 4S1. 23pp.

4.Social Planning and Research Council of B.C. 1996. Thinking Creatively. A Guide to Help Groups Put Their Creative Energy to Work. Strengthening Communities, A Series of Community Development Skills Guides. 14pp.

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6.Social Planning and Research Council of B.C. 1996. Discovering Why We Are Here. A Guide to Help Groups Identify Reasons for Working Together. Strengthening Communities, A Series of Community Development Guides. 15pp.

7.Donaldson, Carole. 1994. Working in Multistakeholder Processes. Environment Canada. 83pp. AND, Social Planning and Research Council of B.C. 1996. Thinking Creatively. A Guide to Help Groups Put Their Creative Energy to Work. Strengthening Communities, A Series of Community Development Skills Guides. 14pp.

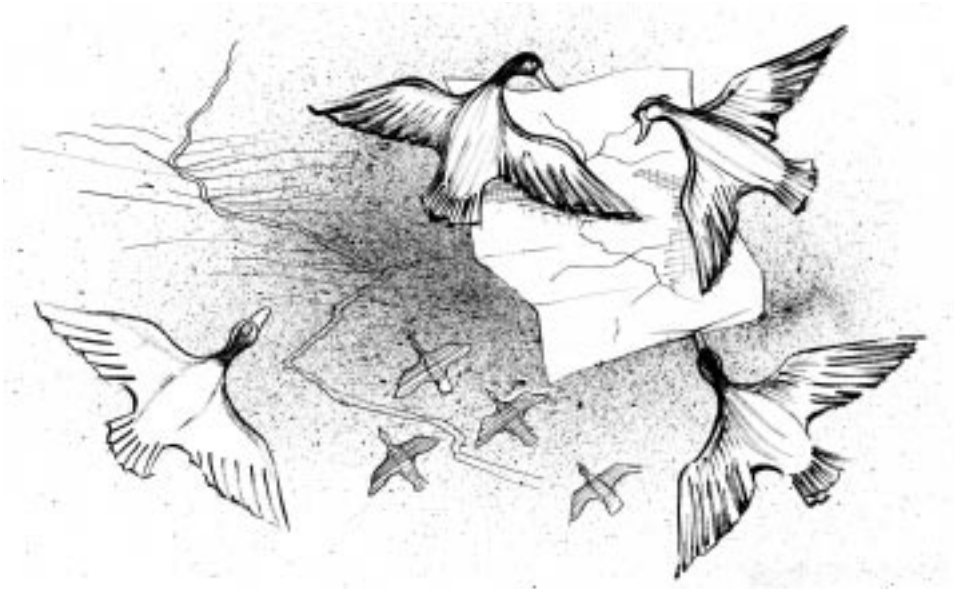
8.Hancock, Trevor. 1993. “Seeing the Vision, Defining Your Role”. Healthcare Forum Journal, May/June 1993: 30-36.

9.Stavinga, Janet. 1997. Creating and Celebrating Our Watershed’s Future: Selecting Indicators for a Sustainable Watershed Future. Workshop Report, March 1-2, 1997, Falkland, BC. Environment Canada, Fraser River Action Plan. DOE FRAP 1997-08. 81pp.

CHAPTER 4

Staying on Your Flight Path

Action Plans, Monitoring, and Reporting on Your Goals, Objectives and Indicators



Staying on Your Flight Path

Action Plans, Monitoring, and Reporting on Your Goals, Objectives and Indicators

This chapter suggests ways to use your ecosystem health goals, objectives and indicators in action planning, monitoring, and reporting. While suggestions are provided to get you thinking about these topics, it is highly recommended that you do further research and reading into these areas.

4.1 Using Ecosystem Health Goals and Objectives in Action Plans

On their own, ecosystem health goals, objectives and indicators won't improve the health of your ecosystem: they must be followed by actions.

