The Role of Tree Planting in Poverty Alleviation of Northern Ghana: A Case Study in Yinyulanyiri

Introduction

Afforestation which is the establishment of forest by the planting of trees or by natural succession is a laudable idea with enormous benefits especially in arid areas like northern Ghana. The goals of afforestation programmes can generally be grouped into economic, social and environmental, but most often the economic benefits supersede the rest. It is expected that forest plantations will play an increased role as a sustainable, environmentally and socially friendly source of world fuelwood, non-wood forest products and other social and environmental values. As a perspective, it is envisaged that tree cover provided on degraded lands will help rejuvenate the soil but most importantly provide for the fuelwood needs of the local population which by extension plays a vital role in poverty alleviation.

Objectives

The main goal of the study was to assess the biological resource of the Yunyolanyilli community plantation resource survey was to ascertain the amount of land that was forested in two years.
The specific objectives of the survey were:

- To ascertain the area of degraded lands that have been forested
- To assess the survival rate of the forested areas.

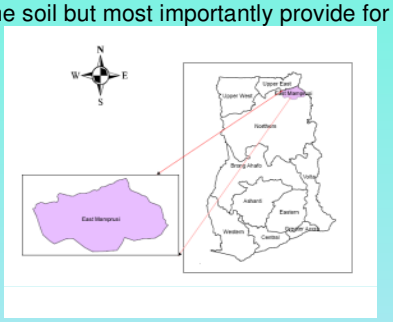

Fig. 1: Map of Ghana indicating project area

Materials and Methods

The study was carried out at Yunyolanyilli located in the East Mamprusi District of Northern Region, Ghana (see figure 1). The plantation was established by the community with GIZ providing tree seedlings and technical expertise. The plantation was established with two species *Senna siamea* (cassia) and *Azachdirata indica* (neem) in alternating rows of three. A digital mapping of the forested area was carried out using a GPS.The tree population was estimated based on the area of the plantation and the planting distance. The plantation was divided into two stands based on the year of establishment which are 2008 and 2009. To sample any row of trees, a random starting point was taken for the first plot. The next plot was taken 15 metres away from the end of the first plot. This was repeated until a row could no longer be sampled and then another row was taken and the process repeated. In all twenty permanent plots (105m²) were plotted, ten plots for *Senna siamea* and ten for *Azadirachta indica* stand. Living tree species within the sampled plots were counted.

Results and Interpretation

- The total forest area for 2008 and 2009 was revealed to be 1.4 ha (see figure 3).
- The total number of living trees for the 2008 and 2009 plantation area was 1570.
- The survival rate of the planted trees species for 2008 and 2009 are presented in figure 2.

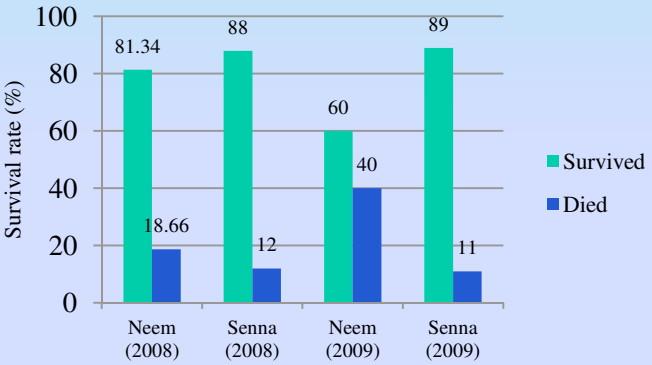

Fig. 2: Survival rates of neem and cassia in the two planting years

Fig. 4: Pictures of Senna (left) and Neem (right) stands

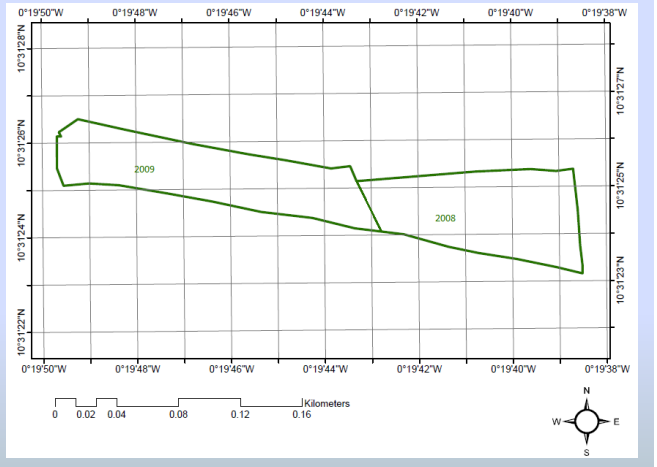

Fig. 3: GIS map illustrating planted areas for 2008 and 2009

Conclusions and Recommendations

The 2008 and 2009 planted area of 1.4ha . The survival rates of *Senna siamea* was higher compared to *Azachdirata indica* plantation established in both years. The initiative by the community is laudable and more rural communities should be encouraged and aided to go into community owned plantations. The community owned plantation will be sustainably used by the community which in one way or the other can contribute to the reduction of rural poverty. The Yinyolanyiri community is however encouraged by this and is increasing the planted area each year.

DAMIAN TOM-DERY[1], ECKERT FREY[2], ABUKARI Z. IMORO[1], JOSEPH K. KORESE[1] ,STEFAN FROELICH[1]
[1]University for Development Studies, [2]German International Cooperation (GIZ)