

**A CGIAR CENTRE PERSPECTIVE TO 2020: EMERGING CHALLENGES AND NEW OPPORTUNITIES FOR ADDRESSING THE CGIAR GOALS OF ALLEVIATING POVERTY, HUNGER AND MALNUTRITION THROUGH FOREST-BASED ACTIVITIES"**

David Kaimowitz  
Center for International Forestry Research (CIFOR)

The multiple and often competing benefits of forests are well documented and can be expected to become increasingly important in the future. Forest related environmental services are also important for agricultural production and health. Forests provide macro-economic benefits, some of which "trickle down" to the poor. Good governance of forests and forested regions promotes economic growth and investment, reduces the potential for conflicts, with all of their associated negative impacts, and may allow a higher portion of forest-based income to reach the poor. The precise role of forests in eliminating poverty in developing countries in the future is not well documented.

**State of the World Forests**

- Cover 30 percent of the world's total land amounting to 3.9 billion hectares
- 47 percent are in the tropics, 33 percent in the boreal zone (far north), 11 percent in the temperate zones and 9 percent in the subtropical areas
- Two thirds are located in ten countries: The Russian Federation, Brazil, Canada, the United States, China, Australia, the DRC, Indonesia, Angola and Peru. CIFOR's mandate covers six of these.
- Forest plantations comprise 5 percent (about 120 million hectares) of the world's forests; 62 percent of these are located in Asia. China accounts for 24 percent of the total and India 18 percent.

**Demands on the forests**

Natural forests are under severe threat in many developing countries. It is the poor that are heavily dependent on these forests that stand to suffer from forest degradation and deforestation. Understanding the complex relationship between forests and rural livelihoods is critical including the impact of agriculture on forest resources. What are some of the demands placed of the forests?

- 250 million people live in forested regions, most of who are poor and depend heavily on forests (The World Bank 2003 World Development Report).
- Forest-based activities provided the full-time employment equivalent of 17 million formal sector and 30 million informal sector jobs in developing countries (ILO early 1990s estimates).
- One study of six countries in the mid-1990s showed that forest-based activities provided between 13 and 35% of all small and large-scale rural non-farm employment in these countries.
- Some two billion people depend predominantly on traditional biomass fuels, including fuelwood and charcoal, for their energy needs. And while the evidence suggests that most countries will not suffer national fuelwood shortages, this is likely to be a significant problem in some regions and localities.

- The World Health Organization estimates another two billion people rely mostly on traditional medicines for their health, a large portion of which come from forests and other types of wild vegetation.
- In 62 developing countries, hunting and fishing provide over 20% of household protein requirements, much of which comes from forests.
- Developing countries produce something on the order of \$30-40 billion dollars worth of timber and processed wood products each year. Although only a small portion of this currently benefits poor households, that proportion could grow markedly in coming years.

### **Trends**

The world's forested area declined by 2.4 percent in the 1990s, an area equivalent to about 90 000 square kilometres per year. Africa has the highest deforestation rate at 7 percent per annum followed by Latin America at just under 5 percent per annum. Africa lost 5.3 million hectares of forest land per annum in the 1990s. Almost all the deforestation is taking place in the tropics, which coincides with some of the poorest countries in the world.

Deforestation declined significantly in Asia from the 1980s to the 1990s. This is partly due to the expansion of plantation forests.

Deforestation and forest fires contributes around one fifth of all human-induced emissions of carbon dioxide and small farmers in developing countries will be among the groups most adversely affected by climate change. And while the evidence suggests that most countries will not suffer national fuelwood shortages, this is likely to be a significant problem in some regions and localities. Forests and forest fallows are essential elements in the maintenance of swidden agriculture systems, practiced by hundreds of millions of small farmers.

Deforestation-induced climate change, decline in water quality, productivity loss resulting from declining fallow periods, and an increase in certain vector-borne diseases may also result from forest loss.

Over the last 15 years, approximately 30 countries have experienced significant violent conflict in forested regions, and in the majority of those cases poor governance of these regions was one factor in these conflicts.

### **Challenges**

1. *Avoiding potential negative livelihood impacts resulting from the depletion of forest resources:* Poor people are in danger of losing access to bush meat, wild fruits and vegetables, and medicinal plants as a result of these trends. They may also lose substantial cash incomes as the result of the depletion of timber and marketed non-timber forest product resources.

Surprisingly little has been done to quantify the above trends. That is a major priority for future research, as it can help to highlight and appropriately define the problem and convince policymakers to

act to address it. We also need to better understand the ecological processes that determine the availability of forest products and services. Similarly, while there has been a great deal of good research on the causes of deforestation and forest degradation, much remains to be learned about what the viable solutions might be.

