GLOBALISATION, GREEN BUSINESS AND SUSTAINABLE LIVELIHOOD: A STUDY IN THE CONTEXT OF TRIBAL WOMEN OF KANDHAMAL DISTRICT OF ODISHA

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Forests and trees play a critical role in the livelihoods and economy of tribal poor in Odisha. The majority of this group depends mostly on forest based resources to meet their subsistence needs. The present paper is a comparative study on the pre and post globalization scenario of tribal women’s livelihood who solely depend upon trading forest based products without affecting their local ecology. The study was conducted to assess the incremental income by the tribal women who are engaged in green business through forest based products during the pre and post globalization era. The study was conducted in Kandhamal district of Odisha covering a sample size of 500 tribal women. Focus group discussion and individual interviews were conducted to assess the impact of Green Business on the livelihood of tribal women during pre and post globalization era. Secondary data were collected from the reports of government departments at district level while primary data were collected during the field study. After detailed cost-benefit analysis of the green business undertaken by tribal women of Kandhamal district, it was revealed that green business model adopted by tribal women has made positive impact on the income of tribal women. The study recommends proper marketing of minor forest produces with forward looking policies to protect the interest of primary producers who play critical role in conserving environment based on sustainable business practices and ensure their sustainable livelihood.

Keywords: Globalization, Non-timber forest products, Green business, Cost-benefit analysis, Common property resources

Introduction

Forests and trees play a critical role in the livelihoods and economy of the tribal poor in Odisha. The majority of tribal groups depend on forest based resources to meet their subsistence needs. For them, forests are also the chief source of construction material, fuel, medicines, animal feed and nutrients for crops. The tribal population has organic linkage with forests as they depend on forest resources throughout the year. It has been estimated that 20–50 per cent of the household income per annum of these households is derived from the Non-Timber Forest Products (NTFP). Also, small scale manufacturing of forest-based products like furniture, tools, and baskets provide an important source of rural non-farm employment to these forest based tribal communities. For many poor tribal people in the forest areas and

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marginal agricultural lands, commercial markets for their forest products offer one of the few available and sustainable options to alleviate their poverty. However, with growing commercialization and degradation of forest resources, the issue of forest management and conservation assume utmost importance. In this debate, the role of forest dependent tribal population has been emphasized to a great extent as they have a fundamental and long-term interest in conservation of forest and its management. The declining economic as well as physical access of local community to forest-based food products gives rise to the questions of livelihood security, sustainability and equity. Excessive deforestation has threatened not only the soil and water base essential for food production, but also the present and future availability of many forest plants and animals that are sources of food. (HDR, 2004).

Since tribal population depends upon the ecology around them for their livelihood, they prefer the kind of trade which produces green output. Forest based trade being the mainstay of livelihood of tribal community, “Green Business” with balanced commitment to profitability and sustainability has been popularized in hilly districts of Odisha. Primary producers of tribal population also attach utmost importance to the sustainable business practices to benefit natural ecosystems which ultimately helps them to live today and secure tomorrow. The tribal Producer Based Organization also attempts to use renewable resources from the local ecosystem to preserve environment as a principle of their business operation. Due to production of natural products, these tribal organizations receive “green request” from consumers. Popularization of green business also creates “Green Consumers” who prefer to purchase eco-friendly green products and avoid environmentally harmful consumption.

The present paper is a comparative study on the pre and post globalization scenario of the tribal women's livelihood who solely depend upon trading forest based products without affecting their local ecology. The study attempts to assess the incremental income by the tribal women engaged in green business through forest based products during the pre and post globalization scenario. The study was conducted in Kandhamal district of Odisha covering 500 tribal women who are engaged in “Green Business” by way of trading of products from nature. The incremental income as well as livelihood options of tribal women engaged in green business during pre and post globalization period was compared by applying Cost-Benefit Analysis in the current paper. Some areas of concern like marketing of forest based products by tribal people and difficulty in getting timely clearance from Forest Department to collect small timber, honey, bamboo and related NTFPs is also presented in the paper. Finally the study recommends promotion of green business through forward looking policies to protect the interest of primary
producers who play critical role in conserving environment based on sustainable business practices.

