The Aboriginal Forest Planning Process

A Guidebook for Identifying Community-Level Criteria and Indicators

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This Guidebook is also available in the internet:
http://researchforest.unbc.ca/afpp/AFPPMain.htm
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Preface & Acknowledgements

This is the final version of the Aboriginal Forest Planning Process (AFPP) Guidebook. It was revised based on two types of evaluation. Using a 3-round Delphi process, 29 First Nation and non-First Nation experts evaluated the Guidebook’s content and design. Pilot projects were conducted with three First Nation communities, including Little Shuswap (Skw’lax), Williams Lake Band (T’elex), and Tl’azt’en Nation. The authors would like to thank the following organizations, agencies, communities, and individuals for their valuable input into improving the AFPP and this document:

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A Quick Look at the AFPP Approach

The *Aboriginal Forest Planning Process (AFPP) Guidebook* is a community-based forest planning tool written primarily for First Nation communities. It may also be useful to managers and decision-makers in government agencies; forest tenure-holders; and other forest stakeholders who engage in planning with First Nations.

**What are the goals of the AFPP?**

- To encourage First Nation community members to participate in discussions about land use, and to actively plan for the future.
- To provide a way to incorporate First Nations land values into local forest management plans in a proactive way.
- To improve communication between First Nation and non-First Nation land user groups.
- To engage First Nation community members in interactive learning about forest management and planning processes.
- To raise non-Aboriginal land users’ awareness about, and appreciation for, Aboriginal land values.

**Who are the key players in the process?**

- **FIRST NATION LEADERS:** The administrative and traditional decision-makers in First Nation communities including Chief and Council, Executive Directors, Elders, Hereditary Chiefs, Treaty Coordinators, Natural Resource Directors, and Research Directors.
- **ANALYSTS:** The researchers and natural resource management technicians and professionals in a First Nation community.
- **COMMUNITY ADVISORY GROUP:** Community experts such as Elders, band administrators, forest workers, youth, and traditional forest users.
- **COMMUNITY PARTICIPANTS:** Community members who are interested in sharing their ideas about planning for the future of their traditional territory.
- **TECHNICAL SUPPORT:** A group of professionals, such as archivists, archaeologists, biologists, or foresters, who provide specialized expertise and knowledge to support the planning process.
- **COLLABORATORS:** Industry, government, non-governmental organizations, and other communities who wish to engage in joint planning efforts with First Nations.

*Many First Nations value wetlands as important habitat for plants and animals harvested by community members, and as an integral element in ensuring water quality. They are important features for preservation.*

Photo: M. Karjala.
What is this planning process about?

- This process focuses on identifying the most important forest values held by a First Nation and translating them into criteria and indicators of forest management.
- Forest values are identified in archived information, which consists of primary materials (such as, Traditional Use Studies and interviews with community members) and secondary materials (such as, archeological reports, community planning reports, books, and research articles). If gaps in information are identified, additional data collection, through interviews, focus groups or other community-based research methods, may be required.
- The approach is structured so that a First Nation manages and applies traditional and local information in the way that is most appropriate. Information that is sensitive or confidential does not leave the First Nation community.

How do the pieces fit together?

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Part A

AFPP Background and Concepts
**What is the purpose of the Aboriginal Forest Planning Process (AFPP) Guidebook?**

This Guidebook was developed to assist First Nations in initiating community-based forest planning using the Aboriginal Forest Planning Process (AFPP). The objectives of this planning approach are to

- Encourage First Nation community members to discuss land and natural resource management issues, plan for the community’s future, and make resource management decisions;
- Ensure that control and interpretation of a First Nation’s knowledge and values remains within the community, and provide options for linking this information with forest management activities;
- Produce a community-based perspective of good forest stewardship; and
- Suggest a way to communicate this forest management perspective to groups outside of the community.

The AFPP is an approach to planning that uses *archival information* (such as, Traditional Use Studies, interviews, maps) to identify core community values. These values are used to develop *criteria and indicators* of forest management.

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**Why involve the community?**

- **It increases equity and empowerment.**
  Giving people a greater share in the decisions that affect them and in the benefits arising from resource management improves both conservation and quality of life. Since resource management profoundly affects people’s livelihoods and cultures, to be acceptable and implementable, decisions need to be locally based.

- **People have a lot to offer.**
  Community participation takes advantage of local resources such as knowledge of the environment, organisational capabilities, management institutions, technology, labour, capital, infrastructure, and land.

- **It increases management effectiveness and efficiency in terms of money and time.**

- **It improves people’s commitment.**
  When priorities and solutions originate from local people, they are more inclined to take ownership of the planning process. And, when people take ownership, they are more likely to become committed contributors to and supporters of the AFPP.
The AFPP Story

The AFPP was developed in 1999 for the John Prince Research Forest (JPRF), located near Fort St. James, BC. The JPRF is operated by Chuzghun Resources Corporation which is co-managed by the Tl’axt’en Nation and the University of Northern British Columbia. Because this research forest is within Tl’axt’en traditional territory, one of JPRF’s mandates is to find ways to directly involve Tl’axt’en in planning and decision-making. To date, the AFPP has been used as a research tool in this unique partnership.

AFPP Guidebook Draft 1 was produced in December 2001, and sent to 29 reviewers in British Columbia: 12 community experts from three First Nations, and 17 Aboriginal and non-Aboriginal technical experts representing industry, government, non-governmental organizations, and consultants. These reviewers were asked to evaluate and suggest improvements for the Guidebook.

Review comments were incorporated into AFPP Guidebook Draft 2, which was used to identify additional improvements through three small pilot projects with Skw’lax (Little Shuswap Band), T’exelc (Williams Lake Band), and Tl’axt’en Nation. The pilot projects resulted in AFPP Guidebook Draft 3, which underwent a final evaluation by the expert reviewers, producing this final version.

Overcoming Barriers to Participation

This Guidebook is an attempt to improve First Nations’ participation in forest management and planning in British Columbia. There are several problems with the way First Nations currently participate in forest management and planning. Some difficulties identified by our research include (but are not limited to):

- Unresolved land claim settlements are a significant barrier. Because many First Nations currently hold no recognized legal authority over their traditional lands, and must allocate significant resources to negotiating toward such authority, their ability to influence forest planning and management is limited.

- A general lack of active participation from community members because they feel their contributions are not considered or implemented.

- Existing planning processes that request First Nations input only when plans

AFPP reviewer comments on First Nations participation in forest management decision-making:

“We’re not listened to, so we don’t put our ideas in there.”
First Nation Elder

“Baseline First Nations information is not available in a format that can be readily used for timely planning and management. In most communities, this information only exists in the community members’ minds.”
First Nation forestry consultant
are in the final stages of completion. First Nations are not pro-actively involved in developing the “big picture” for forest development (strategic-level planning or landscape level planning).

- Most traditional knowledge and land use information is not documented in written form and is usually confidential. This presents difficulties for communicating First Nation’s forest values to other land users.

To address these and other issues, the AFPP aims to improve First Nations involvement in strategic-level planning to guide decisions made in lower-level plans (such as, forest development plans). If First Nations are involved in strategic-level planning, the referral process should place less stress on communities with limited capacity. As a result, the fairness and effectiveness of forest management should improve.

The AFPP is designed to be transparent. Every step in the planning process, and the resulting plan should mirror the community's values and knowledge of the forest. Confidence, trust, and ongoing participation in the process by community members will result after demonstrating that someone listened, understood, and applied their ideas in a constructive and effective way.

The AFPP approach tries to protect sensitive information by translating forest values into criteria (values) and indicators (measures) which could allow a First Nation to safeguard sensitive information, while still communicating what is important. AFPP uses spatial (maps), quantitative (such as, habitat, jobs, timber volume), and qualitative (such as, processes and policies) criteria and indicators to communicate forest values and desirable forest management strategies and practices.

The intent of the AFPP process is to improve First Nations’ influence in forest management while authority is under negotiation (without prejudice to land claim settlements), and to provide a planning process that can also be applied after treaties are negotiated.

Who is this Guidebook for?

This Guidebook is intended mainly for three groups of end users:

1) First Nation Leaders
Leaders include Elders, chief and councilors, natural resource directors, treaty coordinators, land use planners, and other primary decision-makers in the community. The role of this group is to assess the AFPP approach for their community and possibly to initiate, fund, and support their community’s AFPP project.

2) Community Analysts
Analysts are people who work for First Nation communities and are assigned the task of identifying the community’s criteria and indicators of forest management using the AFPP approach. These people should have knowledge of the traditional territory, good cross-cultural communication skills, and an interest
in natural resource planning.

3) Collaborators
These people are land and natural resource professionals who represent forest stakeholders such as government, industry, consultants, and non-governmental organizations. These professionals might include Registered Professional Foresters, Treaty negotiators, Aboriginal liaison staff, academics, environmentalists, or land use planners. In particular it is for those natural resource professionals who interact with First Nations to identify, communicate, integrate or negotiate land and natural resource related issues.

What is in this Guidebook?

The Guidebook is divided into two parts:

Part A
Sections 1 and 2 describe the background and major concepts of the AFPP approach. Sections 3 and 4 address some of the practical issues that First Nations need to address before attempting to apply the process. Section 5 outlines the essential skills and traits of AFPP analysts.

Part B
Sections 6, 7, and 8 describe, in detail, the three steps of the AFPP approach. Section 9 presents possible AFPP applications. A list of resource materials is provided in Section 10. A glossary of key terms appears in Section 11.

Summaries, Examples, and Exercises
For quick review, summaries are provided at the end of each section. Important concepts are illustrated using diagrams, examples, and exercises.

Guidebook Limitations
This Guidebook provides a detailed description of the AFPP approach so that First Nations can assess its potential for use in community forest planning processes. The results of three AFPP pilot projects revealed that the successful application of this approach is still dependent on support and assistance from experts in archival research, data analysis, and forestry from outside of the community.

Before starting, it is essential to recognize that the planning process must remain flexible. Every community, collaborator, and forest has unique needs. This Guidebook is a starting point for communicating knowledge, and building and strengthening relationships within communities and with collaborators. It provides a general framework which is adaptable. Users should adjust the process as appropriate to meet their specific needs.

A Tl’azt’en researcher examines a piece of ku’us - alder bark collected from the forest and used by women Elders to smoke and tan moose hides. First Nations continue to use the forest for cultural, spiritual, ceremonial, medicinal, economic, and subsistence purposes.

Photo: J. Mackie
The AFPP is designed to meaningfully incorporate First Nations values into strategic-level (big picture) planning so that community members can take an active role in decision-making, and so that First Nations’ interests are considered at the outset in lower-level plans (such as, Forest Development Plans).

The AFPP was originally developed to improve the Tl’azt’en Nation’s involvement in decision-making on the John Prince Research Forest, Fort St. James, BC.

The AFPP Guidebook describes how to identify criteria and indicators of forest management from community archives. Criteria and indicators can help to communicate forest values without compromising confidentiality.

The Guidebook is written mainly for community leaders, analysts, and industrial, governmental, and non-governmental collaborators.

The Guidebook uses examples and exercises to explain the concepts and stages of the AFPP approach.
What is Planning?

Planning is about deciding what you want for the future, and figuring out how to work toward those things. People make short-term plans in their daily lives. They plan when they are going to wake up, eat meals, go to work, recreate, and when to go to bed. People also make long-term plans, like when they want to get married, have children, and retire.

Cities and towns make plans too. They set aside land for industries, commercial businesses (such as, shopping malls, gas stations), institutions (such as, hospitals and schools), parks, and different densities of housing (such as, apartments, town houses, single-family homes). In rural areas, land is designated for large-scale agricultural use, hobby farms, airports, and businesses that need to operate on large tracts of land. Planners who work in urban or rural planning try to predict the needs of the future and develop plans that will meet those needs.