In the Salmon River watershed, community members said that ecosystem goals and objectives could be used for several things[1]:

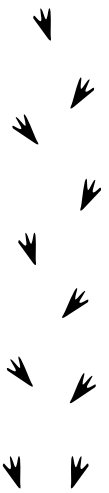
- guiding the Roundtable in planning;
- communicating with funding sources; and
- influencing the actions of government.

These things can become part of an action plan for your community: a written document which states what you are going to do to meet your goals and objectives, how you're going to do it, and who is responsible for ensuring it gets done.

A good community action plan for ecosystem health:

- promotes actions at both individual and community levels
- assigns people to tasks (so you know who is going to do what)
- has clearly defined time horizons for work
- recognizes the strengths of "task oriented" and "process oriented" people
- outlines a volunteer infrastructure
- has clear milestones and states the actions needed to meet them
- provides a public record of what you are doing
- is developed and reviewed at least once per year

An action plan states what you are going to do, how you're going to do it, and who is responsible for getting it done.



There is a wide range of actions which your plan might include, depending on the focus and interest of your group. For example, your actions could be on-the-ground physical changes to the environment. Many of the SRWR's actions were of this type (e.g., fence building and stream bank stabilization projects). Or, your actions could be in lobbying or advocacy, (e.g., lobbying a government to take action on a problem that is within its jurisdiction).

4.1.1 What Should an Action Plan Include?

Action plans vary in formality and scope. If you have never had an action plan for your group, it is best to be comprehensive. If you are doing a yearly update, perhaps a few pages outlining progress made and new directions or strategies would be sufficient. Here is an example of what to include in an action plan [2 3]:

- introduction
- brief overview of issues and conditions (from your knowledge base)
- community vision of ecosystem health
- ecosystem health goals and objectives
- ecosystem health indicators
- options / actions chosen
- implementation strategy (what tasks are required? when will they be done? who will do them? what are the resource requirements?)
- evaluation procedures (how will you review what you have done?)

Other things you may want to add:

- glossary
- code of conduct
- list of participants (organizations and individuals)
- bibliography
- yearly progress reports to update your implementation strategy
- fundraising strategy or financial plan

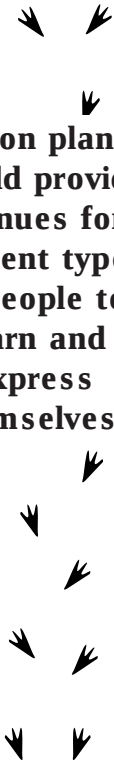
If you have already gone through the process of developing ecosystem health goals, objectives and indicators, most of this work is already done for you. At this stage, you need to add an implementation strategy: the "what", "how" and "who".

Where does your implementation strategy come from?

Achieving a healthy ecosystem requires action from your entire community. All segments of the community must be involved in *developing* your implementation strategy and *living* the strategy. Your implementation strategy

could be started in concert with your goals and objectives (i.e., at the same workshop). Specific actions could be refined in smaller work groups.

In developing an implementation strategy, you will need a method to evaluate different option scenarios which are presented for action. You may want to consider such things as demands on resources, difficulties of managing actions, likelihood of success, and whether or not your proposed actions deal with the root cause or just the symptoms of the problems.[4] (For further information see SPARC 1995 in Appendix B and FBMP *et al* 1995 in Appendix A.)



Action plans should provide avenues for different types of people to learn and express themselves.

4.1.2 The Doers and the Processors

One of the best things your community could do to successfully develop and implement an action plan is to acknowledge and make use of the variety of skills and abilities within your community. Recognize the fact that communities are made up of individuals, and that individuals vary in the way they learn, work, and express themselves. Sometimes, these differences can be very frustrating: John thinks Jane always acts before she thinks; Jane thinks John is all talk and no action. You can make your group stronger and more effective if you provide avenues for different types of people to learn and express themselves.

