CHAPTER III

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CHAPTER III
INFORMATION AT GLANCE

3.1 Introduction:

The "Green Gold" of the 21st Century and commonly known as "Poor man's timber", bamboo played a significant role in human livelihoods since time immemorial and today it contributes to the subsistence needs of over a billion people worldwide. It has been traditionally used as fuel, food, for rural housing and shelter, fencing, tools and various other purposes. In modern days, it is being used as industrial raw material for pulp and paper, construction and engineering materials, panel products, etc. Bamboo, which can be grown easily, is much faster in growth than any known tree, and is eco-friendly and adaptable to various locality factors, is now becoming the most promising wood substitute. It has more than 1500 documented applications, ranging from medicine to nutrition and from toys to aircraft. Recently bamboo changing it is image from the "poor man's tree" to a high-tech, industrial raw material and substitute for wood, Bamboo is globally recognized now as an increasingly important economic asset in poverty eradication and economic and environmental development. Bamboo has always played an important economic and cultural role across Asia and its usage is growing rapidly in Latin America and Africa as well.

In spite of bamboo's importance worldwide the global statistics pertaining to its resources, production and trade remain rather scarce and inconsistent. The lack of reliable and comprehensive data on bamboo resources and utilization has been a cause of concern hampering it is sustainable development and limiting it is potential to contribute to poverty reduction.

From being termed as 'Poor Man's timber' to being called 'Green Gold', the perception of Bamboo, a versatile grass found mainly in Asia and Africa, has undergone a drastic change. The important characteristics that make Bamboo so useful are:

1. It has a short growth cycle which makes it highly renewable (the commercially important species mature in 4- 5 years).
2. Different parts of the plant have different uses and are obtained at different stages of it is growth thus rendering the plant useful during its entire life span.
3. Bamboo shoots of some species are suitable for eating and have high nutritional value.
4. The plant improves the environment in many significant ways including acting as an atmospheric and soil purifier.
5. It is hardy, light and flexible, thus a good substitute for wood.

The significance of these properties has bamboo is looked upon as a miracle plant in many cultures. As is clear from its properties and as has been recognised all over the world, Bamboo is a people's resource, more specifically a poor people's resource. While the inaccurate classification of Bamboo as a tree in our Forest laws bringing it under pervasive state control requires immediate rectification, the more important challenge is to not look upon Bamboo as an inferior forest produce suited for traditional and limited uses in the poor man's world but to explore its potential as a poor man's gold a vast reserve of unutilised opportunity. One unsavoury argument explaining the poverty of newly independent India had been its capital scarcity and the tendency of people to store away available capital in its most unproductive form- gold. We cannot allow that to happen to Bamboo. As we have progressed upon our path of development, often attacked as inequitable and indifferent and even detrimental for the poor masses, we cannot afford to overlook this opportunity.

3.2 World Bamboo Business:

Bamboo is naturally distributed in the tropical and subtropical belt between approximately 46° north and 47° south latitude, and is commonly found in Africa, Asia and Central and South America. Some species may

also grow successfully in mild temperate zones in Europe and North America.

Bamboo is most important and useful grass. It has prominent place in Asian people life due to its usefulness in India it is called as "poor people building woods" and in China as "friend of people" these titles are most appropriate according to its usefulness. It is clear with help of following data.

Table 3.1 Global bamboo scenario

Sr. No.	Bamboo acreage	Area (million ha)	Percentage of forest cover
1	Asia	24	4.4
2	*Africa	2.7	-
3	*Latin America	10	-
4	Worldwide	36	3.2

(Source: FAO, Yes Bank analysis 2008)

**reported by six countries (Ethiopia, Kenya, Nigeria, Uganda, United Republic of Tanzania and Zimbabwe)*

***Precise assessments are not available; a total of over 10 million hectares is a realistic estimate for the region.*

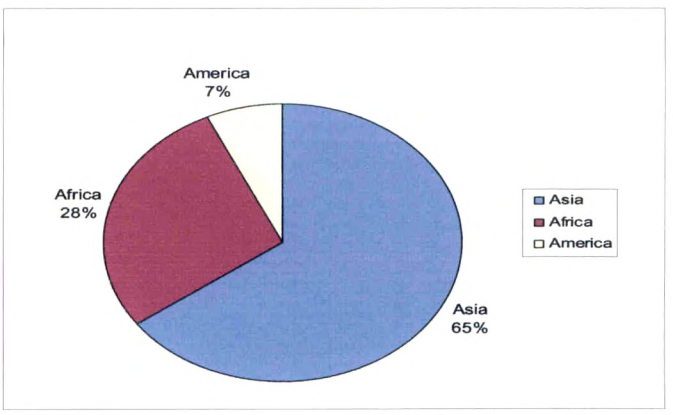
Table 3.1 it is show the bamboo coverage area upon the world. It is found that, in all over world there is 36 million hector areas under bamboo and 3.2% of the areas cover under the forest. As compared to the world Asia are highest captured areas under bamboo which is 24 million hector and within this 4.4% areas under forest. Thus according to above data it is found that Asia is richest in the bamboo production in the world Therefore Asian has lot of opportunity in the world bamboo business.

Table 3.2 Contributions to World Bamboo Resources by Continent

Sr. No.	Continent	Percentage of area cover
1	Asia	65
2	Africa	28
3	America	7

(Source: FAO, Yes Bank analysis 2008)

Chart 3.2 Contributions to World Bamboo Resources by Continent



(Source: FAO, Yes Bank analysis 2008)

From the table 3.2 and chart 3.2 shows the contribution to world bamboo resources by continent. It is found that Asia remains the richest continent in bamboo resources falling in the continent. There of the top six producing countries are from Asia. India and China are together account to approximately 45 percent of the world, bamboo resources with an individual share of 30 and 15 percentages respectively *(Sources Yes Bank Analysis 2008)*.