Traditional land users are also good planners. People plan their hunting, fishing, gathering, and food preparation according to seasonal cycles when certain foods are most readily available. There was a time when it was important to plan and prepare ahead for the winter so that there would be enough food for everyone. Being dependent on nature also meant that people needed to be able to adapt to change, especially if the most important foods were in low supply.
Figure 1: Planning occurs at many levels. Certain plans are made for the entire province (such as, Provincial Parks Strategy) and other plans are made for very small areas like forest stands (forest management plans). Some plans are legal documents (such as, forest development plans) while others simply provide guidance and direction (such as, LRMPs). In British Columbia’s hierarchical planning framework the AFPP falls under “local planning”. Adapted from BC Ministry of Forests Biodiversity Guidebook, 1995
Planning in British Columbia

In British Columbia, land and resource planning is done using a **hierarchical** approach. Figure 1 illustrates this hierarchy, showing how plans that are done at very large scales (higher level plans) are used to guide and direct planning at very small scales (lower level plans). At the time of publishing this Guidebook, changes to forest planning requirements in BC reflect a move away from operational level plans, and increased emphasis on strategic level plans and forest certification.

Planning and Forest-Dependent Communities

**Community-based planning** requires a lot of time, cost, and effort to make informed decisions and to reach agreement on issues where people disagree. These are considerable challenges facing small rural communities, particularly First Nations, who want to be involved in making decisions about the land and people. The decisions that need to be made are complicated, and it is often difficult to identify, organize, and present values and priorities in a way that is easily incorporated into a plan.

The following are some things to remember when conducting any planning process.

- **Transparency and ownership**: It must be clear why certain decisions were made and who made them. When community members have an understanding of the concerns and the perspective of others, and they participate directly in making decisions, they are more likely to support the final plan.

- **Equity and fairness**: All groups in the community should have the opportunity to have a say in what happens. This can increase empowerment, management efficiency and effectiveness; capitalize on the community’s knowledge and human resources; and improve resource user commitment to management decisions.

- **Support**: The community must support the plan and perceive that it was developed through a fair process.

A Helpful Reference for Aboriginal Forestry


*A practical guide to forest certification, with a particular focus on the Forest Stewardship Council (FSC). Written for First Nation leaders, technicians, and community members, this book features a step-by-step description of FSC certification, a series of illustrative case studies, and includes a list of important questions for different parties to consider throughout the certification process. Also an excellent resource for Indigenous communities faced with consultation in any forestry-related context. The step-by-step descriptions are adaptable across any culture and most forestry consultation situations.*
• **Benefit:** The plan must include some direct benefits to the community. Management success depends in part on economic, social, and political incentives that encourage individuals to participate in the process. People must believe that benefits derived from their participation are greater than the costs.

**The Basic Planning Process**

In its simplest form, there are four phases in the planning process:

1) **Visioning**;
2) **Strategizing**;
3) **Implementing**; and
4) **Monitoring**.

**Visioning**

At the **visioning phase**, a community has to ask itself **“Where do we want to be in the future?”**. Should things be the same, or should they be different than how they are now? If things are going to be different, what exactly needs to change? In the visioning phase, a community sets goals and objectives that they would like to achieve (see examples in section 9). Visioning involves thinking about how far into the future the community wants to plan. This is called a **planning horizon**, and it may be 5, 20, 100, or 200 years from now, depending on what the plan is for.

The planning horizon should reflect the number of years into the future that management outcome can be reasonably predicted. For example, a strategic business plan typically covers only 5-10 years, because markets change rapidly from year to year. Ideally, the planning horizon for **strategic forest management plans** should reflect the lifespan of the oldest living tree species on the landscape (for forests in BC between 200-500 years).

**Strategizing**

The **strategizing phase** involves figuring out how to reach the vision, and asks **“How do we get where we want to be?”** It includes identifying **strategies** and **policies** that will help to achieve each goal and objective.

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**AFPP reviewers’ comments on the importance of monitoring and feedback in the planning process:**

. . . “**even though [the] planning process is done or consultation process is done, oftentimes the outcome[s] don't reflect the actual process. They don't reflect the actual needs and concerns of the people. And the only way you can determine that is through monitoring and evaluation.”**

*First Nation land use planner*

“I think we definitely need to go back and revisit the values. I would say revisit the values every few years. You visit them as new information becomes available.”

*First Nation forestry consultant*
Implementation and Monitoring

The implementation phase is the “doing” - when strategies and policies are put into practice.

The monitoring phase involves “watching” to see:
- how well the plan is being followed;
- if the goals and objectives are being achieved; and
- if the outcomes match the original vision.

In the monitoring phase, land users, managers, and planners need to assess whether or not the vision and strategies require adjusting to better reflect the community’s values and needs.

The Planning Cycle

The four planning phases work in a cycle, where the vision and the strategies are always being revisited and adjusted based on what is observed during the implementation and monitoring phases (Figure 2). The AFPP approach is designed to help First Nations get started in the visioning and strategizing phases of the planning cycle.

Figure 2: The planning cycle. The AFPP is a tool for First Nations to work through the visioning and strategizing phases.

The AFPP’s Guiding Principles

Plans are built around information. Information needed for the AFPP can include the following:
- Broad community input, which is necessary for developing a vision with goals and objectives; and,
- Specialized knowledge (such as, from traditional land users, Elders, foresters, biologists, and others) to develop strategies and policies.
Given these information sources, the AFPP guiding principles are as follows:

1. We need to use the best information and knowledge that is available to us and make the best possible decisions from this information.

2. Even though we can never be certain about the future, we must assume that we can make reasonable predictions about what will happen, given the decisions we make.

3. We recognize that in reality, the world is always changing, we are always acquiring knowledge, and that things do not always turn out the way we expect. During the strategizing phase we can conduct risk analyses to prepare for change. During implementation, we need to practice adaptive management. Reacting to change sometimes means that the vision and/or the strategies need to be adjusted.

4. We need to have improved interactions between all land users, addressing communication, cultural, and interpersonal differences.

5. People and groups who are less influential and powerful must have their ideas and needs addressed the same as anyone else.

6. Planning should include local communities by incorporating values identified at the “grassroots” level.

7. Planning should follow principles of sustainable management, including consideration of multiple resources and future generations.

**The AFPP “Tools”: Criteria and Indicators (C & I)**

A forest management criterion is an essential element that must be present to achieve the community’s goals. In this Guidebook, criteria are those things about the forest that are most important to the community.

Indicators are the signs or signals that can be used to measure, predict, or monitor criteria. Indicators allow communities to assess or judge if criteria are being adequately met (see also section 9).

Indicators can be direct or indirect.

- **Direct indicators** are measurements that are directly linked to a criterion. Example: “I saw 10 moose in the past week. There are a lot of moose in the bush this summer,” Moose were observed and counted first-hand, so they are a direct indicator of moose abundance.

- **Indirect indicators** measure something that is associated with a criterion. Example: “It was an easy winter this year. There should be a lot of moose in the bush this summer,” A favourable winter season is an indirect indicator that the moose population will increase.
Criteria and indicators are used in two ways:

- **Visioning and strategizing**: Criteria can help to identify goals and objectives for forest management; indirect indicators can be used to develop specific management targets for the future.
- **Implementing and monitoring**: Direct indicators can be used to guide on-the-ground forestry operations (such as, harvest block layout, logging, planting, brushing); direct indicators also provide a way of assessing whether or not the vision’s goals and objectives are being achieved.

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**National and International examples of criteria and indicators can be found in these publications:**

**CANADA**


**USA**


**INTERNATIONAL**


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**Figure 3**: Two criteria and indicator examples. Indicators are measured using various tools and sources to monitor and assess plans.

**What do you need to keep your vehicle running?**

- **Fuel**
  - Amount of gas in the tank
  - Fuel gauge

- **Lubricant**
  - Amount of oil in the engine
  - Dipstick

- **Electrical power**
  - Amount of power in the battery
  - Battery gauge

These are the criteria for keeping your car going.

These are the direct indicators that are used to measure and assess if the vehicle has what it needs.

These are the sources of indicator measurements

---

**What do you need for a healthy grizzly bear population?**

- **Food**
  - Amount of berries growing
  - Observation by berry pickers

- **Wilderness areas**
  - Road density
  - Forest development maps

- **Shelter**
  - Number of dens available for hibernation
  - Bear habitat research

These are the criteria for a healthy bear population.

These are the direct indicators that are used to measure and assess if the bears have what they need.

These are the sources of indicator measurements
Exercise: Using criteria and indicators on the land

We can take the previous criteria and indicators examples and apply them to the land. This exercise is designed to help you practice your understanding of criteria and indicators. Some possible answers are provided to start you off in each question. Use the extra space provided to record your own answers.

1) First, think about how people make decisions when they are in the bush.

   a) What kinds of important things, or criteria, do you think of when you are in the bush deciding to take a moose for food?

   1) Take only what you need
   2) Age of the animal
   3) Health of the animal
   4)
   5)
   6)

   b) For each of the criteria above, what signs or indicators do you use to decide if you will take or leave a moose when you see one?

   1) People in the community who need food [The criterion is need]
   2) Greyness in the animal’s coat [The criterion is age]
   3) Amount of fat on the animal [The criterion is health]
   4)
   5)
   6)

   c) How can these indicators be measured and assessed?

   1) By talking with people in the community to see if anyone needs food
   2) By observing the moose’s coat to find out it is old
   3) By measuring the amount of fat on the animal to see if it is healthy
   4)
   5)
   6)
2) Now, think of your traditional territory.

a) What are some criteria for keeping the land in good condition?
   1) 
   2) 
   3) 
   4) 
   5) 
   6) 

b) What are indicators that would tell you if the land is in good condition?
   1) 
   2) 
   3) 
   4) 
   5) 
   6) 

c) How would you measure these indicators?
   1) 
   2) 
   3) 
   4) 
   5) 
   6)
3) Now, think about criteria in terms of your community.

a) What are the criteria for making your community strong?
   1) 
   2) 
   3) 
   4) 
   5) 
   6) 

b) What indicators could you use to help you assess these criteria?
   1) 
   2) 
   3) 
   4) 
   5) 
   6) 

c) How would you measure these indicators?
   1) 
   2) 
   3) 
   4) 
   5) 
   6)
Planning involves thinking about the future.

Good community decision-making processes include transparency, fairness, support from the community, and benefits for the community.

The basic planning process has four phases: visioning, strategizing, implementing, and monitoring.

Criteria are the “essential elements” for achieving goals.

Indicators are the signs that help to measure and assess criteria.

The AFPP is a way to identify criteria and indicators that define a community’s vision for the future; to generate strategies, goals, and objectives to achieve that vision; and to produce indicators to monitor how well that vision is being achieved.

Standing dead trees (snags), like the aspen shown in this photograph, are considered to be good habitat for birds and small mammals. Habitat can be a good indirect indicator of bird and small mammal populations.

Photo: M. Karjala
Assessing the Process: Is the AFPP appropriate?

What Does the Community Want?

Consider these questions:

- Does the community want guidance on how to use and apply information gathered from community-based research projects for land and forest management?
- Do they want a way to encourage community members to participate in community discussions about the land, and to think about the future?
- Do they want a way to educate community members about forest management and planning processes?
- Do they want to improve communication of cultural values to non-Aboriginal land users?
- Do they want to encourage non-Aboriginal land users to learn about First Nation’s land values?
- Is it a high priority to make sure that the community’s concerns are included in forest management plans in a pro-active way?

If the answer to any of these questions is “yes”, then the AFPP may be a helpful tool for community-based forest planning.

Seeking Community Support

The process will not succeed if community members do not support it. Leaders must help the community evaluate the process by

1. Learning about the AFPP approach;
2. Explaining the AFPP to community members; and
3. Getting ideas from community members on how the AFPP might fit into existing projects (this may involve altering the process or using it for purposes other than forest planning).

To ensure that the planning process is successful, the community must support

- The goals and objectives of the process;
- How information is to be gathered and used; and
- The methods used to inform the community about the planning process and to involve them in it (such as, attending meetings, reading newsletters, participating in forest walks, and completing surveys).
Capacity

Here are some practical things to consider when deciding whether or not the AFPP approach can be implemented in a community:

- Are there people in the community with the appropriate skills? (see Section 4)
- Is there access to the necessary information sources? (see Section 5)
- Are there funds available for salaries, stipends, meetings, and supplies?
- If outside collaborators are involved, is there a good working relationship with local government agencies, industry, and other land users?

