

JATROPHA PROJECT IN GHANA: HOW TO RESTORE VEGETATION AND ECOSYSTEM ALONG MAJOR MAN MADE LAKES AND WAYS TO RAISE FINANCE

The jatropa project in Ghana is collaboration between the public sector and a private sector company.

After the initial work done by Anuanom Industrial Projects Limited, in the areas of the development of jatropa propagation technologies, physic nuts processing technologies, the successful conversion of jatropa oil into bio diesel that passed various chemical analytical and physical tests, and the development and production of high crops yielding organic fertilizers, in a pilot processing plant, it became necessary that jatropa plantations be established to support large scale bio diesel production in the country.

The ultimate target of the project is to develop about 1 million hectares of jatropa plantations on available idle and degraded lands in phases for the next 5-6 years.

The project when implemented is intended to achieve the following benefits:

- (i) Biodiversity protection
- (ii) Soil conservation and erosion control
- (iii) Protection of Water bodies
- (iv) Sustainable forest management
- (v) Job creation through the maintenance of jatropa farms and the harvesting of physic nuts for sale, leading to the creation of wealth and the reduction of poverty in local communities.
- (vi) Produce physic nuts for the production of crude jatropa oil and bio diesel to replace fossil diesel and avoid the emission of Greenhouse - gases (GHGs)
- (vii) Produce fertilizer to support local food and other agricultural crops production and export the excess.

Structures for the Implementation of the project

In order to implement the project, a National Jatropa Project Planning Committee was established to properly plan and develop a stage wise implementation strategy to ensure success of the project.

The committee is made up all Government Ministries and Agencies connected to jatropa/bio diesel production and distribution value chain and Anuanom. The Hon. Minister of Food and Agriculture ably chairs the committee.

A technical sub-committee was setup and tasked with the preparing of a detailed technical report on the implementations of the seed farm and the first 40,000 hectares of plantation. The sub-committee submitted its report, which paved the way for the implementation of first seed farm to be followed by the main plantations.

The programme includes the training of Agricultural Field Officers who will assist farmers on their farms. Jatropa farms need to be properly taken care of and hence the need to assist farmers to understand and adhere to such practices for maximum yield.

The Initial Project Implementation Programme

All the necessary arrangements have been completed for the establishment of the seed farm, which even though was originally indented for 250 hectares but has been modified to increase to 400 hectares. The implementation of the seed farm is to start before the end of the year.

The seed farm is for the production of quality seeds to be supplied to all would be participating farmers in the national jatropha plantation project.

The implementation of the first 40,000 hectares plantations is to begin early next year.

The Role of Districts and Municipal Assemblies and Agric Directors in the Jatropha project

The plantations have been planned to be developed in all the districts of the Country. It is anticipated that in so doing the benefits from the project will be fairly distributed in the country. However, Districts with large idle or degraded lands will be allowed to develop plantations with respect to land availability.

The national programme requires the full participation of all District and Municipal Chief Executives and district directors of Ministry of Food and Agriculture to ensure the success of the programme.

The district chiefs and Agric directors are expected to take the project as their own project and nature them into success. Registration of farmers and lands for the project are under their control. Some districts have already completed this exercise and others are yet to complete.

For the first phase implementation of the 40,000 hectares, about 30 districts have been selected to begin with the project. Most of the Chief Executives of these districts are present in this workshop.

Participating districts are expected to gain from the following benefits from the project:

1. Enhanced Employment Opportunities in the Districts
2. Restoration of hitherto poor vegetation, ecosystem and improved biodiversity.
3. Increased revenue generation and poverty reduction.
4. Increase in commercial activities and improvement in general living conditions of the people.
5. The linkages of the jatropha project will provide market for cassava, sugar cane, sweet potatoes and sugar loaf pineapple producers.
6. Factories could spring up in the districts to process some of the above-mentioned products

The full participation of the district and municipal assemblies in the projects among other things is crucial for two important reasons:

1. To create employment for the youth in the local communities and
2. Reduction in Poverty and Rural Urban drift.

Lands surrounding the Volta Lake for Afforestation

Greater proportion of Ghana's national electricity supply comes from hydro - electric power generation from dams established on the Volta River. There is doubt that without the establishment of the hydroelectric dams on the Volta River Ghana's development would not have reached where we are today as a nation.

However, before the Akosombo hydro - electric dam was created in the 1960s the rivers flowed through tropical rain forests and communities living along the Volta River and other Rivers such as Afram that have been swallowed up by the lake, lived in complete harmony with nature and were able to obtain all what they needed from the lands along the Rivers.

