

FAO field projects in watershed management – some examples

Projects in the Democratic People's Republic of Korea and Tajikistan illustrate how FAO helps countries improve watershed management through capacity building, institutional development and fieldwork.

At the request of member countries, FAO implements many technical cooperation projects in watershed management. They generally include components of local and national capacity building, institutional development and pilot activities in the field directed towards reducing degradation of natural resources.

In the Democratic People's Republic of Korea, for example, two watersheds were selected for pilot activities. A comprehensive management plan was developed in a participatory manner for each. The project initiated afforestation, agroforestry and intercropping trials and sediment monitoring on sloping fields and in rivers. A national workshop attended by approximately 50 government officers from forestry, agriculture, meteorology and remote sensing, as well as scientists and field staff, focused on preparation of a medium- and long-term participatory integrated watershed management investment programme for the country.

As a result of awareness and skills developed through the project, the Academy of Forest Sciences is now developing a watershed management plan for the Taedong River, which flows through Pyongyang, the country's capital.

In Tajikistan, interventions in the pilot water-

shed included afforestation, agroforestry and gully rehabilitation, pasture management, drip irrigation technologies and farm pond construction. A modern greenhouse was erected for a tree nursery. Participants in training sessions and study tours to India and Nepal have already started to apply their newly acquired knowledge in the pilot project site.

Through the work of a pasture management interest group, controlled grazing has been introduced, vegetation has recovered and degradation has been significantly reduced. The water interest group introduced an irrigation calendar used to allocate irrigation water to each household on a specific date and in a specific quantity. Following the installation of pipes, households now get drinking-water directly from the spring. A women's group on income generation worked to establish a revolving fund which is now used for the implementation of small enterprise projects. A new watershed management unit has been created in the Soil Science Research Institute.

In both countries, watersheds selected for the pilot activities have evolved into attractive demonstration and training sites for modern approaches to participatory integrated watershed management.

The new generation of watershed management programmes and projects

In 2002, in the framework of preparations for the International Year of Freshwater 2003, FAO launched a global review of watershed management practice whose scope was explicit in its title: "Preparing for the next generation of watershed management programmes and projects".

The review involved about 80 institutions and 300 professionals from around the world through a survey and four regional workshops. It culminated in the interregional Conference on Water Resources for the Future, held in October 2003 in Sassari, Italy. Two national (Burundi and Nepal) and two regional (Latin America and the Mediterranean basin) case studies and five volumes of workshop and conference proceedings were published. The flagship output is FAO Forestry Paper No. 150, *The new generation of watershed management*

programmes and projects, a resource book for practitioners and local decision-makers which outlines the way forward in watershed management. Main features of the recommended approach include:

- longer-term programmes (at least ten years, in two or more phases), negotiated with local stakeholders and aimed at initiating a continuing watershed management process;
- local-level processes coordinated beyond the watershed level – i.e. at the river-basin or regional level – to take upstream/downstream linkages fully into account;
- implementation responsibility entrusted to relatively informal local institutions such as watershed management fora, with formal institutions such as government watershed authorities having a

more subsidiary, facilitating role than in the past;

- focus on natural resource management as part of local socio-economic development processes;
- multistakeholder collaboration linking social, technical and policy concerns in a pluralist learning and decision-making process;
- "fairly valid and cheap" monitoring and evaluation focused more on ecosystem changes than on managerial performance, based on uniting local and scientific knowledge and involving a variety of local stakeholders in data collection, analysis and interpretation.

The publications and documentation are available online at:

www.fao.org/forestry/site/forestsandwater



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An artist's visualization of the management plan of a pilot watershed in the Democratic People's Republic of Korea, positioned at the entrance to the watershed for awareness raising



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Intercropping experiment to reduce soil erosion, Democratic People's Republic of Korea



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Watershed management plan for pilot site in Tajikistan

Pilot watershed in Tajikistan before project interventions (left) and after one year of project implementation (right)



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