Sharing Solutions to Shared Challenges

Posters from the 2008 IMFN Global Forum

International Model Forest Network

The International Model Forest Network (IMFN) is a global community of practice whose members and supporters work toward a common goal: the sustainable management of forest-based landscapes through the model forest approach. The IMFN is comprised of all member model forests in existence or under development around the world.

What is a Model Forest?

Model forests are based on an innovative approach that combines the social, cultural and economic needs of local communities with the long-term sustainability of forest-based landscapes and natural resources. By design they are voluntary, broad-based initiatives linking forestry, research, agriculture, mining, recreation, and other values and interests within a large geographic territory.

In a model forest a variety of people with differing interests and perspectives form a neutral partnership based on the following goal: to manage their own natural resources in a way that makes the most sense to them given their history, economic and cultural identities and in a way that does not jeopardize future generations. The partnership defines what sustainability means in their own context, develops a common goal, governance structure and strategic plan, then works collaboratively to achieve the goals set out in that plan.

All model forests share a core set of six fundamental principles that give the international network coherence and provide the basis for networking and knowledge sharing:

1. **Broad-based partnership**: each model forest is a neutral forum that welcomes voluntary participation of representatives of stakeholder interests and values on the landscape
2. **Large landscape**: a large biophysical area representing a broad range of forest values, including social, cultural, economic and environmental concerns
3. **Commitment to sustainability**: stakeholders are committed to the conservation and sustainable management of natural resources and the forested landscape
4. **Good governance**: the model forest management process is representative, participatory, transparent and accountable, and promotes collaborative work among stakeholders
5. **Broad program of activities**: activities undertaken by a model forest are reflective of the model forests' vision and stakeholder needs, values and management challenges
6. **Commitment to knowledge sharing, capacity building and networking**: model forests build stakeholder capacity to engage in the sustainable management of natural resources, and collaborate and share results and lessons learned through networking

SUMMARY

The 20 theme-based posters profiled in this document represent significant areas of work in most model forests in the International Model Forest Network (IMFN) in 2008. The posters were created for the June 2008 IMFN Global Forum which was sponsored by the IMFN Secretariat and hosted by the Canadian Model Forest Network and Foothills Research Institute in Hinton, Canada. The information was subsequently updated in early 2009.

In addition to cataloguing important successes in the nearly 50 model forests represented here, the exercise registered two other key points: that the sustainable management of forest-based landscapes and natural resources is not a developed / developing country issue—these themes represent challenges across all landscapes. By working together through the IMFN model forest stakeholders have access to a unique platform for accelerating innovation and addressing these shared challenges.

Second, it showed that broad, locally-based partnerships are a very powerful tool, not only for finding solutions, but in putting them into practice on the ground.

The 20 themes we explore in this document include:

Biodiversity conservation and stewardship ..... p 1
Bioenergy ..... p 2
Climate change vulnerability and adaptation ..... p 3
Community sustainability / Economic development ..... p 4
Criteria and Indicators ..... p 5
Eco-cultural tourism development ..... p 6
Ecological processes / Natural disturbances ..... p 7
Ecosystem services ..... p 8
Education and capacity building ..... p 9
Indigenous people's involvement and partnership ..... p 10
Innovative practices and tools ..... p 11
Knowledge sharing and communications ..... p 12
Model forests and conservation areas ..... p 13
Model forests: linking global initiatives with local application ..... p 14
Model forest research ..... p 15
Non-timber forest products ..... p 16
Participative governance ..... p 17
Soil and water ..... p 18
Tools for model forest development and collaboration ..... p 19
Women and youth ..... p 20

BIODIVERSITY CONSERVATION and STEWARDSHIP

Biological diversity, or biodiversity, refers to the variability of all living organisms and the ecological systems they are a part of. Biodiversity plays an essential part in regulating the chemistry of our atmosphere, generating water supply, recycling nutrients and providing fertile soils. As home to a vast array of flora and fauna, forests play a key role in maintaining biodiversity.

Model forests are very biologically diverse, and often include landscape areas with significant conservation or preservation values, such as national parks and world heritage forests containing species at risk. By promoting a landscape-level approach, model forests foster a reduction in forest-fragmentation, enhanced wildlife habitat and the development of collaborative strategies with local communities for managing biodiversity.

Model forests working on biodiversity conservation and stewardship issues:

- **Jujuy Model Forest, Argentina**: Preserving, understanding and developing the Pericos-Manantiales watershed; Mapping plant life and management plan for Minetti plantation
- **Eastern Ontario Model Forest, Canada**: Modelling species at risk habitat to inform strategic stewardship programming
- **Resources North, Canada**: Examining habitat requirements of caribou; Managing mountain goat resources; Examining mountain pine beetle and the integrity of woodland caribou winter ranges
- **Komi Model Forest, Russia**: Development and implementation of a "method of traffic lights" for the estimation, conservation and sustainable use of pristine forests
- **Futaleufú Model Forest, Argentina**: Securing conservation status for the Futaleufú River watershed; Conservation of huemul (*Hippocamelus bisulcus*); Taking an inventory of flora in Los Alerces National Park
- **Foothills Research Institute, Canada**: Grizzly Bear Research Program
- **Lac-Saint-Jean Model Forest, Canada**: Zoning of moose territory; Endangered species inventory
- **Atlántida Model Forest, Honduras:** Co-managing protected areas
- **Manitoba Model Forest, Canada**: Conservation of woodland caribou in managed forests
- **Nova Forest Alliance, Canada**: Riparian buffers and forest bird conservation
- **Vilhelmina Model Forest, Sweden:** Functionality of formally protected and voluntary conservation agreements in forests
- **Reventazón Model Forest, Costa Rica**: Designing a participatory work strategy for a biological corridor; Protection of natural resources and environmental services in a second biological corridor
- **Sabanas de Manacas Model Forest, Cuba**: Conservation of flora and fauna in the Monte Ramona protected area; Planting of endemic and endangered species
- **Tierras Adjuntas Model Forest, Puerto Rico**: Community Biodiversity and Cultural Institute; First biological corridor in the country
- **Kodagu Model Forest, India**: Linking markets to cultural and biological diversity; Evaluating the afforestation activities of village eco-development committees
- **Yoro Model Forest, Honduras**: Management of Montaña de Yoro National Park
- **Bergslagen Model Forest, Sweden**: Landscape-level planning for biodiversity conservation and protection of Leien and Kulle mountains
- **Araucarias del Alto Malleco Model Forest, Chile**: Studying the state of araucaria forests and fruit (pine nuts), much used by local Pehuenche people
- **Formoseño Model Forest, Argentina**: Partnership area, including Chaqueño Park, possesses unique characteristics including some animal species listed in CITES
- **Chiquitano Model Forest, Bolivia**: Surveying priority conservation zones; Land use planning that incorporates conservation priorities
- **Yaque del Norte Model Forest, Dominican Republic**: PROCARYN project–development of management plans for four protected areas in the region
- **Urbión Model Forest, Spain**: Trees for Biodiversity program
- **Kovdozersky Model Forest, Russia**: Establish an electronic database to plan reforestation activities in the Model Forest
- **Kologrivski Model Forest, Russia: Guidelines on biodiversity conservation**
- **Prince Albert Model Forest, Canada**: Supporting woodland caribou habitat connectivity research; Supporting the work of a stewardship group striving to co-exist as farmers and ranchers amid a nationally significant growing population of free-ranging Plains Bison

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BIOENERGY

Bioenergy and biofuels are an emerging interest globally and a number of model forests are examining the issue. Bioenergy represents energy from the sun that is captured and stored in plant and animal matter, also known as biomass. Biomass can be collected and converted into various forms of energy, including electricity and heat.

