



course material

Module 1: An Introduction to Compatible Management of Timber – Non-Timber Resources¹

This professional development module on the compatible management of timber and non-timber resources will provide:

- An overview of non-timber forest resources
- An introduction to the concept of, and rationale for, ‘compatible management’
- Examples of how timber and non-timber resources can be compatibly managed on the same land base.

This module is the first of three professional development modules exploring different aspects of the compatible management of timber and non-timber resources. It provides an overview of the diverse range of products covered under the heading of ‘non-timber forest product’, introduces the concepts behind compatible management, and provides case study examples of compatible management. The module is aimed at resource managers, community development specialists, and others with an interest in forest management. A key goal of the module is to provide an introduction to some of the key information and skills required by those wishing to support the effective management and sustainable utilization of non-timber resources.

This module should be seen as a pre-requisite for subsequent modules that will explore case study examples of timber – non-timber compatible management in more depth.

¹ This module is largely based on the work of Brian Titus (Natural Resources Canada) and Wendy Cocksedge (ex-Centre for Livelihoods and Ecology, Royal Roads University).



Overview of the Module

The Introduction to Compatible Management module consists of 4 lessons:

- Introduction to Non-Timber Forest Resources
- Compatible Management: An Overview
- Case studies in Compatible Management
- Regional Profiles of NTFP Activities

The module moves from introductory material to more complex topics that provide learners with the opportunity to gain a more in-depth understanding of the concept of compatible management, and how it might be applied to their own specific situation or interests.

This is a stand-alone package designed for the on-line or distance education learner working individually or as part of an on-line group guided by an instructor. If part of a group, activities can be developed to promote collaboration and interaction between co-learners. Learning success will be evaluated based on the completion of a series of activities.

Module Outline & Timelines

This module comprises the following 4 lessons. The estimated time that it will take you to work through each lesson is noted. Additional time may be required to complete assignments.

- Lesson 1. Introduction to Non-Timber Forest Products (1.5 hours)
- Lesson 2. Compatible Management: An Overview (2 hours)
- Lesson 3. Case Studies in Compatible Management (2 hours)
- Lesson 4. Regional NTFP Profiles (2 hours)

Assessment

Student assessment is based upon successful illustration of learning outcome achievement through the assignments provided in each lesson. These assignments involve:

- Summarizing key points brought out in the reading assignments; and
- Applying the knowledge gained on NTFPs and compatible management to questions focused on the student's specific situation.

Marks are apportioned as follows:

- Lesson 1 – 15%
- Lesson 2 – 25%
- Lesson 3 – 30%
- Lesson 4 – 30%



Lesson 1. Introduction to Non-Timber Forest Products

LESSON OVERVIEW

Over the last two – three decades, non-timber forest products (NTFPs) have emerged as a key forest value and an important focus for forest use and research. However, relative to other areas of forest use and management, comparatively little is known concerning the ecological and economic implications of NTFP development and use and the impact of these activities on society, including on those groups who have traditionally used these resources for subsistence, cultural, and other purposes. This lesson hopes to address some of these information gaps by providing forest resource managers, policy makers, community economic development specialists, and other interested parties an introduction to the topic of non-timber forest products in sustainable forest management.

Lesson 1 helps set the stage for the other topics to be covered in this module. Students will develop a common understanding of what constitutes the diverse sector known as ‘non-timber forest products’ and will be introduced to the wide range of potential uses of these products.

LEARNING OUTCOMES

By the end of this lesson, participants will be able to:

- Define what a ‘non-timber forest product’ (or NTFP) is;
- List the various terms used for NTFPs;
- Define and provide examples of major product categories;
- Demonstrate an understanding of the commercial, cultural, subsistence, and recreational uses of non-timber forest products; and

- List some examples of NTFPs present in their region.

