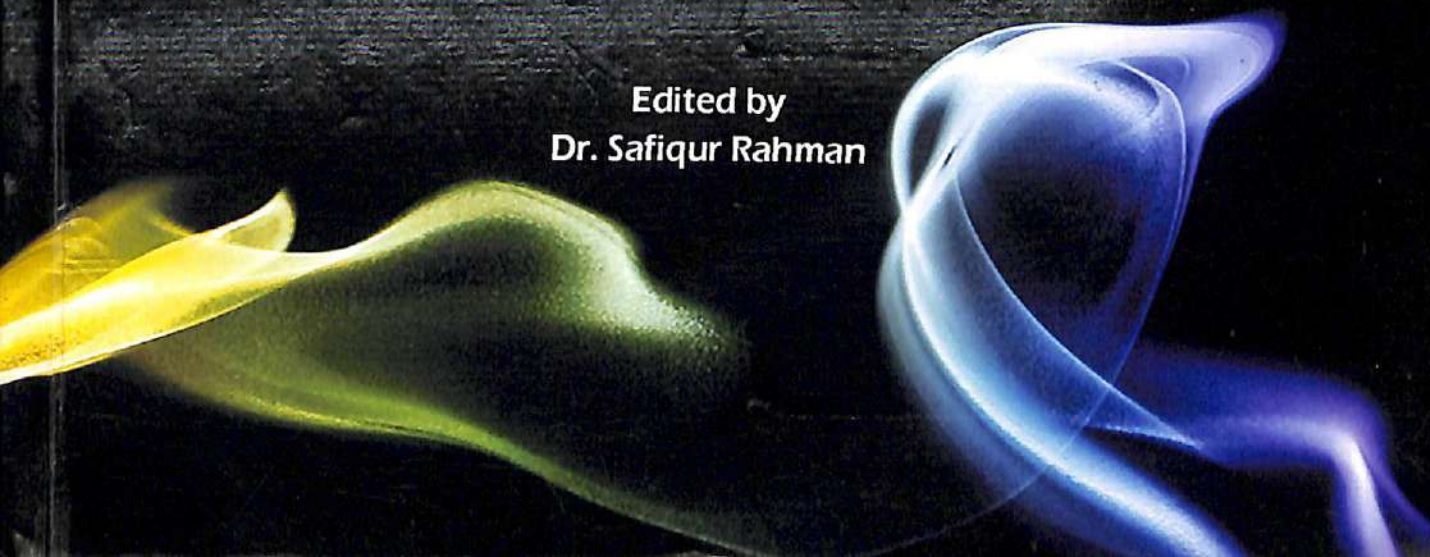


# PANORAMA



**UNITY EDUCATION FOUNDATION  
GUWAHATI**

Edited by  
**Dr. Safiqur Rahman**



***PANORAMA***  
***International Book of Multidisciplinary Studies***

# PANORAMA

*International Book of Multidisciplinary Studies*  
(Research Papers and Articles)

Issue-I : Volume-I



**Unity Education Foundation**  
Guwahati

*Edited By :*

**Dr. Safiqur Rahman**

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### Editorial :

With the emergence of Knowledge Society, we are not debarred from any piece of information. It also means full understanding of distribution of knowledge, access to knowledge and capability to transfer information into knowledge. It represents a new paradigm for a sustainable development. This can be possible if there would be coordinated studies on technology, economics, law, political science, philosophy, sociology, psychology, pedagogy, cultural studies, linguistics and other spheres. Hence, the present volume, 'Panorama' is such an effort to bring multidisciplinary studies into one compendium to gain and to disseminate knowledge. This is our small contribution to provide a platform for the various research and studies to bring before the public. Therefore, the ultimate goal of the book is to draw knowledge, information and understanding to attain certain accomplishment.

The editorial board member consists of prominent academicians from the reputed Institutions and Universities. The main objective of the book is also to publish reviews, research study, review articles, technical notes, short communications, and case study based on its originality, importance and well finding research contents. The selection of paper, article is strictly adhering to the publication policy and guidelines. The present volume consist of 28 research papers, articles and reviews that represent multidisciplinary studies.

