

Local to Global-Level Sustainable Mountain Development

FAO's Recent Achievements in Implementing Its Conceptual and Operational Framework



With its mandate to work on natural resource management, food security, and livelihoods and its attention to the social, economic, and environmental dimensions of sustainable development, the Food and Agriculture Organization of the United Nations (FAO) has played a leading role in sustainable mountain development for many years. Just to recall: in 1992, FAO was appointed Task Manager for Chapter 13 of Agenda 21 (Managing Fragile Ecosystems: Sustainable Mountain Development), and in 2002, Lead Agency for the International Year of Mountains. FAO hosts the Secretariat of the Mountain Partnership and, from 2003 onwards, is also mandated by the United Nations (UN) General Assembly to lead observance of the International Mountain Day, every year on 11 December. FAO participated in drafting Chapter 24 (Mountain Ecosystems) of the Millennium Ecosystem Assessment as well as the work program on mountain biological diversity of the Convention on Biological Diversity (CBD).

Over time FAO has progressively built up a conceptual and operational framework linking sustainable mountain development to forest hydrology and watershed and risk management. In close collaboration with other UN agencies, governments, nongovernmental organizations (NGOs), and research institutions, and across its technical departments, FAO addresses the needs of mountain people and mountain environments through its normative work, field program, and support for international processes. The following paragraphs provide examples of recent achievements and ongoing processes regarding these three areas of work.

Normative work

FAO carries out constant conceptual work with its 189 member countries. Taking advantage of the wealth of specific experience and expertise of government agencies, universities, research institutions, etc, FAO brings on board current issues which require particular attention, analyzes and systemizes them, provides state-of-the-art reports which offer complete overviews of the issues at stake, and contributes to the advancement of concepts and approaches. As a retrofeedback mechanism, findings and recommendations resulting from these normative processes are tested and validated at the field level, thus allowing a continuous improvement. One example in this connection is a recently completed global assessment of watershed management practices that led to the release of a resource book for field practitioners and technicians (*The New Generation of Watershed Management Programmes and Projects*) and of guidelines addressing policy-makers (*Why Invest in Watershed Management?*).

As a founding member, FAO hosts the Secretariat of the Mountain Partnership—a voluntary alliance of partners dedicated to improving the lives of mountain people and protecting mountain environments around the world. An official UN partnership, it was launched at the World Summit on Sustainable Development in 2002. The Mountain Partnership has over 155 members, comprising governments, civil society, and intergovernmental organizations. The Mountain Partnership Secretariat is supported financially by the governments of Italy and Switzerland. It operates in a decentralized manner in order to more effectively provide services and support to Mountain Partnership members. The Secretariat structure consists of central and

decentralized hubs hosted by FAO in Rome (Central Hub), The Banff Centre in Canada (North America Hub), The Consortium for the Sustainable Development of the Andean Ecoregion (CONDESAN) in Peru (Latin America Hub), the International Centre for Integrated Mountain Development (ICIMOD) in Nepal (Asia/Pacific Hub), as well as the Environmental Reference Centre hosted by UNEP in Vienna. Among the initiatives implemented by the Mountain Partnership is the Mountain Products Programme, which aims to improve the livelihoods of mountain communities through promoting socially responsible enterprises in mountain regions based on local, high-quality products.

The trust fund project “SARD-M” (Sustainable Agriculture and Rural Development in Mountain Regions), funded by Switzerland and France, and initially also by Japan, has assisted 15 countries in assessing their mountain policies, as well as related institutions and processes. One important cause of ecosystem degradation is the perception that environmental services, such as biodiversity preservation, provision of clean water, or landscape safeguarding, are free public goods. The third phase of the SARD-M project will appraise financial schemes to compensate rural populations for the environmental services they provide through sound management practices. With this the project will support governments’ efforts to improve the livelihoods of mountain people while boosting their potential to contribute to environment protection.

Three examples for the field program

Pakistan

On 8 October 2005, an earthquake measuring 7.6 on the Richter scale

FIGURE 1 Lamnian Watershed in Pakistan-Administered Kashmir. (Photo by Paolo Ceci)



struck parts of Northwest Frontier Province (NWFP) and Pakistan-Administered Kashmir (PAK) in the northeast of Pakistan, causing 80,000 casualties. FAO supported the development of a livelihood component for the postemergency rehabilitation plan of the Earthquake Reconstruction and Rehabilitation Authority (ERRA). This component was presented to the Swedish International Development Cooperation Agency (SIDA), which agreed to support its implementation. This intersectoral initiative has a threefold focus on improvement of local livelihoods, institutional capacity building, and control of hydrogeological hazards through collaborative watershed management at the village level. The project is being implemented by ERRA in collaboration with several departments of FAO. The project started in March 2007 and will continue at least until December 2009. Strengthening the capacity of ERRA

and its partners to implement the livelihoods rehabilitation strategy is expected to have the medium-term outcome of at least restoring the livelihoods of earthquake-affected people to pre-earthquake levels, through a community-based development approach that is gender-sensitive and environmentally friendly (Figure 1). The project is also expected to demonstrate how a collaborative watershed management approach can protect the environment and strengthen households' natural capital assets in steeply sloping areas, where livelihoods have been seriously affected by soil erosion following decades of deforestation and overgrazing as well as by the landslides and landslips caused by the earthquake.