This data shows that Asia is the major bamboo growing area in the world. There is plentiful scope for greater bamboo production. Recently this

bamboo plant is acquiring greater popularity because it's major role in socio-economic development especially in rural as well as tribal areas.

3.2.1 World Bamboos Business Present and Feature Opportunity:

The world market for bamboo has been valued at Rs. 60000 crore (US$ 12 billion) in 2001 and is expected to grow to Rs. 100,000 crore (US$ 20 billion) or more is foreseen by the 2015. However India, China, Myanmar, Malaysia and Japan together have about 198 lakh h.a. of bamboo reserves. It means 80 percent of the world's bamboo market of this. India share is about 4.5 percentages in global market other hand China alone has captured 56% of the world market, exporting much as 20 million tonnes of varied product a year. India, 20 years behind china in commercial production, in India produce only 3.5 million tonnes of bamboo a year.

3.3 India Bamboo Business:

There are most 18 genera and 140 species of bamboo in India. In India 10.03 lack hectors land is cultivated for bamboo production. This well known bamboo is used to create mat, supa, basket, ladders, and construction material as well as paper industries only these limited uses are known to people but poor people useful bamboo is old identity now.

Today bamboo has reached to house of rich people. Day by day bamboo is used more and more to decorate gorgeous, through that why bamboo promotion require each and every level.

India has the largest area and the second largest reserve of bamboo in the world today. A very large standing resource of bamboo is found mostly in moist and deciduous forests in all the states except Jammu & Kashmir. Of India's total forest are area of 67.7 million hectares, bamboo (both natural and planted) occupies around 11.4 million hectares. This represents 16.7 per cent of the total forest area of the country and 3.4 per cent of the total geographical area (329 million hectares) of India. But despite having the

largest area under bamboo in the world comprising more than 100 different species, India contributes to only 4.5 per cent share of the global market.

This is mainly attributed to the low productivity of around 0.4 tones per hectare which is much lower compared to other countries such as Japan, China and Malaysia which contribute about 80 per cent to the world's bamboo market.

3.3.1 Area Wise Distribution Of Bamboo Production:

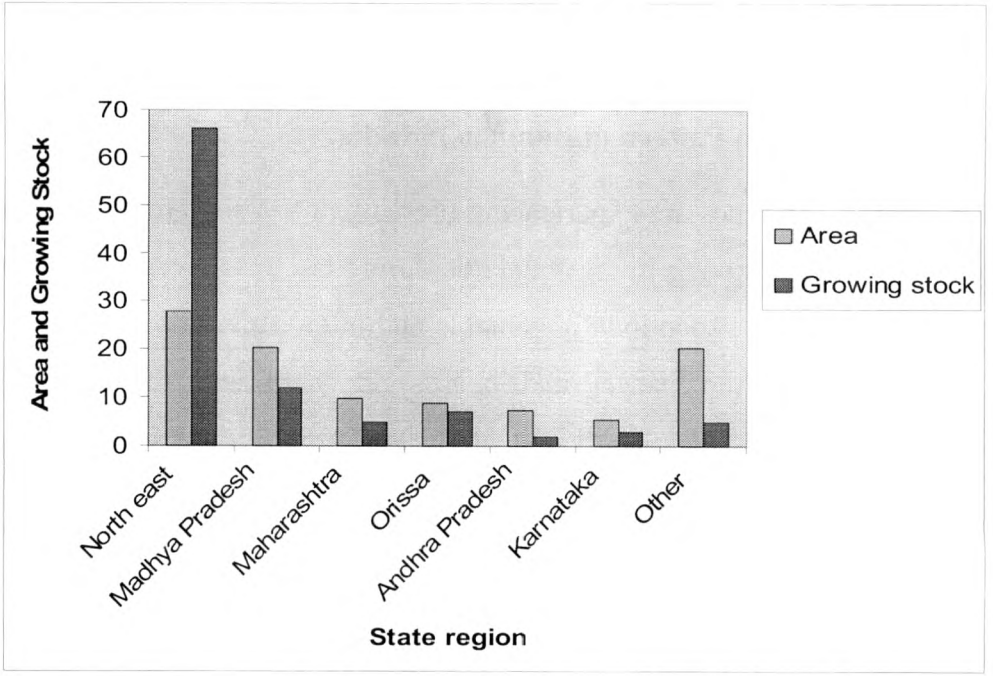
The NER(North Eastern Region) has the largest bamboo stock in the country and account for 54 percent of the bamboo resources in India and other most bamboo growing areas are the Andaman and Nicobar Island, the Himalaya foothills, Madhya Pradesh and Western Ghats. It can be seen in following table 3.3 and chart 3.3.

Table 3.3 Major Region / State under Bamboo

Sr. No.	State region	Area (percentage)	Growing stock (percentage)
1	NER*	28.0	66.0
2	Madhya Pradesh	20.3	12.0
3	Maharashtra	9.9	5.0
4	Orissa	8.7	7.0
5	Andhra Pradesh	7.4	2.0
6	Karnataka	5.5	3.0
7	Other	20.2	5.0
8	Total	100.0	100.0

*(Sources-Madhab jayanta (2003) and the national horticulture mission at http// agricrop nic In/ agriMinConf /National.Hort.Mission.ppt accessed on 12 -03-2010). * North Eastern Region.*

Diagram 3.3 Major Region/ State under Bamboo



(Sources-Madhab jayanta (2003) and the national horticulture mission at http// agricrop.nic.in /agriMin Conf/ National.hort.Mission.ppt accessed on 12 -03-2010).

