

# Whole World in our Hands: Experiential Activities

# Whole System Forestry

## *As if More than the Trees Mattered*

### Theme:

Changing the way we place value on our forests.

### Prerequisite:

A brief overview of the economic importance of logging and milling in both the local county and the international arena. Overview of ecosystems existing as interconnected communities rather than a series of single entities existing in isolation. An overview of the three pillars of sustainability: economic environmental and social.

### Curriculum Entry Points:

Grade 9 Social Studies; Grade 9 and 10 Science; Grade 12 Environmental Science



### Overview:

To have students develop a deeper understanding and appreciation for the Acadian forest as well as become familiar with the principles of sustainable forestry. Students will learn to identify forest species, understand the debate surrounding unsustainable international logging, create their own vision for a community forest, familiarize themselves with 'non timber forest products' and tour a local woodlot.

### Objective:

To expand the way students think about the forest and create awareness of independently managed woodlots in the area. This provides students with an appreciation of alternative forms of management and the multiple uses, both social and economic, for forests. The lesson will also introduce the impact of multinational forest companies on other parts of the world, specifically in the Congo Basin of Africa. This will illustrate the international nature of the forestry industry.

### Main Concepts and Vocabulary:

**LOW IMPACT FORESTRY:** An approach to forest management that employs long term management perspectives. LIF is a philosophy that aims to counter conventional forestry's prime concern of "getting the wood out at any cost." Low Impact Forestry views the forest as an entire ecosystem which holds value for reasons larger than the economic revenue of its lumber.

**NON TIMBER FOREST PRODUCTS (NTFP) :** A wide variety of goods which are harvested and collected from forested areas in addition to pulp and timber. They can include honey, mushrooms, berries, wreaths, etc. Also included in the NTFP are ecological services such as climate control and maintenance of the hydrologic cycle; recreational uses such as camping and hiking, etc.

**MODEL FORESTS:** Model forests are areas of land which are tended to by various people: aboriginal peoples, environmentalists, industry managers, landowners, members of forest-dependent communities, academic institutions, outdoor enthusiasts, parks officials and scientists who have an interest in their region's natural resources. Such varying groups come together to form local partnerships in order to develop, test and share solutions to local challenges in sustainable forestry. Fundy National Park is the site of NB's Model Forest.

**THE ACADIAN FOREST:** A diverse eco-system found in Nova Scotia, New Brunswick, PEI, the Gaspé Peninsula, and northern Maine. It is a transition zone between the boreal forests to the north and the deciduous forests to the south. It is defined by the presence of red spruce but 32 other species are found in abundance: yellow and white birches, ash, beech, maple, poplar, even some cedar to name a few.

# Classroom Activity:

## *Vision for a Community Forest*

### Time Required:

Two 60 minute periods

### Materials:

- Markers, crayons or other colouring supplies
- Large sheets of paper for each group of five students

### Background:

More than 85% of the land area of New Brunswick is forested.

Half of this – more than 8 million acres

of forest-- is crown land, owned by the citizens of NB and man-

aged on our behalf by the provincial government. The economic history of NB forests consists of boom and bust cycles driven by export markets in which crown forests were high-graded, waste was rampant and ecological destruction was wide-spread. By the mid 1950s clear-cutting large tracts of land was seen as the only way to economically utilize logging technology. Under the present Crown land tenure, with management driven by the mill-owning licensees, NB's crown land is quickly turning into small strips of ecologically diverse land surrounded by vast blocks of tree plantations criss-crossed by roads. The incredibly diverse landscape of the Acadian forest is being replanted with only two or three species of conifers in single species stands. This approach to forest management operates on a 50-60 year cycle which is merely a breath of time in the large picture of a forest's life-cycle. Sustainable forest practices are possible and exist in small pockets around the world in the form of community-owned forests and small-scale woodlots. Awareness and education is essential to revamping how we are taught to value our forests.



It is also important to consider international forestry practices and the impact this industry has on the global environment. The example used here, of logging in the Congo basin, demonstrates what can happen when unsustainable logging is allowed.

### Opening Questions:

- Define the word *sustainability*.
- What wood products have you (i.e. students) used already today?
- Has any one been to a personally owned and managed woodlot?

*(continued from Basic Concepts from p. 32)*

**FOREST STEWARDSHIP COUNCIL CERTIFICATION (FSC):** Forest certification uses market-based initiatives to ensure that forests are managed in a way that is ecologically, economically and socially sound. FSC's trademark provides international recognition to organizations who support the growth of responsible forest management.

**HIGH-GRADING:** The practice of consistently harvesting the most valued trees in a stand, giving no thought to the inevitable consequence this will have on the genetic future of species left behind.

**COMMUNITY FORESTRY:** Managed by local people to benefit local people. It is characterized by local control in decision making, and forestry for the economic independence of the community. Wealth generated from the use of the forest stays in the community as much as possible rather than leaving (NB) to pay foreign shareholders. All activities occur with utmost care for the natural integrity of forest ecosystems.

