



Uniting communities and water users for protecting the Usambara catchment

The **Usambaras** are a global hotspot for biodiversity but this is increasingly in doubt as agriculture, mining and settlements spread into the forests.

Settlements that have extended right to the edge of the Western Usambara forest. (Photo © PRESA)

PRESA – Pro-poor Rewards for Environmental Services in Africa is working at sites in Kenya, Tanzania, Uganda and Guinea to facilitate fair and effective agreements between stewards and beneficiaries of environmental services. Voluntary, conditional and negotiated agreements can reward poor farmers for good land use practices, while ensuring a clean and sustainable supply of environmental services for local and global communities.

Contact:

World Agroforestry Centre
United Nations Avenue, Gigiri
PO Box 30677-00100 Nairobi
KENYA
Tel: +254 20 7224000
Fax: +254 20 7224001
Email: presa@cgiar.org
<http://presa.worldagroforestry.org>

The Usambara Mountains are an important source of water for north eastern Tanzania. The Indian Ocean cities of Tanga, Mombasa and Dar es Salaam rely on water from the Usambara Mountains.

The Pangani river, which flows from Mt Kilimanjaro, receives significant inflows from the Usambaras. The river is used for irrigating farms and powering a series of hydro electric stations built along the river's course.

Deforestation and poor land management practices at the Usambaras, and inadequate funds for watershed management pose a threat to the long term supply and quality of water. This is presenting adverse impacts on agricultural production, municipal water supply and electricity generation.

The Pro-poor Rewards for Environmental Services in Africa (PRESA) project is working with site partners to link upland farming communities with urban water utilities, hydro-power generators and downstream

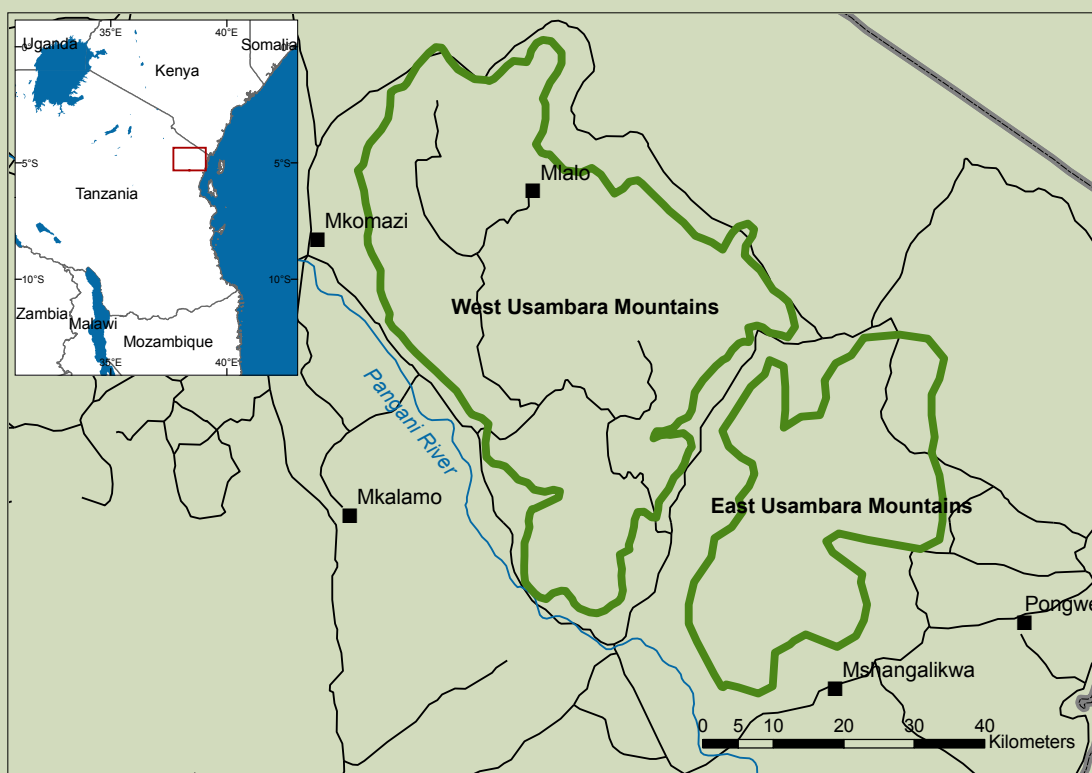
agricultural producers. This will result in greater co-operation for restoring and sustaining a healthy catchment ecosystem.

An ecosystem in danger

As part of the Eastern Arc Mountains of East Africa, the Usambaras are a global hotspot for biodiversity but this is increasingly in doubt as agriculture, mining and settlements spread into the forest.

Destruction is proceeding faster than nature can replenish itself. Indigenous trees take decades to mature even in the few places where there is re-forestation. Without trees, land is degraded by rain water through erosion and fertility loss. Eventually, productivity tumbles and the land is abandoned.

Insufficient funding has been an obstacle in appropriate land management. Most land owners are small scale farmers who cannot afford the physical conservation structures



Usambara Mountains and surrounding catchment area. (Map © M. Mäkelä - World Agroforestry Centre)

Partners

- African Highlands Initiative (AHI)
- Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA)
- Tanzania Forestry Research Institute (TAFORI)

Stakeholders

- Tanzania National Electric Supply Company (TANESCO)
- Pangani Water Basin Office (PWBO)
- Local farmer organizations
- Local planning and agriculture authorities

that prevent degradation, such as gabions and terraces. If anything, there is pressure to maximize agricultural production despite limited tools and knowledge.

Heavy sedimentation during the wet season affects the quality of water to downstream users. It hampers water intake equipment and inflicts heavy maintenance costs on municipal water providers struggling with inadequate revenue.

Opportunities and challenges for PRESA

PRESA is working with the African Highlands Initiative (AHI) to promote agricultural land use options that sustain ecosystem services. AHI has implemented many programmes for sustainable agricultural practices in the region.

Regarding the suitability of the Usambaras for reward schemes in environmental services, there are many direct

beneficiaries such as TANESCO, municipal water supply authorities and commercial farmers who use Usambara water for irrigation. Logging and mining companies could support reforestation by local communities in order to replace lost tree cover. This will also assure the loggers of timber stocks in future.

To better understand the local setting, PRESA is conducting situational analyses and baseline studies to define problems and hotspots. This will help identify the right mix of land use changes to improve ecosystem services.

The existing participatory bylaw development processes are a basis for ensuring that local communities have a say in the usage of agricultural land. *Joint forestry management and value for money* are management options being considered. Well-established farmer organizations can mobilize people through democratic, equitable and fair processes to ensure that reward mechanisms are pro-poor.



World Agroforestry Centre
TRANSFORMING LIVES AND LANDSCAPES



Enabling poor rural people
to overcome poverty

EUROPEAN COMMISSION



MINISTRY FOR FOREIGN
AFFAIRS OF FINLAND