Table 3.3 and diagram 3.3 it can be seen that area wise distribution of bamboo production. From the above data it is found that in India, 28.0% of area and 66.0% of growing stock of bamboo in NR region, followed by 20.3% of area and 12.0% of growing stock Madhya Pradesh, 9.9% of area and 5.0% of growing stock Maharashtra, 8.7% of area and 7.0% of growing stock Orissa, 7.4% of area and 2.0% of growing stock Andhra Pradesh, 5.5% of area and 3.0% of growing stock Karnataka, 20.2% of area and 5.0% of growing stock Others States.

It is also serves to highlight the potential dominance of India in future economic activity and trade. India is second largest bamboo producer in the world after China. Bamboo is precious gift of nature for the country. Particularly East regions hold two third of country's bamboo reserves. It is needed to promote bamboo based industries and is required to make proper

management of bamboo cultivation. It is not only contributing to strengthen Indian economy but also helps to protect our environment.

3.3.2 Consumption Pattern of Bamboo in India:

Forest resources are experiencing pressure due to the growing world population and improving living standards during last 15-20 years, bamboo has developed as an exceptionally valuable and often superior substitute for wood. Bamboo based panels and boards are hard and durable may successfully substitute for hardwood products. Bamboo may soon replace wood in many industrial applications and contribute to the saving and restoration of the world forest.

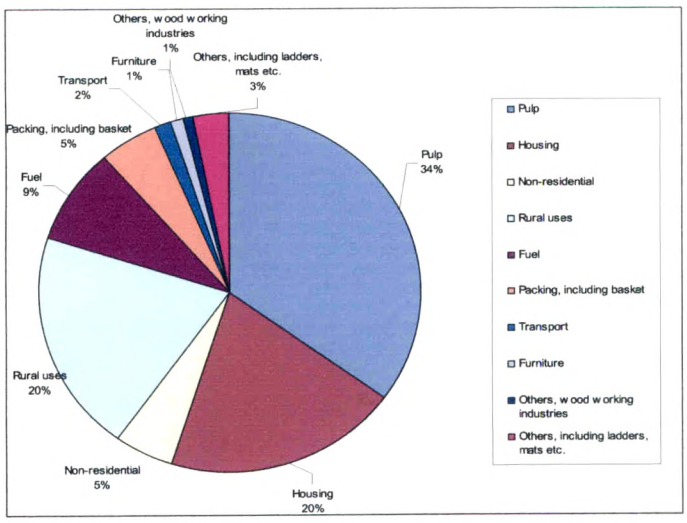
The consumptions pattern of India as summarised below table 3.4 and Chart 3.4

Table3.4 Consumption Pattern of Bamboo in India

Sr.No	Uses	Percentage consumption
1	Pulp / paper industries	35.0
2	Housing	20.0
3	Non-residential	4.5
4	Rural uses	20.0
5	Fuel	9.0
6	Packing, including basket	4.5
7	Transport	2.0
8	Furniture	1.0
9	Others, wood working industries	1.0
10	Others, including ladders, mats etc.	3.0
11	Total	100.0

(Sources Table 5: Consumption pattern of bamboos in India. The Status of Bamboo and Ratttan in India J.K.Rawat,D.C.Khanduri, original sources D.N.Tivari).

Chart 3.4 Consumption Pattern of Bamboo in India



(Sources Table 5: Consumption pattern of bamboos in India. The Status of Bamboo and Ratttan in India J.K .Rawat,D.C.Khanduri).

Table 3.4 and chart 3.4 shows the consumption pattern of bamboo in India. From the above data it is found that mostly used bamboo for paper industries which is 35.0% out of total consumption, followed by 20.0% are equal consumption in the housing and rural use, 9.0% for fuel, 4.5% are equal consumption for Non-residential and packing including basket, 3.0% for other (including ladders mates etc), 2.0 % for transportation and 1.0% are equally use for wood working industries and furniture's respectively.

The data indicate that bamboo is utilised for various purposes like making paper, furniture, handicrafts, constructions etc., but these are not all uses. It is used for many others purposes. Nearly 4000 commercial products made out of bamboo are green gold and has the potential to provide economic security to the rural population.

3.3.3 Present and Future Market Opportunity in India:

The Government of India , has lately come to regard bamboo as an easily manageable export item that provided high yields, has multiple uses and has the potential to provided employment for million in this backdrop. The size of the domestic bamboo economy has been estimated at around 2000 corer by planning commission. The market potential however, India share in global market is estimated at around Rs. 4500 Corer (US$ 1 Billion) and it are expected to increase to around 27000 corers by the 2015. The current and expected size of market for some of the bamboo product has been summarised in the table 3.5.

Table 3.5 Present and Future Market Opportunity in India

Sr. No.	Product Application	Current Market (Rs. In Corer)	Expected by 2015 (Rs. In Corer)
1	Bamboo Shoot	5	300
2	Bamboo as Wood Substitutes	10000 (import value)	30000(in20years)
3	Bamboo Ply board	200	500
4	Bamboo Ply board (for truck and railways)	1000	3400
5	Bamboo flooring	100 (Domestics) 100 (Export)	1950
6	Bamboo Pulp	100	2088
7	Bamboo Furniture's	380	3265
	Building and construction Material		
8	Scaffolding	-	861
9	Housing	-	1163
10	Roads	-	274
11	Bamboo gids for Tiny/ Cottage sector	-	1000
12	Mis. Use	394	600

(Sources: Planning commission: NBM on TTD).

From the table 3.5 it is reveal the present and future market opportunity in India. Bamboo projected demand and supply summarised as following point.

