

The Present Scenario of Bamboo and Cane Handicrafts Industry of Galo Tribe in Arunachal Pradesh

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Abstract: The people of Arunachal Pradesh are artistically minded and gifted with deft hands and skilled fingers. Various arts and crafts are in their blood. Handloom and Handicraft for instance, offer wide scope to produce a variety of artistically blended and beautifully designed clothing. Handicraft is a very common craft in Arunachal Pradesh. The main handicraft items made in the state are masks, carpets, painted wooden vessels and silver articles. Cane and Bamboo play an important role in the rural economy of Arunachal Pradesh. World-wide, bamboo is slowly but steadily gaining importance as material for sustainable development. The commercial aspect of the bamboo resource is also very high and it is fast emerging as the most viable wood alternative in the world over and can be effectively used to revive the closed down plywood units of the state. Arunachal Pradesh has a rich tradition of Bamboo and Cane Handicrafts. The products reflect the rich and varied culture of the tribes inhabiting this enchanting State and the products featured are representative of the wide range of Handicrafts produced in the State.

Introduction

Arunachal Pradesh, one of the North-East States consists of 17 districts. Small scale and cottage industries in Arunachal Pradesh are the largest and most potential source of economy and also the mainstay of economic progress of the people. Almost all the major tribes in Arunachal Pradesh use to practice, to some extent, handicrafts, the widespread house-hold industry. Everywhere it is the exclusive business of the tribe. Arunachal Pradesh is proud of her traditional and fantastic indigenous handicrafts and most colourful handloom products. In the past years, the role conceived for the Industries Department in Arunachal Pradesh was one of the revival and revitalization of the traditional handloom and handicrafts. The notable activities have been the establishment of craft centres, production centres in the broard areas, extension of sericulture programme and setting up of small scale industrial units.

The people of this state are artistically minded and gifted with deft hands and skilled fingers. Various arts and crafts are in their blood. Handloom and Handicraft for instance, offer wide scope to produce a variety of artistically blended and beautifully designed clothing. Weaving is a very common craft in Arunachal Pradesh. Magnificent carpets are woven in West Kameng, Tawang and in northern Siang; while beautiful rugs are woven in the Galo area. The Galos are excellent in the production of useful eye-catching handicrafts products and textile bear ample testimony to the rich heritage. Their nimble fingers weave excellent designs on the textiles and carpets. They also cultivate cotton in their jhum fields alongwith other produces. Vivid colours and exquisite patterns, sometime abstract and at other floral; are the hallmark of the weaving wool, cotton and silk throughout the territory. Besides wool and cotton, some of the tribes use bark-fibres extracted from trees like Udal, Pudu and Rhea Nivea. Different types of natural dyes are used by different tribal groups for printing their clothes. Influence of Assammese, Bhutanese, Tibetan and Burmese style on textile design is also seen in the adjoining areas of Arunachal Pradesh. The Monpa women weave shawls, sashes, coats, a wide variety of bags and hats. Unlike the Monpas, the Sherdukpen women do not work in wool but use only cotton and plant fibre.

The Nyishi women weave in both cotton as well as Pudu Plant fibre to produce blankets, skirts, loin cloths and waist bands. They grow a large amount of cotton especially in the valleys of Panior and Palin valley. They use natural dyes which are extracted from jungle creepers and certain plants such as black from Kukhi, red from Tamin creeper and green from Ungu plant to colour their yarn used for borders. The Apa Tani women also work in wool to weave ceremonial shawls, coats and to embroider cotton cloth. They usually extract red dye from manjeet and black from Yango Leaves. The Mishmis women have a great reputation in weaving. They grow cotton on a small scale in the neighbourhood of Roing. They weave in cotton, wool plant fibres of different kinds especially Rhea Nivea to produce varieties of clothes that include loin and waist cloths, aprons, sleeveless coats, jackets, skirts, scarves, embroidered bodies, shawls, sashes, bands, belts and bags. The Khamptis and Singpho women produce almost all the necessary clothes both for themselves and their men. The Tangsa women mainly produce hand-bags, skirts and lungis of different patterns. Both the Singpho and Tangsa women are experts in making ceremonial costumes, which show their artistry and skill in weaving. They all produce cotton on a small-scale.

The main handicraft items made in the state are masks, carpets, painted wooden vessels and silver

articles. Different items made of cane and bamboo is found among the Apa Tanis, Hill Miris, Adis and Galos. The famous wood carving articles are found among the Khamtis, Khamtis and Wanchos. In short, we find among the people of the state, a wide variety of crafts that include weaving, painting, pottery, smithy work, bamboo and cane work, wood carving and basketry. There is a steady export market for Monpa carpet, Adi Skirts, Galo Coat, the Mishmi bags and shawl etc.

