

Introduction :**Forest based Industries**

India is one of the most underdeveloped countries in the world. The industrialization of the country is crucial. The natural resources endowment of some countries has led to relatively high per capita incomes (Auty, R. M. (1997)). India is one of these underutilized countries, which has abundant natural resources. From time immemorial, human activities have been so closely tied to forests and forest products. The forest industry has therefore been a source of many industries in the past. Paper, plywood, fiberboard, particleboard, and other goods are manufactured from wood and non-wood forest products right now. Indian industries are heavily dependent on forest resources. Industries that are based on wood or those that are not.

The goods produced are pulp and paper mills, fiber boards and particle boards, matches, printing, sports items, and saw mills. There are also railway sleepers, agricultural implements, furniture and panels, packing (wooden) industries, shuttles and bobbins, pencils, slates, shoes lasts, wood carving, wooden toys, etc (Forest Products Laboratory (US). (1974)). Private companies produce a wide range of forestry products in India, while only a few are owned by the government. Forest products, however, are processed mostly by private companies. The main ones are katha, lac, oil extraction, resin and turpentine, oxalic acid, candle making, etc. Additionally, there are many industries that rely on non-wood 80 forest products. A mix of small, medium, and large businesses make up the wood based industries sector. Some industrial units are large and capital intensive, such as pulp and paper production, while others are smaller and labor intensive, which are ideal for supporting rural development (Shimamoto, K. et. al. (2005)). Agricultural implements, treated poles, woodworks, carpentry, rattan and bamboo wares, beekeeping, charcoal, and sawmills are some of these things.

The private sector currently produces over 90% of the country's wood products. As far as the major wood based industries are concerned, there has been no notable increase in production. In this way, there is a decreasing trend in the number of factories and a fluctuation in output over time (Heinimö, J., & Junginger, M. (2009)). The wood industries currently procure raw materials from farmers and social foresters (10%), government forests (30%), and the open market (60%) that also includes foreign wood imports.

With the demand for plywood, veneer, matches, agriculture goods, construction materials, and housing, hundreds of forest-based industries are growing. Forest biomass is also being used to generate electricity in a growing number of biomass plants across the country. Wood will be in short supply by 2020 due to increasing demand for wood and wood-based products (Moiseyev, A. et. al. (2011)).

More than 95 percent of the fuel wood and major timber needs are obtained outside forest areas, with approximately 40 percent of the forest products from outside forest areas (Repetto, R., & Gillis, M. (Eds.). (1988)). Forestry based industries are heavily reliant on forest and agroforestry plantations to meet their raw material requirements

Objective of the Study:

- To Study the impact of forest based industries on the Indian economy

Research Methodology:

Methodology in research is a systematic approach to identification of problems, collection of facts, data analysis and conclusions drawn, either as solutions to the problem or as generalizations for theoretical formulations.

Research is the systematic quest for knowledge, which is characterized by a discipline inquiry. A research project is a structured and planned approach to expanding knowledge that is efficient and effective.

A variety of research methodologies are available, “so the line of action must be chosen from a variety of options”. By evaluating the objectives and comparing different alternatives, we can choose a suitable method.

Data Collection

In order to accomplish the purpose of this study and to conduct the investigation, data has been collected both from primary and secondary sources:-

Primary data:

The primary data was collected through the Questionnaire method from **Madhya Pradesh**.

During the current study, data was collected primarily through the use of questionnaires. Based on the reviewed literature and through discussions with the research guide, a set of well-designed and self-structured questionnaires was framed which included demographic profile, close ended, open ended and five likert scale questions.

The structured questionnaire was divided into three parts”. “Part A consisted of questions related to the demographic profile of the respondents such as Name, age, education, marital status, monthly income and area of residence, and part b five point likart scale.

Secondary Data

Secondary data was collected from books, journals, research papers, websites, articles, and newspapers.

Historical Aspect of Forest industry:

Due to favorable environmental conditions and favorable climatic conditions, India had rich forest resource in the past. India's forests were ravaged by successive invasions during the pre-British period by successive waves of immigration. Following the Aryans, this post-urban people cleared large tracts of forests to expand cultivation. Sinha, V. K. (1999). A description of forests can be found in the Mahabharata and the Ramayana, which were written after Chandragupta Maurya (300 B.C.), when he appointed staff to protect forests. The planting of trees on the roadside and the cultivation of medicinal plants were of great importance during the reign of Asoka. Islamic invaders were not interested in conserving forests when they invaded the country. Brown, K. (2003). Early on in the British period, the country was heavily exploited for its timber resources. As time passed, the British became more aware of the need to conserve forests, leading to the adoption of systematic working and regeneration methods.