1. In India bamboo economy expected to grow around 27000 corers by the 2015.
2. Bamboo can replace the projected import of timber to the tune of Rs.30000 crore in the next 20 years i.e. 2025.
3. The market size for bamboo plywood is expected to grow to Rs. 500 crore in 2015 from Rs. 200 crore in 2001.
4. It has been estimated that the total market size of bamboo flooring materials will rise to Rs. 1,950 crore by 2015 from the current Rs. 200 crore.
5. The demand for bamboo pulp is expected to grow to Rs. 2,088 crore by 2015 from Rs. 100 crore in 2001.
6. The demand for bamboo furniture is expected to grow to Rs.3265 crore in 2015 from Rs.380 crore in 2001.
7. By 2015 bamboo scaffolding requirement will rise to Rs.861 crore and for housing purposes the demand will be Rs.1,163 crore.
8. The demand for bamboo in road construction will rise to Rs.274 crore and for bamboo grids the demand will be Rs. 100 crore by 2015.
9. The demands for miscellaneous industry viz. ice cream sticks, fire crackers, bamboo lathis and ladders will rise to Rs. 600 crore by 2015.

   It is found that export market exists for shoots in Japan, Hong Kong, Singapore and Thailand. The Projected demand and supply of Bamboo as predicted by the Planning Commission is given in *(Estimated Planning commission 2001, table 1).*

   This data reveals the bamboo business has huge potential for investment and it is emerge healthy and growing. The successful investment in

promotion of bamboo plantation, rural crafts business and bamboo based industries, will lead to an opportunity in the socio- economic development.

3.4 Maharashtra Bamboo Business:

This bamboo plays an important role in the human life as man started using naturally available bamboo next to stone and attached faith on the rituals by performing pooja using bamboo sticks. Even today, Maharashtrians perform pooja for bamboo on 'Gudipadava' day symbolising prosperity on the commencement of New Year day. The rich, deciduous, ever green forest, Western ghats at Sahyadri range of Maharashtra provide green bamboo to the Burud, Koravi community, which encourages the Bamboo workers to pursue the craft. The marriage ceremony commences with decorating the house by using torah made out of bamboo sticks ornamented with colour/velvet papers. In Maharashtra area under bamboo and growing stock are 9.9% and 5% respectively. Bamboo sale is periodically done in open auctions held at various Govt. Department, and trader Purchases bamboo from the auctions and sale them in open market. After that the price of bamboo are modulated by the timber associations. Manvel (Dendrocalamus Stricts) is a species of bamboo available in every part of Maharashtra. Following table shows the various species of bamboo available in Maharashtra.

Table 3.6 Bamboo Species in Maharashtra

Sr. No.	Scientific Name	Local Name	Uses
1	*Dendrocalamus Strictus*	Manvel	Crafts, household articles, paper industries, musical instrument, agricultural equipment, traditional medicine etc
2	*Bambusa Bambos*	Katang, Katas, Knak , Kalak	Construction, crafts, foods and compounds etc.
3	*Bambusa Balcooa*	Kondaya mace	Crafts, decorative articles etc.
4	*Dendrocalamus Stocksii*	Managa	Furniture's, musical instrument, agricultures equipment etc.
5	*Oxytenathera Monostigana*	Ranchiva, Chivli.	Basket, household articles, foods etc.
6	*Bambusa Valgaris*	Pivala bamboo	Garden and homesteads area etc.

(Sources: Bamboo Hirav Sona edited by Prakash Thosar, Govt. of Maharashtra)

From the above data it is found that have enormous prospective of bamboo in Maharashtra. Bamboo business in Maharashtra regulated by various government departments, and bamboo is minor forest production in Maharashtra. The production and value of bamboo is summarised with help of table 3.7 and diagram 3.7

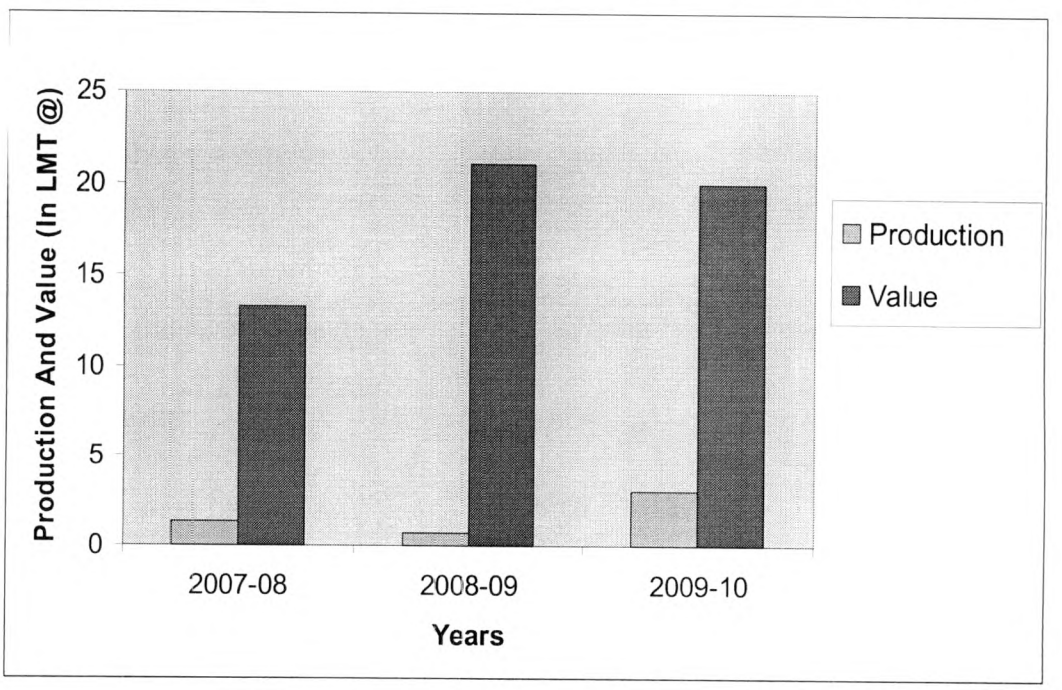
Table 3.7 Minor Forest Production (Bamboo) in Maharashtra