RESOURCES

B.C. Ministry of Forests (1995). Botanical forest products in British Columbia: An Overview. Victoria, B.C.: Integrated Resources Policy Branch, British Columbia Ministry of Forests. (<http://www.for.gov.bc.ca/hfp/publications/00002/index.htm>) *Although published in 1995, this report’s summary of the overall NTFP picture in British Columbia is still relevant today. However, readers should note that the situation in the province has evolved since the report was written and policies etc. may have changed during this time.*

Learning Object: “What is a non-timber forest product?” Available on the web at: <http://learn.royalroads.ca/learningobjects/Ntfp/ntfpmain.html> (15 minute narrated slide show introduction to NTFPs)

Gagné, J. 2004. Integrating non-timber forest products into forest planning and practices in British Columbia. Special Report FPB/SR/19. Forest Practices Board (Sections: Executive Summary, Introduction, and Background) pp. i-ii and 1-10). <http://cntr.royalroads.ca/files-cntr/Forest%20Practices%20Board%20report.pdf>

Centre for Non-Timber Resources (2006). Community Toolkit. http://cntr.royalroads.ca/community_toolkit. (Section I: Introduction To Non-Timber Forest Products)

LESSON NOTES

Over the last couple of decades, the term ‘non-timber forest products’² has entered the lexicon

² Other terms commonly used to describe non-timber forest products include botanical forest products, non-wood forest products, special forest products, minor forest products, specialty forest products, alternative forest products, and forest bio-products. Some authors believe terms such as ‘minor forest products’ misrepresent the key importance of these products in many areas, and to many people.



of forest resource managers in Canada and many other parts of the world. The relatively recent appearance of this concept has sometimes led to the misconception that these are ‘new’ products representing a new use of forest resources. In fact, the harvesting and use of these resources almost certainly represents the first human use of forest resources, and NTFPs remain a key part of livelihood strategies for tens of millions of people around the globe. Apart from their significant commercial value – in BC, the NTFP industry is valued at over a hundred million dollars annually – non-timber resources also make essential contributions in meeting subsistence needs, as well as often playing important roles in cultural practices and recreational activities.

In this lesson, participants will gain a clear understanding of both the broad range of goods and services that can be considered as the ‘non-timber’ resources of the forest, and of the different opportunities for managing these products in a way that is compatible with forest resources such as pulp and timber. One of the first tasks is to develop a common understanding of what non-timber forest products are. Given the tremendous range of resources that potentially fall under the heading of ‘non-timber forest product’, it is understandable that differences of opinions exist as to what exactly is a NTFP, and what term best captures this diverse range of products. The lack of clarity about what is an ‘NTFP’ could have significant implications for policy development and other interventions aimed at the NTFP sector. The diversity of the sector also suggests caution when we attempt to generalize about a group of products that have very different characteristics in terms of ecology, management needs and potential, markets, and other features.

Given the widespread use of these products, their commercial value, and their vital importance for cultural and other non-market purposes, NTFPs clearly deserve consideration in resource management decisions. But perspectives on why these resources are important will vary depending on who is being asked the question.

Community economic development workers may see NTFPs as income-generating opportunities for residents of rural communities. Governments may see NTFPs as a potentially un-tapped source of revenue, or as a potential complication in land use planning processes. A First Nation may value non-timber resources for cultural or economic reasons – or, as is frequently the case, both. Yet others may perceive NTFP harvesting as a more sustainable land use activity than commercial timber harvesting. One of the starting points for effectively managing these resources is to assess the different perspectives and interests of the wide range of groups and individuals making use of these resources. A challenge for anyone working on NTFP-related issues will be balancing the myriad of interests to ensure the management, use, and potential development of these products is sustainable as well as equitable over the long-term.

POINTS TO PONDER

As you make your way through the unit resources (readings and learning object), keep in mind the following questions and comments.

- What are the major non-timber forest product categories? What are some examples from each category?
- After reviewing the learning object “What is a Non-Timber Forest Product?” try to identify 2-3 ‘key’ non-timber forest products being utilized in your area. Which categories do they fall into? Are they being harvested for commercial, subsistence, cultural or recreational purposes (or a combination)?

ASSIGNMENT 1.1

After completing the required readings for this unit, including linking to and viewing the learning object “What is a Non-Timber Forest Product?” answer the following question:

Why is it important for resource managers to know what non-timber forest products are, how they are used, and by whom?