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## Planting Timber Woods : Costs and Benefits Analysis

Mangal Sing Kro

**Abstract :** *The high demand and supply gap of timber increases its market value. The higher demand for timber with compared to its supply, therefore, makes more profitable for those who plant trees in the present day. Planting timber woods is like a life insurance which returns a big economic benefit like we insure ourselves under the insurance corporation. It returns the benefit even after the death of a person who plants trees. It is also like a fixed deposit account which returns the benefit after a long time. Moreover, it produces immense positive externality that keeps cool and calm environment. This paper will analyze hypothetically the cost and benefit of planting timber woods. The analysis is based on asking some questions to the planters, woodcutters, and on own personal observation.*

**Keywords:** *Environment, Externality, Life Insurance, and Plantation.*

### 1. Introduction

The over-exploitation of forest area or rapid deforestation is threatening the future generations to compromise their needs. According to FAO (2016), there was a net loss of 7 million hectares of forest area per year in tropical countries in 2000-2010. The exploitation higher than its generation will be multiplying the pathetic situation which will stand as a big challenge in front of the upcoming generations. The leading causes of deforestation are the extensive subsistence agriculture which is very common in Asia, Africa and Central American countries and government-backed conversion of forest to other land uses. According to FAO, nearly 200 million hectares of forest area has been lost between 1980 and 1995. This overexploitation leads to a big gap between demand and supply of forest products. The population explosion is accelerating its demand and leads to increase its market values. Today, therefore, purchasing forest product like timber is very costly.

The supply of forest product is decreasing day by day due to overexploitation and low rate of aorestation. Generally, 33% (desired level) of the land area should be covered with forest, but today in India, we have only 19% forest area. The people are reluctant to planting trees but they want to exploit more for the sake of their own personal benefits. They do not want to invest (except a few people) on timber woods (planting timber woods) although it takes a long time to get the output. But it is a very profitable investment if we are going to calculate

*Ex-student Gauhati University*

its return. Planting timber woods has dual returns, e.g., return from land and return from the woods itself. The market value both land and woods are increasing day by day due to their excessive demand. Planting timber woods has huge positive externalities, like keeping cool and calm environment by generating oxygen and absorbing carbon dioxide, reducing soil erosion, protecting flood, the shelter for birds and so on which are not taken into our calculation. It is like a life insurance like we insure ourselves under Insurance Corporation.

The planting timber woods is generally very convenient for the rural area although the density of population in the rural area is less than urban area and the land value in the rural area is less than the urban area. Yes, it is true that planting of timber wood involves the opportunity cost. But although rural areas have unused productive land (land having fertility which is not in used) therefore planting of timber woods in such land will generate income. The person who wants to invest in plantation will be better if he plants whose market value is high and suited in the soil. This paper will analyze the costs and benefits of the plantation of "Teak Tree". Teak is relatively easy to establish in plantation and because of enduring global demand for teak wood products, it has good economic as a plantation (Ladrach 2009).

This paper is divided into seven sections. The section one is introduction and the rest are objective of the study, methodology, analysis and discussion, the problems in plantations, suitable area and household and the last section is conclusion.

### 2. Objective of the Study

This paper will try to analyze the costs and benefits of planting timber woods by taking the example of the teak tree.

### 3. Methodology

The market demand for timber as well timber products are very high, therefore, their market price is very high as well. Today, purchasing of timber product of good quality woods is not very costly only; timber products of good quality woods are becoming scare as well. In this paper, the teak tree is taken as an example for measuring costs and benefits analysis. The analysis is based on the questions asking to the planters, woodcutters and on my own personal observation. The unit for the measurement of woods is cubic feet (cft). The formula of cubic feet is

Length (inch) x Width (inch) x Height (inch) = Cubic Feet

For example, length 12 inches, width 12 inches and height 12 inches, then  
 $12 \times 12 \times 12 = 1728$  cubic inches, now 1728 cubic inches is divided by 1728 (there are 1728 cubic inches in a cubic foot) i.e.,  $1728/1728 = 1$  cubic foot. And we can also use the following way to measure the cubic feet.

Length (feet) x Width (inches) x Height (inches) = Cubic Feet

For example, 12 (feet) x 12 (inches) x 1 (inch) = 144. This 144 is divided by 144 to find out cubic feet i.e.,  $144/144 = 1$  cubic foot.

The data used for analysing costs and benefits of plantation have been collected from the planters, woodcutters, sellers of timber, sellers of wooden products and on own personal observation from Biswanath, Goalpara and West Karbi Anglong district of Assam. Data have been collected by direct personal interview.