Identifying the Key Players

If the decision is to go ahead with the AFPP, the next thing to do is to identify the people who will play key roles in the process. Carrying out the full AFPP requires six groups of key players:

1. Community Leaders

Community leaders include chief and council, the executive director, the treaty coordinator, research and natural resources directors, hereditary chiefs, and Elders who are the primary decision-makers in the community. These leaders initiate and direct the AFPP project in their community. They are responsible for establishing and maintaining relationships with collaborators, providing support to analysts, and informing the broader community of progress on the AFPP project. Community leaders are “stewards” of the project. They are responsible for ensuring that community values are communicated accurately and that results of the AFPP are used appropriately.

2. Community Analysts

Analysts are people who work for a First Nation, and who are responsible for identifying forest management criteria and indicators from community information, soliciting community evaluation and feedback on results, and establishing communication links between the community participants and the collaborators. This person or group must be trusted within the community, and must be able to effectively communicate with all other key players.

Ideally, analysts should be members of the First Nation carrying out the project. They must be comfortable working with maps and diverse sources of information, have good written and oral communication skills, and a good knowledge of the traditional territory. In some communities, it may be necessary to hire a consultant to get the AFPP project started and train community members as AFPP analysts.

Pilot projects demonstrate that the success of an AFPP project revolves around having effective analysts to “animate” the process, and organize and carry out the work. For more information on choosing AFPP analysts, see section 4.
3. Community Advisory Group

A useful way to acquire community guidance throughout any planning process is through an advisory group. This group consists of community members from a First Nation who provide support, advice, and direction to the community analysts. Advisors can provide comments and suggestions on the results of the AFPP, encourage broad participation in the process, and help analysts overcome barriers. This group should be a small (8 - 15) selection of people who represent different parts of the community. For example, the advisory group might include Elders, youth, educators, administrators, trappers, medicine gatherers, hunters, loggers, forestry and fisheries technicians/professionals, and traditional forest users. As well, it should be balanced between men and women.

4. Community Participants

Community participants include all members of the First Nation who are interested in voluntarily participating in the planning process. This broad group should have opportunities to get involved throughout the process. This Guidebook suggests meeting with community participants after completing certain milestones or steps in the planning process (see sections 5-7) to verify and refine the results. Like the advisory group, community participants can provide analysts with feedback and evaluation of the plan. Community participants could also include First Nations members living off-reserve, as these people may also have useful things to contribute.

Members of the Little Shuswap Band gather to discuss community land and resource values in the Scotch Creek watershed. The participants in this advisory group include Elders, youth, educators, Band Councilors, archeology technicians, fisheries technicians, traditional land users, and community researchers. Photo: M. Karjala
5. Technical Specialists

Technical specialists are individuals communities can refer to when they need certain types of expertise. These experts can provide help with anything from searching for information in archives to providing insights into different forest harvesting systems.

Technical specialists can include librarians, archeologists, biologists, foresters, planners, extension specialists and computer programmers. These people may already be working for the community. If not, they will need to be hired as consultants. Sometimes, technical specialists work for an organization that will donate a limited amount of time as a public service, such as non-governmental organizations, environmental groups, academic institutions, and industry.

6. Collaborators

Collaborators will come from organizations responsible for implementing and enforcing forestry plans on crown land. These include industry (such as, Canfor, Lousiana-Pacific, and Weyerhauser); government (such as, the BC Ministry of Forests); and non-governmental organizations (such as, universities and municipal governments). In order to effectively integrate First Nations values into forest management, collaborators must be motivated and committed to incorporating community information into strategic and operational level plans. They must have representatives who are known and trusted by the community, and who have nurtured positive, long-term relations with them. Collaborators must support the goals and objectives of the planning process and must have access to an appropriate amount of information so that they can participate effectively. Collaborators must also be willing to provide technical assistance to communities and be flexible with planning deadlines in the face of local constraints.

**AFPP reviewers’ comments on the role of technical specialists and collaborators in forest planning:**

“... when we have our TSA [timber supply area] planning meetings, the licensees and the bands are welcome to attend these meetings. So when we go to these meetings, everything is talked about and we have different speakers that may come in, whether it’s on biology or wildlife, stream classifications, whatever...[for instance] CMT’s [culturally modified trees]. Actually, we had [a technical specialist] come in and talk about CMT’s so that the licensees could get a better perspective of the value of CMT’s -- the spiritual values in this particular case.”

*First Nation technical reviewer*

“... would certainly be a potential for involving the collaborators after the data collection, on what types of interpretations, management interpretations for the resource zones...Going through different scenarios, that’s how I would see the potential for the collaborators to be involved.”

*Non-First Nation technical reviewer*

“... [communities] could sort of basically go with ‘okay, here’s the information we found, here’s [some values] we’re considering...’ and then if you want to do something more prescriptive, that would be a great time to put the collaborators in there.”

*Non-First Nation technical reviewer*
Involving Other Key Players

Some First Nations have good relationships with neighbouring First Nation and non-First Nation communities, and/or with certain stakeholders like recreation groups, ranchers, etc. There are benefits to including these groups in the community planning process from the outset. This involvement could build credibility and broad support from local stakeholders, establish long-term partnerships, and expand the community’s influence with its neighbours. Many First Nations, however, have limited capacity to include other groups’ issues. Significant resources are required to reach out to outside groups and to support their input. First Nations who are beginning an AFPP project may want to start by focusing on their own community, and then including other groups in future revisions or enhancements of the plan.

Setting the Stage

If the intent is to share community criteria and indicators with collaborators and to develop a joint management plan, then the First Nation and the collaborators must clearly define the terms of their relationship.

Things to consider:

- Setting budgets for staff, materials, meetings, extension and evaluation;
- Outlining terms for intellectual property rights;
- Establishing realistic deadlines based on the available financial resources, people, and time;
- Creating protocols for attaining access to public databases and maps from collaborators;
- Clarifying the lines of decision-making authority and the limitations of active representatives;
- Establishing an evaluation framework to ensure accountability;
- Maintaining ongoing consultation during implementation (for example, generating forest development plans);
- Establishing who is responsible for implementation, monitoring and enforcement; and
- Establishing who in the organization is responsible for making the collaboration work, and making sure that they have a mandate, resources, and incentives to succeed.

These issues and other concerns should be discussed at the outset and documented in a Memorandum of Understanding or an Information Sharing Agreement before any joint planning initiatives proceed.
Designing an AFPP Project

Each community can design an AFPP project to meet its own needs and capabilities. The flow chart provided at the beginning of this Guidebook (in “A Quick Look at the AFPP”) shows how the AFPP could be used to carry out a planning process. This diagram shows two rounds of participation from an advisory group and community members, as well as contributions from technical specialists with collaborators. This model is a serious undertaking requiring a large amount of time, money, and human resources to complete successfully.

Even if resources are limited, communities can still benefit from doing the AFPP in small stages. For instance, preliminary criteria and indicators can be used as information to support Treaty negotiations and consultation on forest development plans. This information can be assembled by carrying out the first two stages of the AFPP (Figure 4). Once further participation from the broader community is feasible, then stage 3 can be added (Figure 5), and so on.

**Figure 4.** An alternative version of the AFPP with one round of feedback from the Community Advisory Group.
Figure 5. An alternative version of the AFPP with feedback from both the
Community Advisory Group and community participants.

Collaborators/Technical Support
Provide information, advice, and guidance when needed

AFPP Analysts
Identify and organize information sources, Apply AFPP steps (Sections 5, 6, 7, & 8)

Community Leaders
Evaluate, initiate, fund, and staff AFPP project, and support its implementation (Sections 1, 2, 3 & 4)

Preliminary set of criteria themes, sub-themes, indicators, and management strategies

Verified and revised set of criteria themes, sub-themes, indicators, and management strategies

Community Advisory Group
Review and comment on results. Provide additional information and guidance to analysts

Community Participants
Review and comment on results. Provide additional information and guidance

Collaborators and technical specialists can help with an AFPP research project in many ways. Henry Michel (top) is an Aboriginal Forestry Specialist with the Forest Research Extension Partnership (FORREX). FORREX is a non-profit society that links information users with information sources and assists with building research partnerships. They also post announcements on workshops, conferences, and other events where communities can acquire information and training (website: http://www.forrex.org/home/home.asp).

Doug Hopwood (bottom) is a Registered Professional Forester (RPF) with Ecotrust Canada. Ecotrust is a non-profit organization committed to supporting the development of a conservation economy along North America’s westcoast (website: http://www.ecotrustcanada.org). RPFs like Doug can provide communities with specialized knowledge about harvest systems, stand tending, growth and yield, timber markets, provincial forest management regulations, and so on.

Photo: M. Karjala
Before starting any planning activities that involve community participation, be sure that the community understands and supports the process, and that the community has the capacity to carry it out.

The key players in the process are, community leaders, community analysts, community advisory group, community participants, technical specialists, and collaborators.

Collaborators must be committed to incorporating the results of the process into their plans and allowing time for revisions.

Community analysts must have an interest in planning and good knowledge of their traditional territory.

Completing the AFPP in small portions can still provide useful information that supports treaty and referral processes.

Summary of Section 3

Wild rose [Secwepemc - sk’pelanllp (“rose bush”); Dalkeh - whus; Latin–Rosa acicularis]. Rosehips were used by many First Nations in British Columbia as a laxative. Both the Carrier and the Shuswap soaked and boiled cambium from the roots and used it as an eye ointment. The Shuswap also used rosewood for making arrows and for spiritual purposes. Appropriate planning processes can help to identify and preserve non-timber forest values that are important to First Nation communities.

Photo: M. Karjala
Section 4 - The AFPP Analysts

This section describes the type of people needed to carry out an AFPP project.

What do the AFPP Analysts do?

The analyst’s job is to carry out an AFPP project from beginning to end. It is a full-time position, with duties including the following:

- Searching for information sources;
- Organizing access to information;
- Explaining the AFPP project to a variety of groups both inside and outside of the community;
- Analysing information sources;
- Identifying criteria and indicators;
- Producing maps;
- Communicating interim results to, and collecting feedback from, the community;
- Presenting and applying the AFPP final results in the community; and
- Communicating results to collaborators.

Teamwork

The analysis part of the project (described in part B) can be especially challenging. AFPP pilot projects show that analysts who work alone can experience fatigue, self-doubt, and frustration when gathering information and carrying out the analysis alone.

In order to reduce these difficulties, it is recommended that a team of analysts should work on an AFPP project. Working in a group allows people with different strengths to help each other solve problems. Having a team of analysts allows work to continue if one team member experiences personal issues (family emergencies, illness, or burnout, for example). A team of people working on the project full-time also maintains focus and momentum. No fewer than two analysts should be assigned to any AFPP project.

First Nation leaders are also essential to an effective AFPP team. Analysts cannot carry out an AFPP project without the support of Elders, chief and council, the band manager, natural resource director, and/or the treaty co-ordinator. These individuals must help organize financial resources, provide workspace, and develop protocols for accessing TUS and other confidential information. They also help to set boundaries on the scope of the project, to identify the advisory group, to encourage community participation, and to establish relationships with collaborators.

Words from AFPP pilot project participants that describe the character traits of successful analysts:

- “persistent”
- “highly motivated”
- “problem solver”
- “sense of responsibility and commitment to the community”
- “maturity”
- “emotional attachment to the project”
- “ability to see things through to completion”
Analyst Skills

The AFPP pilot projects have demonstrated that there are several practical skills that an analyst team must have. These fall under two broad categories: communication skills and organizational skills.

Communication Skills

One or more members of the analyst team must have good written and oral communication skills. These skills will come into play in diverse situations such as:

- Writing memos to band administrators;
- Giving presentations to chief and council, community working groups, staff members, and the general community;
- Asking community members, either in writing or in person, for permission to use their interview transcripts; and
- Requesting access to information from other communities, archives and libraries, collaborators, or specialists.

To effectively express project goals, needs, and results, analysts must be able to adapt their communication styles and methods to a range of audiences.

Organizational Skills

The analyst team must be able to co-ordinate AFPP responsibilities and tasks amongst themselves. Data gathering, analysis, mapping, report writing, and presentations must be divided appropriately amongst members of the team.

Each analyst in the team will be required to deal with a large volume of information in a variety of formats (for example, audio, visual, and written; digital and hardcopies; originals and photocopies). Each analyst should have good filing and database management skills to keep all the work organized and proceeding smoothly.

