

## Halting the deforestation front



# Switching from slash and burn to sedentary farming

Slash and burn practices of small farmers account for 90 percent of deforestation in the rainforest in Democratic Republic of Congo (DRC), according to forest expert C.M. Hansen. Near the village of Monkoto, at the border of Salonga National Park, a World Heritage Site in west-central DRC, World Wide Fund for Nature (WWF) assists farmers to switch to sedentary farming and save the forest. The new farming model is a success. In April 2018 I travelled there to see it with my own eyes.

Text and photos by Meindert Brouwer

Flying in a two-propeller Cessna from Kinshasa in northeastern direction to the town of Boende, I saw the landscape beneath me change from savannas mixed with patches of forest to continuous, endless rainforests as far as one could see, with blue rivers winding through the forest made up of countless bulbs of tree tops in countless shades of green. Nearing Boende, the forest showed its wounds: brown stamps of cleared forest, next to each other, amidst the green.

From the town of Boende I continued on the backseat of a motorbike, driven by Obed, a young inhabitant of Monkoto who had come to fetch me. On a small path with walls of green rainforest on both sides we made our way, through villages of small rectangular houses made of yellow loam and palm leaf roofs, meeting women in between, carrying huge baskets on their backs, filled with green vegetables, firewood or a yellow, plastic jerrycans filled with water from a stream. We passed clearings in the forest, sometimes messy with dark trunks and black roots of trees scattered

around in silver gray ashes or filled with the green leaves of cassava plants, slash and burn agriculture in different stages.

**COMMON PRACTICE** Slash and burn agriculture is a common practice in tropical rainforests around the world. Poor, often landless farmers slash a section of forest, burn the remains of trees and then plant crops. When the soil becomes infertile after a few years, the farmers cut a new piece of forest and continue farming there. Slash and burn practices of small farmers account for 90 percent of deforestation in the rainforest in Democratic Republic of Congo (DRC), according to forest expert C.M. Hansen.

After covering 250 kilometers, including an overnight stop in a village and crossing three rivers taking the motorbike in a small canoe, we arrived in the town of Monkoto, at the Luilaka river which serves as the border of Salonga National Park, a World Heritage Site in west-central DRC. It is in Monkoto that WWF and the Congolese Institute for the Conservation of Nature (ICCN) are located to co-manage



Slash and burn agriculture on the way from Boende to Monkoto.



Salonga National Park. Salonga is the largest protected forest area in Africa and the second largest in the world, measuring 33,350 square kilometers (larger than the country of Belgium). Funds of the European Union, the German Development Bank KfW and the Norwegian and American government (USAID) enable the conservation organizations to do their work. Apart from WWF and ICCN, also Wildlife Conservation Society (WCS) and Zoological Society of Milwaukee (ZSM) work as partners in the park.

All of them know that nature conservation on the ground is much more than park management, biomonitoring and law enforcement. It is also about developing alternative livelihoods for the people around the park to alleviate poverty and reduce the pressure on natural resources. New sources of income and sustainable economic development

### Nature conservation is also about developing alternative livelihoods for local people.

will reduce their dependency on the forest. Besides, support of the local population is key to achieve results in conservation. In and around Monkoto WWF assists local farmers to replace slash and burn (swidden) agriculture by sedentary farming on the spot.

**MODEL FARM** It is on the slopes of a tiny valley just outside of Monkoto where one of the sedentary agricultural “model farms” is installed, with agricultural crops growing on its slopes, surrounded by rainforest. The plantation is covered with growing maize, cassava plants, banana and avocado trees and a stretch of pineapple sprouts. Down in the valley rice is planted next to five fish ponds situated at different heights, with gently streaming water from one pond to another, while chickens are held in a small pasture near the forest. The farmer, Ekumba Benz, born in 1970, father of eight children, had started his pilot farm on newly bought land



Village of Watsikengo between Boende en Monkoto.



Women returning from their field in the forest. Every day they walk for many kilometers, carrying heavy baskets with vegetables, firewood or jerrycans with water from forest streams.

## The model of sedentary farms in Monkoto could be replicated all over central Africa and in tropical forests around the world.

in 2008. His older brother had provided the money. It consisted of 30 hectares of virgin rainforest at the time. Ownership of land is very important in this region, as land renting contracts are often not respected in the long term.

Ekumba: “We started by clearing 2 hectares for agriculture. The remaining 28 hectares will remain to be rainforest to produce oxygen. We may clear a maximum of 3 more hectares in the future.”

The farmer can continue farming in this plot over the years – and refrain from slash and burn agriculture – by keeping the soil fertile with planting the *Mucuna* liana (*Mucuna pruriens*) in between harvesting and planting crops. *Mucuna* has the unique property fixing nitrogen and fertilizing the soil, while the beans it produces can be eaten by people or used as fodder with the rest of the plant.

Ekumba added: “Slash and burn agriculture is very heavy work. It is easier now. My model farm is near my house, so I do not have to walk to the forest anymore”. Thanks to diversified products such as chicken, avocado, rice, cassava, fish and more, the sedentary model farm also provides for year-round income. Ekumba: “My yields

have gone up, and the new way of farming brings in more money than the old way. Now I am able to pay the costs of school for my children.” School is expensive here. Parents pay the salary of the teacher who is not paid by the government. Parents also pay for schoolbooks, notebooks, pens, school uniforms and shoes. Seven out of ten children in Monkoto do not go to school because their parents cannot afford this.

“The advantage is that now our family lives well”, continues Ekumba, “and we eat good food and that is why we are in good health.” People in the area tend to have a very non-diverse diet of mainly cassava (manioc) and bush meat and eat very few fruits and vegetables. The model farm therefore not only sedentarizes, but also diversifies food supply.

**LIVESTOCK** WWF invested in setting up this model farm with seeds, technical assistance and practical tools such as machetes. By 2020 the initiative of WWF DRC has resulted in the development of 60 model sedentary farms in Monkoto and surroundings since the start in 2008. WWF DRC aims to help establish 150 sedentary farms in the years to come. In Monkoto sedentary farms are part of a larger scheme of husbandry for which cows have arrived for meat production. Livestock as an alternative source of protein, meant to reduce the hunting of animals in the forest.

Sedentary farms reduce deforestation and dependency on the forest and drive sustainable economic development. They are important for forest and biodiversity conservation, food security and social stability. The model of sedentary farms in Monkoto could be replicated all over central Africa and in tropical forests around the world.

Contact person sedentary farming at WWF DRC:  
Papy Lolatui, rural development officer  
Email: [plolatui@wwfdrc.org](mailto:plolatui@wwfdrc.org)

Right: Ekumba Benz and three of his eight children at his sedentary farm in Monkoto. Green maize in the back, pineapples in front.



The village of Monkoto, west central DRC.