The production of biofuels from bioenergy presents an attractive alternative to meeting constantly increasing global energy demands; and one that is renewable and replenishable—unlike fossil fuels. But global interest in bioenergy has also led to concern about the effect of land-use change on biodiversity, food supply, soil and water.

With an emphasis on sustainable development, model forests could be well placed to act as a testing ground where the demand for bioenergy as an alternative economic and ecological option for forestbased communities is balanced against social, environmental and cultural issues that may arise.

Model forests currently working on this topic include:

- **Fundy Model Forest, Canada**: Working to conduct a feasibility study of small scale bio-energy plants
- **Nova Forest Alliance, Canada**: Mapping and inventory of available biomass in the region and costs of delivering to communities; Developing an implementation strategy for a bioenergy facility
- **Lac-Saint-Jean Model Forest, Canada**: Examining valuation and opportunities for the harvesting of forest biomass
- **Resources North, Canada**: Examining potential biomass energy systems and industry for application to the pine beetle recovery program
- **Eastern Ontario Model Forest, Canada**: Developing the Eastern Ontario Wood Centre and Eco-Industrial Park
- **Araucarias del Alto Malleco Model Forest, Chile**: Conducted feasibility studies for bioenergy production in the region
- **Margowitan Model Forest, Indonesia**: Developing a bioenegy plant
- **Pandeiros Model Forest, Brazil**: Producing charcoal from babaçu plant residues
- **Kovdozersky Model Forest, Russia**: Developed technical and economic basis for the provision and operation of a bioenergy (wood fuelled) boiler

Model forests planning to work in this field include:

- **San Pedro Model Forest, Argentina**: Production of electricity from saw dust of native and introduced species
- **Sabanas de Manacas Model Forest, Cuba**: Harvesting and using organic residuals in the production of biogas
- **Model Forest of Newfoundland and Labrador, Canada**: Assessing bioenergy opportunities and constraints on the northern peninsula of Newfoundland
- **Cachapoal Model Forest, Chile**: Establishing biogas processing plant and higher efficiency ovens in rural households
- **Chiquitano Model Forest, Bolivia**: Using cusi (*Attalea speciosa*) in the production of biodiesel
- **Prince Albert Model Forest, Canada**: Working with a local biomass ethanol cooperative to develop a lignocellulosic conversion industry

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CLIMATE CHANGE VULNERABILITY and ADAPTATION

Climate change is expected to have profound and varied impacts on forest ecosystems and their dependent human communities. Applied research and testing mechanisms are needed to better anticipate and understand these changes and to help communities develop adaptation approaches. The IMFN is ideally positioned to be that mechanism. The Network offers a series of landscape-level sites that are transnational and global, as well as being dedicated to knowledge generation and sharing.

By promoting a multi-stakeholder approach to climate change, model forests:

- **Serve as platforms for monitoring, research and testing responses to changing conditions in forest-based ecosystems**
- **Allow for the consideration of competing community interests and priorities (economic, social and environmental) in climate change initiatives**
- **Facilitate the free flow of information between policy makers, communities, practitioners and researchers**
- **Promote transnational dialogue and collaboration**
- **Provide a framework for the application of global instruments designed to mitigate climate change, including the Convention to Combat Desertification (CCD) and the UN Framework Convention on Climate Change (UNFCCC)**

Model forests currently working on this theme:

- **Manitoba Model Forest, Canada**: Education and risk assessment of forest-based communities to climate change; Cooperating with universities to research community adaptability to climate change
- **Nova Forest Alliance, Canada**: Climate change vulnerability assessment for central Nova Scotia forests
- **Tierras Adjuntas Model Forest, Puerto Rico**: Development of solar energy systems
- **Model Forest of Newfoundland and Labrador, Canada**: Assisting the delivery of national training opportunities for the Canadian Forest Service's Carbon Budget Model
- **Fundy Model Forest, Canada**: Support for the preparation of radial growth predictions for nine native commercial tree species in the Maritimes
- **Resources North, Canada**: Landslides and climate change in Northern British Columbia; Community impacts and adaptation to climate change; Northern climate change network
- **Vilhelmina Model Forest, Sweden**: Adaptive capacity in multi-use forest landscapes
- **Chiquitano Model Forest, Bolivia**: Reduction in carbon-emissions from deforestation and degradation of the Chiquitano forest
- **International Model Forest Network**: Circumboreal Initiative: facilitation of research and information sharing related to climate change vulnerability and adaptation with decision-makers, communities, researchers and others through model forests
- **Foothills Research Institute, Canada**: Supporting a study that will consider the implications of climate change relative to the joint management of timber resources and carbon assets
- **Urbión Model Forest, Spain**: Integrated forest reserves; Improved forest regeneration

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COMMUNITY SUSTAINABILITY / ECONOMIC DEVELOPMENT

Sustainable economic development is a priority for many of the resource-dependent communities located throughout the IMFN. Model forest stakeholders recognize that without the involvement of local people in decision-making processes, and without a sustainable and meaningful income for forest-based communities, sustainable development is unlikely to occur. By promoting a collaborative approach, model forests contribute to community sustainability and economic development by:

- **Offering a platform for the free flow of ideas, data and resources for informed decision-making about economic alternatives to current practices**
- **Allowing for the sharing of experiences and lessons learned**
- **Finding locally relevant approaches and solutions to sustainability challenges**
- **Allowing for competing values and interests to be represented in the partnership**
- **Promoting initiatives that reconcile economic priorities, social concerns and environmental considerations**

Model forests working in this field:

- **Ulot Watershed Model Forest, Philippines**: Agroforestry and livelihood projects including handicraft-making; Coco coir and honey production
- **Sabana Yegua Model Forest, Dominican Republic**: Integrated community development project engaging youth
- **Mata Atlántica Model Forest, Brazil**: Supporting pilot project to create wildlife management centres
- **Pandeiros Model Forest, Brazil**: Establishment of community centres for the sale of local arts and crafts and for environmental education and training
- **Nova Forest Alliance, Canada**: Forest communities engagement; Healthy Forests, Healthy Communities
- **Margowitan Model Forest, Indonesia**: Participatory assessment of sustainable forest management at the local level
- **Ngao Model Forest, Thailand**: Community-based forest management
- **Vilhelmina Model Forest, Sweden**: Forests and rural areas study: local natural resources in a Swedish boreal municipal context
- **Model Forest of Newfoundland and Labrador, Canada**: Development of local community networks in forestdependent communities; Conducting a biophysical inventory analysis for the White Bay South and Northern Peninsula regions
- **Sabanas de Manacas Model Forest, Cuba**: Improving the quality of life of the population by creating jobs and improved management practices
- **Lachuá Model Forest, Guatemala**: Co-administration of the Salinas municipal plantation; Forest strategy for the Ecoregion Lachuá
- **Fundy Model Forest, Canada**: Developing participatory decision-making tools for use in community planning
- **Tierras Adjuntas Model Forest, Puerto Rico**: Handicraft store Casa Pueblo; Madre Isla coffee plantation
- **Jujuy Model Forest, Argentina**: Supporting graduate research on sustainable pasture lands; Vermicomposting project
- **Araucarias del Alto Malleco Model Forest, Chile**: Micro-credit lending program
- **Chiquitano Model Forest, Bolivia**: Land-use planning in communal lands; Certification of local artisan products
- **Formoseño Model Forest, Argentina**: Diversification of local economic activities for food security
- **Campo-Ma'an Model Forest, Cameroon**: Guide stakeholders in the elaboration and implementation of strategic local community development plans
- **Eastern Ontario Model Forest, Canada**: Development of a community sustainability indicator examining the "value of forests to people"
- **Resources North, Canada**: Community leadership fora
- **Panguipulli Model Forest, Chile**: Greater tourism potential generated in the Neltume region through development of a regeneration plan for the municipal park
- **Lac-Saint-Jean Model Forest, Canada**: Development of performance indicators on forest community sustainability; Underutilized fish species marketing
- **Kodagu Model Forest, India**: Organic practices for rejuvenation of Coorg mandarins through multi-location trials with small producers
- **Cachapoal Model Forest, Chile**: Capacity building for the development and marketing of sustainable forest products
- **Prince Albert Model Forest, Canada**: Conducting a business case analysis to assess feasibility of establishing a First Nations agroforestry co-operative
- **Yoro Model Forest, Honduras**: Poverty-Reduction Strategy and Added-Value Forestry programs
- **Bergslagen Model Forest, Sweden**: Re-establishment of mining industry
- **Futaleufú Model Forest, Argentina**: Association of smallproducers to access appropriate technology and improved agricultural production practices
- **Komi Model Forest, Russia**: Development and implementation of forest resource economic assessments
- **Yaque del Norte Model Forest, Dominican Republic**: Formation of organization representing the interests of 76 communities in the area
- **Urbión Model Forest, Spain**: Supporting local entrepreneurs; Tourism
- **Norte de Neuquén Model Forest, Argentina**: Rendering cattle ranching more environmentally friendly
- **Kologrivski Model Forest, Russia**: Integrated analysis of the social situation

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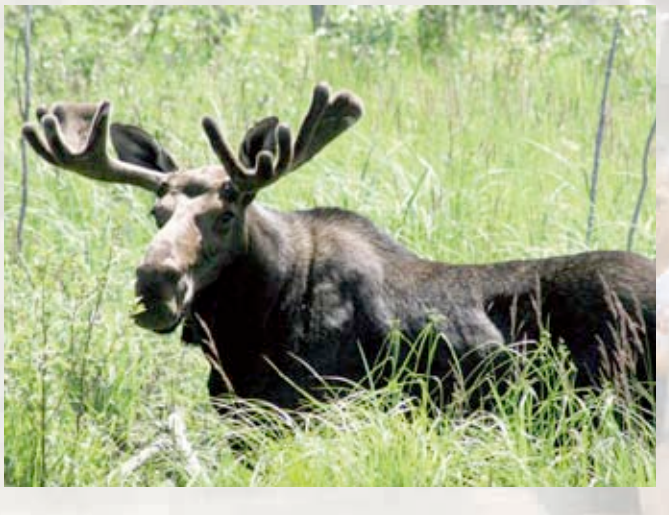
CRITERIA and INDICATORS

Working toward the sustainable management of forested landscapes requires ongoing assessment of impacts and changes resulting from forest management practices and other activities. Establishing a baseline of criteria and indicators (C&I) for sustainable management practices is important because it allows for the measurement of progress at different scales—from international to local. Criteria represent identified forest values that are important to enhance or sustain. Indicators can be scientific (such as an inventory of plant and animal species) or measured by qualitative, social advances (such as increased participation of women and indigenous peoples in decision-making processes).

A number of model forests are actively involved in developing C&I, including:

- **Canadian Model Forest Network**: Each of Canada's model forests developed a suite of local-level indicators (LLI) to help assess their progress toward sustainable forest management in their particular landscape. Results of this work were published in the Users' Guide to Local Level Indicators of Sustainable Forest Management (2000) and shared with other members of the IMFN
- **Dja et Mpomo Model Forest, Cameroon**: Elaborating the principles, criteria and indicators for good forest and environmental governance in the Dja et Mpomo Model Forest
- **National Model Forest Network for Argentina**: The Argentinean Model Forest Network organized four workshops on C&I for its model forests bringing experts from the Canadian Forest Service and the Model Forest of Newfoundland and Labrador to Argentina for the session
- **Ulot Watershed Model Forest, Philippines**: Ulot Watershed expanded on a community-level initiative of the Philippines-Natural Resources Management Program called Environmental Performance Monitoring. The Ulot Watershed C&I program scaled up the initiative to a landscape level. Philippine C&I for sustainable forest management are now being used in various forest management units
- **Waswanipi Cree Model Forest, Canada**: Traditional indigenous knowledge was combined with scientific research to establish the impact of large-scale harvesting of black spruce forests on moose habitat in Northern Quebec. Results show that traditional indigenous knowledge often confirms scientific findings



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ECO-CULTURAL TOURISM DEVELOPMENT

Eco-cultural tourism is a concept where the ecological and cultural aspects of a landscape are combined with tourism to generate local income and encourage conservation efforts. A key element to the success of sustainable eco-cultural tourism is local control in the planning, development and maintenance of sites. When applied within a model forest context, eco-cultural tourism development can:

- **Contribute to fulfilling model forest goals of conservation, poverty-alleviation, education and capacity building**
- **Foster greater public-private collaboration, and strengthen the participation of stakeholders such as protected area representatives, government and indigenous groups**
- **Assist local stakeholders in finding an appropriate balance between the economic and non-economic values of their model forest resources**
- **Contribute to the development of a greater sense of pride among local communities and a global outlook that recognizes the value of biodiversity to all people**

Model forests that are involved in eco-cultural tourism development:

- **Dja et Mpomo Model Forest, Cameroon**: Identification, development and promotion of eco-cultural tourism products from the region
- **Reventazón Model Forest, Costa Rica**: Eco-cultural tourism development in conjunction with Cabecar indigenous group and in partnership with Brokenhead Ojibway Nation (Manitoba, Canada)
- **Ulot Watershed Model Forest, Philippines**: Communitybased ecotourism projects
- **Yaque del Norte, Dominican Republic**: Supporting local ecotourism initiatives
- **Lin'an Model Forest, China**: Development of 10 new ecotourism sites; Promotion of home stay programs in agricultural areas
- **Model Forest of Newfoundland and Labrador, Canada**: Development of an online geo-spatial referencing system for tourism operators and outfitters
- **San Pedro Model Forest, Argentina**: Training of guides and groups for agricultural tourism development in San Pedro
- **Atlántida Model Forest, Honduras**: Construction of eco-lodge for ecotourism initiative
- **Nova Forest Alliance, Canada**: Recreation and tourism opportunities in the St. Mary's river watershed
- **Urbión Model Forest, Spain**: Interpretative trails; Public use of parks; Hunting lodges
- **Lachuá Model Forest, Guatemala**: Rocjá Pomtilá ecotourism project
- **Tierras Adjuntas Model Forest, Puerto Rico**: Development of Madre Isla ecotourism program