In answering this question, be sure to provide a definition of NTFPs, describe the different categories of NTFPs, and give examples of specific NTFP products and their importance for diverse stakeholders. Pick one resource you are familiar with from your area and describe the range of stakeholders with an interest in its management. Limit your answer to 250 words or less. Submit your answer to the instructor by the date indicated in your course schedule.

ADDITIONAL READINGS & RESOURCES

Cocksedge, Wendy and Michelle Schroeder. 2007. *A Harvester's Handbook (Coastal Edition): A guide to commercial non-timber forest products in British Columbia*. Royal Roads University: Centre for Non-Timber Resources. <http://cntr.royalroads.ca/files-cntr/File/Harvester%20Handbook%20for%20web%20Aug%202008.pdf> Publication Year 2007

Non-Timber Forest Products: Historical and Current Use (web-based learning module). <http://web2.uvcs.uvic.ca/courses/ntfp/history/index.htm>

Lesson 2. Compatible Management: An Overview

LESSON OVERVIEW

Given the historically significantly greater economic value of timber compared to other forest resources, it comes as no surprise that much of the management of our forest resources in British Columbia and elsewhere has been more about the management of 'timber' than it has been about the 'forest' as a whole. Where they enter into the discussion, non-timber forest resources generally receive only secondary or incidental consideration.

However, the situation appears to be gradually changing. As communities become aware of and/or are compelled to explore alternative forms of economic development due to the

decline in the timber-based industries, the demand for greater recognition of non-timber values in forest management is beginning to be heard. While many of the tools and methods remain to be developed, the push towards a more holistic form of forest management provided by different stakeholders, as well as national and provincial policy commitments, is leading to the development of new approaches in forest management. Among these new approaches, compatible management has significant potential to address a wide range of stakeholder issues and demands.

Lesson 2 provides an overview of the concept of compatible management, the tools that can be used to implement it on the ground, and examples of how it is being applied in a variety of resource management situations in British Columbia.

LEARNING OUTCOMES

By the end of this lesson, participants will be able to:

- Explain the concept of "compatible management" and how it helps address the need for managing the landbase for a wide range of values;
- Describe the compatible management continuum and the kinds of tools for compatible management commonly used at various points along that continuum;
- Describe the kinds of compatible management tools employed at different stand rotation stages (i.e., stand-ending disturbance/harvest, stand establishment/regeneration planting, and stand tending/management); and
- Provide examples of compatible management already practiced in British Columbia.

READINGS & RESOURCES

Gagné, J. 2004. Integrating non-timber forest products into forest planning and practices in British Columbia. Special Report FPB/SR/19.



Forest Practices Board Integrating forest practices and NTFPs (Section titled: Impacts of timber harvesting). pp. 10-16.
<http://cntr.royalroads.ca/files-cntr/Forest%20Practices%20Board%20report.pdf>

Winder, Richard. 2006. Comprehending the resource for compatible management. In: Cocksedge, Wendy (compiler). Incorporating non-timber forest products into sustainable forest management: An overview for forest managers. Royal Roads University. Pp. 45-47.
<http://cntr.royalroads.ca/files-cntr/Incorporating%20NTFPs.pdf>

Titus et al. 2006. Compatible management: A comprehensive overview of inactive to active tools and examples from North America. In: Cocksedge, Wendy (compiler). Incorporating non-timber forest products into sustainable forest management: An overview for forest managers. Royal Roads University. Pp. 48-68.
<http://cntr.royalroads.ca/files-cntr/Incorporating%20NTFPs.pdf>

Excerpts from Learning Object: *Non-Timber Forest Products: Managing for Multiple Values*
<http://web2.uvcs.uvic.ca/courses/ntfp/manage/sect01.htm>

LESSON NOTES

Compatible management refers to an approach to forest management that recognizes and seeks to enhance the full range of forest values – including both timber and non-timber resources. The concept behind compatible management is not a new development, nor is it restricted to NTFPs. In that sense, a better term might be integrated forest management, as forest management goals focused on maintaining biodiversity, preserving wildlife habitat, and ensuring access for cultural purposes, all overlap nicely with maintaining a range of opportunities for NTFP harvesting.