Tension often arises between the doers and the processors[5]. The "doers" are those task-oriented, action seeking people who want to get to work! These people have the energy and enthusiasm to plant trees, go on marches, write letters, build bird houses, take water quality samples, etc. They do not, for the most part, like to sit in meetings discussing what they are going to do—they want to get out and do it!

The "processors" are those people who want to think things through, focus on building trust and interpersonal skills, and ensure group cohesiveness and unity of vision.

Build an outlet for task-oriented people as soon as possible within your planning process.

These people often play facilitative roles, they want to ensure that actions are related to goals, and that processes used are fair, and inclusive. They want to take the time to ensure that the right things get done!

Everyone has some element of the doer and the processor within them, though people tend to lean one way or the other. Both types of people are needed for a successful project since,

- you want a project that is well thought out and fosters a sense of community, and
- you want work to get done and physical changes to be evident.

Care must be taken not to lose the interest of the doers during the planning stage. You must build an outlet for task-oriented people as soon as possible within your planning process.

4.1.3 Volunteer Resources

Volunteers expand the amount of work you can accomplish, increase community knowledge and support for your project, provide work experience for youth or other groups, and provide feedback and advice on services and policies.[6 7] Because volunteers are such a vital resource, you need to have a way to make use of them as they come forward. One way of doing this is to clearly mark areas within your action plan where volunteer labour is needed, and then design a volunteer program to fill this need.

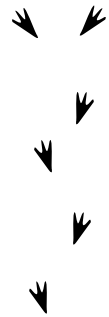
A Good Volunteer Program:

- performs needed work which fits into your action plan
- is flexible enough to allow for varied time commitments of volunteers

- provides volunteers with a sense of satisfaction (keep in mind that there are task-oriented and process-oriented people)
- provides learning opportunities for volunteers and ensures that volunteers are adequately trained
- provides adequate supervision of volunteers by staff or more experienced volunteers
- contains a screening process (to ensure that volunteers are matched to their capabilities) and an evaluation process (to give mutual feedback and improve your program)
- appreciates and rewards volunteers for their efforts
- recruits and places new volunteers as needed

This last point is particularly important. Volunteers usually don't commit their life to a project—they work on a project for a period of a few years until their priorities (or the project's priorities) change and they focus their energies elsewhere. You should anticipate the need for volunteer succession within your group, especially if key leadership roles are filled by volunteers.

There are several good resources (a few are listed in Appendix E) which provide step by step guidance on how to set up an effective volunteer program.



A monitoring program provides continual updates to your ecosystem knowledge base.

4.2 Developing a Citizen Based Monitoring Program for Applying Your Indicators

A monitoring program is an ongoing effort to collect and analyze data to tell you if the conditions in your ecosystem are changing. A monitoring program applies ecosystem health indicators. A "citizen based" monitoring program is one in which the majority of data collection and analysis is conducted by community members, and con-

trol of the program rests in the hands of a community based organization.

Examples of the types of information you can collect through a citizen based monitoring program vary widely. The SRWR is currently setting up a volunteer monitoring program to assess the health of the Salmon River. Volunteers will be trained to collect water and invertebrate samples, conduct physical stream measurements, and learn how to analyze the data they collect.[8] Another example of a citizen based monitoring activity is in the Northern Yukon where local residents have conducted interviews with other members of their community. Through the interviews, information was gathered on six different topics of local interest: berry crops, locally important fish species, porcupine caribou, general observations about other animals, weather conditions, and general community conditions.[9]

A Good Citizen Based Monitoring Program:

- applies your ecosystem health indicators and tells you whether or not you are progressing towards your goals and objectives
- discovers new information
- tests theories about what is happening in your ecosystem
- facilitates a transfer of technical knowledge to citizens so that the community is empowered to continue monitoring if government support is re-allocated
- provides a learning experience to citizens who take part, increasing knowledge and awareness about ecosystem conditions within the community
- provides data which is accessible to all community interests (i.e., “sensitive” data is not hoarded)
- provides data of high quality (quality assurance and quality control measures are in place)

- develops rapport between government agencies and citizens
- helps government agencies to meet their mandates through expanding their information networks
- makes effective use of partnerships with government, businesses and other community service organizations

What Could the Program Look Like?

