

**INTERNATIONAL COUNCIL MEETINGS  
XXIII IUFRO WORLD CONGRESS  
24 and 27 August 2010, Seoul, Republic of Korea**



**DRAFT IUFRO STRATEGY 2010-2014**

**IC 8/2010 Doc 5.1**

**IUFRO STRATEGY 2010 – 2014**

“Reading the pulse of forest science for the benefit of forests and people”

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Foreword (Niels Elers Koch/Don K. Lee)

**Executive Summary**

IUFRO is the global network for forest science cooperation. It is the only world-wide international organization devoted to forest research and related sciences and has a unique membership which brings together research organizations, universities and individual scientists, as well as decision-making authorities and other stakeholders with an interest in and focus on forests and trees.

IUFRO's mission is to promote global cooperation in forest-related research and to enhance the understanding of the ecological, economic and social aspects for forests and trees; as well as to disseminate scientific knowledge to stakeholders and decision-makers and to contribute to policy and on-the ground forest management.

With the Strategy 2010-14, IUFRO addresses Research and Institutional Goals at the same time. The Research Goals strongly focus on the following six evolving thematic areas: 1 - Forest for People, 2 - Climate change, 3 – Forest Biodiversity Conservation, 4 - Bio-energy, 5 - Forest and Water Interactions, and 6 - Resources for the future.

The three Institutional Goals adapted from the previous Strategy present IUFRO's commitment to high-quality science and interdisciplinary cooperation, to better visibility of science-based research findings and increased ability of responding to new and unexpected issues:

- Goal 1: To strengthen research and expand IUFRO's capacity for interdisciplinary cooperation
- Goal 2: To strengthen coordination within the scientific community and increase visibility of science-based research findings
- Goal 3: To further strengthen IUFRO's work at the science-policy interface.

Attaining both research and institutional goals should help IUFRO and its members to effectively respond to the changes in paradigms concerning forests and forest science and to position itself as a truly global network for forest science cooperation.

## Introduction

Forests are perceived in many ways, thus expectations vary. Changes in the scientific and political contexts surrounding the work of IUFRO make it necessary to periodically review IUFRO's current strategic priorities. This IUFRO Strategy 2010-2014 is the result of a 24 month collaborative process of evaluating past achievements and determining the future orientation of IUFRO. The basis was set with an analysis of IUFRO's strengths and weaknesses, an IUFRO benefits survey 2008, and a synthesis paper on emerging issues.

In January 2008, five independent experts<sup>1</sup> were invited to form a Review Panel with the task to assess IUFRO's scientific structure, to identify thematic challenges and opportunities, and to provide guidance on how to adjust and position IUFRO for the future to better fulfil its mission. The Review Panel met in Vienna in November 2008 and in February 2009, and carried out additional electronic consultations.

In its final Report presented in October 2009, the Review Panel confirmed that the three main strategic goals were still valid and should be reinforced. They are: 1 - Strengthening research for the benefit of forests and people; 2 - Expanding strategic partnerships and cooperation; and 3 – Strengthening communication and links within the scientific community and with students, policy makers, and society at large; and are reflected in the present Institutional Goals. In order to better respond to the broader scientific and policy communities, the Review Panel suggested IUFRO to be more thematically oriented and identified four key emerging themes. Simultaneously, the need for improving the capacity to respond in a more flexible and efficient way to emerging forest research issues was emphasized. Finally, the Review Panel expressed a clear recommendation for strongly encouraging interdisciplinary and cross-sectoral cooperation of the IUFRO Research Units; and for continuing to provide high quality scientific input to the international forest policy processes. The stronger focus on thematic priorities is reflected in the present Research Goals.

In line with the recommendations of the Review Panel, the Strategy 2010-2014 is composed of two parts, i.e. Part I: Research Goals, focussing on six thematic emphasis areas and Part II:

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<sup>1</sup> Jan Heino (Chairman of the Review Panel, Finland), Ann M. Bartuska (USA), John R.S. Kaboggoza (Uganda), Shirong Liu (China) and Gerhard Mannsberger (Austria)

Institutional Goals, describing the strategic outline of IUFRO for the years to come and setting out related actions for implementation.