- **Kodagu Model Forest, India**: Establishment of Kodagu Heritage Centre
- **Bergslagen Model Forest, Sweden**: Eco-certification of parts of Safsen Resort; Development of sports fishing; Restoration of small rivers program
- **Futaleufú Model Forest, Argentina**: Trail development
- **Araucarias del Alto Malleco Model Forest, Chile**: Small grants program for local ecotourism initiatives
- **Chiquitano Model Forest, Bolivia**: Training of local guides and interpretative trail development with plans for expansion
- **Kovdozersky Model Forest, Russia**: Establishment of nature trails, interpretive materials and development of a 10 year eco-cultural tourism strategic plan
- **Kologrivski Model Forest, Russia**: State Nature Reserve "Kologriv Forest"
- **Prince Albert Model Forest, Canada**: First Nations and Métis groups share traditional cultural events and activities with visitors

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ECOLOGICAL PROCESSES / NATURAL DISTURBANCES

Ecological processes are naturally occurring actions or events that shape the world's forests and ecosystems. Understanding ecological processes—whether they are natural disturbances like fire or windthrow, or ongoing processes like nutrient cycling or carbon sequestration—is key to the development and implementation of sustainable management strategies and practices on forested landscapes.

Model forests—through the promotion of inclusive landscape-level approaches to forest management—strive to ensure that the ecological processes are maintained, valued and not disrupted by other activities taking place within it. In this way, model forests are "living landscapes" that bring different ways of thinking and planning vis-à-vis the ecological processes at work on the earth and the conservation of its biodiversity and resources.

Model forests currently working on ecological processes and natural disturbances:

- **Tierras Adjuntas Model Forest, Puerto Rico**: Developing a conservation plan for high risk areas in Adjuntas municipality and neighbouring areas
- **Manitoba Model Forest, Canada**: Developing and testing of a natural disturbance (wildfire) template for forest harvesting
- **Nova Forest Alliance, Canada**: Studying effects of hurricane Juan on spruce beetle dispersal
- **Komi Model Forest, Russia**: Development and implementation of a biodiversity conservation system that imitates natural disturbances and natural dynamics of boreal forest landscapes
- **Fundy Model Forest, Canada**: Investigating biological indicators
- **Chiloé Model Forest, Chile**: Stabilizing coastal dunes
- **Chiquitano Model Forest, Bolivia**: Promoting an integrated approach to forest-landscape management
- **Foothills Research Institute, Canada**: Natural disturbance research program including effects of fire, historical disturbance patterns and risk from mountain pine beetle
- **Sabanas de Manacas Model Forest, Cuba**: Developing strategies to reduce local vulnerability to wind, flooding and forest fires
- **Yaque del Norte Model Forest, Dominican Republic**: Training of 20 small fire fighting brigades
- **Urbión Model Forest, Spain**: Improved forest regeneration

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ECOSYSTEM SERVICES

Forest landscapes provide a valuable range of natural ecosystem services that are essential to the functioning and sustainability of the planet—clean water, air and the decomposition of waste. Establishing the value of ecosystem services provided by forests is essential for:

- **Portraying a forest's true value, and therefore increasing desirability for its conservation**
- **Valuation or payment for environmental services (PES)**
- **Increasing awareness that ecosystem services are not only under threat and limited, but that the pressure to evaluate trade-offs between immediate and long-term needs is critical**
- **Promoting transdisciplinary shifts in how we think about and manage the environment, business opportunities and our future as a species**
- **Helping to inform decision-makers of the value of conservation efforts**
- **Creating opportunities for rural or remote forest dependent communities**

Model forests currently working on this topic:

- **Sabana Yegua Model Forest, Dominican Republic:** Establishment of an environmental fund and system for PES provided by the Sabana Yegua watershed
- **Atlántida Model Forest, Honduras**: Reforestation of private lands in the Ramal de Tierra Firme watershed through PES and the creation of an environmental fund
- **Vilhemina Model Forest, Sweden**: Evaluation of environmental services provided by continuous-cover forests and related losses through clear cutting
- **Margowitan Model Forest, Indonesia**: Forest plantation program: by 2010, the bareland in Margowitan areas will be reforested
- **Fundy Model Forest, Canada**: Valuing the Contribution of Private Woodlots to Society project: focus on riparian zones in a New Brunswick watershed; Developing local pilot projects for compensation for the provision of ecological goods and services
- **Kodagu Model Forest, India**: Development of a pollinator management plan for Kodagu Model Forest
- **Cachapoal Model Forest, Chile**: Protection of watersheds with native forest cover
- **Yoro Model Forest, Honduras**: PES in small watersheds in the region
- **Yaque del Norte Model Forest, Dominican Republic**: Financing of forestry and agroforestry activities through PES
- **Kologrivski Model Forest, Russia**: Integrated ecosystem management planning

- **Eastern Ontario Model Forest, Canada**: Establishing mechanisms to facilitate public-private partnerships through provision of ecological services in settled regions
- **Tierras Adjuntas Model Forest, Puerto Rico**: PES for the management and conservation of water resources
- **San Pedro Model Forest, Argentina**: Reforestation of upstream portions of a watershed through PES
- **Model Forest of Newfoundland and Labrador, Canada**: Determining the ecological value of goods and services provided by the provincial Natural Area System Plan for Newfoundland and Labrador
- **Nova Forest Alliance, Canada**: Valuation of ecological goods and services for recreation, biodiversity conservation and water quality
- **Sabanas de Manacas Model Forest, Cuba**: Valuation of environmental services and design of a land-use plan for the area
- **Lachuá Model Forest, Guatemala**: Generate PES initiatives

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EDUCATION and CAPACITY BUILDING

The IMFN is much more than a "community of practice", but a platform for education and the exchange of knowledge, know-how and new ideas. Collaborative efforts serve to confirm that many sustainability challenges are universal and that there are experts out there who can educate, guide and inspire innovation. This collaboration can result in:

- **Increased success of model forest projects**
- **Less time and fewer resources required to develop and implement innovative solutions to sustainability challenges**
- **Improved capacity for the next generation of natural resource managers**

Model forests working, or planning to work, in this area:

- **Foothills Research Institute, Canada**: GPS/GIS as a tool for environmental education
- **Lin'an Model Forest, China**: Training in high-yield edible bamboo shoot and hickory nut production and processing
- **Sabana Yegua Model Forest, Dominican Republic**: Construction and renovation of education centres
- **Manitoba Model Forest, Canada**: Integrating forest ecology and natural resource management into educational curricula; Development of a Junior Rangers program for youth
- **Ngao Model Forest, Thailand**: Youth conservation camp
- Chiquitano Model Forest, Bolivia: Technical and diploma courses in environmental management and land-use planning
- **Vilhelmina Model Forest, Sweden**: Hunting/fishing program at Vilhelmina High School
- **San Pedro Model Forest, Chile**: Environmental education and outreach
- **Sabanas de Manacas Model Forest, Cuba**: Local environmental education and capacity building programs
- **Komi Model Forest, Russia**: Development and adaptation of an education system; Raising the skill level of foresters on sustainable forestry and FSC certification
- **Tierras Adjuntas Model Forest, Puerto Rico**: Community Biodiversity and Cultural Institute; Community forest La Olimpia; Radio Casa Pueblo
- **Dja et Mpomo Model Forest, Cameroon**: Capacity building for local populations for the development of local leadership skills and valuing knowledge
- **Pskov Model Forest, Russia**: Establish a research centre in the village of Strug and 15 forest demonstration sites
- **Margowitan Model Forest, Indonesia**: Field education for primary school students on the functions and benefits of forests
- **Eastern Ontario Model Forest, Canada**: Engaging local communities in assessing current and future landscape conditions and developing user-friendly GIS-based tools to support land use decision making
- **Fundy Model Forest, Canada**: Deliver outdoor education programs for public schools
- **Jujuy Model Forest, Argentina**: Forest education project
- **Campo-Ma'an Model Forest, Cameroon**: Schooling for the Bagyeli pygmy people
- **North-East Superior Forest Community, Canada**: Promotion of the value of our forests to young people; Youth engagement forums
- **Resources North, Canada**: Training stakeholders in Gassinski Model Forest, Russia, in wood-frame construction, entrepreneurial skills and local governance
- **Kodagu Model Forest, India**: Educational programs delivered through the Centre for Environmental Education; Book on land tenures and tree rights of Kodagu
- **Cachapoal Model Forest, Chile**: Educational campaign on natural forest law and its application
- **Lac-Saint-Jean Model Forest, Canada**: Multidisciplinary forestry training program
- **Chiloé Model Forest, Chile**: Huillín Environmental Education Centre
- **Model Forest of Newfoundland and Labrador, Canada**: Developing a high school forestry education package; Cost-benefit analysis of small-scale harvesting in sensitive areas
- **Bergslagen Model Forest, Sweden**: Course in land ecological design and ecotourism; Family farm management program
- **Nova Forest Alliance, Canada**: Training for private woodland owners and contractors
- **Futaleufú Model Forest, Argentina**: Interpretative trails and education centre
- **Araucarias del Alto Malleco Model Forest, Chile**: Environmental education workshops in local schools
- **Prince Albert Model Forest, Canada**: Coordinate the Saskatchewan Aboriginal Junior Forest Ranger program

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INDIGENOUS PEOPLE'S INVOLVEMENT and PARTNERSHIP

Indigenous partners bring a unique understanding of the forest ecosystem—one developed over centuries of close contact with the land. With both traditional and contemporary forest experiences, indigenous peoples are well positioned to contribute to today's sustainable forest management practices for the benefit of their communities and others.

Model forests provide a neutral platform where those traditionally left out of the decision-making process can have a voice around the table. Most sites include indigenous peoples in their stakeholder base and work toward a common vision for sustainability that takes indigenous history, culture and knowledge into account. Indeed, model forest stakeholders recognize that without the involvement of indigenous peoples sustainable development is unlikely to occur.

Model forests with indigenous people's involvement and partnership:

- **Vilhelmina Model Forest, Sweden**: Involving indigenous peoples in the development of reindeer husbandry plans
- **Araucarias del Alto Malleco Model Forest, Chile**: Supporting the active participation of indigenous representatives in the Board of Directors
- **Prince Albert Model Forest, Canada**: Developing the Paspiwin Cultural Heritage Interpretive Site within Prince Albert National Park; Created the Aboriginal Caucus model to provide a stronger voice of indigenous communities in forest community programs
- **Chiloé Model Forest, Chile**: Promoting traditional Mapuche medicine
- **Chiquitano Model Forest, Bolivia**: Supporting rural and indigenous communities in the design of forest management plans aimed at reducing deforestation and illegal logging
- **Lac-Saint-Jean Model Forest, Canada**: Indigenous forestry entrepreneurship: case study of the Ilnu of Mashteuiatsh
- **Campo Ma'an Model Forest, Cameroon**: Supporting the participation of Bagyeli pygmy communities in model forest development and planning
- **Reventazón Model Forest, Costa Rica**: Developing an eco-cultural tourism initiative with Cabécar indigenous communities
- **Dja et Mpomo Model Forest, Cameroon**: Organizing and strengthening of socially-marginalized groups and cooperating with them on the development and monitoring of integrated projects
- **Nova Forest Alliance, Canada**: Engaging indigenous communities and perspectives in the development of the Model Forest's strategic plan
- **Manitoba Model Forest, Canada**: Providing opportunities for indigenous community involvement in natural resource management decision-making
- **Model Forest of Newfoundland and Labrador, Canada**: Facilitating the forest management committee for District 19a, Labrador/Natassinan: a Co-management Agreement between the Innu Nation and the Department of Natural Resources
- **Foothills Research Institute, Canada**: Indigenous involvement program
- **Kodagu Model Forest, India**: Sacred groves project; Jamma Malai indigenous communities project
- **Yoro Model Forest, Honduras**: Development plan for Tolupan indigenous communities
- **Futaleufú Model Forest, Argentina**: Working with local indigenous small-producers
- **Norte del Neuquén Model Forest, Argentina**: Collaboration between the Municipality of Los Miches and the Mapuche Antiñir Pirquiñan indigenous community
- **Komi Model Forest, Russia**: Development and implementation of recommendations on the conservation of areas rich in berries and mushrooms gathered by local indigenous populations
- **Le Bourdon, Canada**: Seeking to develop an agreement with a local indigenous community for the sustainable development of resources and forestry training
- **Resources North, Canada**: Examining indigenous communities' needs and engagement in projects; Community and indigenous forums on alternative uses of mountain pine beetle-affected forest
- **Eastern Ontario Model Forest, Canada**: Community mentoring program incorporating the principles of naturalized knowledge systems

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INNOVATIVE PRACTICES and TOOLS

Innovative practices improve forest productivity while upholding ecological integrity. The development and implementation of innovative practices and tools helps manage forests in a way that benefits both forest managers and the environment.

Model forests are based on a flexible, integrated land-use approach that provides a mechanism to ensure the involvement of a wide variety of stakeholders with innovative ideas in forest planning and development. They also promote the sharing of tools, information and experiences among partners to accelerate progress toward sustainable land-use practices.

Model forests involved in innovative practices and tools:

- **Nova Forest Alliance, Canada**: Produced best management practices guide to forest management on private woodlots
- **Ngao Model Forest, Thailand**: Developed guide to best use and recycling of residues from forest and agricultural products
- **Vilhemina Model Forest, Sweden**: Established demonstration and research areas for best practices
- **Kovdozersky Model Forest, Russia**: Determine approaches, methods and technologies for forest restoration
- **Margowitan Model Forest, Indonesia**: Establishing a Porang plantation under the canopy of teak forests to create income for forest communities
- **Foothills Research Institute, Canada**: Implemented Foothills landscape management forum; Internet mapping technologies
- **Araucarias del Alto Malleco Model Forest, Chile**: Delivered capacity building program in sustainable forest management to 80 private landowners
- **Fundy Model Forest, Canada**: Piloted depth-to-water table mapping
- **Le Bourdon, Canada**: Experimenting with new silviculture processing methods through goal oriented management
- **Lac-Saint-Jean Model Forest, Canada**: Studying and experimenting with degraded and unproductive forest sites
- **Model Forest of Newfoundland and Labrador, Canada**: Developing a best management practice code and training workbook for the Atlantic Master Logger Certification Program
- **Formoseño Model Forest, Argentina**: Protecting and enriching native forest cover
- **Eastern Ontario Model Forest, Canada**: Advancing the innovative adoption of forest and chain of custody certification
- **Komi Model Forest, Russia**: Initiation of FSC certification in the European North area of Russia; Development of regional standards of FSC certification
- **Resources North, Canada**: Establishing a science basis for sustainable forest management and recovery planning for woodland caribou in north-central BC
- **Yoro Model Forest, Honduras**: Supporting implementation of forest management plans
- **Gassinski Model Forest, Russia**: Develop a sustainable forest management strategy including criteria and indicators for sustainable forest use
- **Bergslagen Model Forest, Sweden**: Facilitating dialogue between communities and forestry companies on spatial planning for forestry operations
- **Futaleufú Model Forest, Argentina**: Silvipastural management in native ñire (Nothofagus antarctica) forests; Use of sustainability criteria and indicators in the monitoring and evaluation of forest management plan implementation
- **Chiquitano Model Forest, Bolivia**: Supporting indigenous and rural communities in the development of forest management plans; Certification of community forests
- **Panguipulli Model Forest, Chile**: Developing a tourism awareness program that includes prescriptions for sustainable recreational fishing practices
- **Yaque del Norte Model Forest, Dominican Republic**: Undertaking FSC certification of 16 forestry operations and management plans in the area
- **Pandeiros Model Forest, Brazil**: Establishing tree nurseries and reforesting degraded lands for soil conservation and regeneration of endemic vegetation
- **Urbión Model Forest, Spain**: Creation of forest defence groups; Revitalization of forest warden program; Land-use planning
- **Norte de Neuquén Model Forest, Argentina**: Prevention of forest fires and the application of slash-and-burn agricultural practices in community forests
- **Pskov Model Forest, Russia**: Establish norms for commercial thinning in the south-boreal forest
- **Kologrivski Model Forest, Russia**: Ecological paths; Voluntary forest certification
- **Manitoba Model Forest, Canada**: Developing landscape level planning tools and strategies for woodland caribou conservation in resource extraction areas
- **Prince Albert Model Forest, Canada**: *Environmental Assessment and First Nations: A Resource Handbook*

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KNOWLEDGE SHARING and COMMUNICATIONS

A fundamental principle of model forests is to share knowledge, build capacity and communicate results and lessons learned at the local, national, regional and international levels.

What do we mean by knowledge sharing?

The IMFN's goal is: To build capacity and provide opportunities to effectively share knowledge, engage stakeholders and promote common values across the IMFN in order to build a vibrant and sustainable learning network.

To facilitate the exchange of different types of knowledge across the IMFN a variety of tools are being explored and could include such approaches as:

- Developing terms of reference between scientists working on a common issue in more than one model forest
- Decentralizing the administration of the IMFN website
- Encouraging the use of blogs, listservs and other Internet-based technologies to bridge distances between sites
- Model forest exchanges

> Example: Model forests in Cameroon are practicing a methodology for multi-resource inventory adapted from the approach used by Lac-Saint-Jean Model Forest in Canada.

What is 'communications' and why should model forests plan for it?

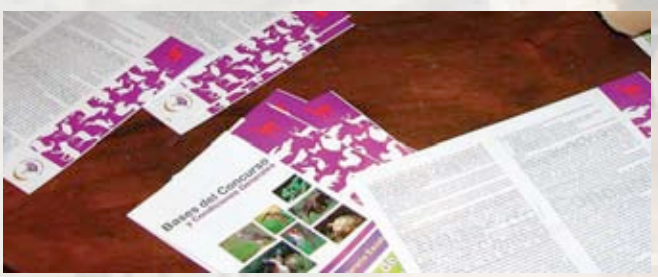
Communication is the effective exchange of information and ideas. Model forests have much to say to many different people and therefore should have a communications plan whenever communicating with the public. For example, a communications plan can help you:

- Keep people in your local area up to date on projects and events
- Persuade new people or organizations to become model forest partners or donors
- Ensure that policy-makers know about innovative new ways your model forest is addressing sustainability challenges
- Share your successes and challenges with other model forests in the IMFN as well as like-minded organizations
- Ensure consistency with messages other sites, regions and the IMFN are promoting

IMFN knowledge sharing and communications resources:

The IMFN website (www.imfn.net)

- Tools and Templates section: information about how to write a communications plan, how to write a news release, the IMFN communications plan, PowerPoint presentation templates and guides, and more
- IMFN blog, listserv and discussion board
- IMFN brochures and other promotional material (PDF format)



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MODEL FORESTS AND CONSERVATION AREAS

Most model forests contain significant conservation areas within or around them; areas such as national parks, biosphere reserves, World Heritage Forests, Ramsar sites and recreational parks.

Through broad-based model forest partnerships, park managers, forest industry groups, indigenous peoples, private land owners, and others work together to understand that actions taken outside of conservation areas can have significant impact inside of them, and vice versa. Stakeholders represent a range of values and interests and work to find common ground and shared approaches to problem solving around resource management and conservation issues.

The model forest approach provides a concrete example of how protected areas can be integrated into larger landscapes, helping to close the gap between conservation theory and practice.

Examples of model forests that collaborate with protected areas include:

- **Kodagu Model Forest, India,** participated in the establishment of the Talacauvery Wildlife Sanctuary to help in the conservation of rare species of flora and fauna, as well as the regeneration the Cauvery River watershed, which produces water for much of southern India. Also, working to establish an eco-territorial army battalion for the protection of forests, National parks and wildlife sanctuaries comprised of Kodagu District ex-servicemen.
- **Reventazón Model Forest, Costa Rica,** works in collaboration with the Barbilla, Volcán Turrialba, and La Carpintera protected areas in the revision of their management plans and in increasing the effectiveness of plan implementation.
- **Komi Model Forest, Russia,** began in 1996 as part of a boreal forest conservation project whose goal was to support the biggest reserve of pristine forest in Europe—the Pechoro-Ilychsky Reserve, also a World Heritage Site and important partner in the Model Forest.
- **Foothills Research Institute (formerly Foothills Model Forest), Canada,** has a landbase of 2.75 million hectares, of which 60% is protected. Jasper National Park joined as a Foothills partner in 1995 and marked the first time in the region that a national park would demonstrate its intent to formally cooperate with the Government of Alberta and a forest company in the management of a shared landscape.

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MODEL FORESTS: LINKING GLOBAL INITIATIVES WITH LOCAL APPLICATION

Since the 1992 Earth Summit a number of global initiatives and conventions have been developed to stimulate collaboration for the alleviation of poverty and the sustainable use and conservation of the world's natural resources.

Model forests can assist in the advancement of international goals and conventions by providing a practical and operational platform from which to translate sustainable development objectives into action. They can also feed the results of that action back to policy-makers for application beyond the model forests' boundaries.

Model forests and their work contribute to the achievement of:

- **The Convention on Biological Diversity (CBD)**: The core of this convention is the promotion of an "ecosystem approach" to sustainability. By practicing an integrated approach to natural resource management on large landscapes, model forests contribute to biodiversity conservation, enhanced wildlife habitat and reduced forest fragmentation.