#### 4. Analysis and Discussion

Plantation of timber woods is one of the long run profitable investments. The most important requisite for this investment is a suitable land area. The investment in plantation generates immense of noneconomic benefits besides economic benefits. The trees release oxygen which we inhale and absorb carbon dioxide which we exhale. It reduces soil erosion, prevents from desertification and so on. It keeps balancing the environment. Now a day, due to its overexploitation demand of timber and timber products have been increasing day by day. The economic benefits return from planting timber woods is shown with the help of the teak tree (the price of per cft is different in different places as per direct investigation; it lies between Rs. 1000 to Rs.1500, therefore, here Rs. 1200 per cft is taken for the analysis). For example, if a person plants 300 teak trees and if each of the trees has 20 cft (average) after 20 years and the market price of 1 cft is suppose Rs. 1200 then after 20 years per tree will return  $20 \times 1,200 =$  Rs. 24,000. The total money return from 300 trees will be  $300 \times 24,000 =$  Rs. 7,200,000 (Seventy-two lakhs rupees). Moreover, the value of land is also increasing day by day due to increasing demand. The population explosion leads to decrease land per head that pushes up the demand. Therefore, more return from the land is also inevitable.

The costs of planting timber woods include expenditure on land, costs of rearing including other maintenances, expenditure on purchasing of saplings and opportunity costs. If per sapling costs Rs.20, then the total costs of 300 saplings will be  $20 \times 300 =$  Rs. 6,000.

#### 5. Problems of Plantation

The main problem of planting timber woods is the selection of land area. The land should neither waterlogged nor very high altitude land. It needs suitable land and will be convenient for the rural area although rural areas have the suitable land area for plantation. Secondly, return from plantation takes a long time. The planters have to wait a long time for its economic return. The Third problem is the problem of rearing; however, the problem of rearing will be decreasing when it rises.

#### 6. Which Section of the Society will Get more Benefits?

Planting woods is one of the important ways of sustainable development. It generates immense positive externalities which spread the benefits to the neighbours along with the planters. Planting timber woods by someone reduces deforestation. That means planting timber woods provides benefits not to planters only, rather it provides to the surrounds as well. The lands in the urban areas are very scared, therefore, more plantations may not take place in the urban areas. But in the rural area, we have seen such suitable land for planting timber woods. There are many poor people who have their own suitable land for plantation. Some of the lands of poor people are lying vacant especially in the North East India. The poor people, generally, do not have life insurance policy and fixed deposit account. The most of them are, generally, depending on agriculture for their livelihood. They do other works after the harvesting. Many of the poor people have uncultivated land which is lying vacant. They, generally, do not know what to cultivate in such land areas. Therefore, in such land, the people could have been planted timber woods which might improve their economic prospects.

#### 7. Conclusion

Despite having varieties of plastics, iron and steel products in the markets the demand for wooden products is still very high. The supply of wood is the shortfall in its demand. The high rate of exploitation of forest area is multiplying the demand for wooden products in the market. Today purchasing wooden products, like wooden furniture, is very costly. The overexploitation of timber woods, on the other hand, badly impact on the environment. The overexploitation of timber woods leads to ecological imbalance. Therefore, today reviving ecological balance through entrepreneurship in the plantation is very important. The poor people should be encouraged to planting trees for ecological as well as for economic benefits.

#### References

1. Hussain, M. (2015). *Environment and Ecology: Biodiversity, climate change and disaster management* (3<sup>rd</sup> ed.). New Delhi, India: Access Publishing.
2. Food and Agriculture Organization (2016). *State of the World Forest: Forest and Agriculture: Land-use Challenges and Opportunities*.
3. Landrach, W. (2009). *Management of teak plantation for solid wood product*. International Society of Tropical Foresters Special Report. Bethesda, Maryland, USA. ●●



## About Unity

Unity Education Foundation is a knowledge enterprise formed by very highly qualified and experienced people with distinct objectives of creating innovative and practical solutions in the areas of Employability, HR and Career Development.

Unity promote and catalyses employment, education among unemployed youths. Create the process to embrace these unemployed youths into the mainstream in a sustained manner. The organization also facilitates them to emerge as productive assets and set the foundation for nation building which is envisaged in its logo. The Unity Education Foundation is not just another organization; it is truly what the name states - A Fresh Unity Platform - for making a better life. A new generation organization with a vision to set new benchmarks in the field of Employability Education.

Our main area of interest includes Education, Training, Counselling, Placement, Publication, Research, welfare of disabled and Peace initiatives in Assam.

There were many research oriented books which was successfully published and distributed among the colleges, universities, scholars, policy makers, academicians and experts.

In the past, the Unity Education Foundation had also collaborated with Educational Institutes and Universities to organize National and International Seminars, Conferences and Workshops in the region.

The organization would carry on with these initiatives in the field of research and education. Besides, by the year end there are few more National and International Research Books also lined up for publication.

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