However, this indigenous knowledge is a flow concept and is prone to change by both endogenous and exogenous factors. Such diverse influences on knowledge of production and dissemination are operating simultaneously and may have conflicting effects on the durability of indigenous knowledge. The conservation or decline of such knowledge may therefore occur unevenly over space and time. Rightly pointed out by Steven Ratuva, "indigenous as a dying sector of humanity which needs to be salvaged from the throes of extinction, either ensuring the survival of its 'noble' primordial culture, or if that is no longer possible, by preserving the socio-cultural and physical remains in museums". Therefore, the word indigenous can be defined in terms of ideal as well as in practical way. Ideally, it refers to originality of particular people or society. Practically, it denotes the struggle for the survival of the originality which is at the verge of extinction due to market expansion.

In recent past, the development efforts made by the government consequently led to changes in the socio-economic fabric of indigenous communities of Arunachal Pradesh. Particularly, the substantive economy is getting diversified and integrated with market economy. Keeping this in view, the present study has made an attempt to study the transition of indigenous knowledge particularly of handicraft activities of Galo Tribe of Arunachal Pradesh. The

objective behind this study is to understand the ramifications of the market on handicraft activities of this ethnic community.

To promote production of handloom and handicraft products and generate self employment, the Directorate of Textiles and Handicraft is running 88 numbers of weaving and craft centres and 6 numbers of Handloom Development and Quality dyeing units in the state. With a view of popularize handloom and handicraft products being manufactured by the industrial units in the state, the department has been participating in various fairs, festivals and exhibitions. Besides running 18

numbers of Emporia and 6 numbers of Show Rooms cum Sales Counters in the state, there are 2 numbers of Emporia functioning in Delhi and Kolkata. The department has also acquired a plot of land in New Mumbai for establishment of a Guest House and an Emporia to exhibit the state's traditional craft with a view to develop rich heritage of handloom and handicraft products of Arunachal Pradesh, the Department has taken up number of schemes viz. participation and organizing of Exhibition to create awareness amongst the local entrepreneurs and artisans of the state. The achievement of Craft/ Weaving Centres during 2012-13 is shown in Table-1.

Table-1: Physical Achievement of Craft/ Weaving Centres In Arunachal Pradesh During 2012-13

Particulars	Unit	2012-2013
Craft/ Weaving Centres	Nos.	88
Trainees in Craft/ Weaving Centres	Nos.	361
Handloom Development Center and Quality Dying Units	Nos.	6
Value of Production of Cloth/ Craft	Rs. in lakh	35
Emporium	Nos.	18
Show Room-Cum Sale Counter	Nos.	6
Annual sale proceed of Emporium and Show Room cum Sales Counter	Rs. in lakh	41.53

Source: Directorate of Textile and Handicraft, Itanagar, Arunachal Pradesh.

Objective: To explore the present scenario of bamboo and cane handicrafts industry in socioeconomic development of Galo Tribe in West Siang district of Arunachal Pradesh.

Methodology and Data Source

Geographical Area under Study: The Geographical area under study is covered West Siang District of Arunachal Praesh. The district located in the central part of the State extends between 93° 57′ to 95° 23′ East longitude and 27° 69′ to 29° 20′ North latitude. It is bounded on the North by China, on the East by East Siang and Upper Siang districts, on the South by Dhemaji

district of Assam and on the West by Upper Subansiri and Lower Subansiri districts of the state. Under the provision of the Arunachal Pradesh (Reorganization of the district) Act No. 3 of 1980 coming into force from June 1, 1980, the district of West Siang came out as a separate administrative unit under the charge of a Deputy Commissioner.

