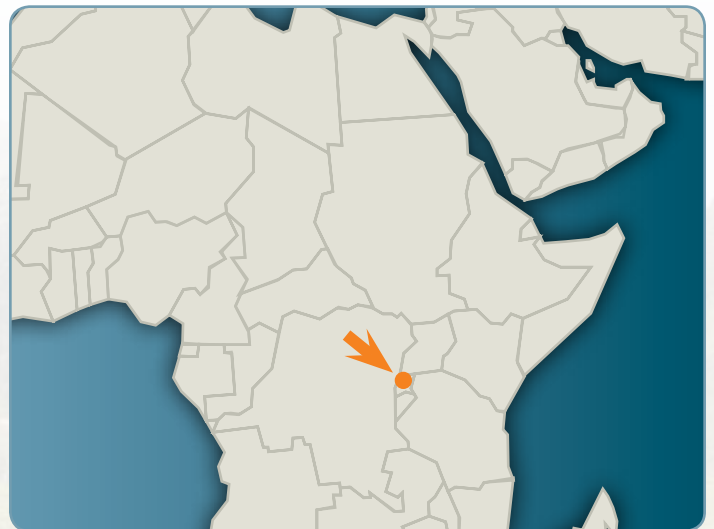# PLANTING TREES TO STRENGTHEN THE RESILIENCE OF RWANDAN COMMUNITIES

The challenge

The small Gishwati Forest Reserve is located in Northwestern Rwanda, close to Lake Kivu, not far from the highway linking Kigali, Rwanda's capital, and the city of Gisenyi. The forest reserve was virtually intact in the early 1980s but was cleared for intensive livestock production and replanted with Mexican weeping pine (*Pinus patula*) at the expense of native species. In recent decades, unsuitable land use policies combined with an immense influx of refugees lead to massive deforestation of the area. Deforestation has caused the disappearance of medicinal plants and various other useful species. The wood was used to produce charcoal and planks for drying tea leaves, an important industry in the region.

Northwestern Rwanda Model Forest
In development

Finding a solution

Since 2011, the African Model Forest Network, in partnership with the World Agroforestry Centre (ICRAF), the International Union for Conservation of Nature (IUCN), the Secretariat of the United Nations Forum on Forests (UNFF) and other partners have been assisting the Rwandan government in its efforts to restore forests across the landscape. According to the government and these organizations, the introduction of sound agroforestry practices will contribute significantly to reduce soil erosion on hills and stabilize the banks of lakes and rivers. This will also help to reduce rural poverty and strengthen the resilience of communities to climate change.

The objective the Rwandan forest landscape restoration program is to reverse the current degradation of resources from the soil, water, land and forests across the country by 2035. The initiative is focusing on sustainable agricultural production, low-carbon economic development, adequate water and energy supplies, and new opportunities to improve the livelihoods of rural populations. Preserving the richness of wildlife, including the mountain gorilla and other at-risk wildlife, is also part of the commitment.

The loss of forest cover on this mountainous landscape had a number of environmental consequences. In addition to the loss of biodiversity, the region suffered accelerated soil erosion, reduced land productivity, river siltation, floods and landslides. These various problems threaten the water supply, infrastructures and agriculture.

Lake Karago, located at the intersection of the Nile and Congo watersheds, is particularly affected by soil sedimentation. As a result, it has diminished in size by nearly 80% in recent years.

Results and impacts

Gishwati Forest

The Rwandan government decided to restore a large part of Gishwati Forest by planting native species including Muyovu (*Entandrophragma excelsa*), Musenene or Podo (*Podocarpus sp.*) and Settala or Mungu (*Polyscias fulva*) and allowing it to regenerate naturally over an area of more than 3000 ha. The other half of the landscape has been designated for livestock production and agriculture, and the government has provided new land and housing to the people who lived in the forest. As a result of these new land use designations, the government invited partners, including the Model Forest, to assist in its restoration process.

Protecting Lake Karago

With financial support from Canada, Model Forest partners carried out a project aimed at restoring Lake Karago. Agroforestry species resistant to soil erosion and wind were planted on the hills of Muderi and Matyazo, including 122 650 alder plants (*Alnus acuminata*) and 600 000 bamboo plants, or species able to provide dietary supplements, including 320 avocado trees and 500 Japanese plum trees. Farmers, local authorities, local leaders and student interns have all been trained through this project. According to Dismas Bakundukize, Director of the Forestry Management Unit at Rwanda's Ministry of Natural Resources, "the Model Forest has brought about an approach to working in partnership across a vast area by bringing all users of the land together. Farmers decide what species of trees should be planted, how to go about it, and what effects they will have on other activities conducted across the landscape."

Athanase Mukuralinda, ICRAF representative in Rwanda, concluded that "the Model Forest will absolutely affect the lives of the people and their well-being as it will introduce services, products, and a change in people's attitudes towards landscape restoration and the restoration of [soil] fertility."

To find out more

- International Model Forest Network: **imfn.net**
- Video: **youtu.be/eps5Q1Pkqqk**

The International Model Forest Network brings people together to test and apply innovative approaches to the sustainable management and use of the world's landscapes and natural resources.

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