**Box:**

**Vision**

As the global network for forest-related research to serve the needs of all forest researchers and decision makers.

**Box:**

**Mission**

IUFRO promotes global cooperation in forest-related research and enhances the understanding of the ecological, economic and social aspects of forests and trees, including wood and non-wood products, goods and services. It disseminates scientific knowledge to stakeholders and decision-makers and contributes to forest policy and on-the-ground forest management.

## **PART I: RESEARCH GOALS**

Forest science, like many other sciences, has faced important challenges in the last few years. Research has become more complex and many of the issues affecting forests cannot be solved by the forest sector alone. Interrelated and emerging key issues are of strong interest to policy makers and groups inside and outside the forest sector. These will be of high relevance to forest science and to IUFRO in the coming years, primarily for global collaboration.

IUFRO is the only world-wide international organization devoted to forest science and related sciences. For IUFRO to be successful, it is important to present effective and research-based responses of the science community to the changes in paradigms concerning forests, forest science, and policies affecting forests. Many issues of global importance, such as climate change, biodiversity, bio-energy and water availability, are of strong interest to policy makers and interest groups outside the forest sector.

For the coming four years, IUFRO will take up the challenge to orient the work of its scientific network and structure of Working Units more strongly along the following thematic areas: Forests for people, Climate change, Biodiversity, Bio-energy, Water, and Resources for the Future. These key themes are meant as guidance for further and interdisciplinary research. Special attention will be given to considering their full ecological, social and economic dimensions. With each thematic area, a few areas of special emphasis were identified and provide specific entry points for IUFRO's Research Units. The relevance of the special emphasis areas will be regularly evaluated and re-adjusted to newly emerging issues in an

ongoing dialogue between science leadership, and policy-makers.

### **Thematic Area 1: FORESTS FOR PEOPLE**

Forests and people are interlinked in many aspects: for a large number of people, forests play a vital role for securing their livelihood, food security, nutrition and as a source for fuel. In urban areas, with the metropolis as an increasing trend worldwide, the maintenance of these (partly endangered) forests, their size and structure play a major role for the quality of life, the local climate and other positive factors for the local environment. There is a high and measurable relevance of forests for human health and well being. The use of forests for wood and non-wood products, goods and services, and in tourism (ecotourism, nature-based tourism, and environmental education) offers new opportunities to generate local income through market-based instruments and/or to reduce poverty across the world.

#### **Special emphasis areas**

- (Agro)Forestry, food security and livelihoods (including fuel wood)
- Forests and human health, recreation and nature-based tourism
- Economic benefits through the use of forests, goods and services
- The role of forests in landscapes and in urban areas.

### **Thematic Area 2: CLIMATE CHANGE AND FORESTS**

Forests potentially play an important role in climate change mitigation. They contain the majority of the carbon stored in terrestrial ecosystems. At the same time, climate change has caused and continues to cause impacts on forests and forest dependent people, such as implications on forest health, changes in tree physiology, insect outbreaks, forest biodiversity, productivity and disturbance regimes, and socio-economic impacts and vulnerabilities. Adaptation of forests to climate change requires a paradigm shift away from management based on past conditions to management of uncertainty and sustainable livelihoods, including the development of more adaptive, flexible silvicultural and agro-forestry systems, and biological concepts like forest resilience. A major role for forest research will be to ensure that adaptation and mitigation strategies are scientifically justifiable and do not cause unintended feedbacks or provoke further inequity or general social injustice. The international development towards a mechanism on Reducing Emissions from Deforestation and Forest Degradation (REDD-plus), CO<sub>2</sub>-storage capacity of forests and wood products, and understanding of non-CO<sub>2</sub> impacts of forest disturbance and management as well as governance and institutional arrangements, provide other fields for input of research.

#### **Special emphasis areas**

- Climate change impacts on forest ecosystems (including insects and pathogens) and forest dependent people

- Feedbacks between land cover dynamics, forest disturbance processes and climate change (e.g. C, aerosol emissions, albedo changes)
- Options for adaptation and trade offs between adaptation, conservation and/or socio-cultural needs
- Reducing Emissions from Deforestation and Forest Degradation (REDD), and other opportunities for carbon mitigation, including governance and institutional arrangements.