**Review of literature**

Giesler and Vesesiu (2014) in his research opines that Green Business creates responsible consumers in long run He emphasized that the business which cares for human civilization and future generation ultimately creates responsible consumers. He further added that such type of business can ensure long term sustainability of the enterprise based on business ethics. Hawken and Lovins (1999) in their work highlight natural capitalism is the way to create next industrial revolution. According to the researchers since majority of the business houses aim for profit maximization with little concern for environment around them, setting enterprises with concern for nature will pave the way for next industrial revolution. The seminal research done by N.S. Jodha (2010) reveals that an industry can reduce its negative impact on the local environment as well as community while maintaining profit. The author suggested an eco-friendly model of doing business where the community can be a stakeholder in managing areas surrounding industries. The study by Karagulle (2012) reveals business models based on rationalities of surplus generation and profit maximization often do not align well with care for Common Property Resources. The study recommends that the current business development models need to create equilibrium between the social, economic and ecology process for their sustainability and contribution to society. Prasad and Mishra (2008) in their study to assess the socio-economic impact on local community in the periphery villages of NALCO in Angul district after setting up of power plant recommend local community to be involved in management of natural resources as a part of Corporate Social Responsibility of the company.

**Objective, study area and methodology**

The study was conducted with the following objectives:

1. To assess the incremental income by the tribal women engaged in green business through forest based products during the pre and post globalization scenario.
2. To suggest the sustainable model of green business without affecting environment and ensuring livelihood of tribal women

The study proposed the following hypotheses:

i. The Green Business model has made positive impact on the income of tribal women.
ii. Green Business through tribal women SHGs is a suitable model for forest dependent communities without affecting local environment.
The study was conducted in Kandhamal district of Odisha. 500 tribal women who were engaged in trading forest based products were consulted during the course of study. Data was collected from secondary and primary sources. Secondary Data was collected from the reports of Government Departments as district level while primary data was collected during the field study. Focus Group Discussion and individual interview was conducted to assess the impact of Green Business on their livelihood during Pre and Post globalization era. The data collected was analyzed in tabular and graphical form to draw inferences on livelihood of the tribal women who depend upon Non-Timber Forest Products without affecting local environment. Cost-Benefit Analysis was applied to assess the incremental income accrued to tribal women engaged in green business through forest based products during the pre and post globalization scenario. Impact assessment of the “Green Business” practices taken up by tribal women was done by applying statistical tools based on the data collected from field. Exploratory study was also done through in-depth interviews and pilot studies to examine existing priorities of consumers, primary producers, traders and competitors who promote green business. Based on analysis of the findings, sustainable model for green business has been suggested.

Kandhamal District

Kandhamal district is one of the districts located in Southern Odisha. It lies between 83° 30’ E to 84° 35’ E longitude and between 19° 34’ N to 20° 34’ N latitude. It is surrounded by the Boudh district in north, Gajapati district in south, Nayagarh district in the east and Kalahandi district in the west. The climate condition of the district is usually hot with high humidity during April and May and cold during December and January. The monsoon normally breaks during the month of June. Average annual rainfall of the district varies between 1500 to 1600 mm (Directorate of Economics and Statistics, Government of Odisha, 2015-16).

Administratively Kandhamal district constitutes of 2 subdivisions, 2 Urban Local Bodies, 153 Gram Panchayats and 2515 villages. Physiographically the entire district lies within high altitude zone with inaccessible terrain of hilly ranges and narrow valley tracts which guides the socio-economic conditions of people and development of the district. More than 50% of population constitutes ST community of aboriginal tribal races. The district is ranked as a backward district of Odisha in terms of HDI and GDI value (Economic Survey, Govt of Odisha, 2015-16).