The altitude of this district varies from 200 m to 1890 m above sea level. The district is divided into 4 regions on the basis of physiographic viz., Likabali-Gensi Region, Tirbin-Basar Region, Lower Siyom River Basin Region and Upper Siyom River Basin Region. It is the home-land of

various tribes like Galo, Minyong, Bori, Bokar, Pailibo, Ramos and the peaceful Buddhist tribes of Membas and Khambas in the northern part of the district. Donyi - Poloism is the main religion of the tribes in the district. Cultivation is the chief occupation of the people in the villages and economy is agrarian characterized mainly by a form of jhum and popular wet cultivation practiced at present. The district is comprises of five subdivisions and twenty circles with it's headquarter at Aalo. Of all tribal groups of the district, the Galos rank first in population and are predominant at Aalo, Basar, Tirbin, Liromoba, Darak, Kaying and Likabali circles and sub-divisions wise they are predominant in Aalo, Basar and Yomcha subdivisions. Total Population of this district as per 2011 Census is 112272 consisting 58586 males and 53683 females. The percentage of ST population is 82.64, Sex ratio is 916 and population is density 13 persons per sq km. There is one industrial estate with 50.00 Acre land and under the Textile and Handicrafts department there are 12 Crafts centres with intake capacity of 133 trainees per annum with one Handloom Development centre and one Quality Dyeing unit.

Selected Study Area: Two villages viz. Kambo and Kamki under Kamba Circle are taken under survey.

Nature and Sources of Data: The proposed study is basically empirical in nature based on primary and secondary sources. The schedules are structured pertaining to the objectives of the study.

The Primary Source: Primary data is collected through personal investigation with the help of prestructured questionnaire and participatory method. Samples are selected through random sampling technique without replacement. The data collected

from field study is supplemented to the secondary data.

Secondary Sources: Analysis of the changes in production and its performance overtime in the study area are fulfilled through secondary data to serve as the backdrop to the in-depth study based on primary investigation. The data of the secondary sources are collected from the publications of District Statistical Office, District Industries Center, Textile and Handicraft Industries, and Directorate of Textile and Handicraft Industry, Itanagar. Beside this, many existing literatures on the Galo tribe as well as on related topics are consulted for proper analysis of the study.

Sampling and Sample Size: 25 Households of each village are selected to conduct the survey. The total number of households from two villages is 50 (25×2) . The respondents are selected from the age group (30-60) years. Because, the authors think that this group is more stabilized in their profession and can say whether they keep this crafts for their future generation or not.

Tools and Techniques for Data Analysis: Simple numerical calculations, graphical representations, different statistical and econometric tools are used to analyze data. The quantum of data used in the study is mainly collected by the personal observation and interview from the field study and secondary source. The various data and information obtained are then processed, represented through tools and diagrams which are interpreted and analysed to write up the study. Photographs of different types of handicraft are presented wherever necessary.

Results and Discussions on the basis of Field Study

Present Scenario of Handicrafts: The life of the Galos is intricately woven around the forest especially bamboo, canes and their products and thus one cannot imagine rural life without the use of these species (Sarkar & Sundriyal, 2002). The commercial aspect of the bamboo resource is also very high and it is fast emerging as the most viable and effectively used to revive the closed down plywood units of the state. To make such products, bulk of the supplies of bamboo is collected from the forest freely and from species cultivated in their own selected plots. Bamboo and cane play an important role in the socio economic development of the indigenous communities. People raise large quantities of bamboo and cane in and around their homesteads as well as rice fields. There are a number of bamboo species available in the reserve forest as well. In many parts of the State, it is used as a food, fodder, primary construction materials and for making variety of useful items. Traditional construction techniques of use of bamboo in flooring, roofing, as post and beam, and also in the false ceiling and fencing remain largely undocumented (Sundriyal et al., 2002). Arunachal Pradesh has a rich tradition of Bamboo and Cane Handicrafts. The products reflect the rich and varied culture of the tribes inhabiting this enchanting State in general and the study area in particular. The Department of Textile & Handicraft has been set-up to develop this sector to uplift the economic condition as well as to provide self employment opportunity to the weaver and artisan of the State through various Development Schemes/Projects.

The Galos make their own hats, which are often extremely decorative, adorned with the beaks and feathers of birds or with tufts of hair dyed red. They also make varieties of baskets, bags and other containers. Cane and bamboo is strictly men's craft and the most commonly made objects are baskets

for storing and carrying paddy, fuel and water, vessels for preparing local rice beer, rice plates, bows and arrows, headgear, mats, shoulder bags, etc. Ornaments and necklaces made of fine strips of bamboo and grass are also popular. Burnt pokerwork too is executed on bamboo articles. Basket making is a major craft in these areas. They produce baskets, grain holders, rice beer containers, haversacks, food plates, etc. from bamboo. From cane, they produce headgears, cane belts, anklets, chairs, tables, wardrobes, toys, etc. domestically produced articles from bamboo and cane meet all their requirements in basketry. Cane and bamboo form the main raw material which meets the requirements of everyday life from house building to making baskets, fishing traps, items of dress, construction of suspension bridges, religious paraphernalia, etc. In nutshell, bamboo and cane plays a pivotal role in the life Galo people. Everyday either bamboo or cane or both are used in the daily life of Galo people.