To improve forest management, the Brandis laid a solid foundation for the Forest Department. From 1871 to 1900, the Forest Department began to plan its operations. In Indian forestry, the first step towards conservancy was taken in the southern Malabar forests. India's first forest policy was announced in 1894 with the main objective of maintaining adequate forests as the main objective. Between the two world wars, the timber was over-exploited, resulting in a degradation of the forests. Kulkarni, S. (1987). The pre-

independence period was marked by a lack of public forest management plans; however, in the post-independence period there were many political initiatives taking place in response to the acquisition of large forest areas from princely states and "Zamindaries." This was the beginning of the concept of planned economy in the forest sector for India. In 1952, the Forest Policy of 1952 was promulgated with the aim of covering 33 percent of the country with forest cover. This policy is focused on the sustainable production of timber.

In this policy, the emphasis is placed on the protection and conservation of forests, but ignores the importance of common people being involved in forest management. The traditional system of forest management was in place until the early 1970s, and locals were not given an equal amount of importance. As a result of a National Commission on Agriculture report in 1972, it was suggested to create Forest Development Corporations that would facilitate bank financing for investments in production forestry, and increase large scale plantations through social forestry. Pande et al., (2004). From the state list, the subject "Forest" was moved to the concurrent list of the Constitution with the 42nd amendment in 1976. Since the Forest Conservation Act of 1980 was implemented, it has become mandatory for the states to take the approval of the Government of India before converting forest land for non-forest purposes with a provision for compensatory afforestation. A new ministry was created in the Central Government in January 1985 to ensure that emerging forestry issues would receive focused attention: the Ministry of Environment and Forests replaced the Ministry of Agriculture

Forest Policy:

There are more forests in Madhya Pradesh than anywhere else in the country. In addition to being a catchment area for many important rivers, the forests of this state are renowned for their rich biodiversity. Forests in the state are therefore extremely important for maintaining an ecological balance and conserving water. Verma et al.(2006) As far as wildlife conservation is concerned, the state leads the way. Wildlife management pertains to about 11.4 percent of the forest's protected lands (national parks and sanctuaries). More than 20 percent of the country's tigers are found in Madhya Pradesh, along with about 10 percent of the world's tigers. Thus, the state is often referred to as the Tiger State. Efforts to manage and protect forests have taken on a new dimension since the National Forest Policy, 1988 was implemented. This policy has given priority to the rights of communities that rely on the forest for their survival, as well as preserving the forest's ecological importance. As opposed to being market-driven, forest management is now geared toward community needs, particularly tribal women and other vulnerable groups. Madhya Pradesh has been a leader in forestry management in accordance with its National Forest Policy. The state of forests is considerably better than it used to be because of the efforts of the people in sustainable forest management.

As of now, the entire state's forests are being managed scientifically. There is a greater amount of forest cover. State-owned companies are the largest producers of wood and nonwood forest products in the country. In order to take advantage of the increasing socio-economic importance of medicinal plants, it is also important to increase their production on private lands in order to ensure their conservation, development, and nondestructive exploitation. Odera, J. (2004). Communities that depend on forests, especially tribes, other weaker sectors, and women, have been tasked with forest management and conservation, with joint forest management's support. In addition to the benefits of indigenous technical knowledge, participation in sustainable forest management also benefits the people. From time to time,

government resolutions are amended to ensure that joint forest management is increasingly people-centered and provides greater and greater benefits to communities dependent on forests.

The forest sector and employment:

The forest covers 21.34 percent of the geographical area of India, constituting a significant segment of land use. The area under forest is less than the required area, the per capita availability is only 0.06 hectares, and forests contribute a little over 1% of the national economy, yet they are still extremely important to Indian society as more than 100 million people live in forests, and another 275 million rely on them for their livelihoods. The livelihoods of a large number of Indians are deeply dependent on the forest ecosystem, because there is a huge population living in close proximity to the forest. Hegde et al., (2000). There are approximately 1.73 lac villages in and around forests (MOEF, 2006). Forested areas are important mainly because of the exploitation of forestry products and because so many products are used as raw materials in industrial production; they not only provide subsistence income for millions of low-income households, but they also contribute to the GDP as well as foreign trade.

Among the forest products harvested are wood, non-timber products like bananas, seeds and nuts, and palm oil, while secondary manufacturing consists of pulp and paper production as well as sawn wood and woodpanel manufacturing. It is estimated that 275M to 350M to 400M people are dependent on forests directly or indirectly (Banerjee and Madhurima, 2013) even though there is no official census figure for the number of forest-dependent people in the country. Non-timber forest products (NTFPs) provide livelihood support for about 100 million people who live around forests in India. It was found that NTFP-based small scale enterprises provide about half of the income of 20-30 percent of rural Indian workers; meanwhile, the NTFP sector accounts for 55 percent of all employment in the forest sector (Kumar et al., 2011). According to a study in Panchmahal district, tribal households earned 35 percent of their income from NTFPs. According to one study, NTFP collections generate over 2 million hours of labor annually (Basu, 2013). Around 41 million tribal people and forest dwellers in India make their living by selling these products after consuming roughly 60% of the NTFPs collected for personal use. Das, B. K. (2005). NTFP gathering, processing, and commercialization are often carried out primarily by women, which indicates that NTFP-related activities have the potential to empower women and raise their status in the household and within the community. Approximately 4-5 million poor people living in Orissa, mainly members of scheduled castes and scheduled tribes, rely upon forests for subsistence and much-needed cash during the lean summer months.