### **Thematic Area 3: BIO-ENERGY**

The rapidly growing interest in using wood and other types of biomass for fuels and bio-based products creates competition for fibre with traditional forest products and the development of more efficient use of material from plantations, involving segregation and allocation technology based on end-user requirements. However, trends towards fast-wood forestry need to be understood in relation to other important roles of forests such carbon sequestration, protection of water quality, prevention of erosion, recreation, habitats for endangered species.

#### **Special emphasis areas**

- Resource competition (bio-energy, fibre, traditional forest products) and cascades of use, including environmental and social impacts
- 'Eco-efficiency' of forest bio-energy production systems and technologies,
- Marketing of bio-energy and economic impacts.

### **Thematic Area 4: FOREST BIODIVERSITY CONSERVATION**

Forests are biologically diverse systems, which offer a variety of habitats for plants, animals and micro-organisms. Forest biodiversity is interlinked to socio-economic factors, providing goods and services that range from timber and non-wood resources to mitigating climate change and genetic resources. However, forest biodiversity is threatened and in danger as a result of deforestation, fragmentation, invasive species and changing land-use patterns. The relationship between biodiversity and response to disturbance has been a foundation for population, species, community, and ecosystem adaptation to environmental change throughout geological history, and has formed the basis for much forest management and nature conservation planning. Different forms and models of protected areas and adapted forest management will play an important role in the future.

#### **Special emphasis areas**

- Impacts and effects of biodiversity loss at various levels, including genetic resources
- Landscape-level strategies for biodiversity conservation (including

fragmentation, conflicting land uses, role of plantations for biodiversity conservation, etc.)

- Ecosystem services of forest biodiversity, forest ecosystem resilience and adapted forest management for protected areas.

## **Thematic Area 5: FOREST AND WATER INTERACTIONS**

Forests and forest cover play a crucial role with regard to sustaining the availability and quality of water critical for human well-being. The linkages between water, wetlands and forests show the importance of managing ecosystems in their entire complexity in order to protect the related vital services. However, there is an urgent need for even better understanding of the interactions between forests, trees and water – including questions such as water consumption of growing tree crops compared to other land uses; the impact of bio-energy schemes on catchments moving towards closure, - for awareness raising and capacity building in forest hydrology. The development of a framework assessing the overall benefits and costs of forestry schemes in relation to timber supply, biodiversity, societal and environmental impacts is needed. Issues of governance and institutional arrangements need to be taken into account.

### **Special emphasis areas**

- Effects of land-use and land-cover change on watershed hydrology
- Forest and water interactions under conditions of climate change, and response options
- Region specific interactions of forests and water (incl. water consumption of forest plantations, erosion)

## **Thematic Area 6: RESOURCES FOR THE FUTURE**

Sustainable management and protection of forests (including forest landscape degradation and restoration) will remain the dominant theme for the forest research community in the future. Understanding the role of insects and pathogens will be important in this regard. Innovation in the field of forest products, goods and services together with sustainable and responsible operations will play an important role for future management options. The development of new processing techniques and environmentally, socially and politically acceptable products are of key importance for the future. Benefits and values of non-wood forest products to large portions of the world's population need to be accepted, realized, and properly accounted for. Furthermore, changes in governance and the understanding of governance structures against different socio-cultural conditions will play an important role for the sustainable management and use of forests in the future. This includes the resilience of social structures towards ecological and economical changes (e.g. caused by climate change).

### Special emphasis areas

- Trends in demand for innovative forest products, ecosystem goods and services and conflicting needs
- Management options (including conservation, avoided degradation, restoration concepts)
- Globalization and changes in governing systems.

## **PART II: INSTITUTIONAL GOALS**

IUFRO is a unique global network of scientists and institutions carrying out research on forests and trees. With this independent and recognized network, IUFRO is well positioned to promote global and comprehensive science cooperation that benefits forests and people. For this purpose, IUFRO is committed to further ensure, strengthen and enhance its capacity to provide a unique reference point for the provision of high-quality science cooperation, to remain a strong partner in CPF and other international policy initiatives and to serve as a primary contact for new emerging issues and questions in forest science.