Dr. Erin Sherry instructs AFPP analyst trainees at the University of Northern British Columbia's Prince George campus. The trainees included TUS researchers, forest technicians, outdoor educators, and community economic development staff. Participants in this photo represent Little Shuswap Band, Williams Lake Band, Nak'azdli, and TLatz'en Nation communities. Photo: M. Karjalal
Analyst Traits

Analysts should be from the local community. As community members, they are already familiar with the local culture, the people, and the traditional territory. This places them in a good position to evaluate information quality; to identify information gaps; and to seek clarification from the appropriate knowledge holders.

Analysts must be able to resolve day-to-day problems independently, and, at the same time, recognize situations that are beyond their abilities and that require others’ assistance.

Analysts should have a strong personal commitment to their community and an understanding of how AFPP work can contribute to community well-being now and in the future. This sense of responsibility and pride in the project will ensure that the work is done to a high standard and that the project is seen through to completion.

AFPP Training Requirements

Analysts must undergo training in archival research, criteria and indicators of forest management, and data analysis techniques. Analysts must master the task of “filtering” information during analysis to minimize bias related to personal opinions and knowledge. Familiarity with forestry and other resource management concepts and terminology, community participation techniques, and technical report writing is also valuable.

Helpful Hints for Analysts

- Every few days, take breaks from the analysis to do other tasks that require less “brainwork”. Breaks allow you to reflect on your analysis and to resolve problems that you encounter.
- Review and correct your work while it is still fresh in your memory.
- Compare your work with that of other team members regularly to make sure the analyses are consistent; also use this time to discuss solutions to problems that you have encountered.
- Keep a daily journal to record accomplishments, problems, and productivity, and to serve as an emotional outlet. It will be an important professional and personal document. The journal will help you to reflect on and improve your individual work, and the project as a whole. It can also serve as a record of lessons learned during your experience, which can be shared with others attempting an AFPP project, thus building collective capacity.
Analysts are central to the success of an AFPP project, as they carry out all major tasks from beginning to end.

Communities using the AFPP approach should ensure they have a team of at least two analysts working on a project; administrators are also essential for providing logistical and personal support to the team.

Strong communications and organizational skills are required of AFPP analysts.

The analyst team should be made up of members of the community. Each analyst must have an interest in planning; good knowledge of the traditional territory; and a sense of responsibility and commitment to the community and to the project.

To ensure consistency and to overcome difficulties, analysts should reflect on their work and that of their team members.

Summary of Section 4

This section explains key concepts and terms that form the foundation of the AFPP framework.

A cutblock with wildlife patches and seed trees along Highway 24 in interior British Columbia. To facilitate communication between traditional land users and collaborators, it is helpful if analysts are familiar with forestry concepts, practices, and terminology.

Photo: M. Karjala
Section 5 - Information Sources

This section describes the types of information that can be used to carry out the AFPP.

Information Management: Getting Things in Order

The AFPP uses secondary information as a starting point for developing a community-based plan. Secondary information includes materials found in archives and libraries, such as interview recordings and transcripts, photographs, books, and reports. A good place to start looking for this information is in community archives. However, before beginning an AFPP project, it is important to make sure that existing community archives are in good order so that any new information is stored and recorded properly.

Organizing the archives includes taking an inventory of what is there, making sure the information is complete, and making sure the information is accurate.

This might involve

- Cataloguing and labelling books, reports, photographs, maps, audio and video tapes, and interview transcripts;
- Setting up a computer database to record all these materials;
- Learning how to properly store and file delicate materials (for example, photographs and tape recordings); and
- Verifying interview and map information with local people.

A critical part of managing information is prioritizing information sources. The AFPP project team, in consultation with the Community Advisory Group, needs to decide which information sources to analyse, and in what order. The most relevant and complete information should be used first.

Information For the Community’s Vision

Developing a vision in the planning process is completely based on values. That means we have to look at what is important to ourselves and to the people around us. These values form the basis for developing forest management criteria.

It seems fairly straightforward to simply ask people what is important, but it is sometimes difficult to get people to participate in meetings to talk about values. Instead, the AFPP approach uses existing archived information to identify community values.
Information used in the AFPP comes from primary and/or secondary materials. Three types of information that are commonly found in First Nation communities are discussed here:

1) Traditional Use Studies (TUS)

In British Columbia, TUS’s were initiated to support the referral process, which requires government to consult with First Nations on tenure holders’ forest development plans. They have also been used by First Nations as information to support the Treaty process.

TUS information usually includes maps of traditional (both historical and current) land use and occupancy such as cultural sites, important subsistence areas, and trail networks. TUS maps are important for understanding how the community views the landscape both now and in the past, by identifying where the important values are located, how they are connected to each other, to the community’s history, and to the community’s well-being.

TUS may also include interview transcripts of Elders and traditional land users describing life on the land and the areas that they use for subsistence and cultural activities.

2) Community-Based Research and Other Research Projects

Some communities have collected information on things like traditional knowledge, oral history, and genealogy. Interview transcripts from these projects are an excellent source of information. In these interviews, people often express what is important to them, explain how the land has changed over their lifetime, and provide descriptions of traditional land use practices.

In some First Nations, university researchers or consultants may have interviewed as part of previous projects of studies. These sources can also be very valuable, especially if the project was land-related.

Some communities might also have completed Historical Land Use and Occupancy Studies funded by the federal government which should provide similar information.

3) Secondary Sources

Some communities may not have completed a TUS, or translated and transcribed interviews. In such cases, other sources can be used, including books, journal articles, and reports. The organizations or individuals who wrote the materials may also provide copies or allow access to primary information.

Secondary sources should be used with caution. Although they can provide useful information on values, they should never be the only source. Data collection is usually purposive, meaning information was collected and analysed for a purpose which may affect the conclusions reached, the research methods used, the
definition of terms and categories, and the quality of information. Secondary sources do not necessarily provide a reliable picture of local community perspectives on forest values. Information may not be timely. Community information may have been generalized (the information is grouped from many cultures into one description) and/or interpreted by non-Aboriginal researchers. If possible, information taken from secondary sources should be validated through community review or original community-based research.

**Information for Developing and Evaluating Forest Management Strategies**

Other sources of information are necessary to decide what forest management strategies will best achieve a First Nation’s vision. Although community interviews can provide important direction, additional help will be needed from scientific research, technical specialists, inventories, and guidebooks.

The following lists provides examples of primary and secondary materials and how they can support the development of forest management strategies:

- **Interviews:** Traditional knowledge of ecosystems, natural disturbances, wildlife habitat and behaviour; or experiential knowledge of forest development impacts;
- **Inventory information:** Wildlife, vegetation, and fish inventories conducted by government agencies;
- **Scientific knowledge:** Research conducted by government, academics, non-governmental organizations, and technical specialists;

**Types of Secondary Information**

Secondary information about community forest values, management indicators, and management approaches is available in a variety of forms, including:

- **Standard and official sources:** works of reference, government reports, statistical records, local annual and special reports, reports of companies, societies, charities, universities, political parties, unions, non-governmental organisations, co-management regimes, etc.
- **Parliamentary and other papers:** parliamentary records, parliamentary debates, Chief and Council minutes or proceedings, other First Nation, municipal, provincial, or federal government documents.
- **Memoirs, diaries, autobiographies, and biographies.**
- **Letters and contemporary writing:** current affairs, social surveys (e.g., public opinion polls), newspapers, newsletters, journals, magazines, etc.
- **Images, sounds, and objects:** film, photographs, aerial photos, satellite images, maps, sound and video recordings, radio programs, television programs, interviews, artefacts, etc.
- **Computerized records:** any one of the above stored or distributed electronically, computer databases, the Internet, etc.
Guidelines and reference manuals can provide useful information for developing forest management strategies. Collaborators and technical specialists can recommend such materials. The guidebooks shown above are from federal, provincial, and academic sources.

Photo: M. Karjala

- Maps: Biogeoclimatic zones, topographic features, forest cover, trapline boundaries, and family/clan/house territories.
- Guidebooks/guidelines: Harvesting, silvicultural treatments, and pest management.
- Websites: Provincial and federal government policies, procedures, regulations, and guidelines.

**Collecting New Information**

Analysts will inevitably find gaps in information as they work through the AFPP project. First Nations can always conduct additional research to collect information on forest values and potential management strategies. Indicators can be developed with the assistance of community members through focus groups and interviews. Partnerships with collaborators can be developed to improve and update inventory information. Additional archival and library research can also reveal additional secondary materials.

**Evaluating Secondary Sources**

Secondary information can be misleading in many ways. It is important to carefully evaluate the quality and appropriateness of information. Conclusions should not be accepted simply because they are in print or because they are based on research. When evaluating secondary information, try to answer the following six questions:

1. What was the purpose of the study?
2. Who collected the information?
3. What information was actually collected?
4. When was the information collected?
5. What research approaches and techniques were used to collect the information?
6. How consistent is the information and does it match with information available from other sources?

**Readings on doing community-based research:**


The AFPP uses secondary information as a foundation for supporting the development of a community’s vision and to develop forest management strategies.

Analysts should be prepared to conduct extensive information searches within their communities, in other libraries, and in archives to find primary and secondary information for identifying community criteria and indicators.

Collecting new information from community members may be necessary if the existing primary and secondary sources are inadequate.

Community members with experience in forestry, technical specialists, published scientific research, and published guidelines for forest management are useful sources for developing and evaluating forest management strategies.

Stinging nettle [Secwepemc - sucnamlip; Dalkeh- hoolhs'i; Latin–Urtica dioica] is a source of both food and medicine for First Nation’s people. Young leaves can be boiled and eaten. The roots, stems and leaves are used to treat blood, lung and digestive ailments. Herbariums are good ways to archive plant samples and to document their traditional uses for cultural preservation, education, and forest management.

Photo: M. Karjala
Part B

Applying the AFPP
The following three sections describe the steps involved in analysing primary and secondary materials. This Guidebook uses information from actual transcripts to illustrate AFPP steps (names are changed to maintain confidentiality). Maps from a fictitious land base are also used as examples.
Why Make Summaries?

Once the primary and secondary materials are identified and gathered, analysts can begin extracting information from them.

Summaries shrink the information down into a useful and manageable form. The purpose of making summaries is to pick out important values related to the land so that they are considered when planning future forest activities. These values become the criteria for managing the forest.

Getting Ready

Before beginning to summarize, analysts need to

- Make photocopies of all the sources that are going to be analysed. *Original copies of primary and secondary materials should not be used* for the analysis because analysts will write on these documents, and they can be lost or misplaced.
- Prepare a computer workspace with room to layout the source documents. Typing the summaries into a word processor (such as, WordPerfect™ or MS Word™) will save time and help analysts stay organized.
- Have computer disks ready to make backup files. The analysis is time-consuming work, so save digital files frequently and in more than one place (for example, onto both floppy disks and other computer hard drives). It is also a good idea to print off hard copies regularly.

Extracting Information from Written Documents

The interview summary layout has four elements:

1. Assigning a summary number;
2. Recording the document source information;
3. Looking for relevant information; and
4. Recording criteria and indicator codes and descriptions.

For a sample summary, see Figure 6 and Figure 7.
Summary Number

Each summary should be given a number. This number acts as a link so that in later steps of the AFPP, criteria can be traced back to the original analysis summaries.

Source Information

Summarizing involves selecting parts of the original document and changing its form. Therefore, it is very important to provide enough source information with the summary so that anyone can find the originals and check to see if the summary is accurate and complete. This makes the process transparent and verifiable.

For primary materials, such as interview transcripts, source information might include

- The interview or transcript number;
- The name of the interview project (e.g. Traditional Use Study Project, 1997-1999);
- First and last name of the interviewer (s);
- First and last name of the interviewee (s);
- First and last name of the interpreter or translator;
- Where the interview took place;
- Where the original recording and transcript are archived;
- Date of the interview; and
- Whether the interview transcript was edited and verified.

If other information is included, such as a recording number or the name of the transcriber, add it to the source information. The objective is to leave a clear trail to the original material.

For secondary materials such as books and reports, a standard publication reference is sufficient. There are many variations on citation format, but they all include

- The author's last, and first name;
- The year of publication;
- The title of the book or report; and
- The publisher's name and location.

For examples of referencing, see Section 10 near the end of this Guidebook.