(Rs. crore)

Sr. No.	Years	Production (IN LMT*)	Value (IN LMT*)
1	2007-08	1.35	13.29
2	2008-09	0.7	21.07
3	2009-10	3.09	19.99
4	Average	1.71	18.12

*(Source: Office of the Principal Chief Conservater of Forest, GoM. (Economic survey of maharashtra2009-10))*LMT=Lakh metric tons,*

Diagram 3.7 Minor Forests Production (Bamboo) in Maharashtra



(Source: Office of the Principal Chief Conservater of Forest, GoM. (Economic survey of maharashtra2009-10))

The above table 3.7 and diagram 3.7 show that the production and value of bamboo during last three years 2007-08 to 2009-10 in Maharashtra state. It is observed that bamboo production and value average are 1.71 and 18.12 respectively in Maharashtra. It is found that value of bamboo has increased year after year but production of bamboo has fluctuated year wise.

3.5 Kolhapur Bamboo Business:

Kolhapur is an ancient city situated on the banks of river Panchganga and is known as 'Dakshin Kashi'. Kolhapur is seat of Goddess Mahalaxmi and is one of the Shaktipeeths mentioned in Indian mythology. Chhatrapati Shahu Maharaja was the founder architect of modern Kolhapur. The district is rich in natural resources - water, soil, natural vegetation, animal wealth and minerals. As a result, Kolhapur is one of the most agriculturally advanced districts of not only Maharashtra but also India.

In Kolhapur district there are twelve talukas likes- Shahuwadi, Panala, Gaganbawada, Karavir, Hatkanagale, Shirol, Kagal, Radhanagari, Bhudargad, Gargoti, Ajara, Chandgad and Gadihingalaj. Most of talukas cover hilly region and mostly depend on agriculture due to their people huge utilise bamboo and bamboo product in daily lives. In Kolhapur district it is found that bamboo are cultivated and available in farming boundary area, waste land and aside of brook of lake. There are plenty of bamboo resources from the place like Bhangaon, Jarale, and reign about western Ghat in Kolhapur district. In Kolhapur district some bamboo species found which are mentioned in the below table with their Scientific as well as local names.

Table 3.8 Bamboo Species in Kolhapur District

Sr. No.	Species	Local Name
1	*Dendrocalamus strictus*	Chiva, Tokar Madar,Mace.
2	*Oxytenathera Starcis*	Konda
3	*Oxytenathera Monostigana*	Ranchiva
4	*Bambusa Arundinacea*	Velu, Kanak, Pudhai.

(Sources: Kolhapur Gazettes)

In the Kolhapur District have huge bamboo business potential and this business engaged farmer, artesian, purchaser due to this business help to generate employment. And majority poor people economical depend on bamboo and bamboo product. Burud and Korvis are two communities

engaged in bamboo handicraft business. Vashi Naka and timber market the main centre of bamboo trading activity of Kolhapur district. In two both market came bamboo from the various talukas of district. Therefore in the Kolhapur district bamboo business play significance role to economically uplift of poor people.

3.6 Ajara And Chandgad Talukas Bamboo Business:

3.6.1 Chandgad Taluka:

Chandgad is the southernmost taluka not only for Kolhapur district but for entire Maharashtra state. . It is situated on the bank of Tamraprani River. Chandgad is one of the biggest & beautiful rainfall taluka of Kolhapur district. This place is 110 km for from Kolhapur but only 38 km away from Belgaum City. Chandgad is located on Belgaum-Vengurle state highway. Amboli hill station is very near to chandgad, it forway only 29 km. People of Chandgad town and taluka are heavily relying on Belgaum and Gadhinglaj cities for their day to day needs. Chandgad was formerly a part of Belgaum District. But during reorganization, the entire taluka was merged into Kolhapur District. Famous places in this taluka are Fort Pargad, Kalanandi gad, Mangi hill station, Tilari Dam, Swapnavel Point.

3.6.2 Ajara Taluka:

It is situated on the banks of Hiranyakeshi and Chitra rivers. Famous Ramtirth waterfall and hill station Amboli are near from this place. It's on the Kolhapur - Amboli road. Ajara is also famous for heavy rain and for production of Ghansal rice (variety of rice). It is surrounded by jack and mango groves and the deep ravines of the Citri and Hiranyakesi flanked by high woody hills. The town stretches lengthwise south and north and covers an area of about two and half square miles. It has two parts, Ajra proper, the old town fenced by an earthwork with an outer ditch, and Nababpur of later

growth to the north of the earthwork. Besides the river water, the town has an abundant supply from wells. The climate is cool and pleasant during the hot season. Besides footpaths to the villages around, Ajra is joined with Vengurle by the Amboli Pass road and by a cart track which runs past Gaddhinglaj with Nipani and Sankesvar on the Pune-Belganv road.

Thus Chandgad and Ajara talukas are naturally reach in Kolhapur district thus both talukas geographical and demographic fact and figures in brief summarised as following table.