The three institutional goals below have been adapted from the previous Strategy to the present needs of further encouraging high-quality science collaboration and interdisciplinary cooperation related to the six key thematic areas, promoting better communication and visibility of science-based research findings, working at the science-policy interface and increased ability of responding to new and unexpected issues.

### **Goal 1: To strengthen research and expand IUFRO's capacity for interdisciplinary cooperation**

The most important aspect of IUFRO's work is to ensure the high level of quality research. The current network and structure of Divisions, Research Groups, Working Parties and Task Forces provide the scientific back-bone for generating research results and to inform the interested public. In light of changing research priorities, collaboration across sectors and disciplines in forestry and related sciences becomes increasingly important, and needs to be promoted within the IUFRO Research Units.

#### Objectives:

- **To promote high-quality research and strengthen scientific capacity**

Actions for implementation

- Conduct regular assessments of the level of activity of IUFRO Units on the basis of agreed standards and procedures; provide feedback to the Units for consideration of appropriate actions;
- Train scientists in developing countries through SPDC, and promote their participation in meetings and activities of IUFRO;
- Continue to improve balance in forest research by promoting gender mainstreaming, young talent, and cultural and ethnic diversity, in particular with regard to decisions on the appointment of officeholders;
- Cooperate within IUFRO using national and international funds and calls;
- Share knowledge and technologies among IUFRO Units and facilitate scientists' collaboration and exchange.

▪ **To relate the work of all IUFRO Units to the six research goals**

Actions for implementation

- Research Units and IUFRO Units to identify and undertake activities related to one or more of the six thematic areas, taking into particular consideration the special emphasis areas listed under each thematic area; ;
- Convene periodic IUFRO Regional Congresses in between IUFRO World Congresses related to the six thematic areas;
- Convene each year an inter-Divisional Meeting, addressing a thematic area from a global science perspective;
- IUFRO Units to provide regular information on the implementation of their work related to the six thematic areas.

▪ **To promote interdisciplinary cooperation and broaden the IUFRO membership base**

Actions for implementation

- Promote increased science and interdisciplinary cooperation between IUFRO Units, and encourage IUFRO Research Units to improve interdisciplinary cooperation;
- Increase involvement of scientists that are not yet IUFRO members in the activities of IUFRO Units, increase the involvement of IUFRO Units/scientists in activities and meetings of other science organizations, and promote the organization of joint activities and meetings;
- Continue and further develop cooperation with under-represented regions. At the same time look for new opportunities to cooperate on a long-term basis with these regions.

▪ **To identify emerging issues and changing paradigms (foresight mechanism)**

Actions for implementation

- At regular intervals, identify key issues relevant to scientists and research institutions as well as to policy- and decision-makers, practitioners,

- stakeholders and donors, including the consideration of emerging issues and changing paradigms;
- Assess the thematic structure of IUFRO in order to identify the appropriate Working Parties and/or Research Groups or other activities needed to address key issues.

## **Goal 2: To strengthen communication within the scientific community and increase visibility of science-based research findings**

Effectiveness and added value of the collaboration with IUFRO network shows that IUFRO contributes to problem solving and meeting broader societal goals. With the former Strategy IUFRO has set already a number of successful measures in cooperation with the Task Force on Communicating Forest Science which need to be taken over into the present Strategy to strengthen communication and links within the scientific community and with students, policy makers and society at large.

IUFRO's attractiveness is closely connected with its communication and marketing capabilities. There is a need to strengthen capacities in the Secretariat to provide communications expertise and improve abilities to focus on external and internal communication, with Division Coordinators increasingly taking over responsibilities in communication. The complexity in a global, voluntary-based organization like IUFRO includes the problem of speaking with an "IUFRO voice" - spokesperson on political issues, and on scientific issues.

### Objectives:

#### ▪ **To enhance communication within the IUFRO structure**

##### Actions for implementation

- Assess the views of IUFRO members and scientists periodically to more clearly understand their needs and preferences and their perceptions of IUFRO's role;
- Include "Communications" as a standard item on the Agenda of IUFRO Board meetings;
- Division Coordinators to allocate about half of their IUFRO time for communication and policy tasks. Special attention should be focused on networking (1) within the Division policy issues related to its science program; (2) across all Divisions on policy issues requiring multi-disciplinary science contributions; and (3) outside IUFRO on policy issues related to the Division's science program;
- Make IUFRO members more visible on the IUFRO homepage;
- Make seminars in connection with Board and MC meetings in cooperation with the local IUFRO host.