Suggestions for Assigning Summary Numbers

- Number them 1, 2, 3, 4...as you go; or
- Use an alphanumeric code (letters and numbers combined), according to the information type. For example, TUS summaries might be TUS1, TUS2, TUS3, etc.; archeological reports might be AR1, AR2, AR3, and so on.
Looking for Relevant Information

At this point, the analyst studies the document to find information on forest-related values. This is called **content analysis** or **data analysis**.

*Remember that the primary and secondary materials being analysed were collected for another purpose and will contain information irrelevant to the AFPP.* A few basic questions to keep in mind when reading documents and deciding what information to put in the summary include:

- What things related to the land are important to people in the community?
- What are community members’ concerns about how the land is managed?
- What solutions are they offering to address some of the problems on the land and in the community?

As a rule of thumb, if a person takes the time to express a concern, share an idea or some knowledge, or tell a legend, story, or oral history which relates to the land, then they must think it’s important. Therefore, it might be important. In the AFPP, these important values are related to criteria. Ways to measure, monitor, or manage these values are related to management indicators or actions.

**Criteria and Indicator Codes**

Underline each relevant piece of information in your photocopy of the document and write an alphanumeric code in the margin next to it. Under your source information, construct a table with four columns: one to record each code for each criterion found in the document; one for a description of each criterion; one to record indicator codes; and one for a management indicator or action description.

It is important to remember to **summarize** the information, because the objective is to condense it into a more manageable form. It is also important, however, to keep the information in context; that is, to make sure that the meaning does not change when it is being summarized.

A way to preserve context is to use **quotes** so that the summaries include some of the same words that were in the original document. Use brief sentences for general information like descriptions of the plants that people gather; wildlife species that are trapped or hunted; materials for tools; and so on.

At first, analysts should spend time recording codes and statements using a sample (3-5 documents) from each information type (for example, TUS interviews, archeological reports, and reports). This sampling will allow analysts to understand the broad range of forest values in the documents; to familiarize themselves with the format of each information type; and to understand the different kinds of information each source has to offer. After summarizing a sample of the information, analyst team members can compare and discuss their work, solve difficulties, and seek outside advice if needed. Establishing consistency among analysts is critical.

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**Are past traditional lifestyles relevant information for forest management?**

Some archived sources document pre-contact lifestyles, harvesting techniques, rules of conduct on the land, and land stewardship systems - some of which are no longer practiced today. Is this type of information relevant? Should it be included in the analysis?

Yes. The AFPP approach is designed to produce a comprehensive list of potential criteria and indicators of forest management. Analysts should avoid filtering out information that could be important in the eyes of the broader community. The analysis should produce the widest range of documented values and management options. Review by community leaders, the advisory group, and community participants will identify irrelevant or low priority values and add missing or current values at later stages of the AFPP. This process ensures that criteria and indicators are up-to-date, verified, and prioritized.
More on Management Indicators and Actions

Management indicators are signs or signals that provide information about the criterion. Therefore, they should be recorded with the appropriate criterion in the summaries.

Management actions are ideas and suggestions for improving the way that forestry is carried out on the land. They are often mentioned as solutions to forest-related problems that people observe. These include things to do on the ground, like leaving behind berry bushes when brushing and weeding, or logging certain areas only in winter when there is less chance of ground damage.

Management indicators and actions are not commonly found in secondary information. Analyst teams can make the first attempt at generating indicators for the criteria they find, and then modify them with the help of the community advisory group, collaborators, and technical specialists. Additional interviews with community experts can also reveal management indicators and actions.

Devils Club [Secewpemc - k’astse7allp or k’este7ellp; Dalkeb - hoolghbulh; Latin–Oplopanax horridus]. Although its thorny stem is painfully familiar to most bush workers, this plant continues to be a very important source of traditional medicine for First Nations across British Columbia. Traditional use and knowledge of plants are often documented in interview transcripts, and contribute to forest management criteria.

Photo: M. Karjala
With the coming of the month called “That we canoe half of it in”, which was November, people began making camps in sheltered places, preferably among tall spruce trees beside a lake or river. Each family made a lodge. The framework consisted of four wooden posts, driven into the ground for the four corners. The willows were driven into the ground for the walls. Spruce bark, which had been stripped off the trees in the spring, and rolled up were soaked in the water to soften, and unrolled to make the roof, and outer wall. The inside walls were lined with dried reeds, fastened to the willows with strands of willow bark. They added a sort of a little porch to the building, the roof of which was spruce boughs turned down, quite waterproof too. Dry wood was stored in this porch. Spruce boughs were used for the floor of the smoke-houses and lodges.

Several layers of boughs were used to sleep on. When the boughs showed signs of wear and dryness, they were replaced by fresh boughs. These were the woman’s jobs, as well as packing them in. Spruce boughs were laid on the floor or ground for putting fresh meat or fish on. A hole in the roof, served as an escape for the smoke from the fire in the center of the lodge.

This fire was their only heat, and also used for cooking. Once a fire was lit, it was not allowed to go out as to start was quite tedious. A piece of wood was pressed on a wooden drill, which was pointed on both ends. Dried willow root was the fastest to catch fire. A man pressing down on the shoulders of another man, made the fire quicker. While the two men drilled, others crowded around. There were cries of “Now, there is smoke” when the first whiff of smoke appeared. Then when the root would be glowing, it was put among a little pile of dried straw. The supply of dried straw was very precious. A little bagful was carried on the march, in the arm pit to keep the straw dry. This was done to assure a dry supply of this precious material. It was more valuable in the winter when the snow covered the ground. Later on the North-West Company, introduced the flint, and steel for lighting fires.

Occasionally, the men went out on snowshoes to kill a supply of caribou, or elk, but for the most part, the winter was spent in leisure. But don’t let me give you the impression food was always plentiful. My father was told of starvations among tribes, when luck among the hunters absolutely failed, despite plenty of game.

When snowshoeing, the Carriers used supports, like ski-poles. They called these “Tuğmaş”.

They had plenty to eat out of their ground caches, so they had little to worry about. The older folks told stories, and legends around the fire during the long winter evenings, to help pass the time for the young people.
**Criteria and Indicator Codes**

<table>
<thead>
<tr>
<th>Criteria Codes</th>
<th>Criteria Statements</th>
<th>Indicator Codes</th>
<th>Management Indicator</th>
<th>Management Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1</td>
<td>Willows were used as building materials (“driven into the ground for walls”)</td>
<td></td>
<td>• Amount of area in suitable willow habitat</td>
<td>• Retain willow species in harvest blocks</td>
</tr>
<tr>
<td>C2</td>
<td>Spruce bark was used for building materials (softened in water and used for outer walls)</td>
<td></td>
<td>• Amount of area in spruce leading stands</td>
<td></td>
</tr>
<tr>
<td>C3</td>
<td>Reeds were used for building materials (dried and used for inner walls)</td>
<td></td>
<td>• Amount of area in suitable reed habitat</td>
<td></td>
</tr>
<tr>
<td>C4</td>
<td>Willow bark was used for building materials (used to fasten reeds to walls)</td>
<td></td>
<td>• Amount of area in suitable willow habitat</td>
<td>• Retain willow species in harvest blocks</td>
</tr>
<tr>
<td>C5</td>
<td>Occasionally hunted caribou in winter</td>
<td></td>
<td>• Amount of area in suitable caribou habitat</td>
<td></td>
</tr>
<tr>
<td>C6</td>
<td>Occasionally hunted elk in winter</td>
<td></td>
<td>• Amount of area in suitable elk habitat</td>
<td></td>
</tr>
<tr>
<td>C7</td>
<td>Winter ground caches were important for storing food</td>
<td></td>
<td>• Amount of protective buffer surrounding known ground cache sites</td>
<td></td>
</tr>
<tr>
<td>C8</td>
<td>Lodges were built amongst tall spruce along lakes and rivers</td>
<td></td>
<td>• Amount of spruce leading stands in riparian areas</td>
<td>• Amount of protective buffer surrounding riparian areas</td>
</tr>
<tr>
<td>C9 . . . etc</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: Indicators shown in italics were generated by the analyst.
Extracting Information From Maps

Defining the Boundaries

It is important to first decide what area is going to be considered in the community’s plan. Is the plan for the entire traditional territory? A watershed? A tree farm license (TFL) or community forest? Is it a family or house territory? Does it incorporate a group of trapline areas?

Community administration, advisory groups, and general membership must be the ones to decide exactly what area to focus on before the maps are prepared.

Creating Information Layers

Once the boundaries are defined, it may help to draw or print the traditional use information onto transparent mapsheet layers or “overlays”. Using mylar (see-through plastic or paper), print or copy different types of traditional land uses on separate sheets, all at the same scale (1:50 000 is recommended). For instance, the following six map sheets might be produced:
1. Hunting areas;
2. Fishing areas;
3. Medicinal plant areas;

Limitations of Using Mapped Information

As with any other type of information, maps can contain inaccuracies and misleading information.

Some inaccuracies are created on purpose to make the information on the map clearer (for example, using wide lines to represent a road).

Sometimes maps showing the same information from more than one source will not look exactly the same (for example, streams and lakes do not line up).

Sometimes the information is incomplete or has not been verified because of cost constraints (as in the case of forest cover maps interpreted from airphotos).

Sometimes maps are used to communicate certain political agendas (such as, political boundaries under dispute).

To verify map information check the following:

- When was the map produced?
- Why the map was produced?
- Who created the map?
- Who sponsored the map?
- Where did the source information came from?
- Was the information ground-truthed or verified?
4. Berry picking areas;
5. Archeological sites; and,
6. Spiritual and sacred sites.

If information is available, it is useful to also make other map overlays, such as

- Traditional land use areas (such as, trapline boundaries and family, clan, or house territory boundaries)
- Existing land development (roads, logging history, private land, and so on)
- Contours;
- Forest cover;
- Forest age classes;
- Water bodies (e.g., streams, rivers, lakes, wetlands);
- Soils; and
- Non-timber forest product inventories.

Collaborators may agree to provide some of this information from their own databases.

When the summaries are complete, analysts present the results to:

1. An Advisory group for comment and feedback; and then to
2. Community participants for comment and feedback.

Summary tables and maps are updated by the analysts after each presentation.
The first step in the AFPP is to summarize the documented information sources. The purpose of this step is to condense the volume of information by extracting criteria and indicators.

The analyst must prepare his/her documents and workspace before beginning. This includes making photocopies of the archival documents; arranging desk space; and getting access to a computer with word processing database software.

Summarizing written documents includes recording source information; analysing or coding the document; and recording codes, criteria statements, and indicators into a table.

Summarizing map information involves creating map overlays of traditional land uses, traditional boundaries, development activities, and/or forest inventory information.

Maps showing recent timber harvesting activities can help to identify areas where ecological values can be restored using management techniques. Information on approaches to forest restoration can be found in the Internet at: http://researchforest.unbc.ca/hfep/

Photo: J. William
Why Compile the Information?

Once the information is summarized, it is merged into one table and one map. This is a very important step because it combines all community priorities, concerns, and criteria for forest management in one place and in one format, making it more usable. Doing this also helps to reveal similarities and differences in perspectives among community groups (Elders and youth; men and women, and so on). Each of the criteria and indicator descriptions are organized into criteria themes and sub-themes which are generated by the analyst.

Compiling Interview Summaries

Table Format

The compilation table has five columns: criteria themes, sub-themes, descriptions, sources, indicators, and actions.

Criteria Themes and Sub-themes

Criteria themes are a way of grouping broad areas of concern within the community. The themes arise from information provided in the transcripts or secondary sources. Developing the themes is a logical and creative process which requires looking for patterns and relationships in the data. This is best achieved by analysts working together in a group setting. It is probably good to limit the number of themes to 10 or less.

To get more specific, the criteria themes can be divided into criteria sub-themes. There can be anywhere from 2 to 10 sub-themes for each criteria theme. Again, these will be different from community to community. Some examples of themes and sub-themes that were identified in previous applications of the AFPP are provided in Table 1.

Ultimately, there is no rule or formula for choosing themes and sub-themes. Common sense is the best guide, while keeping in mind that the objective is to simplify information so that it is easy to understand.
Table 1. Examples of criteria themes and sub-themes used to organize summary tables.