Here is an example progression of events to develop and implement a citizen based monitoring program:

- *Decide on initial goals*. If you have already prioritized your indicators, and know where you want to start, this step will be easy! You also have to assess what you are capable of doing right now. Don't get discouraged if you can't monitor everything you want to measure. Start with what you can, and let the program grow. Also, check to see that your monitoring goals are not already being met: is someone else already collecting this data? For efficiency's sake, avoid duplication.
- *Develop/assemble your instruments, questionnaires, and other materials*. For example, these could be technical equipment needed to take measurements, or interview forms used to question local residents about their observations.
- *Train staff and volunteers*. Take the time to hold workshops to train workers in quality assurance and quality control. Modify your instruments as necessary and reach common understandings of how the monitoring is to be conducted.
- *Apply your instruments*. Take the measurements, conduct your interviews, etc.
- *Analyze your data*. What does your data mean in terms of conditions, trends, and actions required?
- *Report your data*. (Discussed in next section)

- *Re-apply your instruments*. Continue your monitoring program on a regular basis, perhaps bi-annually or annually.

To develop a monitoring program, you will have to examine several topics in much more detail (e.g., data analysis and presentation, scientific validation of instruments, and roles of different partners). Appendix D lists references to get you started.

4.3 Reporting on Your Progress

In developing and applying ecosystem health goals, objectives and indicators, news and information will be generated. This news and information needs to be reported to those people who need it. There are generally three types of audiences for this news. These audiences are discussed in the following sections along with the types of information they need, and some suggestions for getting it to them.

Coordination of all your reporting or communication activities could be done through a communications plan. Communications is time consuming, so stay focused and report what people need to know to work effectively. Your plan should attempt to:

- identify audiences
- outline what each audience needs to know
- develop appropriate, socially relevant formats for presenting information
- consult with audiences to evaluate the information they're receiving. Is it understandable? Comprehensive? Accessible?
- revise communications strategies as necessary

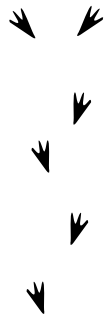
4.3.1 Reporting Within the Convenor Group

Reporting within the convenor group entails keeping your working community informed about what individuals are doing. You need a way for different members to keep informed about what one another is doing.

Here are some examples of reporting within the Salmon River Watershed Roundtable and other groups:

- informal discussions
- reporting segments during regular meetings
- written weekly/monthly/yearly progress reports from staff or committees
- meeting minutes which serve as your public record
- newsletters
- code of conduct
- formal plans and reports

Discussions—both formal and informal—are often the best way to ensure understanding of one another's activities. However, it is also important to have a formal written record to which you can refer.



Use local communication networks to report to the larger community.

4.3.2 Reporting to the Larger Community of Interest

Recall that the larger community contains all the people who are affected by or have an interest in your ecosystem's health, (i.e., all the residents, businesses, government agencies, First Nations, etc.). Things you could report to these people include:

- upcoming events and meeting schedules
- work projects
- your ecosystem vision, goals, objectives and indicators

- current ecosystem health conditions (and changes as they are noted from your monitoring program)
- things people can do to work towards ecosystem health
- stories from local champions

To report to the local community, you need to make use of the local communication networks (see section 2.3). To report to groups such as government agencies who may not be actively involved in the convenor group, you could send them a yearly copy of your action plan.

4.3.3 Reporting to External Groups

Finally, you may wish to report to external organizations similar to your own (i.e., other community based groups working towards ecosystem health). It is beneficial to your community if you exchange information and discuss problems, solutions, progress, ideas, etc. with other groups grappling with similar issues. Other groups may have valuable lessons to share with you, and much to learn from your experiences as well.