  The Natural Disturbance Program in Foothills Model Forest, Canada, identified how forest management practices can be designed to mimic natural disturbances in order to better maintain ecological integrity and conserve biodiversity.

- **The Millennium Development Goals (MDG)**: Model forests in developing countries actively work toward, and promote, poverty alleviation (goal #1), gender equity (goal #3), environmental sustainability (goal #7) and developing a global partnership for development (goal #8) though participation in the IMFN.

  A training program in pili tree (*Canarium ovatum*) crop management and marketing to generate an economic alternative to unsustainable timber extraction in the Ulot Watershed Model Forest, Philippines.

- **National Forest Programs (NFP)**: Most of the principles describing NFPs can be found in model forests—partnership and participatory mechanisms; ecosystem context; focus on local communities and indigenous stakeholders; development of C&I; capacity-building; international linkages, and others.

Other international conventions to which the IMFN can contribute:

- UN Convention to Combat Desertification (CCD)
- UN Framework Convention on Climate Change (UNFCCC)

Key international organizations whose work compliments IMFN objectives:

- United Nations Educational, Scientific and Cultural Organization (UNESCO)
- World Conservation Union (IUCN)
- International Union of Forest Research Organizations (IUFRO)
- United Nations Forum on Forests (UNFF)
- Food and Agriculture Organization (FAO) of the United Nations

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MODEL FOREST RESEARCH

Information is a key requirement for the sustainable management of large forested landscapes. A fundamental principle of model forests is a commitment to generate and share knowledge through research, innovation and collaboration.

All model forests engage in action research—learning by doing—and many are also involved in social and biophysical research by:

- **Undertaking their own studies**
- **Collaborating with other model forests or partners in research projects**
- **Providing funding to research initiatives**
- **Providing the field laboratory (physical space) within which research activities can take place**

Active involvement in research helps ensure that the advances in knowledge and experiences of model forests become an integral component of future management practices and decisions.

Model forest research activities lead to a greater understanding of ecological processes, the impacts of multiple anthropogenic and natural disturbances on forest ecosystems, the socio-economic dimensions of sustainable management and much more. In addition, model forests are instrumental in incorporating research results into effective decision-making and on-the-ground applications.

400 articles, 4000 citations

According to the IMFN Secretariat data tracking project, about 400 model forest articles have been published in peer-reviewed journals or other publications to date. Those articles and publications have, in turn, been cited elsewhere nearly 4000 times indicating the validity of the findings or recommendations, and the support this research receives from others not necessarily involved in model forests.

Also, more than 125 graduate students have conducted their research in or on model forests around the world. Model forests benefit from graduate research in several ways:

- Stakeholders that have identified research priorities can call on students to undertake projects, thereby ensuring the new knowledge will meet their expectations
- Student researchers are cost-effective
- Model forests are assured of fresh perspectives
- Work quality is usually high because students are supervised by university professors

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NON-TIMBER FOREST PRODUCTS

Non-timber forest products (NTFPs) are typically defined as all goods derived from forests of both plant and animal origin other than timber and firewood. In recent years NTFPs have sparked a global interest that is rapidly increasing. The establishment of local and successful NTFP enterprises can contribute to both sustainability and the generation of income for forest-based communities, thus illustrating that the pursuit of economic opportunity is not incompatible with environmental conservation.

NTFP development initiatives within model forests can:

- **Promote non-traditional resource uses and more sustainable natural resource extraction processes**
- **Increase awareness of these products, their management and market potential**
- **Provide an opportunity for indigenous communities and women's groups to participate in the local market economy through the application of traditional knowledge**
- **Complement model forest activities related to conservation, generation of economic alternatives, education and capacity building**

Model forests involved in NTFP initiatives:

- **Atlántida Model Forest, Honduras**: Production, certification and marketing of local handicrafts
- **Model Forest of Newfoundland and Labrador, Canada**: Establishing wood yards of domestic and commercial clients
- **Cachapoal Model Forest, Chile**: Production of honey in native soapbark plantations (*Quillaja saponoria*)
- **Vilhemina Model Forest, Sweden**: Reindeer meat processing
- **Futaleufú Model Forest, Argentina**: Development of wooden toys; Sustainable harvesting and marketing of mushrooms; Certified honey production
- **Tierras Adjuntas Model Forest, Puerto Rico**: Establishment of a butterfly farm
- **Araucarias del Alto Malleco Model Forest, Chile**: Harvesting of mushrooms, araucaria nuts and a wild rose whose seeds produce an oil good for cellular regeneration
- **Dja et Mpomo Model Forest, Cameroon**: Production of wooden pens (with support of Lac-Saint-Jean Model Forest in Canada)
- **Ngao Model Forest, Thailand**: Sustainable management of wild bamboo forest
- **Resources North, Canada**: Created a regional profile of NTFPs
- **Panguipulli Model Forest, Chile**: Production of organic honey and honey by-products; Production of indigenous Mapuche wooden handicrafts and textiles
- **Kodagu Model Forest, India**: Promotion of bamboo cultivation
- **Lac-Saint-Jean-Model Forest, Canada**: Inventory and collection of forest mushrooms, birch sap and blueberries
- **Eastern Ontario Model Forest, Canada**: Work with local maple producers to get maple syrup Forest Stewardship Council (FSC) certified.
- **Chiloé Model Forest, Chile**: Production of organic-fibre textiles
- **Yoro Model Forest, Honduras**: Establishment of local enterprises to process and market NTFPs
- **Chiquitano Model Forest, Bolivia**: Production of almonds, oils, fruits, soaps and honey
- **Yaque del Norte Model Forest, Dominican Republic**: Collection of seeds, flowers and fruit
- **Margowitan Model Forest, Indonesia:** Resin tapping as a source of income generation for rural communities
- **Pandeiros Model Forest, Brazil**: Production of charcoal from babaçu plant residue
- **Urbión Model Forest, Spain**: Promotion of alternative energy sources (biofuels), hunting lodges and etho-cultural tourism; Support to local entrepreneurs
- **Komi Model Forest, Russia**: Socio-economic research of non-timber product importance for the survival of populations in remote villages
- **Kovdozersky Model Forest, Russia**: Mushrooms, berries, hunting and fishing
- **Manitoba Model Forest, Canada**: NTFP curricula and training for local communities
- **Fundy Model Forest, Canada**: Developing an NTFP directory for Atlantic Canada

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PARTICIPATIVE GOVERNANCE

Traditional approaches to sustainable resource management often only take into account environmental and economic considerations at the expense of social sustainability. In this way, key stakeholders are excluded from decision making processes and conflict potentially arises.

Model forests directly address social aspects of sustainable development by developing governance structures that provide a neutral forum allowing people, especially those who have traditionally been left out of the decision-making process, to have a voice around the table where the issues and decisions that affect them are discussed.