Table 3.9 Geographical and Demographical Facts and Figures

Sr. No.	Particulars	Chandgad	Ajara
1	Area	95221	54800
2	Cultivable land	58020	38021
3	Area under forests	27200	14836
4	Waste land	9820	2867
5	Latitude	15-16	16-18
6	Longitude	74-74	74-75
7	Average Rainfall	2783.7	1900
8	Population	180781	106425
9	Population Density	190	221
10	Literacy Rate	66.67	61.65
11	Sex Ratio	1036	1086
12	No. of Village	157	94
13	STD Code	02320	02323

(Sources: Kolhapur gazettes 1991and 2001)

From the table 3.9 shows that geographical and demographical facts and figures. It is found that these two talukas are undergone hilly region and mostly people depend on their agriculture. Rice, Sugarcane, Nachni, Sweet-potato and Green Chilly these are the major crops taken by the farmers. Agree and agree- based businesses are major occupation of people in these talukas. Bamboo business is one of the agree-base business which is closely

related to their life, because bamboo is used for Agricultural works, Agricultural equipment furniture's and in the religious and cultural ceremony. Chandgad and Ajara are surrounded by tropical forests of Sahyadri Ghat, which is western part of Maharashtra. Therefore nearly 3 to 4 bamboo species are available in these two talukas. These species also known as local name i.e Managa *(Dendrocalamus Stocksii),* Yalkut, kanak (Bambbusa Bambos), Mess, Chiva *(Dendrocalamus Strictus)*, Ranchiva, Chivari *(Oxytenathera Monostigana)* etc.

Managa, Mes, Chiva these species are mainly cultivated by farmer in the area of their farming boundary area, and farmsteads or homesteads area, and bank of river also. Yelkut, Kanak, Ranchiva these species are mainly found in farming boundary and mostly in forest/Jungel area. The people of Chandgad and Ajara talukas uses in Ranchiva and Chivari new comb (Shoots) as food which is hygienic for health. Mostly Managa, Mes, Chiva, etc species are cultivated by the farmers of the both talukas and these bamboo is mainly cultivated in the first monsoon showers in June. Specially Managa, Mes, Chiva are cultivated since these species have huge demand from Local craftsman's and city market.

The people especial in Burud, Korvi and Kamble (SC, ST,VJ-NT) community make various crafts from bamboo like Agri- goods, as Kangi, Tattya (for grain-Storage), and day to day use articles like Buttya, Sup, Chalani, Shibadi etc.. These people are make useful articles and sold in near local market. These people engaged in thier bamboo craft business since generation to generation. For this business bamboo is the Raw material and it is provided by the local Farmers and western area of these two talukas. Such as Kalanandi Fort and Mangi foot area, Tilari Ghat, in Chandgad taluka and Chtri, Amboli Ghat in Ajara taluka. Amboli Ghat and Kokan Region are attached to both talukas. In both talukas bamboo have huge demand from Belgave, Nipani, Sankeshwar, Dandeliraychur, Shidnur (Karnataka), Gangawati (Madhya Pardesh), Kolhapur, Sangali, Nashik, Solapur (Maharashtra), Because of huge demand local purchasers collect

bamboo from farmers and its send to relevant market place as per their market demand. Thus local bamboo purchaser play significant role in bamboo business. Therefore bamboo business of these talukas helps to economical uplift to the farmer, rural craftsman and local bamboo purchaser.

Bamboo business in these two talukas is on the local base because the bamboo cultivators cultivated the bamboo and they do not use the new modern techniques and also do not gives the importance to the small craft business which is related to bamboo Because of this bamboo business is not on the great value. But the bamboo business has a role to strengthen the economical condition of the poor people in Chandgad and Ajara Talukas. Importance of the bamboo business in Chandgad and Ajara talukas will denote the following table, which is shows the material which made from bamboo.

Table 3.9 Bamboo Use for Various Materials

Sr. No.	Use of Bamboo	Purposes
1	Traditional Equipment	Buttya, Chalani, Gorab/ Irali,Chatai, Sup, Topali, Shidi
2	Religious And Cultural use	Palana, Mandap, Gudi, Toran, Tiradi
3	Agricultural use	Grain storage, supporters for vegetables, Agricultural equipment etc.
4	Traveling	Bulkcart, Ship, Tarafa etc.
5	Building	Door, roof, Divider
6	Furnitures	Rack, Stool, Table Chair etc
7	Weapons	Bow, Stick, Bhala etc
8	Industries	Paper
9	Musical Instrument	Flute, Tabale, Mrudang etc.

(Sources: Field Survey)

The table 3.9 shows the scope of bamboo business in Chandgad and Ajara talukas bamboo used in the festivals of Gudipadava for the symbol of victory on the vice and also prosperity. If we give the more attention to this bamboo business on local level, it will become important and huge business which is help to generate employment and also improve the economical condition of the poor people in these two talukas.

Testing of Hypotheses (Descriptive testing):

From the detail information of the bamboo business of selected talukas i.e. Chandgad and Ajara talukas. It is found that both talukas are having the good potential for bamboo business. Since both talukas are blessed by natural resources and tropical crop are grown on huge quantity and quality, with good geographical condition. So the researcher mentioned hypothesis H_1 ***(Chandgad and Ajara talukas have potential for bamboo cultivation in the district)*** is accepted which is based on the result.

3.7 Government Policy of Bamboo business:

3.7.1 Policy:

Bamboo in India has been called "Poor man?s Timber". Therefore in all parts of the country, the local communities are generally given certain rights or privilege of access to these resources, either free or at concessional rates, to meet their bonafide needs. These customary and traditional rights and their regulation in some of the states, as compiled by Singhal and Gangopadhyay (1999), are given below:

Madhya Pradesh: The villagers are supplied up to 250 pieces of bamboo per family per year at a subsidised rate of Rs.0.25 per bamboo from the nistar depots. These depots are located in the middle of cluster of villages. Bansods, the artisan community earning their livelihood through manufacture of bamboo articles, get up to 1,500 pieces of bamboo per

family per year at concessional rates of Rs.0.60 per piece for the first 500 pieces and Rs.0.75 per piece for subsequent pieces.