Many current and emerging forest practices incorporate non-timber values, including

Ecosystem Based Management, Adaptive Management and potentially Forest Stewardship Plans. Managing for non-timber forest products often complement the management for other non-timber values – and vice-versa – with only minimal extra effort and planning. In the final assessment, the most important tools for incorporating NTFPs into management plans will be awareness of the opportunities and communication between forest managers and users. In order to realize these opportunities and to practice truly holistic and sustainable forest management, resource managers and others who utilize forest resources require a solid base of knowledge for incorporating NTFPs into resource management plans.

Compatible management is best viewed as a **continuum** of possible management activities. This continuum ranges from *inactive* compatibility (i.e., taking advantage of already existing forest management tools to increase NTFP values) to *active* compatibility (i.e., applying forest management with the explicit objective of increasing both timber and non-timber values). In between are *incidental* management scenarios, where management for one value happens to benefit the other, although this is not a clear objective of the management approach. Compatible management can be built into all phases of forest management, including timber harvesting, stand regeneration, and stand management.

POINTS TO PONDER

As you make your way through the unit resources, keep in mind the following questions and comments.

- What are the major tools for compatible management?
- How is each tool related to the compatibility management continuum? What about to stand rotation phases?
- Are there circumstances under which compatible management is likely to be disadvantageous? From whose standpoint would it be disadvantageous and why?



ASSIGNMENT 2.1

After completing the required readings for this unit and viewing the video or reading the transcript on mushroom management in the Blackwater Creek area, address the following points in a 1-2 page narrative.

- Explain why compatible management is an important concept for resource managers to be familiar with. In your explanation, include a definition of compatible management and distinguish between active and inactive approaches (30%).
- For each of the three stand rotation phases (i.e., stand disturbance/harvesting; stand replacement/regeneration; stand tending/management), list two appropriate compatible management tools and describe their potential for addressing both timber and NTFP management objectives (30%).
- Provide 2 or 3 examples of compatible management being practiced in your area or that have potential application in your area. Describe the different stakeholders and their perspectives on NTFP values, the compatible management tools that were or could be used, and challenges associated with or likely to be associated with implementation (40%).

Submit your answer to the instructor by the date indicated in your course schedule.

Lesson 3. Case Studies in Compatible Management

LESSON OVERVIEW

Since the 1990s, a number of efforts to integrate timber and non-timber forest products management have emerged across North America. In many cases these “adaptive management” experiments have brought together stakeholders previously at odds with one another as they seek to develop the tools and approaches needed to manage forests for

multiple values. In Canada, British Columbia has been a “hotspot” of compatible management innovation, owing to a confluence of factors, including efforts by First Nations to solidify their claims to traditional territories and resources, the downturn in the wood products industry and the need for many rural communities to diversify their economies, and growing consumer demand for wild products.

By providing funding for research and extension over the past two decades, the British Columbia Ministry of Forests and Range (now the Ministry of Natural Resource Operation) supported research on innovative approaches to compatible management. With the help of this funding, the Centre for Livelihoods and Ecology at Royal Roads University has developed a series of case studies that capture the lessons learned from efforts to implement compatible management in British Columbia.

Lesson 3 provides an in-depth look at three case studies of compatible management implemented in British Columbia. An important conclusion from these case studies is that understanding the socioeconomic dimensions of compatible management is as critical as understanding its biophysical dimensions.

LEARNING OUTCOMES

By the end of this lesson, participants will be able to:

- Describe some approaches used for understanding the socioeconomic dimensions of compatible management;
- Summarize key lessons learned from each of the three case studies; and
- Describe whether and how the tools or approaches used in the case studies could be applied to a management situation they are involved with.

