COMMUNITY AGRO-FORESTRY TO RECONCILE FOOD SAFETY AND ENERGY SAFETY

DR CONGO – NATURAL RESOURCES MANAGEMENT – MITIGATION, ADAPTATION – REPLICATION

Context: The disappearance of dry forests in Katanga province

The mining city of Lubumbashi, which was founded in the 1920s, is the capital of Katanga province in DR Congo and has a population of two million. Food and energy requirements are satisfied by shifting slash-and-burn cultivations and charcoal production. The demographic growth of Lubumbashi is accelerating large scale degradation of savannah woodlands and dry forests (Miombo). Deforestation and degradation of forests are the main cause of Greenhouse Gas (GHG) emissions in DR Congo and they are increasing the population's vulnerability to climate change.

The solution: Community agro-forestry perimeters

As part of the Afodek project, GRET is supporting the sedentarisation of agricultural practices of 150 families producing charcoal on 2,000 hectares on the outskirts of Lubumbashi. Within an agro-forestry system, the aim is to exploit the fertilisation potential of the land with acacia, planted along with corn or cassava. For the provincial government, this reforestation project also makes it possible to prevent the disappearance of the Miombo woodland and to channel urban expansion. Several actions have been defined: development of agro-forestry areas and support to social structures in charge of managing them, dissemination of agro-ecological techniques and the construction of housing with a low output of GHG. This combination enables:

- **Positive effects on development** with families who will benefit from concrete houses, latrines, access to drinking water and an increase in their income.
- **Mitigation of GHG emissions** through carbon sequestration by the trees planted. These trees provide an alternative to logging in natural forests for the production of charcoal and minimize the practise of shifting slash-and-burn agriculture. The construction technique used to build the houses avoids using bricks traditionally baked using wood from the surrounding natural forests.
- **Adaptation to climate change** by promoting the diversification of agro-ecological cultivation and techniques that minimize dependency on inputs and strengthen the resilience of local populations.
Initial results (since 2013)

- 130 hectares of agro-forestry have been developed by families who have doubled the surfaces cultivated and yields.
- Approximately fifteen houses were built using low-carbon techniques that can be reproduced by farmers and approximately fifty more will be built this year.
- Measurement of carbon stock and preliminary assessment of the potential to reduce emissions using existing carbon certification methodologies (carbon sequestered or even avoided deforestation).

Challenges and questions

In order to implement this solution, several conditions must be met:

- Clarify the tenure of the land on which the first agro-forestry plot will be built and adjust the appropriate land tenure security option;
- Promote the creation of a structure to manage the agro-forestry area capable of financing and organising the supply of collective services to farmers and of representing their interests;
- Adapt the agro-forestry technical itinerary to the specific agro-climatic and socio-economic features of the local context as well as to the capacity of farmers;
- Design and implement a policy for the dissemination of agro-forestry techniques in the villages beyond the agro-forestry area to avoid displacement of deforestation.

Recommendations

- Invest in a high quality agrarian and territorial assessment (good agro-climatic, social and economic knowledge of the region, including land tenure) in order to adapt the agro-forestry technical itinerary appropriately.
- Invest in research and action approaches that will make it possible, during the project, to adjust the agro-forestry itinerary to the capacity of farmers and the estimated impacts in terms of mitigation of GHG emissions.
- Support the creation of the structure to manage the agro-forestry area based on farmers' requirements rather than imposing a governance model.

Further information:


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