The district of Kandhamal is bestowed with the beauty of nature. It has wild life, scenic beauty, healthy climate, and serpentine roads for the tourists who need to relax and unwind. It has attractions, like
panoramic coffee gardens, pine jungles, Ghat roads, hills and waterfalls, virgin forest and typical tribal village life. Almost 66% of the land area of the district is covered with dense forest and towering mountains which provide shelter to the inhabitants like Kondhas, classified under the ancient Gondid race of proto Austroloid group, rich in green meadows at the attitude of 2000 ft to 3000 ft, the terraced valleys thronged with these colorful tribals in their natural heritage, dancing and sporting has its own appeal. Kandhamal is also famous for handicrafts such as Dokra, Terra-Cotta, Cane and Bamboo works (http://kandhamal.nic.in, 2012).

The district has an area of 8021 sq. kms and 7.32 lakhs of population as per 2011 Census out of which 6.60 lakhs (90.14 per cent) are from rural areas and the remaining 9.86 per cent are urban population. 43.3 and 15.4 per cent of the population belong to ST and SC community respectively and the remaining 41.3 per cent are from other caste groups. The district is having favorable a sex ratio of 1008 females (per 1000 male) while density of population of the district is only 81 per sq km. 5.15 per cent of the land area of Odisha consists of the district (Census of India, 2011).

70 per cent of the population depends upon agriculture which is the mainstay of livelihood and employment of common masses. Agriculture is mainly rain-fed and is heavily dependent upon monsoon. During the year 2016-07, the net sown area of the district was 73 thousand hectares against 5654 thousand hectares which is 1.3 per cent of the net sown area of the state. Paddy, wheat, maize, ragi, sesame, groundnut, mustard, potato and sugarcane are the major crops produced in the district. (Directorate of Economics & Statistics, Govt of Odisha 2015-16).

Tribal Women and Forest Based Livelihood in Kandhamal District of Odisha

There are nearly 45000 tribal women engaged in forest based occupations in Kandhamal district of Odisha. Tribal women perform several community and economic activities, such as collection of firewood, fodder, small timber, and various NTFPs, and are also engaged in primary processing such as leaf-plate making, beedi rolling, broom/mat making besides marketing of NTFPs, fuel wood, leaf plates and brooms. They provide greater support towards forest protection and management in order to secure sustainable livelihood. Their relationship with forests and livelihood issues indeed are recognized in recent years due to emerging large scale deforestation, shortage of fuel wood, fodder, deteriorating eco-system, unhealthy environment and increasing deterioration of their basic source of livelihood. Women have a deep sense of belongingness with the trees and forests and have greater
knowledge about the forest surroundings, precious species, flora, and their value. In fact, poor women as gatherers, users, processors, and protectors, contribute to a large extent for their household economy and food security and get benefited in terms of fuel wood, fodder, small timber, various NTFPs, and medicines. They meet their daily survival needs from these forests (DFO, Territorial, Kandhamal District, 2015-16).

**Globalization, green business and tribal community in Odisha**

Globalization usually refers to the closer contact between different parts of the world, with increasing possibilities of personal exchange, mutual cooperation and friendship between “World Citizens” and creation of global civilization. The forces of globalization affect every country in the world in general and the state in particular (Kumar, 2010).

Odisha’s experience through globalization is characterized by transformationalist theories of globalization. In the era of globalization, every culture is changing under the spell of it and there is hardly any exception from this process. Therefore, the local became global under the influence of globalization. Culture has become an essential element in the everyday life of human being as it creates a specific identity in the society for every individual (Jindal, 2013).

The Globalization has various dimensions which affect tribal communities. Since the emergence of Liberalization, Privatization and Globalization (LPG), the areas inhabited by tribal community have been subject to various protests due to involuntary displacement. Tribal people are not only experiencing economic exploitation but also environmental degradation due to excessive extraction of resources. The reform process has affected the indigenous communities of Odisha, particularly their local culture, economy and social life (Kale, 2013).

