Natural regeneration of forest for environmental and socio economic development in Bas-Congo, DRC

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- Congolese subsistence farmers increasingly rely on degraded marginal savannah lands for food production and firewood collection.
- These degraded lands were abandoned after decades of deforestation in the province and provide very little wood resources and very low yields. Local communities burn the savannahs every year to capture small rodents for consumption.
- Communities are concentrating around the Luki Biosphere Reserve, where resources are still abundant. As a result, the Luki Biosphere Reserve is highly threatened.
- This project aims at reducing the impoverishment of communities in and around the Luki Biosphere Reserve by restoring the forest ecosystem in the degraded lands.

- Together with local community based conservation groups, we identified the most suitable places for forest regeneration.
- Awareness raising programs were established to stop burning the savannah and firewalls were installed to prevent propagation of fire from the surrounding areas.
- A first plot of 88 ha was established in 2005 in the Manzonzi village. By June 2016, the aim is to turn 5000 ha of savannah back into forest.

- After ten years of natural regeneration, we have observed a gradual restoration of biodiversity.
- The only fire-resistant tree Hymenocardia acida lost ground and left space to various pioneer species as Macaranga spinosa and forest species as Anthocleiste vogelii.
- Progress towards a restoration of the birds and mammals population was observed. The absence of fire enabled the soil to slowly develop again and to restore its fertility. Local communities notified/percieved the restoration of water sources.
- Local communities are satisfied about their work as this biodiversity offers opportunities as:
  1. - Hunting
  2. - Firewood collection
  3. - Agriculture on the restored soils.
- The community based conservation groups and WWF are working on a sustainable management of these new patches of forest.

This project is part of the REDD+ program of DRC with the greater objective of mitigating climate change.

In 2015, the aboveground carbon was estimated on 41.8 ± 1.30 ton C/ha or 153.4 ± 4.8 ton CO2 /ha. Further research is needed to create a growth curve of the trees to estimate carbon storage over time.

We hope to generate carbon credits that can be invested in local socio-economic development.