Maharashtra: Bamboo is supplied at confessional rates to the agriculturist and basket and mat makers, either from the forest coupe under working or from the departmental depots after extraction.

Orissa: Depending on availability, each rural family is supplied 250 bamboos and each bansod family 1,500 bamboos per year. The allotment is done by the state forest department on a certificate from the Head Man of the village. At the time of flood or cyclones, 50 bamboos are provided to each affected family.

West Bengal: Forest Protection Committees, established under the Joint Forest Management, which help the forest department in protection and rejuvenation of the forests, are given 25% of the net sales proceeds of the usufructs.

Himachal Pradesh: The local population has the right to meet their bonafide requirements from the bamboo bearing forest compartment. For those residents whose requirements can not be met from these compartments conveniently, bamboo supply is made from forests other than the closed ones.

Andhra Pradesh and Karnataka: People in and around forest enjoy the privilege of free use of bamboo for fencing, agricultural requirements, hutment and other bonafide uses.

Uttar Pradesh: Bamboo is made available to the villagers for their domestic and agricultural demands provided they have been enjoying this privilege for long and their livelihood depends on it. The supply is made at reasonable rates, but not less than the schedule rates fixed by the forest department.

Tripura: As per rules framed in 1952, the population engaged in shifting cultivation (about 20,000) was entitled to bamboo collection free of cost for construction of their huts and other uses. In addition, bonafide householders and cultivators from the villages adjoining reserved forests were also entitled to free permit to the extent of 250 pieces of bamboo per family per year.

Royalty for making bamboo baskets, mats, etc. has been discontinued since 1990 as a concession to the bamboo craftsmen.

In fact the current National Forest Policy has clearly laid down that meeting the needs of the local communities will get priority over the commercial use of such species. This is facilitating active community participation in the upkeep of local forests. With short term maturity and higher economic returns from bamboo and rattan, these can act as focal points in reviving community participation in forest protection and management.

3.8 Legislation:

Bamboo and rattan are categorised under Non Timber Forest Produce in India. However, under Indian Forest Act (1927) and for enforcement of its provisions they are legally clubbed with trees as per Section 2 of the Indian Forest Act. Accordingly all movement of above products for trade is regulated under transit rules framed under the Act. Many species are now being grown outside the forest area in agro forestry systems. In order to promote agro forestry and trade, many states are liberalizing transit restrictions on these produce. Unfinished bamboo and rattan species also figure in the negative list of exports from the country.

3.9 Information about National Bamboo Mission:

In 2003, the National Bamboo Mission was formulated through the publication of the National Mission on Bamboo Technology and Trade Development. The Detailed Project Report of the National Bamboo Mission laying out the detailed implementation arrangements was published by the CBTC in September 2004 and accepted by the Planning commission and Government of India. At the same time, the North Eastern Council, the apex development body in the NER launched the North East Regional Bamboo Mission.

In its meeting held on 27th October, 2006, the Cabinet Committee on Economic Affairs (CCEA), Government of India cleared the launching of the much awaited '*National Bamboo Mission*', with 100% central assistance to be operational from the 10th Plan and extended up to 11th five year Plan at a total outlay of Rs. 568.23 corer (approx.).

3.9.1 Mission:

The National Bamboo Mission will be a Centrally Sponsored Scheme, in which the contribution of the Central Government will be 100%. The Scheme will be implemented by the Division of Horticulture under the Department of Agriculture and Cooperation in the Ministry of Agriculture, New Delhi.

3.9.2 Objectives:

The following specific objectives are to be set by Govt. of India and Planning commission and Government of India for the purpose of bamboo and bamboo business promotion.

1. To promote the growth of the bamboo sector through as an area based regionally differentiated strategy;
2. To increase the coverage of area under bamboo in potential areas, with improved varieties to enhance yields;
3. To promote marketing of bamboo and bamboo based handicrafts;
4. To establish convergence and synergy among stake-holders for the development of bamboo;
5. To promote, develop and disseminate technologies through a seamless blend of traditional wisdom and modern scientific knowledge.
6. To generate employment opportunities for skilled and unskilled persons, especially unemployed youths.

Thus, National Mission on Bamboo and Applications which is an initiative of Govt. of India under the guidance is of Department of Science and

Technology, Govt. of India for the development of bamboo sector by developing new range of value added products and applications.

It also targets improvement of productivity of bamboo plantations from existing level to average level. It has also been decided by the Government that to ensure synergy of plantation and resource development activities with value addition, the NBM will provide required technical and financial support to post harvest processing, technology development and commercialization, setting up of processing and product manufacturing units, processing zones, technology parks, industrial applications and subsequent value addition.

3.10 Conclusion:

Today bamboo is a major non-wood forest product and it is substitute for wood. In the past bamboo could known as a 'poor man's timber', but now it has changed and it is fast emerging as a 'Green Gold'. Recently bamboo markets are growing and offering new opportunities for promotion of bamboo business. This is a golden opportunity for bamboo business. Bamboo business is one of revealing agro forestry business which has lot of scope in coming years. It will have contributes and prestigious weightage in the economy of the country. Therefore realising the immense socio-economic potential of bamboo, the Government of India has launched the National Bamboo Mission (NBM) and National Mission on Bamboo Application (NMBA) for it is holistic development, cultivation and for developing the technologies and applications for bamboo based products. In order to realize the full potential of bamboo, various technical, financial and entrepreneurial interventions are needed in the field of forestry, land use, Propagation technology for it is cultivation and sustainable use, and in the areas of industry and finances.