## Activity Instructions

1. The night before this lesson have students research, as homework, the term community forest. Students should arrive to the class the next day with a paragraph outlining what this term means and how community forestry is different from conventional forestry. (see websites below)
2. Divide the class into groups of five or six. Give each group a sheet of paper and markers. Ask them to design a community forest and map it out in detail, keeping in mind the following questions:
  - How large is your forest?
  - What species are found in your forest?
  - Identify areas of interest i.e. trails, fallen trees, old fences, habitat trees, water sheds
  - Make note of areas of special environmental sensitivity
3. Have each group develop a management plan based on previous research of existing community forests. Each plan should consider:
  - What options for value added timber are there in your community?
  - Consider your NTFP options. How will community members be educated as to what the NTFP's are and when they should be harvested?
  - Who are the user groups of this forest? What recreational activities take place in this space? Who will be in charge of trail creation and maintenance? Remember to keep all four seasons in mind.
  - What will the governance of this forest look like?
  - Who will harvest the timber?
  - Where will it be sold?
4. Brainstorm potential obstacles that your community forest may face. Choose one and discuss the details of the issue as well as your approach to a solution. How will you measure the success of your proposed solution?
5. Dedicate a period for delivery. Have each group present their forest, discuss what they learned in the brainstorming process, and highlight various obstacles that were discussed as well as proposed solutions.
6. Now that students have identified what a local community forest could look like, their homework assignment should allow them to build upon this knowledge by getting them to understand the devastation caused by unsustainable logging. Show the students where the Congo Basin is on a map of the world. Pass out the handout on logging in the Congo Basin. Have students identify how each of the facts are tied to loss of forest and illegal logging. There are no single correct answers, each will be affected by a number of factors. This is meant to stimulate discussion on how demand for wood products can create unsustainable practices in other parts of the world, and reinforce the idea that we need to consider global consequences of our actions and purchases.

### Community Forestry Resources

- Silva Forest Foundation: [www.silvafor.org](http://www.silvafor.org)
- Harrop-Proctor Community Forest: [www.hpcommunityforest.org](http://www.hpcommunityforest.org)
- Conservation Council of New Brunswick: Policy Proposal “Public Lands in Public Hands: Managing Crown Forests in the Public Interest” [www.conservationcouncil.ca](http://www.conservationcouncil.ca)
- Madam Community Forest Initiative: [www.conservationcouncil.ca/publications/ecoalert/ea\\_june01.html](http://www.conservationcouncil.ca/publications/ecoalert/ea_june01.html)
- Low-Impact Forestry: forestry as if the future mattered Edited by Mitch Lansky

# Community Forest Case Study: *Logging in the Congo Basin*

1. The area experiences a population increase of 1.7 million people each year.
2. The Congo Basin forests span six countries: Cameroon, the Central African Republic, the Democratic Republic of Congo, Gabon, Equatorial Guinea and the Republic of Congo.
3. The Democratic Republic of Congo is the largest country in the Congo Basin and contains 12.5 percent of the world's remaining tropical rainforest.
4. Seven countries hold 60 percent of the planet's forests: Brazil, Canada, China, Indonesia, the Russian Federation, United States and the Democratic Republic of Congo.
5. The forests in the Congo Basin contain the greatest number of mammals, primates, birds, amphibians, fish and swallowtail butterflies in Africa. More than 1,000 species of bird can be found in these forests.
6. The Congo Basin is the only place to shelter all the subspecies of gorilla: the lowland gorilla, the endemic eastern lowland gorilla and the endangered mountain gorilla.
7. 50 percent of the Congo Basin forest has now been allocated for logging.
8. The Congo River that flows through the forest is the second largest river in the world.



## Questions:

- How might each of these points be considered an important factor in managing the forests of the Congo Basin?
- Where do you think the demand for this wood is coming from?
- Who will be most affected by the mismanagement of these forests and the environmental impact of logging?

# Community Activity:

## *Re-greening the Schoolyard*

This activity can be done either by the whole class or an interested group of students. The proposal produced at the end can be presented to the principal, teachers, school board or other appropriate party. Community businesses and organizations will likely be willing to donate some supplies, plants and even labour for a re-greening project if presented with a well thought out proposal.

### **Vision:**

Establish a “Vision” or mission statement for the project.

### **Design:**

Have students create before-and-after drawings or maps of the space.

### **Features:**

Make a list of features to be incorporated into the landscape design. For example: recreational features, sports fields, walking paths, native plant gardens, courtyard patio, picnic areas, vegetable gardens, wildflower gardens, small ponds with fountains powered by photovoltaic panels, fencing, storage building, parking requirements, wind breaks, a maze, shade garden, natural rock formations, butterfly gardens, seating, amphitheatres etc.

### **Proposal:**

Create the proposal as a tool to “sell” the project to potential donors and those who could approve the project. Outline why the project is a good idea; the benefits of having a greener common space for both the school and for the community. Get estimates on material and labour costs and include a to-scale design of the projects components and features. Source materials from local businesses. It is also a good idea to find out how many volunteers could be expected to participate in this project.



<http://www.evergreen.ca/en/ig/ig.html>

### **Resource People for Field Trips and Classroom Visits**

- Richard Wetmore: High school teacher, Organic Property Management Landscape business
- Sally Macintosh (Glassville): Naturalist, Woodlot Manager, Sugar Bush Management
- Bill Hutchinson (Glassville): Contractor for ecologically managed woodlots
- Ernst Arnold (Hartland): Owner of ecologically managed woodlot
- Tom Allen (Perth-Andover): Woodlot Owner and Operator
- Gareth Davies (Perth-Andover): Eco-forester