Classification of Baskets in respect to their shapes

Conical Basket: Baskets of conical shapes are invariably used for carrying purposes. There are sufficient reasons to show that there is definite relationship between the topography and the conical shape of these baskets. Their jhum fields and water sources are located far away beyond the villages. As a result, they have to carry their loads such as paddy, firewood, water tubes, etc., on their backs and climb high up the mountain. In this process with the basket on the back while climbing up, the carrier naturally has to bend in such a way as to form a 120-degree angle from the horizontal. Another feature of this basket is that it is more advantageous for carrying things. The portion of the wall of the basket that rests upon the back of the carrier is almost flat and straight and the portion

just opposite to it bulges outward. The flat portion is slightly flexible to rest comfortably on the back.

Semi- conical Carrying Basket: The carrying baskets reveal uniformity in shape; they are **nit** perfectly conical. Though these baskets have tapering outlines, yet they invariably have flat bases.

Cylindrical Basket: These baskets are of straight outline and have perfectly flat bottom. They are used for storing as well as for carrying articles. The baskets used for storing grain in the granary have uniformity in shape all over in this region. They have a flat base, round and straight outline. Normally these baskets are 3 to 4 feet in height and about 4 to 6 feet in diameter. Since the utility is restricted to the houses, this type of basket with a flat base and straight outline has its own advantage. Womenfolk for carrying light loads such as vegetables, seeds, etc., normally use them.

Flat Basket: Distribution of this type of carrying basket seems to be indicative of the influence of the climatic factor, as far as the state of Arunachal Pradesh is concerned. This basket is flat and carried by means of two shoulder straps. The outer surface is slightly concave. This makes the baskets little more spacious. The very shape of this basket renders a natural protection against the rain. It prevents water from accumulation on the surface of the basket and helps the water to trickle down slowly and gradually. They are sometimes lined with a kind of bark to make it doubly sure that the water is not absorbed inside. To make it rainproof, tama fibres are fitted on to the outer surface. Because of the flat nature of the basket, the tama fibres or animal skin are more effectively used to render the basket complete waterproof.

Basket with constricted mouth: Most of the smaller baskets found have usually constricted

mouth in relation to the size of the body. They are almost round in shape. A good example of such a basket is the *husak*. The height of the basket is about 10 cm and maximum girth is about 20 cm. The diameter of the mouth is 5 cm. Husak is used by the women folk for sowing paddy in the jhum field

Tools and Implements used in Basket Making:

The only tool, which is commonly used for the manufacture of baskets and various other objects manufactured, is a sort of long knife, popularly known as dao. Besides the dao and knife, iron and bone needles are required in coil basketry. The needles are thin, round with tapering ends. Two different types of needles are found. One of them is used for finer work and the other for rough work. Bone needles are extremely rare. The socioreligious significance of dao is as important as its utilitarian value. The importance of dao in the socio-economic life of the Galo people of Arunachal Pradesh can be gauged only when the peculiar topographical and socio-politico conditions are taken into account.

Socio-Economic Significance: The technique and habitat are directly interlinked. Therefore, the techno-typological study of basketry becomes meaningless if the nature of the topography, the climate and the ecology is not taken into account. Therefore, there exists a technological balance in between the mountainous topography, the shifting and terrace cultivation and a bamboo and cane based material culture. Basketry, as an aspect of traditional industry has definite bearing on the economy. Further, the socio-political condition of a particular group of people is also reflected on the economic life. Hence, the functional study of basketry is bound to reflect the social, political and economic life of the group. Many social phenomena such as division of labour on craft

basis, ceremonial weaving of matting as the basis of tribal solidarity, material object like basket as the form of tribute and political authority are dynamically interrelated with the functional aspect of basketry of the Galo people of Arunachal

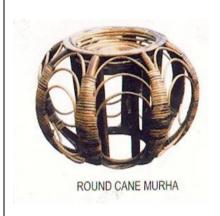
Pradesh. Besides the symbolic value attached to certain baskets, (such as the basket used in Mopin festival) and other cognate objects have a definite functional orientation. The different items made of Cane & Bamboo are shown below in Table-1.

Fig-1: Descriptions of Different Items made of Cane and Bamboo Used in Daily Life in the Study area



Bamboo Bottle. It is

made of bamboo. It is used as container.



It is made of cane and used for sitting.