Sharing information with other ecosystem initiatives enables you to benefit from each other's experiences.

There are various forums for you to communicate with other groups, including:

- conferences and workshop
- networking associations
- internet discussion groups
- sustainability councils or taskforces
- journal articles or magazine articles

You can also exchange your newsletters and meeting minutes with external groups in order to keep them up-to-date on your activities.

Chapter Summary

- Ecosystem health goals, objectives and indicators won't improve the health of your ecosystem unless they are followed with actions.
- An ***action plan*** states *what* you are going to do, *how* you're going to do it, and *who* will get it done.
- To make use of the variety of skills and abilities within your community, you must have outlets for both ***task-oriented*** and ***process-oriented*** people.
- A good *volunteer program* ensures that you are able to make best use of volunteer resources when they are available.
- A *citizen based monitoring program* applies your ecosystem health indicators. The majority of data collection and analysis is done by local community members and the control of the program rests with a community based organization.
- ***Partnerships*** with government agencies, business, or other groups aid in providing technical expertise to a citizen based monitoring program, and ensuring adequate training of community members.
- A ***communication plan*** outlines who you need to report information to, how you will do it, what you will report, and how you will evaluate and revise your communication efforts.
- Audiences to which you should report include: members of your community group, the larger community (residents, businesses, agencies, First Nations, special interest groups), and other ecosystem health initiatives.

[1].Grant, Kathy. 1996. Evaluating the Collaboration Towards a Future Vision and Ecosystem Objectives for the Salmon River Watershed. M.Sc. Thesis in Resource Management and Environmental Studies. University of British Columbia. December 1996.

[2].Atlantic Coastal Action Plan. 1993. Sharing the Challenge: A Guide for Community-Based Environmental Planning. Volume 1. Environment Canada. 226pp.

[3].Clague, Michael. 1993. A Citizen's Guide to Community Social Planning. Social Planning and Research Council of B.C. 68pp.

[4].Fraser Basin Management Program, Canadian Wildlife Service.

Department of Fisheries and Oceans Canada, and Forest Renewal B.C. 1995. Community Stewardship: A Guide to Establishing Your Own Group. 80pp.

5.Shaffer, Carolyn and Kristin Anundsen. 1993. Creating Community Anywhere. Finding Support and Connection in a Fragmented World. Jeremy P. Tarcher/Perigee. 334pp.

6.MacLeod, Flora. 1993. Motivating and Managing Today's Volunteers. How to build and lead a terrific team. Self-Counsel Press. North Vancouver, BC. 173pp.

7.Fletcher, Kathleen Brown. 1987. The 9 Keys to Successful Volunteer Programs. The Taft Group. Washington, D.C. 88pp.

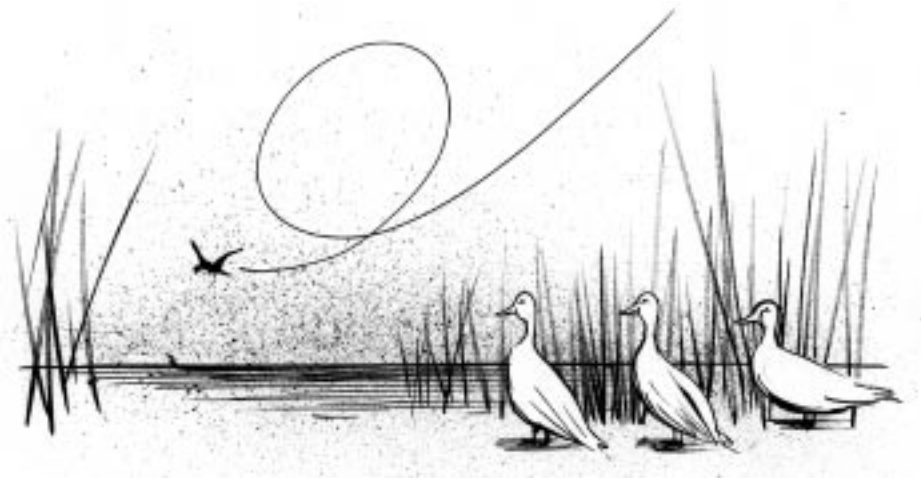
8.Culp, Joseph M., Kevin J. Cash and Daryl B. Halliwell. 1997. Volunteer-Based Monitoring Program for the Salmon River Basin: Using Benthic Indicators to Assess Stream Ecosystem Health. Environment Canada, Fraser River Action Plan. DOE FRAP 1997-09. 70pp.