<table>
<thead>
<tr>
<th>Criteria Themes</th>
<th>Criteria Sub-Themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human Factors</td>
<td>Education</td>
</tr>
<tr>
<td></td>
<td>Community</td>
</tr>
<tr>
<td></td>
<td>Employment</td>
</tr>
<tr>
<td>Economics</td>
<td>Economic Development</td>
</tr>
<tr>
<td></td>
<td>Bush/Subsistence Economy</td>
</tr>
<tr>
<td>Land Management</td>
<td>Current Approaches</td>
</tr>
<tr>
<td></td>
<td>Alternative Approaches</td>
</tr>
<tr>
<td></td>
<td>Knowledge and Research</td>
</tr>
<tr>
<td></td>
<td>Communication</td>
</tr>
<tr>
<td></td>
<td>Legacy</td>
</tr>
<tr>
<td>Resource/Environmental Concerns</td>
<td>Wildlife</td>
</tr>
<tr>
<td></td>
<td>Fish</td>
</tr>
<tr>
<td></td>
<td>Trees and Plants</td>
</tr>
<tr>
<td></td>
<td>Water Quality</td>
</tr>
<tr>
<td></td>
<td>Climate</td>
</tr>
<tr>
<td></td>
<td>Access</td>
</tr>
</tbody>
</table>

Descriptions

The descriptions are intended to provide some detail to the one- or two-word criteria themes and sub-themes. This usually involves a phrase that gives more description and explanation without using direct quotes.

Sources

The source column provides a space where criteria themes and sub-themes can be linked to the summaries and sources. The source is recorded by typing in the last name of the interviewee or author, with the summary number or alphanumeric code in brackets.

Management Indicators and Actions

Indicators and actions that are coded or generated for the summaries are also transferred into the compilation table.

Filling in the Table

To fill in the table, insert all the themes, sub-themes, and descriptions from the summaries in the appropriate columns, and insert the source information from each summary in its column (table 2). When criteria themes, sub-themes, and descriptions are repeated, just group the source information in with the appropriate theme and sub-theme. This shows that more than one person thought that criteria theme was important.
Continue to add themes, sub-themes and descriptions as they appear in the summary tables until all the information is compiled. During compilation new relationships or ways of grouping the information will emerge from the data, which may lead to new themes and/or sub-themes. Generating themes is a creative process and may take some time to build a framework that works well with the summarized data.

**Compiling Traditional Use Maps**

Compiling the map information involves the following:

- Dividing the landscape into resource management zones;
- Naming each zone;
- Identifying a management criterion (or criteria) for each zone;
- Defining indicators for the criteria; and
- Deciding on an appropriate management policy for each zone.

**Resource Management Zones (RMZs)**

RMZs divide the landscape into units that contain certain forest values. This makes it easier to assign appropriate forest management policies to different areas of the forest.

There are several ways to define these zones. One way is to establish boundaries based on particular forest values that are clearly grouped in certain areas of the forest. The TUS maps that were produced in the summarization stage can be used for this purpose by overlaying them on top of each other and identifying areas based on what traditional uses occur there. The example of the fictitious Lion’s Lake First Nation in the following pages shows how this is done.

Another possible way to divide the landscape is to use existing traditional boundaries, such as trapline, family, clan, or house territories. This approach may make it easier to link strategies with how community members view and use their territories. This could also make it easier to gather information for long-term monitoring.

A third option is to combine the above two approaches and develop RMZ boundaries that reflect traditional use and traditional tenure boundaries. It is important to remember that the RMZ boundaries are not necessarily permanent. They should be reviewed during each cycle of the planning process and revised when necessary (for example, when environmental, social, or economic changes occur).
Table 2. An example of how summaries are compiled into one table. Note that the entries in bold are linked to “The Carrier, My People” summary example (Figure 6). This table may be useful to collaborators for understanding community values. If the information is to be shared, the source column may be omitted to protect the identity of information holders.

<table>
<thead>
<tr>
<th>Criteria Themes</th>
<th>Criteria Sub-Themes</th>
<th>Description</th>
<th>Source</th>
<th>Management Indicators</th>
<th>Management Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human Factors</td>
<td>Education</td>
<td>We need to provide more traditional education in schools</td>
<td>E. Nathan (8); W. LaHache (16); M. Jensen (24)</td>
<td>• Provide outdoor facilities for traditional education</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Community</td>
<td>People used to share – no one was in need of anything</td>
<td>W. LaHache (16)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economy</td>
<td>Bush</td>
<td>People hunted caribou and elk for food</td>
<td>L. Hall (1); M. Jensen (24)</td>
<td>• Number of people engaging in subsistence activities</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Economic Development</td>
<td>We need more value-added business opportunities</td>
<td>F. Louis (19); T. Rice (30); J. Elton (24)</td>
<td>• Number of dollars earned in the community from value-added business ventures</td>
<td></td>
</tr>
<tr>
<td>Land Management</td>
<td>Current Approaches</td>
<td>The wildlife corridors need to be larger</td>
<td>T. Rice (30)</td>
<td>• Establish ½ mile minimum corridor width</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Alternative Approaches</td>
<td>We were always taught “put back what you take out”</td>
<td>T. Rice (30); W. LaHache (16)</td>
<td>• Replace stands with the same tree species</td>
<td></td>
</tr>
<tr>
<td>Environment</td>
<td>Wildlife</td>
<td>Elk are important for food</td>
<td>L. Hall (1)</td>
<td>• Amount of area in elk habitat</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Trees/Plants</td>
<td>Willow was used for building</td>
<td>L. Hall (1); W. LaHache (16)</td>
<td>• Amount of area in willow habitat</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fish</td>
<td>Salmon is important for food</td>
<td>T. Rice (30); M. Jensen (24)</td>
<td>• Amount of area protected in riparian buffers</td>
<td></td>
</tr>
</tbody>
</table>

Notes: Indicators shown in italics were generated by the analyst.
RMZ Name

When the RMZ boundaries are established, each zone is assigned a name, criterion emphases (using one or more themes from compilation tables), indicators, and a management policy (Table 3). The RMZ name allows collaborators to understand what types of community values are found in the zone. Some of the names in the example shown in Table 3 already suggest some management treatment. For example, RMZ 2 is called a “cultural reserve zone” due to the high level of traditional activities present in the area. In this case, the use of the word “reserve” implies no harvesting.

RMZ Criterion Emphasis

The criterion emphasis provides a little more detail for understanding the importance of each zone. There is no limit to the number of criteria that go into this column. All values that are relevant can and should be included.

RMZ Indicators

Indicators that were identified during the summarization and compilation of written documents can also be used to measure what is happening in each RMZ. This helps to link the written information with the map information. Some indicators may be important across the entire landscape (all the RMZs) and some indicators may be RMZ-specific.

RMZ Policy

The RMZ name and emphasis provide direction for deciding on appropriate forest management activities or policies for that zone. The example in Table 3 uses the Lion’s Lake First Nation example to show how general policies such as “no harvesting”, “sensitive management” or “intensive management” can be applied to RMZs. These designations need to be discussed during the community advisory group and during general community meetings.

Each policy needs to be defined in some way. What exactly does “sensitive management” mean? At this point, it is a good idea to get advice from appropriate technical specialists such as registered professional foresters or biologists to help decide what types of policies are appropriate to protect those values, and if they are economically and operationally possible.

For example, a community may define sensitive management as partial cut harvesting OR leaving large buffers on creeks OR harvesting only in winter time.

A silvicultural worker uses an experimental technique called “whips” on young aspen trees competing with planted spruce on TFL 42, operated by the Tl’az’t’en Nation’s Tanizul Timber Ltd. This technique removes the tree from the overstory without killing it, to reduce competition with commercial species. Manual systems of vegetation management address community concerns over application of chemical herbicides, while also providing employment to the local community. Photo: M. Karjala
Resource Management Zoning Example: Lion’s Lake First Nation

This example is a simple illustration of how mapped forest values can be used to generate resource management zones. A fictitious watershed, called the Hakuna Creek Watershed (shown below), falls within the traditional territory of the Lion’s Lake First Nation (also fictitious). Hakuna Creek and its tributaries are fed by two large wetlands to the north of the watershed, cross under a logging road, and drain into the Lion’s River to the south.

The Lion’s Lake First Nation has completed their traditional use mapping, and now wants to generate resource management zones based on three forest values that are a top priority for the community: grizzly bears, berries, and camping and spiritual sites. The mapping department produced three map overlays, one for each of these land uses (see opposite page). When these overlays are laid on top of each other, the compiled land uses show groupings in certain areas of the watershed. Boundaries can be drawn around these groupings to divide the landscape into resource management zones. Each zone is then given a number.

In this example, the Lion’s Lake First Nation divided the watershed into four resource management zones:

RMZ #1: The boundaries follow the height of land between Hakuna Creek’s upper tributaries. This zone includes grizzly habitat, berry-gathering areas, and two spiritual sites.

RMZ #2: This zone is located on the west side of the watershed. The boundaries follow the logging road, Hakuna Creek, and the height of land between the upper tributaries. None of the three community values are found in this area.

RMZ #3: This zone is on the east side of the watershed. The boundaries follow the logging road, Hakuna Creek, and the height of land between the upper tributaries. Berry-gathering areas and grizzly habitat are the main community values in this zone.

RMZ #4: (try describing this zone in your own words)
Figure 8. Resource management zones can be generated using overlays of mapped forest values and grouping similar values into units.
When the compiling is complete, analysts present the results to

1. An Advisory group for comment and feedback; and then to
2. Community participants for comment and feedback.

Compilation tables and RMZ maps are updated by analysts after each presentation.

### Table 3

A table describing the resource management zones shown in Figure 8. Some community participants will offer suggestions for management policies to achieve the community’s objectives. Selection cutting, for instance, is often associated with having less impact on the land. It is recommended that communities consult with technical specialists to assess the feasibility of management policies and to ensure activities will achieve the desired outcomes.

<table>
<thead>
<tr>
<th>RMZ#</th>
<th>RMZ Theme</th>
<th>Criterion Emphasis</th>
<th>Management Indicator</th>
<th>Policy</th>
</tr>
</thead>
</table>
| 1    | Cultural Reserve Zone     | Community, Wildlife, Bush Economy               | • Amount of berry habitat preserved  
• Amount of grizzly habitat preserved  
• Amount of protective buffer around spiritual sites | No harvesting                   |
| 2    | Integrated Resource Management Zone | Community; Economic Development                     | • Number of jobs generated                                                                 | Intensive/Sensitive harvesting (combine conventional and selection cutting) |
| 3    | Traditional Use Zone     | Bush Economy; Wildlife; Trees/Plants           | • Amount of berry habitat preserved  
• Amount of grizzly habitat preserved                                                                 | Sensitive harvesting (selection cutting) |
| 4    | Traditional Use Zone     | Bush Economy; Water Quality                      | • Amount of berry habitat preserved  
• Amount of grizzly habitat preserved  
• Amount of protective buffer around fishing cabin                                                                 | No harvesting               |

Note: Indicators in italics were generated by the analyst.
Summary of Section 7

✔ The second step in the AFPP approach is to compile the summary information.

✔ The summary information from each written source is compiled into one large table to show the range of community forest values, management indicators, and management actions grouped under criteria themes and sub-themes.

✔ Resource management zones (RMZs) can be generated using mapped traditional use information, or can be based on family, clan, house or trapline territories. Each zone is given a name, a criterion emphasis, and a general management policy.

Members of the Williams Lake Band build a hunting cabin within Secwepemculecw (Shuswap territory). Many First Nation community archives contain documented accounts of traditional land uses and lifestyles that evolve with each generation.
Photo: J. William
Section 7 - AFPP Step 3: Criteria and Indicator (C&I) Categories

This section describes how to organize community information into spatial, quantitative, and qualitative categories.

What are C&I Categories Used For?

Categories focus mainly on grouping the information into types of forest management indicators and actions.

Dividing C&I into categories serves two purposes. First, categories make it easier to organize C&I so that they can be integrated into analytical forest planning tools (see examples in Section 9). Some analytical tools are specially designed to use criteria, indicators, and maps to support forest management decision-making. Second, categories separate C&I into types of management strategies to address each community forest value and concern, which helps collaborators incorporate them into plans.

There are three C&I categories:

- **SPATIAL** – Are the desired forest management practices being applied in the right places?

- **QUANTITATIVE** – How much of each value should there be?

- **QUALITATIVE** – Do community members feel that they are involved in the decisions? In their judgement, is the community benefiting from forest development? Does management retain the spiritual values of the forest? Does the community perceive that the plan addresses their needs and concerns?