READINGS & RESOURCES

Winder, Richard. 2006. Comprehending the resources for the socio-economic dimension. In:



Cocksedge, Wendy (compiler). Incorporating non-timber forest products into sustainable forest management: An overview for forest managers. Royal Roads University. Pp. 68-71. <http://cntr.royalroads.ca/files-cntr/Incorporating%20NTFPs.pdf>

Burton, P. 2006. Managing for wild berries. In: Cocksedge, Wendy (compiler). Incorporating non-timber forest products into sustainable forest management: An overview for forest managers. Royal Roads University. Pp. 114-121. <http://cntr.royalroads.ca/files-cntr/Incorporating%20NTFPs.pdf>

Ehlers, Tyson and Signy Frederickson. 2006. Managing for timber and pine mushrooms in the West Kootenay Region of British Columbia. In: Cocksedge, Wendy (compiler). Incorporating non-timber forest products into sustainable forest management: An overview for forest managers. Royal Roads University. Pp. 114-121. <http://cntr.royalroads.ca/files-cntr/Incorporating%20NTFPs.pdf>

Cocksedge, Wendy. No date. North Island Native Fern Harvesting Trials (draft dated December 2008).

LESSON NOTES

In many forest areas, timber receives priority in management decisions with non-timber forest products a secondary or incidental consideration. The case studies explored in this lesson illustrate that managing for multiple resources can enhance economic productivity while expanding social benefits. At the same time, however, managing for multiple values requires managers to address a diverse set of challenges that can be grouped into three categories:

- Estimating the abundance, quality, and spatial distribution of the current resource;
- Projecting the availability and sustainability of timber and non-timber resources under various management regimes; and
- Taking into account the socio-economic

impacts of different management regimes.

The approaches taken in the case studies to addressing these three types of challenges reflect differences in the resources being managed (i.e., berries, mushrooms, and ferns) as well as in their social, economic, and ecological contexts. The case studies further suggest the following steps that forest resource managers can take towards implementing compatible management.

1. Getting to know local NTFP harvesters and buyers. They can help managers develop an understanding of the commercial quality of plant species, provide local knowledge of preferred NTFP habitat, and help with understanding the impacts of forest management on NTFP resources.
2. Establish good communication avenues with NTFP harvesters. Many compatible management opportunities require coordination of timing, the communication of forest management plans, and understanding the timing of NTFP harvester needs.

The range of examples of compatible management already underway in British Columbia suggests that there are many imaginative ways that NTFP values can be increased within our forests as part of forest management. Some of these approaches will also increase the value of our timber products, while some may help forest managers realize financial returns early in a rotation. The next decade promises to be even more interesting as the recognition of NTFP values increasingly becomes a part of main-stream sustainable forest management.

POINTS TO PONDER

As you make your way through the unit resources, keep in mind the following questions and comments.

- What are the management tools or approaches being applied or recommended in the case studies?
- What challenges can you see in applying



these tools in your own work? How would you overcome those challenges?

ASSIGNMENT 3.1

After completing the required readings for this unit, address the following points in a 1-2 page narrative.

- Describe two approaches that managers can use to better understand the socioeconomic dimensions of compatible management. (20%).
- Compare and contrast two of the case studies with respect to how they address the following three challenges associated with managing for multiple resource values (50%):
 - Estimating the abundance, quality, and spatial distribution of the resource;
 - Projecting the availability and sustainability of timber and non-timber resources under various management regimes; and
 - Taking into account the socio-economic impacts of different management regimes.
- Describe how the tools or approaches used in the three case studies could be applied to a management situation in your own area. How would you need to modify them to suit the ecological, economic, and social context of your area? (30%).

Submit your answer to the instructor by the date indicated in your course schedule.

Lesson 4: Regional Profiles for NTFPs

LESSON OVERVIEW

Lack of information about NTFPs has played a key role in perpetuating the invisibility of these resources in forest management. To raise awareness about NTFPs among forest managers and community development specialists,

Canada's Western Economic Diversification commissioned the Centre for Non-Timber Resources to develop a series of regional profiles for NTFPs in British Columbia. Regional profiles for three Forest Districts – Cariboo-Chilcotin, Cascade, and Prince George-Omineca – have been completed. Each profile summarizes the regional socio-ecological context, the major NTFPs present in the area, key stakeholder issues and concerns, the steps being taken to actively manage for NTFPs in the area, and recommendations for strengthening NTFP management capacity. Lesson 4 examines these three regional profiles, highlighting the differences and similarities between the regions.

