



EMBRACING INTERDISCIPLINARITY FOR OUR OWN BENEFIT

Forests are essential for human well-being as they provide a broad range of goods and services which contribute to the livelihoods of around 1.6 billion people worldwide. Forests also provide several other benefits such as contributing to human health, cultural values, local traditions and education opportunities. Furthermore, they protect water and wildlife resources, and improve the local climate. Global trends such as urbanization and population growth influence the demand for forest products and services. Over time the diversity of forest uses has increased, new forest plantations have been established, and trade-offs have become more complex. These trends and challenges underline the necessity to investigate forests in broader societal and interdisciplinary contexts.

GLOBAL CHALLENGES

For a large number of people forests play a vital role for their **livelihoods**, food security, nutrition and fuels. Since forests are important to livelihoods, in order to reduce poverty and improve well-being, it is necessary to meet the challenge of reducing both forest loss and further degradation of forests. Additionally, the integration of novel silvicultural opportunities with traditional lifestyles and land use presents a new and demanding task.

In developed countries the functions of forests have changed over time and various social functions such as **recreation** and **health**, general well-being and quality of life are increasingly being recognized as very important. Furthermore, **tourism** is a growing economic activity worldwide and it is always in search of new products and new attractions. Forests and natural environments across the world provide opportunities for regional development founded on nature-based tourism.

Continuing urbanization is endangering forests close to cities and metropolitan areas. A loss of these forests goes hand in hand with significant losses of ecosystem services, reduces the quality of spaces and living places. In rural areas, increasing demand for biomass is one of the forces significantly changing the character of the landscape and its ecosystem services.

Many countries have a strong **cultural relationship** and history associated with forests, the use of timber, and forest-related professions, traditions and practices. For effective forest conservation it is important to maintain this knowledge, to increase awareness of forests and forest products and to integrate the importance of forests into **educational programs**. Furthermore, participatory planning, communication and governance play crucial roles in integrating perceptions of forests and their important roles into decision-making processes.



KNOWLEDGE GAPS

Policy debates are influenced by rapid changes such as urbanization, globalization, demographic changes and changing consumption patterns, all of which have an impact on forests and their social, ecological and economic functions, with resulting effects on society.

Changes affect forests, forestry and forest-dependent people globally, but specific challenges occur in less developed regions. Understanding the main societal causes of these changes and their consequences on forests and people is a major challenge for forest research. This understanding represents a first step towards scientifically identifying instruments for a sustainable relationship between forests and people acting as individuals, households or larger organizational structures at the local, national and international levels.

International scientific collaboration on the complex relationship between forests and people should provide holistic information to policy-makers and stakeholders.

The changes and consequent challenges for the relationship between forests and people are global and cross-sectorial with diverse effects in different places around the world.

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JUFRO'S TASK FORCE "FORESTS FOR PEOPLE"

This Research Letter summarizes the findings of IUFRO's Task Force "Forests for People" between 2011 and 2014. The Task Force aimed at increasing knowledge on forests for people in all its various facets as well as the societal awareness of forests and forest use. The researchers defined four main clusters: livelihoods; health, recreation and tourism; urban and rural landscapes; culture and education.



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LESSONS LEARNED

Forests make a contribution to people's **incomes**. For example, research in Western Bhutan showed that communities using non-wood forest products such as mushrooms and leaf litter had a 10 per cent higher household income from the forest.

Other research findings emphasize the importance of **women** who have extensive knowledge about the use of non-timber forest products although, several studies indicate that the knowledge about these products has already disappeared in some areas. To counteract this trend, researchers are developing programs to train people in **traditional knowledge** about non-timber forest products.

Tourism is a growing economic sector worldwide in which forests can play an important role. For example, in Sweden researchers found that the annual expenditure on **outdoor recreation** amounts to about EUR 10 billion, contributing to some 75,000 jobs. A study from Nepal showed that by improving the management system in a forest area of 101,055 ha additional benefits of USD 7.9 million could be obtained, especially from **non-timber forest products**.

Besides the economic effects, forests contribute to **health benefits**. Measurements from Japanese and Finnish researchers show that even short visits (15-20 minutes) to urban forests reduce blood pressure and heart rate. Studies from the US found that green roof vegetation can contribute to wildlife habitat and enhance **biodiversity** in urban areas.



CONCLUSIONS

To ensure the quality of forests and a flow of benefits to people, a strong input from social sciences and an integrated, all-encompassing approach is crucial. Many research questions need to be tackled in an interdisciplinary manner in collaboration with various actors.

Collaborative work over the last several years revealed a list of new and emerging issues which demand further research and need to be addressed in policy, and national and international programming.

RESEARCH AREAS AND EMERGING ISSUES

The following are key research areas and emerging issues identified by the Task Force:

Livelihoods, including agro-forestry, food security, fuels, poverty alleviation, and human well-being

- The increasing relevance of medicinal plants and non-timber forest products
- The specific role of community planning and cooperation
- The role of tourism and forests for poverty alleviation
- Trade-offs between food security and fuel production
- Impacts of agro-forestry on rural livelihoods and rural societies

Health, recreation and tourism, including well-being, disease prevention and promotion of health, outdoor recreation and nature-based tourism

- Forest impacts on health and well-being
- Measurement of cultural ecosystem services
- Requirements for nature-based tourism and outdoor recreation in the context of forestry
- Development of forest-related tourism in developing countries
- Special needs in an ageing society

Landscape development, including ecosystem services, economic benefits and development, living spaces and places

- Metropolitan areas and forest losses
- Ecosystem services and landscape change, in rural and urban forests
- Forest management and increasing private forest owners with little interest in forest products
- Concepts for sustainable biomass use
- Influence of climate change on forest owners and communities
- Societal acceptance of new forest management methods (e.g. introduced species, genome research, management actions)

Culture and education, including perceptions of forests, their spiritual character, education, historical tradition and practice, communication and governance

- Forest education in kindergarten and primary school
- Forests and citizen science
- Communication and governance in relation to climate change adaptation
- Tools for collaborative planning and management
- Community forestry and sustainable development