Western gall rust (Endo-cronartium harknessii) attack Lodgepole pine (Secwepemc- quliy7; Dalkeh - chundoo ; Latin– Pinus contorta) and Ponderosa pine (Latin–Pinus ponderosa) causing swollen “galls” on branches and stems. Spores of mature galls turn bright orange in June and can easily infect surrounding trees of the same species. Infection is not necessarily fatal, but can result in breakage of the branch or stem. Gall rust infection can be used as a quantitative indicator of forest health in young stands.

Photo: M. Karjala
Members of TL’azt’en Nation examine a riparian buffer in a cut block on the John Prince Research Forest. For the TL’azt’en community, adequate riparian buffers are an indicator of wildlife, plant, and water quality forest management criteria. Photo: M. Karjala.

Spatial

Spatial criteria refer to values on the land that are permanently fixed in one place. Burial sites, cabins, recreation facilities, and salt licks are a few examples. It is generally assumed that these values will still be present at the end of the planning horizon (for example, 20, 100, or 200 years from now).

Spatial indicators tell us how the forest management plan addresses spatial criteria. The RMZs are one type of spatial indicator. For instance, if the community identified the economic development of non-timber forest products as a criterion, an indicator could be the amount of forest area in zones emphasizing non-timber forest products. Buffers are another spatial indicator (Table 4). Buffers are areas that are established to separate sensitive, location-specific values from potentially damaging development activities.

Spatial criteria can be described in maps and in tables from interview information. The spatial tables are similar to the summary and compilation tables, except that one column called “feature” is added. Features are the specific spatial concern(s) under that criterion. For example, in the map associated with Table 4, the features of concern are streams. Other possible features found here include archaeological sites or spiritual sites.
Table 4. An example of a spatial criterion. The amount of area in lake and stream buffers can be an indicator for addressing criteria themes such as wildlife, fish, water quality, and trees/plants. Appropriate management strategies for protecting riparian and cultural areas are an important point of discussion between First Nation communities, technical specialists, and collaborators. The source column in the table can be removed to protect source identities.

<table>
<thead>
<tr>
<th>Criteria Themes</th>
<th>Criteria Sub-Themes</th>
<th>Features</th>
<th>Description</th>
<th>Management Indicators</th>
<th>Management Actions</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resource/Environmental Concerns</td>
<td>Water Quality</td>
<td>Streams</td>
<td>Protection: Logging too close increases sediment</td>
<td>• Amount of buffer around streams and lakes</td>
<td>• Placement of a buffer around streams and lakes</td>
<td>F. Louis (19); T. Rice (30); W. LaHache (16)</td>
</tr>
<tr>
<td>Human Factors</td>
<td>Community</td>
<td>Spiritual Sites</td>
<td>Protection: Need to preserve these places for future generations</td>
<td>• Amount of buffer around spiritual sites</td>
<td>• Placement of a buffer around spiritual sites</td>
<td>T. Rice (30);</td>
</tr>
<tr>
<td></td>
<td>Archeological Sites</td>
<td></td>
<td>Protection: Need to keep evidence of historical use of the land</td>
<td>• Amount of buffer around archeological sites</td>
<td>• Placement of a buffer around archeological sites</td>
<td>W. LaHache (16)</td>
</tr>
</tbody>
</table>

Note: Indicators and actions in italics were generated by the analyst.
Quantitative

In the AFPP, *quantitative criteria* are measured using both direct and indirect indicators that describe forest conditions and management activities.

For instance, if the criterion was medicinal plants, an indirect quantitative indicator would be the amount of habitat in the forest for those medicinal plants. A direct quantitative indicator of employment is the number of community members employed in silviculture, which is related to forest harvesting.

In the table that lists *quantitative criteria and indicators*, a column called “attribute” is added where the specific concern is recorded (Table 5). The attribute refers to the specific value that is being measured.

### Table 5

Quantitative C&I measure amounts or percentages that the land provides at any given time in the future. This leaves flexibility for natural variability in the landscape over time.

<table>
<thead>
<tr>
<th>Criteria Themes</th>
<th>Criteria Sub-Themes</th>
<th>Attribute</th>
<th>Description</th>
<th>Management Indicator</th>
<th>Management Action</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human Factors</td>
<td>Community/Employment</td>
<td>Non-timber forest jobs</td>
<td>Economic diversity will help the community become more self-reliant</td>
<td>Number of person days per year</td>
<td>Conduct a non-timber forest product feasibility study</td>
<td>E. Nathan (8); W. LaHache (16); M. Jensen (24)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Economy</td>
<td>Hunting</td>
<td>People hunted caribou and elk for food</td>
<td>Number of people engaged in hunting activities</td>
<td></td>
<td>L. Hall (1); M. Jensen (24)</td>
</tr>
<tr>
<td></td>
<td>Economic Development</td>
<td>Non-consumptive/value-added business opportunities</td>
<td>Economic diversity will help the community become more self-reliant</td>
<td>Yearly profits to the community from value-added businesses</td>
<td>Train community members in wood working technology; Develop a joint venture proposal for a sawmill operation</td>
<td>F. Louis (19); T. Rice (30); W. LaHache (16)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Moose</td>
<td>Food</td>
<td>Percentage of forest in suitable moose habitat</td>
<td></td>
<td>E. Nathan (8); F. Louis (19); T. Rice (30); J. Elton (34)</td>
</tr>
</tbody>
</table>
Qualitative

Qualitative criteria and indicators are generally not landbased, but instead are related to things like community benefits from forestry; the level of influence the community has in decision-making; and how well the community's perspectives are incorporated into the plan. It also includes community members' intuitive assessment of an entire plan or management system. This encompasses a wholistic point of view and cannot necessarily be evaluated only by measuring its component parts. The additional column in the qualitative table is called “issues” (Table 6). Issues refer to the specific policy or practice that is of concern.

**Table 6.** Qualitative criteria and indicators monitor how policies in the forest plan improve community benefits from forest management.

<table>
<thead>
<tr>
<th>Criteria Themes</th>
<th>Criteria Sub-Themes</th>
<th>Issue Description</th>
<th>Management Indicator</th>
<th>Management Action</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land Management</td>
<td>Knowledge</td>
<td>Rejection of traditional and local knowledge</td>
<td>Need for more information sharing and mutual knowledge</td>
<td>• Elders’ perception of the use of traditional knowledge in decision-making and policy development</td>
<td>E. Nathan (8); W. LaHache (16); M. Jensen (24)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Use traditional knowledge in decision-making and policy development</td>
<td></td>
</tr>
<tr>
<td>Economy</td>
<td>Bush Economy</td>
<td>Increased Access</td>
<td>Roads impact hunting and trapping success</td>
<td>• Kilometres of roads reclaimed after logging</td>
<td>E. Nathan (8); F. Louis (19); T. Rice (30); J. Elton (34)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Establish more effective deactivation policies</td>
<td></td>
</tr>
<tr>
<td>Resource/Environmental Concerns</td>
<td>Wildlife</td>
<td>Destructive vegetation management practices</td>
<td>Herbicides eliminate moose habitat</td>
<td>• Compliance with ‘no herbicide’ policy</td>
<td>F. Louis (19); T. Rice (30); W. LaHache (16)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Use non-chemical vegetation management practices</td>
<td></td>
</tr>
</tbody>
</table>

When the categorizing is complete, the analysts present the results to

1. An Advisory group for comment and feedback; and then to
2. Community participants for comment and feedback.

Category tables are updated by analysts after each presentation.
At this third stage, the summary information is divided into three categories: spatial, quantitative, and qualitative.

The categorization stage allows the community’s forest values to be incorporated into forest planning tools that are designed to use criteria and indicators and maps to assist in long-term forest planning.

Spatial criteria and indicators refer to values that are stationary (they don’t move over time) and are measured using types and amounts of protection (such as, RMZs or buffers).

Quantitative C&I are measured using numbers.

Qualitative C&I are related to community issues, concerns, benefits, and levels of influence. These are measured through people’s perceptions and judgements.

A brusher works on Tl’az\’t’en Nation’s TFL 42. Silvicultural jobs for community members are a quantitative indicator of forest management that promotes local employment.

Photo: M.Karjala
Section 9 - Putting the AFPP to Work

This section describes how to use the information from the AFPP framework in a community-based planning process.

The Final Product

Once the three steps (summarization, compilation, and categorization) are complete and the community is satisfied with the outcomes, analysts are ready to incorporate these results into a final report. The report should include

- A summary of where the source information came from and an explanation of how tables and maps were developed;
- An explanation of the tables and maps, what they mean, and how the management strategies were arrived at (for example, community participation methods, expert consultation, advisory group review and feedback); and
- Some ideas on how the community would like this information to be used.

Community Meetings to Obtain Feedback

The results of the AFPP analysis can be used to initiate further community discussions on forest management. Take the opportunity to show community members how their knowledge and ideas were used to make a forest management plan. As well, provide a venue for community members to share additional input.

For instance, present this information to the Community Advisory Group using the following:

- Copies of the report accompanied by a list of open-ended questions, so that group members can provide written or taped oral feedback on the results; and/or
- An oral presentation that summarizes the Community Advisory Group’s feedback and the changes you intend to make. Encourage the group to provide additional information at the meeting. Take advantage of the meeting to fill in knowledge gaps (for example, identifying indicators), validate the information that resulted from the analysis, and resolve point of disagreement. Have someone record the discussion (audio or video recording).

Once the Community Advisory Group is satisfied with the results, bring the results to the attention of the broader community. Make participation opportunities fun, interesting, and accessible to the range of people in the community. Consider the timing of local events, the use of the local Aboriginal language, and the communication needs and preferences of various community groups.

Useful References on Report Writing:

Richardson, N. H. 1992. Writing a planning report. Canadian Institute of Planners, Ottawa, ON.


Grey Owl Tutoring, Guides for Writers. Website:http://www.greyowltutor.com/guides.html
Application #1: Developing Management Priorities, Goals, and Objectives

The list of criteria themes can be used in community meetings to set priorities, goals, and objectives for land management. Is education a high priority? Or should there be a focus on jobs? Is there a need to improve wildlife habitat immediately, or should there be a focus on fish and streams? The criteria themes and community priorities can also be used to establish community goals (see Table 8). For example, these goals might be

- To have a self-reliant community;
- To keep the land healthy;
- To have more influence over the decisions made about the land;

Application #2: Developing Management Scenarios

Scenario planning is a creative way to look at possible futures. Different scenarios or ways to manage the forest are developed. Each scenario produces different outcomes at the end of the planning horizon. Scenario planning uses “what if” questions to explore planning options for the future. Criteria themes can be used to generate these scenarios. Examples:

- What if creek buffers were 50 metres wide?
- What if half the forest was partial cutting only?
- What if the forest was managed to maximize moose habitat?

In scenario planning, indicators are used to compare scenario outcomes. These indicators are often indirect and need to be predictable. Many ecological values (like wildlife and plants) rely on indirect indicators because they are easy to link with commonly available sources of information such as forest cover maps or aerial photos. Indicators need to be predictable, so that we can anticipate how alternative management policies might affect them.

Indicators provide a way to compare scenarios and to understand tradeoffs between different forest values. For instance, how would a scenario that focuses on moose habitat impact berry habitat, employment opportunities, and trapping species?

Application #3: Analytical Approaches to Forest Management Planning

Some computer models are specially designed for forest management planning, and can calculate spatial and quantitative indicators for long and short-term planning horizons. This makes it easier to compare and contrast many complicated scenarios using many indicators (Figure 9). There are at least three models in British Columbia that have this capability:

- The TEAMS/BC (formerly known as “Lurch”) forest planning model was developed by Dr. Stephen Dewhurst at the University of Northern British Columbia. It is available for free on the internet at www.teamsbc.unbc.ca.
**Exercise: Linking C&I with Goals and Objectives**

In the AFPP, criteria represent community values on the forest. With a list of criteria, we can start to see general areas of concern that are common throughout the community. These can be used to generate community goals and objectives for forest management. Fill in appropriate criteria and indicators for each goal, then generate additional objectives in the spaces provided.