Erap Bolup



This Hat is known as Erap Bolup used in the Hornbill dance (Nyida Parik) performed during Togu (Marriage ceremony). It is made of Peak of Hornbill, bird feathers, bore hair, cane. The hat has ritualistic importance in the Galo people.

Bolup



This type of hat is made of cane and used in various occasions by the male folk of the Galo people.

Igin



The Igin is a basket used for carrying paddy and vegetables. The basket is generally used by the women folk. It is made of bamboo and cane.

Lettu



The Lettu or Rase is a carrying bag used by male folk for carrying eatable items while going for work in the field and jungle. It is made of cane only.

Oyok Hobuk



The Oyok-Hobuk is used for carrying dao. It is made of cane and bamboo used by male-folk.

Yoksik Hobuk



The Yoksik-Hobuk is used for carrying knife. It is made of cane and bamboo used for carrying knives by male-folk.

Livelihood on Handicraft

The interesting feature of the handicraft activities of Galo community is that the expert himself performs all activities in his trade. We find non existence of division of labour. All the

specialized works are entirely taken up by themselves using the locally available raw materials. During the preparation of some items, one person is needed to help. Generally, the time requirement depends on the size of the craft and its design. The time period takes on an average 1-4

hours or 3-10 days depending on the size and quality of the products. It has also been found that the required labour hours of the handicraft product depend on the expertness. Consequently, this

influences the cost of production and subsequently to its market prices. The profit of the worker depends on the cost of production and its selling price.

Table-2: Cost and Price of Some Handicrafts Items in the Study area

Sl.	Product	Labour	Total cost	Market	Profit	per
No.		hours	(in Rs.)	selling price	product	in
				(in Rs.)	(Rs.)	
1.	Hat (Bolup) made of cane	10	1500.00	3000.00	1500.00	
2.	Hat (Bolup) made of bamboo	5	750.00	1200.00	450.00	
3.	Carring Busket (Ankur) made of bamboo and	3	450.00	1000.00	550.00	
	cane					
	(big size)					
4.	Carring Busket (Igin) made of bamboo and cane	2	300.00	500.00	200.00	
	(Small Size)					
5.	Dao Cover (Hobuk) made of cane	2	300.00	500.00	200.00	
6.	Knife Cover (Yoksik Hobuk) made of cane	1	150.00	300.00	150.00	
7.	Opho for cleaning rice	2	300.00	500.00	200.00	
8.	Raju for catching fish	3	450.00	1000.00	550.00	
9.	Mura made of bamboo and cane for sitting	3	450	800	350	
10.	Mat (Upho) for drying paddy	5	750	1600	850	

Source: Field study in July. N.B.: The data obtained on the basis of collection data from the study area and taken average is subject to error.

From the above table, the profit of the worker for each product is abnormally high. This profit is purely accrued to the worker for her entrepreneurial skill and abilities. This profit is accrued after deducting total cost from the market selling price and the total cost includes the cost of materials and labour. The total cost of labour is calculated by taking Rs. 150 wages per day (taken as imputed cost) and eight hours of working per day. Since, at the household level, the people engage in many activities and handicraft activities are considered as subsidiaries activities which mean they engage in it whenever they have leisure time. Hence, even for a simple item, one worker takes a month or more to complete it. So, for the convenience of calculating the labour cost, the working hours required in the completion of particular product have been taken.

Problems

The handicraft industries are not commercially viable. Its main problems in the state are (i) lack of interest of craftsmen; (ii) lack of working capital, (iv) lack of marketing facilities, (v) lack of capacity-utilisation, (vi) lack of technical knowhow, (vii) shortage of organizational strength, (viii) competition from other modern products, (ix) lack of entrepreneurial knowledge, etc.

It is undisputedly accepted that the success of an industry depends on the market of its products. It has no well organized market outside the state and even inside the state also. It has 18 numbers of Emporia and 6 numbers of Show Rooms Cum Sales Counters in the State. It has only 2 numbers of Emporia outside the state functioning in Delhi and Kolkata having no Emporia and no Show Room Cum Sales Counter outside the country. It has no regular advertisement through T.V. and

Radio and not even in daily newspaper inside or outside the state. Again there is no organised agent to whom its products can be sold. Only the local entrepreneurs are encouraged to participate in different Fares and Expo inside and outside the state like N.E. Trade Expo, Indian International Trade Fare, New Delhi and Regional Level Exhibitions where the products of handicraft industries are exhibited and sold.

Suggestions

The following suggestions may be considered with a view to strengthen the handicraft industries in Arunachal Pradesh.

