ANALYSIS OF HANDMADE PAPER INDUSTRY OF KALIMPONG

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ABSTRACT

‘This type of indigenous technology should be promoted by the Government in the interest of the socio-economic development without compromising the ecological pristine in the mountainous region’

- (Paul et. al., 2006)

The need of the hour is the promotion of small and medium industries in North Bengal like in the rest of West Bengal, preferably those that are agro-based which will synchronise agriculture and employment like the Handmade Paper Industry of Kalimpong which has tremendous growth and export potential. Handmade Paper in Kalimpong is mainly produced from the plant, Daphne papyracea. This paper has analysed three primary Handmade Paper factories in Kalimpong, namely Gangzong, Himalayan and Anushya. The Gangzong factory is the oldest and the biggest among the lot and so enjoys certain advantages. However, there is an urgent need of modernization of all the three factories, which is held up due to a paucity of funds and lack of a clear plan by the Government. If the Handmade Paper Industry of Kalimpong is modernised and suitably equipped with adequate machinery and man-power, then it will have the capability to able to compete with international countries like Nepal and China, to export their products to faraway countries like Japan and earn much-required foreign exchange for India. This promotion of small-scale and ecologically sustainable Industry will undoubtedly prove to be a recipe for the all-round development and successful integration of the restive Darjeeling with the rest of West Bengal.

‘Increasing demand of bark of.....Daphne papyracea......for subsistence as well as commercial use demands more careful assessment of resource base and application of sustainable harvesting techniques to ensure the sustainability of local hand made paper enterprises. A systematic inventory......would determine the resource availability and annual harvestable yields......the case study......demonstrates the need for incorporating ecological integrity, economical viability, and social acceptability to define the sustainable management......which can in turn ensure the sustainability of hand made paper enterprises’

- Poudyal (2004)

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1. INTRODUCTION

‘….industrial development as central to the process of structural transformation which characterizes economic development’

- JoAnne DiSano (2007)

Today, the development of industry in West Bengal is of paramount importance. In order for West Bengal to develop and provide employment for its burgeoning population, it has become imperative that West Bengal make rapid stride in industrial development. Endowed with abundant natural resources, the focus area of industrialization has been on coal, iron ore, steel and petrochemicals sectors centering in the state’s most important industrial belts located in South Bengal; and lately on the information technology and software sector centering in Sector V in Kolkata (The Hindu, 2010). At one time, undivided Bengal, under the colonial British rule, was the leading industrial region in India. Immediately after independence and in the aftermath of Partition, West Bengal still continued to rule the roost in jute, automobiles, chemicals, fertilizers, wagons, electronics and paper industries. But, all that is in the distant past. In present-day West Bengal, agriculture dominates both its landscape and economy (Encyclopedia Britannica, 2012). The need of the hour is the promotion of small and medium industries in West Bengal, preferably those that are agro-based which will synchronise agriculture and employment. Another primary aim should be on the promotion and encouragement of industries in North Bengal which unfortunately industry-planners do not attach much importance most of the times. This is a recipe of disaster as neglect of North Bengal has led to the emergence of several autonomy movements, like the Gorkhaland and Greater Cooch Behar agitations, that demand cessation from West Bengal and the creation of new States within the Indian dominion (Ray & Biswas, 2013). To avoid such incidents, that would undoubtedly prove to be a mitigating disaster for the large sections of population that reside in North Bengal, small-scale and ecologically sustainable industries should be promoted in such undeveloped and restive areas like the promotion of Handmade Paper Industry in Kalimpong.

2. OBJECTIVES

‘This type of indigenous technology should be promoted by the Government in the interest of the socio-economic development without compromising the ecological pristine in the mountaineous region’

- (Paul et. al., 2006)