Participative governance is a principal attribute of model forests that:

- **Promotes voluntary and equitable participation**
- **Ensures a wide diversity of interests and values are represented**
- **Promotes collaboration among stakeholders using consensus-based processes**
- **Promotes the development of a shared vision for the management of the landscape**
- **Fosters transparency and accountability within model forest governance structures**

Examples of participative governance in model forests include:

- **The Ngao Model Forest (Thailand)** was successful in bringing local stakeholders together to define how to sustainably manage essential bamboo resources that were quickly disappearing in the region.
- **The Araucarias del Alto Malleco Model Forest (Chile)** was the first organization in the region to create a multi-stakeholder dialogue over ancestral land claims that included the participation of the Mapuche-Pehuenche indigenous groups.
- **Chiloé Model Forest (Chile)** includes the Catholic Church as one of its key partners. In fact, the church has been instrumental in engaging local communities in discussions on sustainable resource use.
- **Vilhelmina Model Forest (Sweden)** adopted the model forest approach to address conflict between forest land tenure holders and the Sami people, traditional reindeer herders. There, forestry practices are now being adjusted to meet the needs of indigenous land users.

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SOIL and WATER

The long-term productivity and resilience of the forest depends on the maintenance of appropriate levels of soil-oxygen, nutrients and organic matter, as well as abundant and clean water. Model forests promote the conservation and regeneration of soil and water by:

- **Highlighting the relationships between soil and water and the sustainable use and maintenance of forest cover**
- **Fostering a holistic approach that recognizes the relationship between maintaining hydrological and nutrient cycles and maintaining forest cover**
- **Recognizing that sustainably managing watersheds, including reducing or mitigating erosion and flooding, is imperative to safeguarding invaluable water resources for humans and wildlife**
- **Recognizing that the scope of model forest operations must reflect all the forest's uses and values and that watersheds are the ideal scale for this approach**

Model forests actively and interested in pursuing work in this field:

- **Araucarias del Alto Malleco Model Forest, Chile**: Analysis of local water availability and conditions, and problems associated with its use
- **Sabana Yegua Model Forest, Dominican Republic**: Projects directed toward promoting and conserving groundwater
- **Lin'an Model Forest, China**: Research on soil and water pollution from intensive bamboo cultivation
- **Atlántida Model Forest, Honduras**: Plans for the management of microriver basins as sources of drinking water
- **Manitoba Model Forest, Canada**: Integrating water quality considerations into forest management planning
- **Nova Forest Alliance, Canada**: Quantifying ground disturbance and soil compaction relationships after forest harvesting
- **Sabanas de Manacas Model Forest, Cuba**: Reforestation efforts; Sustainable soil management
- **Model Forest of Newfoundland and Labrador, Canada**: Approaches to riparian management for woodland operations; Assisting in the development of a web-portal of water resources data
- **Resources North, Canada**: Mountain pine beetle–rehabilitation of altered drainage patterns and influence on riparian processes and stream temperature
- **Tierras Adjuntas Model Forest, Puerto Rico**: Forest Reserves Network (Red de Reservas Forestales Familiares)
- **Ulot Watershed Model Forest, Philippines**: Rehabilitation of mined-out areas
- **Jujuy Model Forest, Argentina:** Nuevas Raíces Program
- **Ngao Model Forest, Thailand**: Conservation of watershed forests
- **Campo-Ma'an Model Forest, Cameroon**: Study on the pollination of inland and maritime surface water
- **Foothills Research Institute, Canada**: Stream Crossing Inspection Program
- **Vilhelmina Model Forest, Sweden**: Study of effects of hydroelectric power exploitation on the Ångermanälven and Vojmån rivers
- **Kodagu Model Forest, India**: Rain centre project
- **Cachapoal Model Forest, Chile**: Capacity building workshops on appropriate soil conservation practices
- **Bergslagen Model Forest, Sweden**: Spatial planning and ecosystem restoration for sustainable mining
- **Chiquitano Model Forest, Bolivia**: Development of land-use management plans that account for soil and water usage
- **Komi Model Forest, Russia**: Use of GIS to develop and implement soil and water conservation efforts during the planning and undertaking of logging activities
- **Kovdozersky Model Forest, Russia**: Established comparison plots to study soils to better understand and protect soil dynamics and forest harvesting operations
- **Kologrivski Model Forest, Russia**: Guidelines on soil and water protected zones
- **Prince Albert Model Forest, Canada**: Support a local watershed stewardship group in conducting a water quality monitoring program in their community

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TOOLS for MODEL FOREST DEVELOPMENT and COLLABORATION

WHAT IS THE MODEL FOREST TOOLKIT?

A series of documents produced by the IMFNS to provide guidance to new and existing model forests. The toolkit is available in English, French, Spanish and Russian.

What does the toolkit include?

- The Model Forest Development Guide
- Guide to Model Forest Strategic Planning
- Guide to Model Forest Annual Work Planning
- Guide to Model Forest Governance
- Guidelines for Reporting Cash and In-Kind Contributions

Why use the toolkit?

- It provides detailed but flexible guidance on key model forest planning, organizational and reporting issues
- It is a source of examples being applied across the IMFN
- It will help save you time, energy and resources

Where can I get a copy?

- It is available on CD from the IMFNS
- Online at www.imfn.net

IMFN WEBSITE

The IMFN website has undergone a redesign that includes several new features, among them:

- General activities and contacts databases—conduct your own quick search to find out who's doing what in the IMFN
- Got a question? A members' area for posting questions to a listserv and discussion board for follow up
- Possibility for decentralized maintenance—we can host your website, you maintain it
- Promotion of a "family look" for the IMFN and regional-level websites

COLLABORATIVE TOOLS

Collaborative tools are online resources that your model forest partnership can use to share information, files, hold meetings, plan projects, conduct outreach, edit documents and more, often available at no cost to the user. Examples of free collaborative tools you might have heard of include: Skype, Wikidot, YouTube, YouSendIt, blogspot and Zoho, among many others.

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WOMEN and YOUTH

People, regardless of their age or gender, must be at the centre of sustainability efforts. That's why gender equity and youth engagement are cross-cutting themes in model forests. These themes are promoted through the creation of participatory model forest governance structures that account for gender differences in a landscape, and through youth oriented activities and outreach.

Recognizing that women are not only traditionally at an economic and social disadvantage in many countries, but that they are also the primary conveyors of culture and traditional knowledge, model forests support women as active players in defining and shaping a sustainable vision for their landscape, while youth engagement helps ensure a new generation of forest stewards is created.

Women and youth are involved in model forests in the following ways, among others:

Women as...	Youth as...
• Representatives of partner and stakeholder groups • Members of boards of directors • Managers • Technical or advisory committee members • Project implementers • Educators • NFTP producers/entrepreneurs • Participants in, and facilitators of, capacity-building workshops	• Representatives of partner and stakeholder groups • Participants in ecotourism projects • Participants in environmental educations programs • NTFP producers • Exchange students • Student researchers • Participants in capacity-building workshops

Examples of women and youth involvement in model forests:

- **Campo Ma'an Model Forest (Cameroon)** promotes the involvement of marginalized groups, particularly Bagyeli pygmy women, in sustainable forest management activities
- Local youth in the **Kovdozerski Model Forest (Russia)** participated in an initiative to analyze the potential applications of bioenergy in the region, while learning a great deal about the use of alternative natural energy sources
- The environmental education and awareness program of the **Kodagu Model Forest (India)** uses a number of approaches to teach children and youth about the importance of conserving the natural resource base for present and future generations
- **Model Forest of Newfoundland and Labrador (Canada)**: Implementation and management of Envirothon and Forest Ecology Walking Tours

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NOTES

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