Photo 3.1 “Green Gold”

Reference:

Books and Magazines:

1. Shrikant Thate (1995) *"Bamboo Van Sethi"*.
2. McClure,F.A 1966. *"Bamboos: a fresh perspective"*, Havard University Press, Cambridge, Massachusetts, U.S.A.
3. S.S. Negi, Bishen Singh Mahendra Pal Singh, 2009, *"Bamboos of India"* VI, 222 p, 47 col. plates, ISBN: 81-211-0741-9.
4. "*Bamboo Hirv sona – National Bamboo Mission Maharashtra*" (Marathi) edited by P.G. Thosare (2008).

Unpublished Thesis:

5. Ram. n. Naik (2009). *"Industrial Development-Pace, Pattern, and Gaps-A Case Study Of Chandgad Talukas"*.

Government Reports:

6. Primary report of Agriculture Department, Shirgaon Chandgad, 2009
7. Primary report of Agriculture Department, Ajara, 2009
8. Primary report of Social Forestry Department, Chandgad, 2009
9. Primary report of Forestry Department, Chandgad, 2009
10. Primary report of Forestry Department, Ajara, 2009
11. Kolhapur gazettes 1991 and 2001
12. District Social and Economic Survey 2006-2007.
13. Statistical Abstract of Maharashtra State 2000-01
14. Handbook of Basic Statistics of Maharashtra state 2007.
15. Economic survey of Maharashtra 2009-10

Research paper and Reports:

16. Planning Commission, Government of India. 2003. Introduction. 1-13.: In National Mission on Bamboo Technology and Trade Development. Government of India, Publ. India.

17. Varmah, J.C. and Bahadur, K.N. 1980. Country report and status of research on bamboos in India. Indian Forest Records. Vol.6, No.1.
18. Cane and Bamboo technology center annual report 2008-09.
19. Anonymous (1997). Compendium of Environment Statistics 1997. Central Statistical Organisation. Planning Commission (Govt. of India).
20. Primary report of agreeculture department and forest department From Chandgad and Ajara talukas.

Articles:

21. S. C. Nagpure, D. P. Wahile, and Anita G. Rangire(2008) *"Economic of Bamboo Production in Maharashtra State"*, Proceedings of Workshop held in New Delhi International Conference, 15th - 17th April 2008, p.214
22. K. G. Karmkar, M.S. Haque, and Suman Kumar 2008,*"Investment opportunity for bank in channelising credit for raising bamboo plantation on north forest land"*, Proceedings of Workshop held in New Delhi International Conference, 15th - 17th April 2008, p.113
23. Dr Cherla B Sastry 2008, *"A 2020 Vision for Bamboo in India Opportunities & Challenges"* Proceedings of Workshop held in New Delhi International Conference, 15th - 17th April 2008, p.no.6-15.
24. Sangeeta Prasad Mehra & L. K. Mehra- *"Bamboo Cultivation - Potential and Prospects". (Internet accessed dated on 15-11-2009).*
25. Basu, S.K. (1985). *"The Present Status of Rattan Palms in India – An Overview"*. In K.M. Wong and N. Manokaran, (Eds.): Proceeding of the Rattan Seminar 77-90. FRI, Kepong, Malaysia.
26. Varmah, J.C. and Bahadur, K.N. (1980). "*Country Report and Status of Research on Bamboos in India"*, Indian For. Rec. (Botany), 6(1): 1-28.
27. Wagh, R. and Rajput, J.C. (1991). *"Comparative Performance of Bamboo with the Horticultural Crops in Konkan"*. In: Bamboo in Asia and Pacific. Proc. Ivth Intl. Bamboo Workshop, 27-30 Nov. 1991.

Chiangmai, Thailand, FORSPA Publication-6. Canada. IDRC and FORSPA, Bangkok, Thailand, 1994: 85-86.

28. Ajay kumar (2008), *"Investment Potential and Marketing in Bamboo Sectors"* Proceedings of Workshop held in New Delhi International Conference, 15th - 17th April 2008, p.129
29. U. M. Chandrashekara, C. N. Krishnankutty and R. Ranamaharam 2008,*"Bamboo cultivation in home gardens of Kerala, India"* Proceedings of Workshop held in New Delhi International Conference, 15th - 17th April 2008, p.164
30. Nirvan Jyoti Bhattacharjee and kalian chakravarthy G. K. D.*(2008), "Indian Bamboo Industry market overview and outlook"* , Proceedings of Workshop held in New Delhi International Conference, 15th - 17th April 2008, p.97.

Website:

31. www.caneandbamboo.org
32. www.bambootech.org
33. http://dacnet.nic.in/nbm/
34. www.inbar.int
35. www.bamboobazar.com *(Accessed on 15/10/2009).*
36. www.completebamboo.com *(Accessed on 15/10/2009).*
37. www.bambootrade.net *(Accessed on 15/10/2010).*
38. http://www.maharashtra.gov.in
39. http://kolhapur.nic.in
40. http://envfor.nic.in *(Accessed on 06/08/2010).*
41. http://cza.nic.in/index.html *(Accessed on 10/09/2010).*
42. http://www.fdcm.nic.in *(Accessed on10/09/2010).*
43. http://www.finmin.nic.in/ *(Accessed on 18/11/2010).*
44. http://indianforester.org/ *(Accessed on 18/11/2010).*
45. http://www.fsi.org.in/ *(Accessed on 18/11/2010).*
46. www.worldbamboo.net *(Accessed on 18/11/2010).*
47. www.icfre.org

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