First this industry needs well organized advertisement for its product through media like T.V., Radio, even through daily newspaper outside and inside the state.

The State government may arrange every possibilities to help the local entrepreneurs in participating in every expo and fare conducted inside and outside the state and even in outside the country.

The state government may give priority to develop border trade with Bhutan, China and Myanmar. If border trade comes into effect, it will give fillip not only generating a new avenue of employment but also it will make a self-generating and self-sustaining economy of Arunachal Pradesh. In this way the market for Arunachal products including handicraft products will be automatically developed.

The handicrafts industries will have to be attracted by means of various incentives and concessions.

A comprehensive techno-economic survey of entire region of Arunachal Pradesh by a competent agency may be undertaken to find out the potentiality of such type of small scale industries.

Establishment of various technical and managerial institutions may be setup for imparting training to the existing and potential entrepreneurs.

Complete financial support and its use in proper way in any probable selected unit are to be shouldered by the government agent with proper monitoring.

The flow of relevant information relating to these small scale industries may be circulated in a regular way so that the entrepreneurs can get up-to-date information about technology, man power planning, etc.

The bank has to play more vital role in addition to lending credit assistance to such type of small scale industries. Bank may offer a special scheme to the entrepreneurs so that they can take short-term interest free loan. The bank can detect the sickness of industrial units and draw up a nursing plan for their rehabilitation. It can set up a special cell for close monitoring during the rehabilitation period until the unit becomes self-sufficient again.

Tourism industry must be developed on the priority basis as this state has a great potentiality regarding this so as to attract a good number of tourists to come in Arunachal Pradesh. They will come and see the eye-catching handicraft products and purchase these products.

Conclusion

In the process of industrial development, the importance of cottage industries could not be ignored. To set up heavy industry is not so much possible in different places of this state as its major portions are not easily accessible. But to set up

small scale industries in the state is not so much difficult. That is why; top priority must be given to those small scale industries like handloom and handicraft industries which need light machine tools and other equipments in order to produce qualitative products.

But while the planners planning for the development of these industries they should keep in mind the features of Arunachal Pradesh. These include the long distance from the mainland, relative isolation from the rest of India, under development and fundamental backwardness in terms of most social and economic development indicators, isolation of sparsely populated settlements in difficult and hilly terrains, limited cultivate area, etc.

As small scale and cottage industries are the largest and most potential source of economy for the state and is the mainstay of economic progress of the people, these are very important from the stand point of providing gainful employment to the people of Arunachal Pradesh. Lastly, it is necessary to make an integrated research for the development of marketing of handicraft products and more emphasis may be given by the policy maker of the State in this sector.

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References

- Bhattacharjee, R.P (2000), "Economic Development of Arunachal Pradesh", Himalayan publishers, Delhi, Itanagar, P. 147 & 236.
- 2. Borgohain, H., "Development of Industries and Handicrafts in Siang

Region" in Pandey, B.B. (ed), "Patterns of Change and Potential for Development in Arunachal Pradesh," Himalayan Publishers, Itanagar, New Delhi, P. 133 – 139.

- 3. Das N.C (1998), "Handloom Development Programme under five year plans in Assam" in Bhorali, D.(ed), "Economic Development of the North-Eastern Region", Spectrum publication, Guwahati, Delhi, P. 177 185.
- Govt. of Arunachal Pradesh (2000, 2001, 2002, 2003 & 2004), "Economic Review of Arunachal Pradesh", Directorate of Economics and Statistics, Itanagar.
- Mandal, R.K. (2009), "Socio-Economic Transformation of Arunachal Pradesh" Omsons Publications, New Delhi, P- 90 – 91.
- Govt. of A.P. (2010): Arunachal Review, Vol.VIII, No.22, June-August, 2007 P.31 (editorial part).
- 7. Prodip et. al.(2010): "Role of bamboo resources in socio economic development of the Tribal people of Arunachal Pradesh with special reference to Nyishi tribe of Papum Pare District", Journal of Biosciences Research 1(3): 216-226
- Sarkar, J. and Sundriyal, R.C. (2002): Indigenous uses, management and conservation of Bamboo Resource in Arunachal Pradesh, North East India, Bamboo Journal, 19:24-39
- Sundriyal, R.C., Upreti, T.C and Varuni,
 R.(2002): Bamboo and Cane Resource

utilization and conservation in the Apatani Plateau, Arunachal Pradesh, India: Implication for management. J. Bamboo and Rattan, 1(3): 205-246.