The impact of globalization on tribal community may be analyzed in the following manner.

- **Displacement of Tribals**: It is estimated that owing to construction of over 1,500 major irrigation development projects since independence, over 16 million people have been displaced from their villages, of which about 40% belong to tribal population.

- **Land Alienation of Tribals**: Land is very important component for tribal development. It is their source of livelihood. But the globalization trend has alienated tribal community from their own land.

- **Problems of Indebtedness**: The global economy has extra pressure on tribal people with various debts due to their lack of access to sustainable livelihood options. The lack of
education, purchasing power and resources for engaging them in gainful activity has led to indebtedness among the tribal communities. The indebtedness of tribal community further pushes them into extreme poverty.

**Extinction of Primitive Tribal Culture:** The ethos of globalization has not only impacted the socio-economic conditions of tribal people but also their indigenous tribal culture (Behura, 1999).

Green Business was adopted by tribal women even before the conceptualization of Self Help Groups in the year 1980. Tribal women were engaged in leaf plate making, collection and sale of various Non Timber Forest Produces (NTFPs), leaf plate making, broom and mat making and sale of surplus agricultural produces in the local market. In addition to these activities, new operations such as wood craft, bamboo craft, turmeric processing, terracotta and decora casting have been taken up by tribal groups since 1993 after economic liberalization and globalization. The tribal groups use renewable resources for their trade and livelihood. The tribal women Self Help Groups amalgamated trade with environmental sustainability as a part of their business strategy. They protected timbers but used usufructs from forest as a part of their green business operation. In the process, economic sustainability to their business operations was complemented by environmental considerations as well. Their business plan also took care of ecological concern with clear cut institutional mechanism for conservation of forest and benefits to be shared among the group members themselves. 15 per cent of the profits of Self Help Groups were also going to the corpus fund of the Gram Panchayat Level Federations to regenerate forests by way of planting new species.

**Findings of the study**

500 tribal women who were engaged in trading different forest based products were consulted during the course of study. The diversification of their activities during Pre and Post Globalization Era are presented in the following table.

**Table-1**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Collection of firewood, small fodder &amp; timber</td>
<td>Wood Craft</td>
</tr>
<tr>
<td>2</td>
<td>Collection and sale of various NTFPs</td>
<td>Bambo Craft</td>
</tr>
<tr>
<td>3</td>
<td>Leaf Plate making</td>
<td>Turmeric Processing</td>
</tr>
<tr>
<td>4</td>
<td>Broom and mat making</td>
<td>Terracotta</td>
</tr>
<tr>
<td>5</td>
<td>Sale of surplus agricultural produces in the local market</td>
<td>Decora Casting</td>
</tr>
</tbody>
</table>

(Source: District Rural Development Agency, Kandhamal (2017-18))
It can be seen from the above table that tribal women have diversified their economic activities in addition to the earlier activities. Since the livelihood sustenance issue essentially rests on the sustainable harvest of forest products including NTFPs, 68 per cent of the tribal women interacted during the study have been found to be enrolled in Joint Forest Management Committees.

The Joint Forest Management (JFM), one of the key elements of the New Forest Policy (NFP) 1998, marked a paradigm shift towards the involvement of forest based communities whose livelihood requirements would be complementary to forest conservation and regeneration. Even before the Minor Forest Policy was introduced in the state in 2000, the primary collectors had an informal right for collection of NTFPs from the forest floor. Following the resolution on JFM issued during 1993, usufructs like leaves, fodder, grasses, thatching materials, broom grasses, brush wood, fallen lops, tops, and twigs used as fuel wood were made available to the members of the Vana Surakhya Samiti (VSS) at no cost. Other usufructs like leased out NTFPs and kendu leaves are collected by the members, but these are delivered to the departmental agency/lessee against payment of prescribed wages for collection and delivery. Further, in the new Minor Forest Policy Resolution of March 2000, 68 minor forest produce (MFP) items were handed over to the Panchayati Raj Institution, and as such collection, storage, processing and sale of which were made free to the primary gatherers and collecting agents and no royalty is levied on these items. The implementation of the National Afforestation Programme (NAP) through the Odisha Forest Development Agencies (FDA) has made some difference to the costs and benefits of forest protection, particularly for forest fringe dwellers. The JFM guidelines of 1993 also take care of the problem arising out of uncertainty regarding sharing of future benefits. In addition, provision of Entry Point Activities under NAP–FDA being implemented through VSSs in JFM mode promises to provide both livelihood security and create conditions for long-term economic development of forest fringe villages (Human Development Report, 2004).