The main objective of this paper is to highlight the importance of Handmade Paper Industry in Kalimpong and to analyse the working of this Industry so as to bring out the hurdles and
challenges facing the expansion of this Industry. With a population of 42,988 (Census, 2011), Kalimpong is a major production centre of indigenous ginger, gladioli and orchids, which are exported to other countries. Apart from its horticulture industry, the main source of revenue for the economy of Kalimpong still remains its tourist industry, followed by its education sector (Passang, 2008). However, like most of North Bengal, Kalimpong is bereft of a manufacturing base. So, in this era of globalisation and competition, it has now become important to explore new avenues for earnings in Kalimpong, like its traditional Handmade Paper Industry. The size of Handmade Paper Industry in Kalimpong may be small as compared to the other sectors of the Kalimpong economy, but the sheer potential of the Handmade Paper Industry is immense. If we strive to take a leaf out of the neighbouring economy of Nepal, we can see that ‘the local handmade paper has contributed significantly to the national economy as well’ (Poudyal, 2004). Total export of local handmade paper in 2001-2002 in Nepal was an astounding US $ 3.5 million (Biggs & Messerchmidt, 2003). The white bark of the plant Edgeworthia gardenri is used for making Japanese Yen (Maharajan, 1996 cited in Acharya, 2003). Yet, Nepal manages to supply only 2% of this white bark to Japan for making Yen. Thus, there is a huge scope for Kalimpong to cultivate these plants and modernize its Handmade Paper Industry to meet export criteria and exports its Handmade Paper products to foreign countries. This paper attempts to bring to the table of the national policy-planners the strategic importance of promoting such sustainable industries like Handmade Paper Industry in the rich Himalayan forests of North Bengal, like Kalimpong located in Darjeeling. This paper endeavors to provide viable linkages between the promotion of Handmade Paper Industry in Kalimpong, providing employment to the poor, poverty alleviation, economic development and prosperity and ultimately, regional development and the integration of the diverse Indian mosaic with the Indian ethos – ‘Unity in Diversity’.

3. METHODOLOGY

The data used for this paper is both of primary and secondary in nature. The primary data is obtained through structured and informal interviews with various people connected with the Handmade Paper Industry in Kalimpong during 2014. The secondary data has been obtained through a study of various books, periodicals, newspapers and journals. However, this independent study has been subject to the constraints of both resource and time.

4. THE STUDY AREA

The Handmade Paper Industry stretches much beyond the geographical frontiers of Kalimpong to international territory, like Nepal where the Handmade Paper is made from such a wide assortment of plants like Daphne bholua, Daphne papyracea and Edgeworthia gardenri (Biggs & Messerschmidt, 2003; 2005). However, keeping consistency with the topic of this paper, the study area is concentrated to Kalimpong municipality area, where the Handmade Paper is mainly produced from the plant, Daphne papyracea (Paul et al., 2006). The study area comprises of three major Handmade Paper factories located in the Kalimpong Municipality, namely the:-
Ganzong Handmade Paper Factory located at Primtam Road in Kalimpong;
Himalayan Handmade Paper factory located in Tirpai Road in Kalimpong; and
Anushya Handmade Paper factory located at Bhalukhop in Kalimpong.

5. ANALYSIS OF THE WORKING OF THE INDUSTRY

After the collection of data from the three factories, it is seen that the method of preparation of Handmade Paper in Kalimpong is of very methodical, economical and naturally sustainable. The steps involved in the preparation of Handmade Paper in Kalimpong are as follows:

- Collection of bark of *Daphne papyracea*;
- Scrapping, washing and drying of the bark;
- Making pieces of the dried barks;
- Cooking and boiling of the barks;
- Making pieces of the soaked barks;
- Making of pulp from bark;
- Making of paper sheets;
- Drying of paper.

5.1 SHORT DESCRIPTION OF THE HANDMADE PAPER INDUSTRY:

The Handmade Paper Industry in Kalimpong use traditional methods in preparing Handmade Paper sheets from the barks of the Daphne plant. Firstly, the barks of the Daphne plants are collected from remote areas where these plants are generally harvested. Then, after these barks are brought to the factory, the barks are scrapped to remove the outer-greenish to reveal the whitish creamy inner layer which is washed and sun-dried for a few days. After that, these dried barks are cut into small pieces and boiled in water for a few hours to remove any remnant organic material. The greenish part of the boiled bark is removed and it is again washed in water to remove any dust particles. Then, the boiled bark are beaten on plain, flat stone plates by big hammers to make into smooth pulps that are rolled into balls.

The Handmade Paper sheets are made from these pulps. Firstly, these fine pulps are kept in aluminum tubs where water is added to make it sticky. Then, these pulps is put in small bamboo baskets and poured into a rectangular sized net which is floating on water from time to time, a bamboo rounder is used to stir the pulps to help them to be evenly distributed on the net to
ultimately form a even layer. This rectangular net is sun-dried for a few days to ultimately form the much-sought after fine Handmade Paper.

