International Agri-Food Network

Approved May 30, 2017

Private Sector Mechanism Position Paper

May 2017

FORESTRY

Key recommendations for forestry for food security and nutrition

The private sector mechanism suggests that the following policy recommendations be considered in order to safeguard and improve the contributions that the forestry sector makes to food security and nutrition, in the context of the elaboration of UN Committee on Food Security (CFS) recommendations on “sustainable forestry for food security and nutrition”.

1. Investing in forestry research

Establishing and promoting best practices with regards to forestry and agroforestry will depend upon the availability of a solid knowledge base. Increased investment is needed from both private and public sources, including businesses, agricultural ministries, and intergovernmental organizations, in order to enable this base to be expanded and to build capacity for data collection both among researchers and producers. This will allow the development of innovative techniques and technologies to make forest-related agricultural activities more sustainable, more efficient, and more lucrative. Specific areas in which investments for further research are needed are:

- Resource-efficient, resilient, and high yield varieties
- Integrated land use planning
- Climate change adaptation and mitigation techniques
- Assessments of the sustainability of start-up plantations (beyond the scope of existing forest certification schemes), and projections of their eventual social, environmental, and economic impacts

2. Improving provision of technical support and training

In order to ensure that the forestry and agroforestry sectors continue to play a positive part in maintaining and improving food security and ecological systems, it is important that science-based technical support and extension services be available to those working in this sector, particularly smallholders and other vulnerable groups. Specific areas in which training and technical support may yield large improvements in efficiency and productivity in several contexts include:

- Raising seedlings
- Tree planting
- Agro-forestry techniques
- Wood harvesting practices
- Soil and water management, and land-use models
- Landscape restoration/reforestation
- Transportation

3. **Improving financial support and access to markets for forestry products**

The financial needs of those working in the forestry sector tend to differ from those of more conventional agricultural practitioners, due to the generally much longer timeframes for returns on initial investments and the unique ecosystem services provided by forests. Financial support for the forestry sector is in many cases underdeveloped in comparison with those for livestock and crop commodities. We would therefore suggest that:

- Where appropriate, support in the form of grants, subsidies, and tax exemptions be made available for the purposes of investing in the establishment of sustainable forestry plantations, and of harvesting and processing operations, particularly for smallholders and other marginalized groups.
- Support be provided for the development of sustainable, more efficient, and more inclusive value chains for forestry products, for example through the provision of macro-economic stability, infrastructure, and investment-friendly development strategies.
- Access to financial literacy and business management extension services be provided, particularly for smallholders, to allow producers to become entrepreneurs.
- Innovative financial products be developed to address the particular needs of start-up plantations (for which credit history or financial statements may not be available, and who may not be able to offer collateral).

4. **Integrating forestry sustainability programmes into food security and nutrition frameworks**

Forestry sustainability programmes, including certification schemes, can be useful tools for monitoring forest use practices and helping to ensure that they contribute to the socio-economic wellbeing of the communities involved. However, the forests in which most of these programmes operate are currently located in developed regions, meaning there is ample scope for their expansion in areas where food security and nutrition concerns may be particularly acute. Improving the positive impacts of these programmes could be achieved by:

- Ensuring that food security and nutrition issues are incorporated into their operational frameworks, as facets of development interconnected with and inseparable from environmental and socio-economic goals.
- Ensuring that technical support and educational resources are available to enable producers and other members of the value chain to enroll in these programmes, thereby avoiding the creation of segmented markets or barriers to market access.
- Ensuring that adequate chain of custody requirements are in place, so that these programmes are effective and correctly incentivized.
- Ensure that gender is mainstreamed throughout these programmes, for example by making sure that certification statements issued to groups and households are issued in the name of women members, not just men.
- Ensure that these programmes take into account the customary rights of stakeholders, as well as their legal rights.

5. **Addressing tensions and trade-offs with regards to resource use, including land use and water use**

Growing demand for food as a result of the earth's increasing population will inevitably mean that the socio-economic trade-offs between the resource use demands of the forestry and conventional agricultural sectors will need to be managed. This will entail either the extensification or intensification of agricultural systems ("land sharing" or "land sparing"), as well as increased pressure on existing resources to be used more productively in order to conserve natural habitats and biodiversity. It is essential that these trade-offs be handled effectively in a manner that is appropriately tailored to local socio-economic and ecological contexts, and that ensures that policymakers do not neglect the positive impacts of the forestry sector for health and the environment. This could be achieved by:

- Implementing and promoting market-based approaches to the valorization of forest products, including certification schemes, sources of credit, and trade information systems.
- Updating regulatory systems to reflect current contexts, e.g. by revisiting colonial era tree protection policies that still persist in many regions.
- Minimizing and re-using forestry waste products, for example through the promotion of the recycling of post-consumption wood and paper materials, or the use of pre-consumption waste as fuel.
- Providing training on agro-forestry and crop-livestock-forestry integration.
- Exploring creative and innovative forest stewardship solutions, for example preserving forest corridors for ecosystem services and biodiversity.

Forestry for food security and nutrition

Forests play a crucial role in food security, as sources of fruits, vegetables, bushmeat, fuel, and income, as well as providers of key ecosystems services, with effects on soil quality, water quality and availability, greenhouse gas emissions, and biodiversity. They are often particularly significant to the poorest segments of the population as a source of food and energy when more conventional forms of agriculture have been disrupted, for example by drought or conflict. It is estimated that forestry, agroforestry, and other tree-based agricultural production systems (including livestock breeding) contribute either directly or indirectly to the livelihoods of over one billion people[1]. In spite of this, the role that forestry plays in food security and human nutrition remains under-researched, and under-appreciated by policymakers. Greater focus on forestry will help strengthen the four pillars of food security and promote nutritionally adequate diets.