9.Kofinas, Gary. 1997. Personal Communication, May 1997.

CHAPTER 5

You're Not the First to Fly

Learning from Yourselves and Others



You're Not the First to Fly
Learning from Yourselves and Others

5.1 Know Your Local Conditions

Each community, each ecosystem is unique. The things which make your ecosystem wonderful—those things that inspire you to work towards ecosystem health—are things that will also guide you in choosing appropriate community based planning activities.

For example, it is easy to imagine differences between rural and urban ecosystems. Cities have, in general, higher population densities, a higher cost of living, less self-reliance in food production, a higher degree of ethnic and cultural diversity, and a lower degree of home ownership than rural areas. These types of differences influence the way people respond to planning initiatives and should be considered *before you begin* (and during) your process to develop ecosystem health goals, objectives and indicators.

5.1.1 Culture

One way of conceptualizing these types of differences is to examine the culture of your community. In everyday language, the word "culture" often refers to artistic occupations (music, art, dance, etc.) or pop-culture symbols such as fashion. However, culture extends far beyond these uses. Culture can be defined as all the shared assumptions about the way the world works which evolve as a group of people struggle together to make sense of their world.[1]

When people live or work together, they develop ways of doing things which seem right to them. Deep assumptions

can develop about what is right in relation to such things as human relationships, power or authority issues, or how members of a culture should plan for the future. It is these deep assumptions that can affect the success of a planning process. If the process does not jive with the community's assumptions about what is right, there will be resistance to your process.

You need to consider if your methods are culturally appropriate. For example, if the residents of your ecosystem dislike going to meetings, perhaps you should explore other methods of communicating with them.

Some considerations in designing culturally acceptable methods include:

- **The degree of individualism in your community.** If people are highly individualistic, they may resist attempts to work in groups.
- **Community cohesiveness and exclusiveness.** How close knit is your community? Will there be any resistance to people perceived as "outsiders" participating in the process?
- **The degree of long-term or short-term thinking.** If people in your community are just scraping by, meeting their own needs on a short-term basis, it may be difficult to address long-term sustainability planning without first addressing immediate problems.
- **Symbols of respect, authority, and power.** Who do people look up to, admire or respect in your community? These may be the first people to approach about your ideas.
- **The distinction between public and private domain.** Will people in your community consider it appropriate to discuss or act on the issues you want to address or will they think it is their private business and of no concern to the rest of the community?

Knowing the culture of your community can help you design an appropriate planning process.

5.1.2 Vision-based or Conflict-based Collaborations

Revisit your reasons for working together. Are you together because you have a common vision of the problems and issues in your ecosystem and you want to find a way to jointly work towards ecosystem health? Or, are you together because you need to resolve a conflict? This will influence the design of your process. For example, in a conflict based collaboration, you will need to put more energy into negotiation, mediation, and conflict resolutions methods. You may also have to be more formal (e.g., keep very careful written records) and work hard to build trust among the conflicting parties.

Special conditions can be used to generate interest in the development of ecosystem health goals, objectives and indicators.

