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Fuel efficient stoves reduce tree cutting in Rwanda forest

- *By Jude Fuhnwi*

Rwanda is a small landlocked country in East Africa with a green and mountainous landscape. Between 1990 and 2010, Rwanda gained 36.8 % of its forest cover being around 117,000 hectares, as opposed to other countries where forest cover is declining. UN figures show that Rwanda had 373,000 hectares of planted forest.

Local communities champion production of fuel efficient stoves © ARECO

The Cyamudongo forest in south west Rwanda is a small patch of dense forest covering 412 hectares of land near the border with the Democratic Republic of Congo and Burundi. It is part of Nyungwe National Park. The forest is rich in diverse tree species that include *Chrysophyllum gorungosanum*, *Croton spp*, *Newtonia buchananii*, *Alangium chinense*and *Leptonychia melanocarpa* and is home to many animal species especially birds, some of which have been listed globally as endangered. Cyamudongo forest holds many bird species typical of the Albertine Rift forests, including *Apalis argente*. *Musophaga rossae*, which is not found in Nyungwe, is common in Cyamudongo, while the only Rwandan record of Accipiter erythropus is from here.

This small relic forest, once connected to the Nyungwe National Park is under serious threat. A high demand for fuelwood in communities living around the park has forced people to enter the forest to cut down trees, mostly for firewood and other household uses.

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“A survey done in 2013 by the Rwanda Development Board, the Wildlife Conservation Society and the Rural Environment and Development Organisation showed that 70% of firewood used in households comes from the Nyungwe National Park, including the Cyamudongo forest,” said Dancilla Mukakamari, National Coordinator of Association Rwandaise des Ecologistes (ARECO), which translates to the Rwandan Association of Ecologists – a civil society organization in Rwanda.

To conserve the remaining forest at Cyamudongo, ARECO launched a project in September 2014 to provide the local population with improved fuel efficient stoves that reduce firewood consumption in households as part of efforts to save the forest from the devastating practice of cutting trees unsustainably.

The project titled “Promoting Energy Efficiency on Cyamudongo Forest on Nyungwe National Park” was funded by the Critical Ecosystem Partnership Fund (CEPF), supported by BirdLife International, acting as the Regional Implementation Team for the Eastern Afromontane Biodiversity Hotspot.

At least 151 people, of which 68 are women, gained direct employment through local cooperatives engaged in the production of kilns. Some 1000 households received energy efficient stoves from the project, through a “one stove per household” initiative.

“This has a positive impact on conservation and on climate change as it decreases the quantity of trees used [as firewood] daily,” explained Dancilla.

The project has constructed kilns, as well as produced and disseminated modern stoves, known locally as Canarumwe, to communities around the Nyungwe National Park which includes the Cyamudongo forest – a CEPF priority site in Rwanda.

“A family of 5 persons using traditional stove consumes 7 to 9 kg of firewood per day. By using modern fuel stove, the same family now consumes 3,5 kg of firewood a day saving at least 1060kg per year which corresponds to 0,25 hectares of woodlots annually,” said Dancilla.

Women have gained direct employment producing stoves © ARECO

Many young people, women and indigenous communities of the Batwa people have benefitted from this project directly or through their cooperatives.

“It is almost three years that I started using modern stoves to cook and have realized that it saves energy, the quantity of firewood used and money when you have to buy. We use two canarumwe stoves that my wife bought from COFABRI cooperative. We are proud of it and ready to share this with others,” said one of the beneficiaries, Jean Nsengimana, a farmer in Gitambi, a locality near the Cyamudongo forest.

However, the one stove per household was not sufficient to stop the local population from cutting down the forest trees for sustenance because ARECO only reached 1000 households in this densely populated area with an estimated population of 400 persons per square kilometer.

ARECO and the CEPF regional implementation team in the Eastern Afromontane have identified this challenge and currently working to establish how the results of a baseline study conducted by ARECO will inform the next approach.

BirdLife International, together with the International Union for the Conservation of Nature (IUCN) and the Ethiopian Wildlife and Natural History Society (BirdLife in Ethiopia) form the Regional Implementation Team (RIT) for the Critical Ecosystem Partnership Fund (CEPF) investment in the Eastern Afromontane Hotspot (2012 - 2017). The investment will support civil society in applying innovative approaches to conservation in under-capacitated and underfunded protected areas, Key Biodiversity Areas (KBAs) and priority corridors in the region.

The Critical Ecosystem Partnership Fund is a joint initiative of l'Agence Française de Développement, Conservation International, the European Union, the Global Environment Facility, the Government of Japan, the MacArthur Foundation and the World Bank. A fundamental goal is to ensure civil society is engaged in biodiversity conservation. More information on the CEPF can be found at www.cepf.net.