Although the contribution of foods from forested areas in terms of total caloric intake is limited, they are an extremely important source of diet diversity and micronutrients. Micronutrient deficiency is one of the most significant global nutritional challenges, with those affected numbering over 2 billion[2]. The most common deficiencies include those of iron, vitamin A, and zinc. Vegetables, fruits, and animal source foods are nutritionally dense sources of each of these elements, and also represent the majority of foods sourced from

[1] Agrawal et al, 2013
[2] FAO, 2012

forested and “mosaic” landscapes[3]. Many studies have found significant positive correlations between proximity to tree cover and dietary diversity[4].

Forests are also a key source of energy for many people. According to FAO estimates, almost three billion people rely on wood as their primary supply of fuel for cooking and heating[5]. This means that deforestation and degradation of forests impacts energy usage, and therefore cooking and eating behaviours. Changes in diets and in preparation methods (e.g. boiling water for shorter periods to conserve fuel) can easily lead to malnutrition. Finally, forests are also an important source of animal fodder. For example, it has been estimated that 75% of tree species in Sub-Saharan Africa are used as feed for livestock[6].

Forests as providers of ecosystems services

The importance of the forestry sector for food security and nutrition goes beyond the direct products that can be harvested from them, and encompasses the influence that forests wield over local microclimates and other aspects of the environment that affect the production activities of other forms of agriculture.

Climate change is one of the most significant factors affecting food security and nutrition. The forestry sector makes important contributions to mitigation and adaptation processes. Firstly, forests are able to absorb large amounts of atmospheric carbon dioxide, acting as a sink for greenhouse gas emissions. Secondly, they can reduce the negative effects of extreme weather events, which are forecast to become more frequent as a result of climate change, by decreasing the amount of topsoil run-off as a result of heavy rains, and sheltering infrastructure from strong winds.

Well-managed forests are also important for their effects on hydrological cycles. By stabilizing soil, forests help prevent erosion and preserve soil quality. They also help prevent sedimentation of water systems, and trap pollutants generated by upslope activities, keeping them out of watercourses. In addition to this, the health of forests affects water availability on surrounding land, since they have effects on rates of infiltration and on soil’s water storage capacity, and since rates of evapotranspiration affect rainfall cycles. Deforestation and degradation of forests can therefore cause significant disruptions to non-forestry agricultural activities.

Forests are also among the most biodiverse terrestrial ecosystems. Biodiversity is directly responsible for many of the most important roles that forests play in providing ecosystem services, including improving soil quality, harboring pollinator species, and fostering predator-pest interactions that can be assimilated into agroforestry and integrated pest management (IPM) schemes. However, this biodiversity is the result of complex and sensitive systems that are increasingly vulnerable to climate change. Degradation of forests as a result of climate change and the concomitant loss of biodiversity threatens to render connected agricultural systems less resilient.

[3] Vinceti et al, 2008
[4] Sunderland et al, 2013
[5] Rehfuess, 2006
[6] FAO, 1991

Enhancing the contributions of the forestry sector to food security and nutrition

Despite the value of forests for food security and nutrition, the relative neglect of the forestry sector compared with other forms of agriculture by policymakers, means that the potential for the sector to play a greater role in securing the food security of a growing population remains great.

One of the first challenges the sector must overcome to realize that potential is therefore to raise awareness of it among policymakers. Overdependence on non-forestry related forms of agriculture hampers effective resource allocation to research and market information dissemination, as well as the propagation of quality germplasm. This lack of knowledge also results in a dearth of favourable credit terms and price supports for forestry processes and products, in comparison with those available to most other types of agriculture.

Another major impediment, particularly in developing countries, is the lack of clarity with regards to land rights. Land tenure arrangements that are ambiguous or unsecured discourage long-term agricultural investments. This has a particularly strong impact on agroforestry and other forest-related production systems due to the relatively delayed returns on investment with regards to other types of agricultural production.

Finally, agroforestry and other mixed production systems are effective solutions to increase the diversity of production systems and to protect habitats. However, a lack of inter-sectoral coordination often poses challenges to implement them. As these systems are directly affected by policies concerning agriculture, forestry, energy, water, and the environment, gaps and policy conflicts often arise which may create adverse incentives, discouraging their expansion.

References:

Agrawal, A., B. Cashore, R. Hardin, G. Shepherd, C. Benson & D. Miller. 2013. Economic contributions of forests. Background Paper 1, United Nations Forest on Forests (UNFF), 10th Session, Istanbul, Turkey. http://www.un.org/esa/forests/pdf

FAO 1991. Household food security and forestry: an analysis of socio-economic issues. Rome available at: www.fao.org/docrep/006/t6125e/t6125e00.htm

FAO. 2012. The state of food insecurity in the world: Economic growth is necessary but not sufficient to accelerate reduction of hunger and malnutrition. FAO (Food and Agriculture Organization of the United Nations): Rome, Italy.

Rehfuess, E. 2006. Fuel for life: household energy and health available at: www.who.int/indoorair/publications/fuelforlife/en/

Sunderland, T., Powell, B., Ickowitz, A., Foli, S., Pinedo-Vasquez, M., Nasi, R. and Padoch, C. 2013 Food security and nutrition: The role of forests. Discussion Paper. CIFOR, Bogor, Indonesia.

Vinceti, B., P. Eyzaguirre, and T. Johns. 2008. The nutritional role of forest plant foods for rural communities (Chapter 4). In Human health and forests: a global overview of issues, practice and policy, eds. C.J.P. Colfer, Earthscan: London, UK