



Resilient Watershed Management Programme

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The Food and Agricultural Organization of the United Nations' (FAO) watershed management activities focus on building resilient communities while ensuring the sustainable provision of watershed services.

Resilient watershed management is an integrated landscape approach in which the area addressed is defined by the hazards and vulnerabilities and the area exposed to them, rather than by a particular unit of land or water. The landscape may include a watershed, many watersheds, a portion of a watershed or even a basin, depending on the risks. The integrated approach encompasses the people, their livelihoods and their interactions with their environment.

A resilient watershed is planned and managed using a risk-based approach involving four key steps:

1. **multi-hazard risk assessment**, examining hazards such as flooding, landslides, wildfire and drought, using satellite imagery at a landscape scale and participatory risk and vulnerability mapping and assessment at the community level;
2. **identification of hot spots**, i.e. the highest-risk areas and locations where mitigation measures will have the greatest impact;
3. **preparation of risk-based watershed management plans** indicating mitigation measures that will be implemented, which may include bio-engineering and sustainable forest and land management interventions such as slope and erosion control measures, river and gully control, drainage control and adaptation of agricultural techniques;
4. **participatory implementation** of the risk-based watershed management plan at the community level.

Vision

Resilient communities and sustainable provision of watersheds services.

Goals

- Support and enhance enabling environments and institutions.
- Promote resilient watershed management.

Activities

Technical support for resilient watershed management

Ongoing or recent projects include:

- integrated management of watersheds to combat erosion in Morocco
- risk-based watershed management in the Islamic Republic of Iran
- management of Chimborazo's natural resources, Ecuador
- resilient watershed management in the Fouta Djallon, Guinea
- vulnerability reduction and rural development in Guatemala.

Capacity development

To ensure that all stakeholders understand and are involved in the management of the watersheds, capacity building for a risk-based approach is carried out at three levels: community, subnational and national. In the case

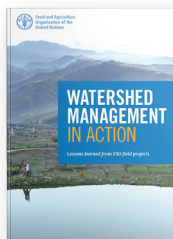
of transboundary basins, international collaboration is fostered.

Knowledge management

Methodological tools and technical materials are developed to support the implementation of initiatives at the local, national and regional levels and to ensure the global dissemination of expertise on resilient watershed management. Practical experiences in the field are systematically reviewed and analysed to maintain a high standard of knowledge, to promote continuous learning and to ensure that field practices and technical guidance are mutually reinforcing. A handbook on resilient watershed management is being developed and will be made available online as an e-learning tool to ensure its wide distribution.

Publication

"Watershed Management in Action" published in 2017, reviewed the achievements and shortcomings of 12 watershed management projects technically supported by FAO with a view to learning from their experiences. The review identified a sequence of steps for watershed management projects to effectively respond to global challenges of water supply, land restoration, climate change adaptation, disaster risk management and fighting hunger.



For more information:

www.fao.org/forestry/watershedmanagementandmountains/95482



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Forestry Department
Food and Agriculture Organization of the United Nations
Viale delle Terme di Caracalla - 00153 Rome, Italy
Email: Forest-and-water@fao.org
Web address: www.fao.org/forestry/en

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