‘This paper can survive for thousands of years if it is not touched by fire or water……since it doesn’t catch fungus, crumble or entertain the rapacious silverfish’

- Sen (2002)

5.2 COMPARISON BETWEEN THREE HANDMADE PAPER FACTORIES

After describing the process of preparation of the Handmade Paper sheets in the factories of Kalimpong, it becomes essential to make a comparison between the workings of the three Handmade Paper factories in Kalimpong as this provide for an in-depth analysis of the Industry. This comparison is given is given below:

<table>
<thead>
<tr>
<th>Particulars</th>
<th>Gangzong</th>
<th>Himalayan</th>
<th>Anushya</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year of Set-up</td>
<td>1992</td>
<td>2006</td>
<td>2007</td>
</tr>
<tr>
<td>Number of employees</td>
<td>4 males, 7 females</td>
<td>3 males, 6 females</td>
<td>1 male, 3 females</td>
</tr>
<tr>
<td>Annual raw material required (kgs of Daphne bark)</td>
<td>4000-5000</td>
<td>3000-4000</td>
<td>1500-2000</td>
</tr>
<tr>
<td>Cost of Daphne bark (per kg)</td>
<td>25</td>
<td>20-22</td>
<td>15-20</td>
</tr>
<tr>
<td>Amount of Daphne barks cooked at a time (kgs)</td>
<td>60</td>
<td>150</td>
<td>100</td>
</tr>
<tr>
<td>Annual output (number of sheets)</td>
<td>108000</td>
<td>70000-80000</td>
<td>24000-30000</td>
</tr>
<tr>
<td>Productivity (sheets per kg of Daphne bark)</td>
<td>21.60</td>
<td>20</td>
<td>15</td>
</tr>
<tr>
<td>Market Price (Rs. Per sheet)</td>
<td>8</td>
<td>7-8</td>
<td>7-8</td>
</tr>
</tbody>
</table>

Source: Primary Survey
From Table 1, it is seen that the Gangzong Handmade Paper Factory is the oldest of the three factories. Also, the annual output and productivity of Gangzong Handmade Paper Factory is the highest followed by the Himalayan Handmade Paper Factory and the Anushya Handmade Paper Factory. However, the cost of raw materials is the cheapest for Anushya Handmade Paper Factory and highest for Gangzong Handmade Paper Factory. The Gangzong Handmade Paper Factory requires the highest quantity of raw materials and the Anushya Handmade Paper Factory require the lowest quantity of raw materials. The number of employees working at Gangzong Handmade Paper Factory is highest with four males and seven females and is lowest for Anushya Handmade Paper Factory with one male and three females. Generally, it is seen that the Handmade Paper Industry in Kalimpong employ more female employees than male employees, which indicate that the Handmade Paper Industry in Kalimpong is female-intensive. The amount of Daphne barks cooked at a time varies between the three factories – being 60 kgs for Gangzong Handmade Paper Factory, 150 kgs for Himalayan Handmade Paper Factory and 100 kgs for Anushya Handmade Paper Factory. However, it is to be noted that the market price of the output of all the three Handmade Paper factories is the same which indicates that the quality of the sheets of Handmade Paper produced by all the three factories are the same.

6. CHALLENGES FACING THE INDUSTRY

‘Expansion would certainly ensure that the Gangzong paper factory does not end up as just photographic memories in some obscure album’

- Sen (2002)

There are several difficulties and challenges that are facing the Handmade Paper Industry in Kalimpong. After evaluating the survey data and the preparation of Handmade Paper at the three factories in Kalimpong, it is seen there are several hurdles in front of the Handmade Paper Industry in Kalimpong. These are discussed below.

- Lack of modern technology;
- Shortage in supply of raw material;
- Lack of water in Kalimpong;
- Irregular electric supply;
- Local disruptive elements.

The above-mentioned hurdles lie before the expansion of the Handmade Paper Industry in Kalimpong; the chief among them, is the lack of application of modern technology which can increase the productivity of the industry. Back in the 1960, a similar Handmade Paper factory was established in Kalimpong but it had shrunk without a trace. But, the setting up of the
Gangzong Handmade Paper factory has resurrected the traditional technology; albeit a much-needed infusion of modern technology.

Also, the area under cultivation of the Daphne plant has not grown to commensurate the growing demand from paper dealers from faraway places like Delhi, Mumbai and Kolkata. For example, the elite market stationery designer, Chimanlal has been a much valued customer of Gangzong since the inception of the factory (Sen, 2002). So, there is shortage of raw materials and the cost of raw materials is high, which drives up the cost of production of Handmade Paper in Kalimpong.

Kalimpong has a perennial shortage of water almost throughout the year, except the rainy season. This hampers the functioning of the Handmade Paper Industry in Kalimpong as water is needed for washing, boiling and making of paper sheets. To overcome this problem, the Himalayan Handmade Paper factory has built a tank of a capacity of 70000 litres to harvest rainwater. This has gone some way in solving the water-crisis of the Industry.