#### ▪ **To enhance communication with other scientists and students**

#### Actions for implementation

- Improve external communication in particular with non-IUFRO scientists and students;
- Strengthen the IUFRO Secretariat by increasing its human resource base, including through secondments and student internships;
- Continue to develop the IUFRO Website and further develop other information tools with special attention to target audience, e.g. students
- Establish student programmes and exchange possibilities.

#### ▪ **To enhance communication with the public**

#### Actions for implementation

- Further develop a well balanced set of communication products and activities in order to reach diverse target audiences. Tailor-made messages should be developed for the identified key issues/emerging themes;
- Prepare and disseminate policy briefs and scientific summaries to clarify complex issues and address emerging forestry and related issues in a timely manner;
- Look for possibilities to raise the awareness of IUFRO and share the benefits of IUFRO membership among heads of government agencies as well as other forest-related institutions;
- Promote or initiate studies of societal relevance to a wider public.

#### ▪ **To increase visibility and accessibility of research findings**

#### Actions for implementation

- Provide services and tools for efficient communication of scientific information, among others, through GFIS and terminology services;
- Continue to develop IUFRO's website and further develop other information tools, such as Directories of Expertise and contact databases for information dissemination;
- Set up and update regularly the directory of contact persons of the IUFRO global network.

### **Goal 3: To further strengthen IUFRO's work at the science-policy interface**

The work at the science-policy interface is essential to promote IUFRO's science-based knowledge to policy makers. IUFRO's visibility in the international forest policy arena has considerably increased through activities such as WFSE. A major development of IUFRO in forest policy is the active involvement in the Collaborative Partnership on Forests (CPF). IUFRO has become a strong partner and a leader of two CPF initiatives, i.e. GFEP and GFIS.

The scientific structure supports IUFRO in its involvement in international processes and it

gives IUFRO the credibility it needs in responding to forest issues. However, IUFRO's effectiveness or timeliness in responding to emerging issues or needs for scientific synthesis to inform policy dialogues will be given special attention. Furthermore, IUFRO operates on a limited funding base and the voluntary nature of cooperation sets limits to its activities. To further negotiations with governments and development of IUFRO's partnership agreements with specific countries is a promising model to be followed.

### Objectives

- **To further enhance contributions of IUFRO to international processes, conventions and organizations**

#### Actions for implementation

- Continue and increase IUFRO's involvement in CPF and other international policy initiatives relevant to the work of IUFRO;
- Prepare thematic contributions to the work and deliberations of international processes, conventions and organizations, including contributions to key publications;
- Continue to lead and further develop the CPF Global Forest Expert Panels as a global mechanism for assessing available information and producing reports on forest-related issues of high concern.

- **To respond rapidly to new and unexpected policy issues**

#### Actions for implementation

- Develop a Rapid Response Mechanism (RRM) under the coordination of the Secretariat and with participation of the most appropriate IUFRO Units, as a dynamic tool to deal with unexpected features within six months;
- Create an electronic repository of recent analyses to answer questions on forestry trends and issues.

- **To further expand partnerships and collaboration of IUFRO with international organizations and processes**

#### Actions for implementation

- Increase involvement of stakeholders in the collaborative scientific work of IUFRO;
- Expand participation of IUFRO in initiatives and partnerships of intergovernmental and non-governmental organizations that are of mutual interest;
- Develop joint activities with governmental, intergovernmental and non-governmental organizations;
- Lead the further development and implementation of GFIS, using the extensive network of IUFRO members as providers of information and expertise.

- **To strengthen the capacity of IUFRO to expand its funding base**

#### Actions for implementation

- Implement, evaluate and further develop the IUFRO Financing and Fundraising Strategy, including the funding for the IUFRO Secretariat and the IUFRO Special Programmes and Projects; and promote the idea of “Friends of IUFRO”;
- Look for possibilities to engage a selected group of countries and institutions to support the IUFRO Secretariat in financing positions needed.