<table>
<thead>
<tr>
<th>Goal 1: A Self-Reliant Society</th>
<th>Goal 2: Keep the Land Healthy</th>
<th>Goal 3: Influence Over Decision-Making</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Objectives:</strong></td>
<td><strong>Objectives:</strong></td>
<td><strong>Objectives:</strong></td>
</tr>
<tr>
<td>• Maintain subsistence and</td>
<td>• Protect habitat for</td>
<td>• Equitable exchange of information</td>
</tr>
<tr>
<td>spiritual uses of the land</td>
<td>locally important wildlife</td>
<td>between the community and</td>
</tr>
<tr>
<td></td>
<td>and fish</td>
<td>industry/government agencies</td>
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<table>
<thead>
<tr>
<th>Criteria:</th>
<th>Criteria:</th>
<th>Criteria:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Community (cultural values)</td>
<td>• Wildlife (moose, grizzly,</td>
<td>• Knowledge sharing</td>
</tr>
<tr>
<td>• Bush Economy</td>
<td>cougar)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Fish (salmon, whitefish,</td>
<td></td>
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<tr>
<td></td>
<td>trout)</td>
<td></td>
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<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indicators</td>
<td>Indicators</td>
<td>Indicators</td>
</tr>
<tr>
<td>• Amount of area designated</td>
<td>• Number of healthy moose</td>
<td>• Number of responses to requests</td>
</tr>
<tr>
<td>to protect locally important</td>
<td>caught per year</td>
<td>for information</td>
</tr>
<tr>
<td>cultural heritage values</td>
<td>• Amount of moose habitat</td>
<td></td>
</tr>
<tr>
<td>• Number of families</td>
<td>• Amount of stream, lake</td>
<td></td>
</tr>
<tr>
<td>supplementing diet</td>
<td>and wetland buffers</td>
<td></td>
</tr>
<tr>
<td>with traditional foods</td>
<td></td>
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</tbody>
</table>

The Tool for Exploratory Landscape Scenario Analyses (TELSA) was developed by ESSA Technologies Ltd. For more information visit their website: www.essa.com.

These tools require establishing numerical targets for different indicators. How much moose habitat is appropriate? How much timber volume is needed to sustain the local economy? Communities, technical specialists, and collaborators can work together to determine these targets.

Generally, analytical tools require sufficient technical skills and expertise (for example, a university degree in resource management and preferably, a Registered Professional Forester or a Registered Professional Biologist designation) to effectively use the model and to accurately interpret the results. For particularly large and complicated planning projects, individuals with graduate degrees (Master’s or PhD), specialized training, and advanced computer skills may be required.

**Application #4: Monitoring and Feedback**

As the plan is implemented, direct and indirect indicators can be measured to monitor and assess how well the original goals and objectives of the plans and strategies are being achieved. If they are not achieved satisfactorily, then the plan strategies are revised. This is adaptive management (see section 2).

Observations by people on the land are an important source of information for assessing the success of implementing a plan. Land users make observations over long periods of time and can report on positive or negative changes to the forest as a result of development.

Monitoring indicators during implementation also serves to report on and monitor compliance with the plan strategies.

Monitoring also includes revisiting the community’s values every few years and repeating the planning cycle (Figure 1). Have the forest management criteria changed? Are the priorities the same? Should the RMZ boundaries change? Should the goals and objectives be altered? Any of these alterations will change the forest management strategies. These changes need to be fed back into the process when the plan is revised.

**Application #5: Using AFPP Results to Develop a Plan with Collaborators**

Figure 10 shows how the AFPP results can support joint planning with collaborators.
It is easiest to think of the results of the AFPP approach as one possible management scenario, one way of managing the forest based on the knowledge, values, and needs of a First Nation. Other local First Nations and groups in the non-Aboriginal communities might have their own ideas on how to manage the forests, and they might be similar to or different from each other.

If AFPP results are to be used as a way of incorporating your First Nation’s values into forest management planning, then collaborators should provide a management scenario that is based on their values. Examples might be a plan from a timber company showing their ideal timber management scenario, or “higher level” plans like LRMPs, which incorporate information that is gathered from various public planning processes. These perspectives reveal different ways of managing the forest.

**Figure 9.** Maps of the John Prince Research Forest showing the results of a scenario produced using the TEAMS/BC forest planning tool. This scenario emphasizes the management of habitat for a plant that is important to members of the Tl’az’t’en Nation (called “trees/plants 2” for confidentiality). Each map shows the resulting amount and distribution of various indicators including the Tl’az’t’en’s wildlife and plant indicators, and conventional tree species and seral stage indicators at the end of the 80-year planning horizon. (from Karjala, 2001)
At the planning table, the scenarios can be compared by examining planning goals, objectives, criteria and indicators. Maps can be used to compare areas of importance and recommended management policies. Similarities and differences should become apparent, and an understanding of the reasons for those differences should also surface. This activity should result in knowledge exchange, stimulation of creative solutions to forest management problems, an understanding of alternative perspectives on management, areas of agreement, and areas that need to be discussed and negotiated towards a consensus.

Ideally, the interaction should produce a mutual set of forest management goals, objectives, criteria, indicators, and appropriate management treatments that will direct lower level planning initiatives.

Other Potential Applications/Benefits
- Treaty process/Interim Measures Agreement;
- Education within First Nation communities;
- Cross-cultural education;
- Bolstering community confidence and morale;
- You are only limited by your imagination . . .

References on Techniques for Group Decision-Making:


Participation Techniques

Different participation techniques can be used to get community members interested and involved in the AFPP. Some examples include:

- **Transect walks:** Take an observational walk with a small group and pay attention to specific people, activities, resources, or environmental features.

- **Participatory mapping:** Discuss resource issues among a group of community members and draw individual maps of people's perceptions of the distribution and location of environmental, social, cultural, or economic features.

- **Interviews with natural groups:** Engage in conversations with natural groups of people to discover problems, expectations, common interests, and so on.

- **Slide language:** Give people a camera and get them to take pictures of important things in their community and on the land. Make slides out of the photos and get people to tell stories about the images at meetings to reveal what is important to them, to raise awareness about the local situation, and to promote reflection.
Figure 10. A diagram showing one possible way that First Nations could work with collaborators to develop joint forest management plans.

Finished?

A Cause For Celebration!

Any First Nation who completes this process and applies it to the benefit of their community has taken an important step forward.

So … have a feast, a potlatch, a pow-wow … make it a cross-cultural event and congratulate yourself!
The criteria themes, sub-themes, and maps can be used in many aspects of forest planning. These include initiating discussion at community meetings, developing alternative management scenarios, generating community goals and objectives, incorporating values into analytical planning tools, and developing joint management plans with collaborators.

Analytical planning tools can be used to develop management scenarios based on community values.

Indicators and relationships built with land users can contribute to monitoring plan implementation and plan revisions.

Communities that apply the process have cause to celebrate!


Curran, D. and M. M’Gonigle. 1998. Aboriginal Forestry: Community Management as Opportunity and Imperative. Faculty of Law and School of Environmental Studies, University of Victoria, Victoria, BC.


Four Worlds Development Project. 1985. The Sacred Tree Four Worlds Development Project, Lethbridge, AB.


ADAPTIVE MANAGEMENT: a systematic process for continually improving management policies and practices by learning from the outcomes of operational programs; the use of change and uncertainty as an opportunity to gain and apply new knowledge.

ALPHANUMERIC (code): a coding system that uses letters, numbers, and sometimes other symbols.

ANALYTICAL FOREST PLANNING TOOL: a computer program designed to calculate future timber harvests based on a set of assumptions.

ARCHIVAL INFORMATION: information such as public records, historical documents, interview recordings, transcripts, and maps that are stored and preserved.

COLLABORATORS: a key player in the AFPP approach. organizations responsible for implementing and enforcing forestry plans on crown land. These include industry (such as, Canfor, Louisiana-Pacific, and Weyerhauser), government (such as the BC Ministry of Forests), and non-governmental organizations (such as, universities and municipal governments).

CO-MANAGEMENT: shared decision-making power which includes groups other than either state managers or industry, such as local resource users, environmental groups, or aboriginal people; resource management that emphasizes negotiation; the process of combining western scientific knowledge and traditional environmental knowledge for the purpose of improving resource management (Campbell, 1996).

CONTENT ANALYSIS (also data analysis): analysis of the content of a body of communicated material (for example, a book or film) through classification, tabulation, and evaluation of its key symbols and themes in order to understand its meaning and probable effect.

CRITERIA SUB-THemes: groupings that describe forest values; more specific than criteria themes.

CRITERIA THEMES: broad groupings that describe forest values.

CRITERION: an essential element or condition necessary to achieve a goal (such as, sustainable forest management).

DATA ANALYSIS (also content analysis): analysis of the content of a body of communicated material (such as, a book or film) through classification, tabulation, and evaluation of its key symbols and themes in order to understand its meaning and probable effect.

DIRECT INDICATOR: measurements that are directly linked to a criterion (for example, wildlife population numbers).

EVEN-AGED STANDS: stands of trees that fall into one age group (cohort) and are formed as a result of a major disturbance such as, fire or timber harvesting; even-aged management is management that produces even-aged stands.

FOREST DEVELOPMENT PLAN (FDP): an operational plan that outlines a licensee’s intended operations (roads and cutblocks), which is reviewed by the provincial government and ultimately may become tenured as part of their licensed activities; generally a one to two year cyclic process.

GOAL: a desired destination or endpoint.

IMPLEMENTATION PHASE: the third phase in the planning cycle, where plan strategies are carried out.

INDICATOR: a sign or a signal that can be measured or observed, that provides information about a criterion.

INDIRECT INDICATOR: an indicator that measures an aspect of a criterion (such as, wildlife habitat).

INTEGRATED RESOURCE MANAGEMENT: a land management regime that identifies and considers resource
values in the context of social, economic, and environmental objectives.

**MONITORING PHASE:** the fourth phase in the planning cycle, where indicators are used to assess whether or not the planned strategies are achieving the vision.

**OBJECTIVE:** something toward which effort is directed.

**PARTIAL CUT (HARVEST SYSTEM):** a harvest system that produces an uneven-aged stand.

**PARTICIPATORY PLANNING:** the involvement of those affected by decisions to participate in the development of planning goals, objectives, criteria, and indicators.

**PLAN:** a method or procedure that describes a path toward a goal which is thought out ahead of time.

**PLANNING HORIZON:** an established time in the future to set planning goals and objectives.

**PRIMARY MATERIAL:** raw data collected by others, such as interview tapes or transcripts, map biographies, and so on.; basic and original material or raw evidence.

**QUALITATIVE C&I:** forest management criteria and indicators that involve forest values that are not quantified.

**QUANTITATIVE C&I:** forest management criteria and indicators that can be expressed using numerical values.

**REFERRAL PROCESS:** the public viewing of a forest development plan as legislated in the province of British Columbia.

**RIPARIAN AREA:** areas of land next to wetlands or waterbodies such as swamps, streams, rivers or lakes.

**RISK ANALYSIS:** an examination of the costs (social, environmental, financial) involved with activities associated with the creation of some benefit.

**RMZ:** divide the landscape into units that contain certain forest values. This makes it easier to assign appropriate forest management policies to different areas of the forest.

**SECONDARY MATERIAL:** published summaries of primary material such as reports, books, journal articles, newspapers, and so on.; an interpretation or analysis of primary materials.

**STEWARDSHIP:** the careful and responsible management of something entrusted to one’s care.

**STRATEGIC LAND USE PLANNING:** planning at the regional, sub-regional or local level which results in land use allocation and/or resource management direction.

**STRATEGIZING PHASE:** the second phase in the planning cycle, where strategies are developed to move toward a vision.

**SPATIAL C&I:** forest management criteria, indicators and actions that relate to a place, or occupy space on the landscape (such as, streams and riparian buffers).

**TRADITIONAL KNOWLEDGE:** a body of knowledge, practice and belief that is built up by a group of people through generations of living in close contact with nature.

**TRADITIONAL USE STUDIES (TUS):** community-based research that identifies areas of Aboriginal land use and occupation.

**TRANSPARENT:** clear, easy to understand.

**UNEVEN-AGED STANDS:** stands that are composed of trees from multiple age groups as a result of a series of minor disturbances (such as, wind or timber harvesting).

**VISIONING PHASE:** the first phase in the planning cycle, where a planning horizon is established and a desired future is decided upon by establishing goals and objectives.