

## HUMID FOREST ZONE CASE STUDY 3

### Agricultural Reclamation of Nueng North Forest Reserve in the Western Region of Ghana<sup>1</sup>

#### BACKGROUND

Neung North Forest Reserve lies at longitude 2° 30' 0"W and latitude 5° 20' – 5° 30' N located in the Wassa West District in the Western region of Ghana. The average annual rainfall is between 1700 – 2000 mm and the soils are of highly acidic latosols. These soils also contain deposits of gold and diamond, and the forest is of the wet evergreen type. Close to the forest reserve is the town of Agona Wassa, which has a population of about 3000 made up of two groups of people. The first group is the indigenous Wassa people, who constitute about a third of the population. This group is mostly subsistence farmers who farm in areas outside the forest reserves. The second group, the largest, is made up of migrants and consists mostly of young men and women of many other tribes (Ashantis, Fantes, Frafra's Gas etc). These migrants came to the town to search for gold and diamonds in the Neung Forest Reserves. The *modus operandi* of the miners, all of whom were illegal, was to sneak out in the night into the reserve clear an area of all trees and shrubs and dig trenches some as deep as 10-12 metres and from these trenches collect the soil and pan for the minerals.

As a result of the activities of these miners, the forest reserve has been significantly fragmented, with many deep trenches between patches. This type of mining activity was prevalent in many areas in Ghana. Consequently, the Ghana Mineral Commission, which has responsibility for all mining operations in Ghana, applied for a credit from the World Bank to pilot the reclamation of the degraded forest reserve with a view to transferring the technology and experience gained to other mining areas. The reclamation project was approved for two years and started in 2000 to close at the end of 2001.

#### OBJECTIVES

The objectives of the reclamation were:

- To return the degraded forest as closely as possible to its original status conforming to the landscape".
- To increase the biodiversity as well as serve the economic and social benefit of the community".

#### APPROACH

The Mineral Commission designed the project and contracted its management out in two phases. The first phase was contracted to Messrs Nossoe Engineering Co. Ltd., an engineering firm with expertise in filling trenches outside forests. The contract involved trench filling by felling trees

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around the trenches, cutting them up into pieces and placing the pieces in the trenches until the trenches were filled up. The pieces of wood were then covered with sand. Thus, although the trenches were filled, they caused further degradation through the tree felling activities. The second phase was contracted to Arbor Nova, a Forestry consultancy firm, with the Forestry Research Institute of Ghana (FORIG) as a partner. This second contract consisted of planting trees in the trenched areas.

It was only during this phase that the District Manager of the Forestry services Division at Tarkwa, who had oversight responsibility, was informed of the project. It was also during this phase that the chief of the town was fully briefed about the project.

The activities conducted during the second phase consisted of:

- Digging holes of 500 x 500 x 600 mm in the filled trenches and filling these holes with organic matter at a rate of 5m<sup>3</sup>/ha;
- Planting of seedlings of the following indigenous species: *Heriteria utilis*, *Nauclea diderichii*, *Tieghemella heckelli*, *Entandrophagma utile*, *Khaya ivorensis* and *Terminalia ivorensis*;
- Watering the seedlings until they were established;
- Spot weeding around the seedlings;
- Protecting the seedlings from fire by creating fire belts around the rehabilitated areas.

## **RESULTS**

The major achievement of this project was that 45 ha of degraded areas were rehabilitated with indigenous timber trees. The benefits from the trees to the local communities, however, will only be realized about 40 years later when the trees are harvested.

The project saw very little involvement of local people since the contractor in the first phase brought most of its workers from outside the village and in the second phase only a few young men and women participated as hired labour.

Furthermore, even when the project was going on in one part of the reserve, the illegal miners were operating at night in another section of the reserve. There has been a report that the miners went back to work in the rehabilitated areas after the project was over.

The essence of the rehabilitation was to remedy forest fragmentation and achieve increased biodiversity as well as economic and social benefits to the local communities. This unfortunately has not been achieved, as illegal miners still operate in the reserve, including areas which have been rehabilitated.

## **REASONS FOR FAILURE**

This project has not been successful. Very little progress has been made in any of the two stated objectives. The following are some of the main reasons for the observed failure:

- The Mineral Commission designed the project without the involvement of other stakeholders especially the Forest Services Division, which had over-sight responsibility, and the chief and people of Agona Wassa who are the traditional owners of the Forest Reserve.
- There was no awareness creation among the citizenry of Agona Wassa on the impact of the activities in the forest reserve.
- The contractor hired to refill the trenches did not have the expertise to execute the job correctly.
- In the project design, there was no activity nor provision made for identifying the needs of the local communities and for improving their socio-economic conditions through the project. Furthermore, no provisions were put in place to prevent illegal miners from returning to the forest reserve, thus to sustain the benefits from the project. No wonder illegal miners did not stop their activities during and after the project.

## **LESSONS LEARNT**

From this project, the following fundamental lessons are to be learnt for successful rehabilitation of degraded forest reserves:

- All stakeholders, including local communities, should be involved both in the planning and implementation of the project. The needs and aspirations of the forest fringe communities should be properly assessed and taken into account in project objectives.
- The project design should make provision for ensuring project sustainability through preventive measures as well as through incentives to stop the people from repeating the activities responsible for the land degradation.
- Contractors or consultants employed to execute rehabilitation projects should be carefully selected, matching their expertise with the tasks to be performed.

## **RECOMMENDATIONS**

### **Policy**

- The policy on mining in forested areas should make a provision for the development of sustainable livelihood programmes in fringe communities,

- Land-use policies that have been developed should be implemented in all forest communities,

## **Management**

- Forest rehabilitation projects should be participatorily designed, with the involvement of all relevant stakeholders and experienced experts in degraded land rehabilitation.
- The Mineral Commission of Ghana should, in consultation with other land management authorities, develop standardized methods of rehabilitating mining areas, as this type of degradation is now widespread in the country.
- There should be a start-up workshop involving all stakeholders before the rehabilitation project begins, to discuss objectives, expected outputs, detailed activities to achieve the objectives, the role and responsibilities of every stakeholder, as well as requirements for effective enforcement of forest protection laws in the project area.
- The selection of contractors for projects should be done through competitive bidding, which is open and transparent, so that the right contractor can be employed.

## **Research**

Research into the underlying factors for the degradation and ex-ante assessment of the impacts of the rehabilitation project should be carried out in order to identify socio-economic constraints, judiciously orient project objectives and activities and anticipate additional policy measures needed for the successful implementation and sustainability of the project.