But the creation of the lake changed every thing. Large areas of lands were completely covered by water destroying all trees within its catchments areas and leaving its banks with dry savannah lands covering thousands of hectares where biodiversity was completely destroyed, rainfall pattern has become very erratic and greatly reduced making normal farming activities impossible. The ecosystem was completely destroyed and local communities displaced. Even though the Volta River Authority did well in resettling these displaced communities, the source of their livelihood was no more and therefore most of them could not stay in their new settlements areas. Even after over 40 years of the creation of the lake one can visibly see thousands of tree stamps still in the lake. The activity of creating the dam for the generation of electricity was and still very good and has helped in the development of the country and still does, but it left lands on both sides of the lake completely degraded without tree cover, dried up soils and left them without nutrients, there has been so much erosion whenever there was any rainfall, sending lots of silt back into the lake.

It is estimated that lands degraded as a result of the creation of the Volta Lake alone, are over 500,000 hectares, covering both sides of the lake, from the Volta region, through the Eastern region to parts of the Brong Ahafo region all in Ghana

The Ghana jatropha project has therefore earmarked the banks of the Volta Lake as its major sites for the jatropha afforestation programme.

By the afforestation of the banks of the Volta Lake, tree cover will be provided within a short period of time, because the jatropha tree matures from 12 months after planting, there will be soil conservation and erosion control and hence reduced silting of the lake. Tree cover along the banks of the lake will help reduce the rapid evaporation of the water in the lake during warm weather, biodiversity will be restored, community members who abandoned their homes will go back to plant jatropha trees, because they will sell the nuts and earn some income or simply obtain employment from large plantation owners. Above all, farmers and plantations owners will benefit from the sale of Certified Emission Reduction to Annex I companies due to carbon sequestration of the trees under the CDM Programme.

In this way the current degraded lands along the Volta Lake will be restored into permanent forest areas that will open up new opportunities for the Country; the Volta River Authority (the owners of the lake), project promoters; investors, local communities along the banks of the lake and biodiversity.

The project will promote sustainable development of the areas through organic agriculture, forest enrichment and ecotourism while at the same time, providing jobs to the local people and physic nuts to processing companies for the production of jatropha crude oil and bio diesel to replace fossil diesel.

Monitoring activities will measure the amount of carbon sequestered and missions avoided over the course of the project.

Additional Benefits:

- Deliver vital environmental services such as soil conservation, erosion prevention and protection of water bodies
 - Generate much-needed employment for local residents
 - Contribute to sustainable development by providing alternatives to traditional land-use practices, such as ecotourism and organic agriculture
- Raise environmental consciousness among local populations through education.

Land Acquisition

The project promoters plan to invite landowners to become part owners of the project by using their lands as their equity contribution. This process has already begun. Since the area is so large, development will be carried out in phases.

The Host Country

The Government of Ghana is already providing full support to the project.

Project Financing

The project promoters intend to among others, develop the project for Clean Development Mechanism (CDM) financing. The area was degraded in the late 60s and therefore qualifies to be used for an afforestation project with CDM financing. The project promoters will therefore want to take this opportunity to invite investors into the project. There is enough information on the area for the preparation of a feasibility report for the project.

Here is some estimates for the avoidance of Green House Gases (GHGs) through carbon sequestration of the Afforestation/Reforestation of about 1 million hectares of jatropha trees:

Total estimated Carbon	349,250,000 tonnes
Total estimated Carbon dioxide	128,069,976 tonnes

Through the use of bio diesel produced from Jatropha oil will help avoid the following:

Nitrogen	10,500,000 tonnes
Carbon (carbon monoxide)	14,000,000 tonnes
Carbon dioxide	10.500,000 tonnes

Conclusion

The youth need jobs. In the search for jobs the youth from the communities travel ail over the World and some of them land themselves into all sort of problems in foreign lands, some even lose their lives in the process.

We are aware that the youth in other African Countries are facing similar fate. Some of us have dedicated our lives for this project, because we know from the work we have done so far, that it holds the potential to provide jobs for sizeable number of our youth. I will therefore call on all who love the survival of Africa to support this project with funding and facilities for further research and training.

For the strength of Africa is being wasted on the streets of our major towns, cities, in the Oceans and on the deserts. "For the strength of any nation is inherent its youth". If the situation of the youth of Africa continues like this for the next 50 years, imagine what will hapen to African nations.

Let me there take this opportunity to express my gratitude to the organizers of this workshop. Thank you.