5.1.3 Special Environmental, Economic or Social Conditions

Are there any special environmental, economic or social conditions which are pervasive throughout your ecosystem and influence the way people think and feel? For example, in the Salmon River watershed, the reliance on water from the Salmon River by a number of interests (agriculture, fisheries, domestic use, etc.) shaped the evolution of the Salmon River Watershed Roundtable and its work:

- water quality and quantity and the return of the salmon became the group's first common interests
- the watershed became their ecosystem unit
- field projects to improve ecosystem health were centred around the river

- most people in the watershed live within a few kilometres of the river, and are affected by the river and/or water issues in some way, making water quality and quantity special environmental issues for this ecosystem.

Special conditions can be used to generate interest in the development of ecosystem health goals, objectives and indicators. Identifying and addressing these conditions strengthens your planning process. Other examples of special conditions to look for include:

- heavy economic reliance on one resource sector
- timing of important activities and events in your community (e.g., calving or harvesting time in agricultural areas)
- ethnic, religious, spiritual, or other cultural events, times of year, or beliefs which are pervasively held in the community.

5.2 Easier Said Than Done!

Community planning processes, like the one to develop ecosystem health goals, objectives and indicators, are not easy. But, they can be very rewarding if you persevere through the rough spots. Community processes go through phases of ups and downs. One description of these phases is given below.[2]

(1) Excitement: Getting High on Possibilities.

When a community group first forms, members are excited by the new possibilities offered to them by working together. The focus is usually very positive and is centred around developing a common vision.

Surviving the ups and downs of a community process strengthens your group.

(2) Autonomy: Jockeying for Power.

This second phase serves an important development purpose. Community members are no longer infatuated with the thought of working together; they assert their independence and differentiate their needs from the whole group. This phase can be disruptive as some members may decide their needs are best met outside the group. By encouraging open communication and paying attention to both individual and group needs, a group can move through this disruptive phase.

(3) Stability: Settling into Roles and Structures.

Once a group has faced its power issues, it usually settles into a stable phase in which members accept their own, others' and the group's limitations and set to work on the tasks at hand. Problems can arise if the roles into which a group has settled place most of the group's weight on the shoulders of a few people. This leads to burnout, stagnation and polarization. The ability to share leadership, and survive changes in leadership are the greatest challenges of this phase.

(4) Synergy: Allowing Self and Group to Mutually Unfold.

In this phase, there is a realization that what is good for the individual is also good for the group. When each individual of a community is happy, healthy, and doing what they do best, the group functions better as a whole. Individuals can encourage this phase to happen by listening to their own inner wisdom and finding the best way to serve their community. The challenge at a group level is to be open to change as people take up roles that are best for them.

(5) Transformation: Expanding, Segmenting, or Disbanding.

Community processes follow cycles. Eventually the end of a cycle is reached. Perhaps the original reason for being together has come to an end, or a sense of completion has been reached. The community might stay together through another cycle, starting with redefining their common interests and revitalizing the excitement for working together. The group could also decide to part ways at the end of a job complete.

5.3 Where to Find Help

You don't have to do it alone. In fact, you *should not* do it alone! The advice repeatedly given by community workers is: *talk to someone who has done it before.* Even if your project is "leading-edge", "brand-new", "pushing-the-envelope", you can find elements of it elsewhere. At the very least, you can think about the skills you need for your project, and consult with people who have those skills.

Searching Your Own Community

Most of the human resources you need to develop ecosystem health goals, objectives and indicators can be found in your own community. Whether you are recruiting volunteers, seeking advice, or seeking partnerships with other organizations, there are a number of places to look:

- **Community Associations**. Make use of the networks that already exist in your community to find what you need. There are different types of community associations:

- *Issue related* - e.g., agricultural groups like the Cattlemen's Association, or environmental groups
- *Service related* - e.g., food banks, volunteer fire departments
- *Recreation* - e.g., social clubs, outdoors groups, sports fishing groups
- *Business* - e.g., chamber of commerce
- *Other clubs* - e.g., scouts and girl guides, Rotary Club, Lions Club

- **Volunteer Bureau**. Your community may have a volunteer bureau which lists volunteer organizations and what they do. You could place your group on this list as a way to recruit volunteers, and use the list to find other organizations which may be able to help with your work.
- **Schools, Colleges and Universities.** Academic institutions can be a great source of volunteers, knowledge and advice. Joint research and work experience projects could be explored.
- **Public Libraries and Other Public Buildings.** Ask if you can put up posters at your local library, post office, or other high traffic buildings.