2. *Loss of access to forest resources and forest-based incomes resulting from changes in property rights and regulatory regimes:* In many parts of the world, poor rural people are losing access to forest resources as the result of the privatization of previously open access and common property resources and the establishment of forest concessions, large-scale plantations, resettlement programs, and protected areas, among other things. Many, if not most, of the forest-based activities that poor people depend on are currently illegal under existing forest and conservation laws, and improved enforcement of those laws could have significant negative impacts on rural livelihoods. These are topics that have been documented anecdotally, but about which there is little quantitative evidence, much less serious research on possible policy alternatives.
3. *Forest trade liberalization in forest-poor countries that are major importers of forest products:* In particular China, India, and Mexico stand out as countries that have large populations of poor people that depend on commercial forestry activities, which will find it difficult to compete in the context of globalized markets and where there are few livelihood alternatives for the people and regions involved.
4. *Finding viable options for integrating conservation and development:* Recent research has demonstrated that there are fewer "win-win" solutions than previously believed. That means to find ways to ensure biodiversity conservation without having an overly negative impact on economic development and rural livelihoods will require a much better understanding of the specific ecological, economic, and social trade-offs in various contexts and the development of conflict resolution mechanisms and systems of payment for environmental services. That, in turn, will require an approach based on adaptive management with a strong component of research and social learning. (This also applies to payment for environmental services related to climate change and hydrological services.)
5. *Violent conflict and other major governance problems in forested regions:* Historically neglected forested regions, with valuable natural resources that have poorly defined property rights and can be used to finance armed conflict, ethnically diverse populations, and limited accessibility provide fertile breeding grounds for war, banditry, and cultivation of illicit crops. In some cases poor governance of these forested regions directly contributes to the outbreak of conflict. In others it simply provides a context where it is easy for conflict to persist. These conflicts often have widespread negative economic, social, and political consequences that contribute to poverty and food security problems that affect large populations outside the forested areas as well as within. Once again, research can help highlight these problems and identify practical solutions.

6. *Developing the human resources and institutions:* To address all of these challenges, most developing countries face the additional challenge of developing the required capacity. Most countries still have an extremely weak capacity for research on forests and forestry - much weaker on average than is the case for crops and livestock. What capacity they do have is largely focused on tree breeding and silviculture and conservation biology. The capacity for rigorous policy analysis and multidisciplinary approaches is extremely limited and concentrated mostly in NGOs, externally funded projects and full-time consultants.
7. *HIV/AIDS:* The impact of HIV/AIDS on forestry is far reaching. Associated issues include: worker productivity, loss of skilled and trained workers, use of and dependency on forest resources, poverty and vulnerability of surrounding communities, AIDS orphans, and broader social instability. For many households, aids can seriously diminish household productivity through illness and caring for the sick.

### **Opportunities**

The opportunities identified here can be considered as enabling conditions and strategies that may improve the potential of forests to alleviate poverty. At the same time, opportunities can be constraints to forest-based poverty alleviation.

1. *Rights:* Small farmers and communities now own or have long-term usufruct rights over 22% of the world's tropical forests. The last few decades have seen a major devolution of control over forests to poor households, indigenous peoples, and community organizations. This trend should continue in the future, and in principle has the potential of improving the livelihoods of many of the people involved. Research can document the livelihood impacts of these changes in property rights and help identify policies that can promote policies that have the greatest potential for alleviating poverty and achieving food security.
2. *Access and Justice.* Rights do not always guarantee access and justice. Decentralization can result in exclusion and/or inclusion depending on the prevailing politics. In some extreme cases it has been used to justify ethnic cleansing.
3. *Market Conditions:* A rapid growth of domestic markets for forest products means that rural poor people have a comparative advantage to produce and market. These include markets for fuelwood and charcoal, medicinal plants, poles, low grade construction timber, low cost furniture and many non-timber forest products. Rapid urbanization has stimulated much of this growth. In countries where companies find it difficult to find large areas for pulp wood plantations small farmers may also find attractive markets for pulpwood.
4. *Micro-enterprise development:* A strong interest in micro-enterprise development can provide major opportunities for small-scale forest-based activities. Better access to market information, credit, and technology could allow poor households to improve the quantity and quality of their production and obtain higher prices for it.

However, this will require greater understanding and sensitivity within micro-enterprise development initiatives of the specific requirements of forest-based activities and the links back to the resource base. It will also require assistance in developing tools and methods that to identify promising opportunities and to strengthen local organizations and management.

5. *Good governance*: Greater democracy and willingness to allow poor rural people to participate in decision-making processes offers yet another large opportunity. Although the situation varies markedly, in many parts of the world local communities, small - scale foresters, and indigenous people are better organized and have greater political influence and possibilities of expressing themselves than in the past - and that undoubtedly can contribute to policies that are more effective at improving their welfare. Again, appropriate research can develop methods and tools to make these participatory processes more effective and efficient.

There is clearly a renewed focus on people-centred forestry but the extent to which this approach can help reduce poverty requires better understanding of how forests can increase household income, function as safety nets, and the direction of policy reforms. Incorporating all of these issues into national poverty reduction strategies, forestry and biodiversity strategies, comprehensive development framework, and country assistance strategies poses both a challenge and an opportunity. It will be a challenge to convince those concerned mostly with macro-economic aspects, infrastructure investments, and social services that protecting poor people's access to forest resources and improving their ability to manage forests and earn higher incomes from them is fundamental to their efforts. Once that has been achieved, however, there will be a real opportunity for forest resources to contribute to poverty alleviation and food security.

Loss of forests does not always mean that the forest dependent poor will necessarily be worse off. Agricultural expansion is one of the major causes of forest loss and small-scale agriculture remains an important economic activity of many poor households. Besides small-scale agriculture many find employment in logging companies. These local level nuances need to be understood when seeking policy options.