West Africa

The Fouta Djallon Highlands (FDH) are a series of high plateaus concentrated in the central part of Guinea and extending into Guinea-

Bissau, Mali, Senegal, and Sierra Leone. This highland area is the point of origin of a number of international rivers in West Africa, notably the Gambia, Niger, and Senegal rivers, and a number of small watercourses. Owing to their geographic and climatic diversity, the highlands and surrounding foothills also support a rich diversity of ecosystems. The overall objective of the Integrated Natural Resources Management project, which is funded by the Global Environment Facility (GEF), is to ensure the conservation and sustainable management of FDH's natural resources in the medium to long terms, in order to improve the livelihoods of rural populations living in countries directly or indirectly connected to FDH. The project is expected to mitigate the causes and negative impacts of land degradation on the structural and functional integrity of FDH ecosystems through the establishment of a regional legal and

FIGURE 2 Pilot project site in the Yunttagi Mountains, Turkey. (Photo by Thomas Hofer)



institutional framework, the strengthening of institutional capacity to facilitate regional collaboration, the assessment of the status of natural resources in FDH, and the development of replicable, community-based sustainable land management models. This GEF project started in early 2009, is laid out for a duration of 10 years, and involves 8 countries from both Anglophone and Francophone West Africa.

Turkey

More than two-thirds of Turkey's territory consists of mountain ecosystems covered by forests and alpine grasslands. Mountain forests play a crucial role in the national economy and provide a source of livelihood to rural people. Recognizing FAO's experience in sustainable mountain development and watershed management, the Government of Turkey requested FAO's assistance, through its Technical Cooperation Program, in addressing the urgent problems in mountain areas. The TCP selected

the Yunttagi Mountains, in southeastern Anatolia, as the project pilot site (Figure 2). Economic conditions are poor there, and livelihoods depend mainly on crop production, livestock, and forest resources. The Yunttagi Mountains are affected by problems that include soil and forest degradation, limited agricultural productivity, lack of access to markets, low living standards, unemployment, and out-migration. The project has two immediate objectives: to establish a framework for sustainable mountain management planning at the national level, and to improve livelihoods for mountain people, thus reducing out-migration from the pilot site. The national component of the project will build on progress made at the pilot site, while a broader, donor-assisted investment program is expected as an output of this TCP.

International processes

FAO provides support to international processes related to

intersectoral topics that need to be addressed by the international community. One example is the topic of "forests and water," which is obviously very important for sustainable mountain development and which is getting increasing attention. The Resolution on Forests and Water of the Ministerial Conference on the Protection of Forests in Europe (MCPFE), adopted in Warsaw in November 2007, has triggered a number of international conferences in 2008. In September, FAO participated in the "III international conference—forest and water" in Mragowo, Poland, and attended as a member of the organizing committee the conference "Water and forests—a convenient truth?" in Barcelona, Spain. During the European Forest Week, held in October 2008 at FAO Headquarters in Rome, Italy, a special session on "Forests and water" was jointly set up by the United Nations Economic Commission for Europe (UNECE) and FAO. These events evidenced the complexity of the relationships between forests and water as well as

the many gaps and misconceptions which still persist. There is a need to translate the vast scientific knowledge into concepts and tools that can address policy-makers, to create national and transboundary institutions which are able to bring together all actors, and to exchange among countries existing experience related to integrated management of forests and water, including also the valuation of water-related forest services.

FAO contributed to the First World Landslide Forum, organized by the International Consortium on Landslides (ICL) in November 2008 and hosted by the UN University Headquarters in Tokyo, by setting up a special session entitled "Watershed and forest management for risk reduction." The main thrust of the session was to put landslides into a multihazard, landscape, livelihood, and food security context.

FAO hosts the Secretariat of the European Forest Commission Working Party on the Management of Mountain Watersheds. The 26th session of the Working Party was held in Oulu, Finland, in August 2008. The

main topic under discussion was "Forests, water and climate change in high altitude and high latitude watersheds." In the perspective of adaptation to climate change, the session was an apt occasion to gather and discuss contributions from researchers and approaches of national experiences as well as international organizations (projects, policies, and outcomes) related to forest, water, and risk management. Besides offering a full insight into the topic at stake, it allowed for a comparison of the problems experienced and coping strategies put in place by specialists working in either high altitude or high latitude areas.

Outlook

FAO anticipates that the number of requests from countries and partners for support to mountain-related projects and processes and the expectations that FAO will be the leading UN Agency in mountain-related matters will increase. In its work program, FAO will continue to

have a focus on sustainable mountain development and will further strengthen the collaboration with partners both within and outside the organization.

For further information about FAO's multidisciplinary focus on sustainable mountain development, see the following:

Forests and water website: <http://www.fao.org/forestry/forestsandwater/en/>

Mountain Partnership website: <http://www.mountainpartnership.org/default.asp>

SARD-M website: <http://www.fao.org/sard/en/sardm/home/index.html>

International Mountain Day website: http://www.fao.org/mnts/intl_mountain_day_en.asp

AUTHORS

Paolo Ceci and Thomas Hofer*

* Corresponding author:

Thomas.Hofer@fao.org

Food and Agriculture Organization of the United Nations (FAO), Viale delle Terme di Caracalla, 00153 Rome, Italy

Open access article: please credit the authors and the full source.