Economic development is influenced by forests:

The forest sector is an important source of wealth and income as well as employment and livelihood, along with the industries it supports. Be, C. C. (2015). We rely on wood as a raw material and a fuel for a large amount of our modern economy. Wood is a natural raw material and it is often a sustainable resource. In addition, wood can be utilized and repurposed in an extremely efficient way. The ECE trade in wood and forest products is one of the major wood and forest product sources. The forests of the region do, however, provide many goods and services that are not marketed and do not have a monetary value. As a result, economic problems and distorted perceptions of function are exacerbated. Because of the forest, the ECE region generates about \$300 billion worth of economic activity every year. Pomfret, R. (2014).. About 1% of the growth of the European and North American economies comes from the forest industry (wood) and 0.8% from the Russian economy. Van Dam, J. M. C. (2009). Around \$285 billion is spent on forest

products in the ECE region, mostly from the wood and paper industries. The shares of forest products in several countries exceed regional averages. Finnish (5.7%), Swedish (3.8%), Estonian (3.7%), Latvian (3.4%), Canadian (2.7%), Bosnia/Herzegovina (2.5%), Lithuanian (2.4%), Austria, Belarus, and Czech Republic (2.1%).

Forests contribute to the economic development of a country in the following ways:

The importance of forests to the economy of a country cannot be overstated. Wood is an important raw material in many industries. Rural households can also obtain wood energy from forests. Söderholm, P. (2003). Wood is the primary material used to make paper. An economy grows economically by more and more uses of paper, such as packaging, communication, and more. The market for alternatives to paper is quite limited. Additionally to providing wood fiber for many uses, forests contribute greatly to a country's economic development; however, their non-wood outputs are becoming more and more recognized throughout the world. Bruijnzeel, L. A. (2004). Forests have a significant impact on watersheds, particularly in areas with fragile soil or those prone to erosion; trees can be valued simply for their protective properties. Forested areas provide recreational opportunities. The types of forests that are suitable for outdoor recreation depend on the types of forests that are suitable for wood production. Recreationists are less attracted to densely packed forests than open forests with a greater availability of sun, moisture, and fertility. de Vries, S. (2005). There are many types of wildlife found in forests, including mammals, reptiles, and birds. Many species of these animals are important to mankind. Scientists have observed wildlife populations declining when tropical forests are cleared, and sometimes extinctions are the result.

CONCLUSION:

The Indian economy is affected by forest-based industries

Human well-being is supported by the forest in several ways (Claessens, H. et. al. (2020)). Aside from direct benefits such as wood, food, medicine, fuel, fodder and fiber, indirect benefits had an impact on the economy of the country and the people in general. As of today's prices, India's GDP was Rs.7161.110 million in 1993-94. A total of 29.8 percent of GDP was accounted for by agriculture, 20 percent by manufacturing, 12 percent by trade, 5 percent by transport, 11.4 percent by financing, 11.5 percent by services and 8.8 percent by others. With a GDP contribution of 1.3 percent, the forestry sector was the least important to the economy. The total GDP in 2001-2002 was Rs.20,94,013 crores. Forestry contributed Rs.23,798 crores to the total (Vantomme, P. (2003)).

According to government estimates, the forestry sector in 2001-02 generated revenues of Rs. 1,52,378.18 lakhs, with a large portion of this income coming from Madhya Pradesh, Kerala, Tamil Nadu and Uttar Pradesh. Karnataka, Uttaranchal, Andaman and Nicobar Islands registered considerable revenues (Guertin, C. É. (2003)). In Madhya Pradesh, Karnataka, Gujarat and Maharashtra the highest amount of expenditure was determined to be Rs.3,38,729.69 lakhs. During the year 2002-03, the total revenue was approximately Rs.1,39,323.02 lakhs. The majority of this revenue was collected from Madhya Pradesh, Maharashtra, Karnataka and Chhattisgarh. A total of Rs.3,33,577.52 lakhs were spent in that year, a majority of which came from the states of Gujarat, Madhya Pradesh, and Karnataka. There is no relationship between the data of revenues and expenditures of all states, thus implying that there is no relation between them.

The forest industry is a labor-intensive industry that requires various types of labor. Many rural and tribal poor people receive direct and indirect employment from forests and the diverse forest-based industries (Tewari, D. D., & Campbell, J. Y. (1995)). As per the National Forestry Action Programme (2000-01) for India, various plans and programs for forestry development are generated on forest and other government lands each year. Under agroforestry and farm forestry programmes, we generate 75 million man days every year. Around 100 million manhours are estimated to be generated by forest protection, maintenance, and harvesting. This generates a huge amount of employment in the forestry industry. Both the organized and unorganized sectors generate considerable employment in the processing of forest products. Through direct employment, self-employment, and secondary employment, the forestry sector contributes significantly to employment generation in India.

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