Some Last Tips:

- Communicating with other groups (see section 4.3.3) cannot be stressed enough. Reading about other ecosystem based community planning projects can give you some second hand experience. Better still, talk to people from other groups! Interactive discussions can generate great ideas for your group.
- Keep planning simple and to the point[3]. Your process must have sufficient detail to be credible, but not so much detail that you become lost in bureaucracy.

- Planning, action, and group development must go "hand in hand"[4]. The best plans in the world won't come to fruition in a poorly organized group.

Resources to get you started

In Appendices A-G, suggested readings, contact organizations, and—in some cases—more detailed information, are provided on the following topics:

- General References
- Group Process Skills
- Fundraising for Non-Profit Groups
- Indicators and Monitoring
- Volunteer Management
- Government Agencies and Government Relations
- The Salmon River watershed

Chapter Summary

- Each ecosystem and each human community is unique. Local conditions affect the way people think, feel and do things. Knowing these local conditions is key to designing a planning process which will work for your community.
- Some aspects of a community's culture may be helpful in designing appropriate methods to use in your effort to develop ecosystem health goals, objectives, and indicators.
- Different methods may be appropriate in vision based or conflict based collaborations.
- Pervasive environmental, economic or social conditions can be used to generate interest in ecosystem health goals, objectives and indicators, and in working towards health.
- Community groups experience a number of growth and development phases. You can expect some ups and downs in developing ecosystem health goals, objectives and indicators.
- Always look to your own community first to find the skills and resources you need. Other communities may be able to provide you with great advice on how to effectively use your resources.

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1. Linkage to Goals and Objectives - the indicator should be grounded within the context of the desired goals and objectives.

2. Ecologically Relevant - the indicator must be important for maintaining balanced biological communities and sensitive to alterations in physical and biological components of the ecosystem.

3. Socially Relevant - the indicator has obvious value to, and is observable by stakeholders. The actual indicator may not be relevant to the broader community, however the information derived from the indicator or the insights it provides must be.

4. Sensitive - sufficient information is available which demonstrates that the candidate indicator responds to moderate changes in ecosystem conditions, without exhibiting extreme natural variability.

5. Measurable - valid metrics have already been developed to assess the status of candidate indicators (i.e., easy to measure). In addition, the accuracy and precision of the suite of indicators can be evaluated using established procedures.

6. Appropriate Scale - data provides relevant information on the ecosystem as a whole. For example indicator species that occur throughout the drainage basin may be more useful than species that occur only at specific sites. [However, it is also important to note that endemic species (those that are only found in one restricted area) are more susceptible to threats than ubiquitous species, and can often provide early warning signals of ecosystem threats.]

7. Historical Data Available - sufficient traditional knowledge or scientific information is available to support the determination of natural variability, trends, and targets.

8. Non-destructive - collection of the required data does not change the structure and/or function of the ecosystem.

9. Timely - data provide information quickly enough to support the initiation of effective management actions before significant and lasting effects on the ecosystem have occurred.

10. Unique - data provide information on the status of the ecosystem that is not redundant with other indicators. This characteristic can only be evaluated on a relative basis, and is intended for establishing a suite of indicators that provides comprehensive information on the status of the ecosystem.

11. Cost Effective - the indicator which is the least expensive to monitor should be selected when several indicators provide similar information on the status of the ecosystem (i.e., maximum amount of information per unit effort).

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