Irregular supply of electricity and local disruptive elements are the other two problems confronting the Handmade Paper Industry in Kalimpong. During interruption of electricity, equipments like the electric dryer used for drying the barks by Gangzong factory stops working. Disruptive elements pose a huge problem for collection of raw materials by the factories. The local disruptive elements often stop the vehicles used for collecting and transporting the raw materials to the factory and charge exorbitant amounts from the hapless drivers.

7. CONCLUSIONS AND SUGGESTIONS

‘Increasing demand of bark of......Daphne papyracea......for subsistence as well as commercial use demands more careful assessment of resource base and application of sustainable harvesting techniques to ensure the sustainability of local handmade paper enterprises. A systematic inventory......would determine the resource availability and annual harvestable yields......the case study......demonstrates the need for incorporating ecological integrity, economical viability, and social acceptability to define the sustainable management.......which can in turn ensure the sustainability of handmade paper enterprises’

- Poudyal (2004)

The challenge that lies before the policy planners is to transform the traditional Handmade Paper Industry of Kalimpong from a cottage industry into a potentially more profitable venture. As mentioned earlier, the development of Kalimpong, like any other place in North Bengal region has become an important national agenda. In this era of cut-throat competition, opening of new sources of revenue for regional economies are of paramount importance for their basic survival. The prospect of modernisation and expansion of the Handmade Paper Industry in Kalimpong will augur well not only for the economy of Kalimpong but also earn important foreign revenue
for the nation through export of the Handmade Paper sheets to foreign countries. The very geographical location of Kalimpong is conducive to such a possibility.

Kalimpong lying between two hills, Deolo and Durpin (Banerjee, 2002), is in close vicinity to Nepal, Bhutan, Sikkim, Chumbi valley of Tibetan Autonomous Territory, Barindland-Boikunthopur watershed as well as the transnational Teesta River flows towards Rajshahi Division of North West Bangladesh. Furthermore, with the possible re-opening of Jelep-la pass in the future, Indo-China trade through Kalimpong will receive a fillip (The Telegraph, 2008). In this favorable trading environment, there is huge possibility to make the Handmade Paper Industry in Kalimpong export-oriented.

For that to happen, it becomes essential to upgrade the quality of the Handmade Paper produced in Kalimpong to export quality through the infusion of new and modern technology. As seen from Table 1, the market price of the biggest Handmade Paper factory, that is Gangzong and the oldest Handmade Paper factory, that is Anushya are the same, which indicates that there is no differential in quality of the sheets of Handmade Paper produced by them. For the Handmade Paper factories of Kalimpong to be competitive in the global market, infusion of new technology will help to upgrade the quality of Handmade Paper sheets produced in these factories. These newer quality sheets of Handmade Papers can then be exported. For over a decade, the Gangzong Handmade Paper factory has ‘drawn up plans for a factory to house 5,000 workers in place of their modest staff..., with machinery from Japan for which they need financial and other assistance’ (Sen, 2002). But, for paucity of funds, the modernization drive has not been taken. The Government should immediately draw up special financial packages and extend all types of financial and technical assistance which the Handmade Paper factories like Gangzong can avail of and can mordenise themselves.

To improve the supply of raw materials, captive consumption of *Daphne papyracea* is very viable option for the Handmade Paper Industry in Kalimpong. From Table 1, it is seen that the cost of raw materials between the three factories varies, with that of Gangzong Handmade Paper Factory being the highest and that of Anushya Handmade Paper Factory being the cheapest. This is not acceptable as the cost of raw material of the largest factory is the most expensive. Previously, it was not so. Before the setting up of the other two factories, the Gangzong factory used up all the Daphne barks in the vicinity of Kalimpong and thus the cost of raw material was cheaper at that time. However, after the setting up of the other two factories, the area of cultivation of the Daphne barks has not increased, which has led to shortage of raw materials and its consequent rise in cost. This problem can be removed if all the three factories bring some area under Daphne cultivation for captive consumption.

Since Kalimpong, like other areas of the Himalayan Darjeeling, suffers from water scarcity, especially in the months of February to May, the suggestion of rain water harvesting in excess of one lakh litres is proposed; obviously after conducting extensive soil tests for building of the
huge concrete reservoirs. To improve the electricity supply for the Handmade Paper Industry in Kalimpong, use of renewable energy like water and solar is proposed. Also, awareness campaigns about the huge possibility of this Industry must be taken up by the authority on a mass scale so as to enlist the more and more support of the locals. If the people of Kalimpong are made the stakeholders of the Handmade Paper Industry, then the success of this industry is ensured for the future generations to come.

‘Most important feature of these industries is that majority of workers are women. Therefore the handmade paper industries of the region by employing local rural female population play a significant role towards the socio-economic development of the whole region’

- (Thapa & Chaudhuri, 2012)

References