LEARNING OUTCOMES

By the end of this lesson, participants will be able to:

- Describe the main NTFP harvesting activities, issues, and management efforts in three Forest Districts in British Columbia (Cariboo-Chilcotin, Cascade, and Prince George-Omineca).
- Use the knowledge gained from these profiles and the case studies in Lesson 3 to develop recommendations for strengthening or expanding NTFP management efforts in their own contexts.

READINGS & RESOURCES

Powell, George W. 2005. Regional Profile of Non-Timber Forest Products Being Harvested from the Cariboo-Chilcotin, British Columbia Area. The Centre for Non-Timber Resources, Royal Roads University. Victoria, BC.
<http://cntr.royalroads.ca/node/92>

Keefer, Michael E., Tyson Ehlers, and Nancy Macpherson. 2008. Regional Profile of Commercial Harvesting of Non-Timber Forest Products in the Cascade Forest District, British Columbia. The Centre for Non-Timber Resources, Royal Roads University. Victoria, BC.
<http://cntr.royalroads.ca/node/173>



Burton, Carla. 2007. Regional Profile of Non-Timber Forest Products Being Harvested from the Prince George-Omineca, British Columbia Area. The Centre for Non-Timber Resources, Royal Roads University. Victoria, BC.
<http://cntr.royalroads.ca/node/169>

LESSON NOTES

The dearth of systematically collected data about NTFPs and the historic lack of input into management decisions by NTFP harvesters, buyers, and other stakeholders present major challenges to compatible management. Regional NTFP profiles developed by the Centre for Non-Timber Resources help document the breadth and depth of NTFP activities occurring across British Columbia, providing a useful knowledge baseline for future compatible management efforts. Key gaps identified in the current information available for NTFP management include lack of information about NTFP use by personal users, subsistence, and commercial harvesters and insufficient biological and ecological data for developing indicators for sustainable NTFP management objectives.

The regional profiles also identify critical “next steps” needed to move NTFP management from its current reactive status into a more focused and proactive approach. These include the following:

Identifying community preferences for key species of focus;

- Using multiple sources of data, such as predictive ecological mapping³ methods and focus group interviews, to develop a more comprehensive understanding of NTFPs;
- Developing and applying research and management protocols that respect First Nations’ claims to NTFPs and intellectual property rights associated with traditional uses of these resources;

³ Module 2 of this distance learning series explores applications of predictive ecological mapping to NTFP management in British Columbia.

- Including NTFP concerns into Land Use Plans and other official planning processes; and
- Increasing support for research on NTFPs.

POINTS TO PONDER

As you make your way through the unit resources, keep in mind the following questions and comments for each Forest District.

- What are the important NTFPs in the area?
- What are the major socioeconomic and ecological factors affecting NTFP species populations and harvesting activities in the area?
- Who are the major stakeholders and what tensions, if any, exist over NTFPs (or managing the land for NTFPs)?
- What aboriginal uses of NTFPs existed/exist and how are First Nations claims to NTFPs influencing management today?
- What efforts are being made to manage NTFPs proactively and who is involved in those efforts?

ASSIGNMENT 4.1

After completing the required readings for this unit, address the following points in a 2-page (maximum 500 words) narrative.

- Describe the similarities and differences between these three regions in terms of NTFP species, types and levels of harvesting, key stakeholders, existing conflicts or potential for conflicts linked to NTFP activities, socio-ecological factors affecting NTFPs, and the type and extent of pro-active management.
- Based on the information in these three profiles, knowledge gained from Lessons 1, 2, and 3 of this module, and your own experiences, outline your own list of 5 key “next steps” for developing your organization or agency’s capacity to contribute toward or carry out compatible management that includes NTFPs.



Submit your work to the instructor by the date indicated in your course schedule.