The tribal women were engaged in green business based on bamboo and wood crafts without affecting local environment. Table-3 depicts the Cost-Benefit analysis on wood and bamboo craft by the tribal women SHGs from 2009-10 to 2016-17 covering a period of eight financial years during the post-globalization period. It can be seen from the table that on an average one tribal women SHG has invested Rs 1,51,400/- for bamboo and wood craft during a time period of eight years. The gross return from the investment from the same time period comes to Rs 2,56,500/-. Detailed Cost-benefit Analysis from the project has been calculated with respect to investment and return from the particular set of activities.
Table-2. Cost-benefit analysis on wood and bamboo craft per tribal women SHG in the post-globalization era

<table>
<thead>
<tr>
<th>Distance from Base Year</th>
<th>Year</th>
<th>Investment</th>
<th>Return</th>
<th>MF</th>
<th>PV of Investment</th>
<th>PV of Return</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>8</td>
<td>2009-2010</td>
<td>15000</td>
<td>22300</td>
<td>2.07</td>
<td>31050</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>2010-2011</td>
<td>15400</td>
<td>24500</td>
<td>1.89</td>
<td>29106</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>2011-2012</td>
<td>16800</td>
<td>28800</td>
<td>1.72</td>
<td>28896</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>2012-2013</td>
<td>17200</td>
<td>31500</td>
<td>1.57</td>
<td>27004</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>2013-2014</td>
<td>18900</td>
<td>33000</td>
<td>1.44</td>
<td>27216</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>2014-2015</td>
<td>20400</td>
<td>36500</td>
<td>1.31</td>
<td>26724</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>2015-2016</td>
<td>21400</td>
<td>38400</td>
<td>1.2</td>
<td>25680</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2016-2017</td>
<td>26300</td>
<td>41500</td>
<td>1.1</td>
<td>28930</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td>151400</td>
<td>256500</td>
<td></td>
<td>224606</td>
</tr>
</tbody>
</table>

NPV 153916

CBR 1.68

Source: Field Study, MF-Multiplication Factor, CBR>1 is considered to be viable

The year 2017-18 has been taken as the base year. Since investment has been made eight years before the base year i.e. 2017-18 and value of money have been appreciated, therefore multiplication factor has been applied in order to calculate the present value of investment and return.

The formula for Multiplication Factor is given below:

\[
\text{Multiplication Factor} = (1+i)^n
\]

Where,
\(i\) = interest rate
\(n\) = number of year

In the table-2 interest rate has been assumed to be 9.5 per cent based on which multiplication factor has been applied to calculate Net Present Value (NPV) for the current period. Year wise present values of investment and return have been calculated for the activities taken up by tribal women Self Help Groups. Net Present Value (NPV) as well as Cost Benefit Ratio (CBR) have been calculated by applying the following formula.

Net Present Value = Present Value of Benefit " Present Value of Cost

Cost Benefit Ratio (CBR) is the ratio of present worth of benefits to present worth of costs i.e.

\[
\text{CBR} = \frac{\text{Sum of the present worth of benefit (Returns/Incomes)}}{\text{Sum of the present worth of cost (Investments/Expenses)}}
\]
Mathematically, it can be shown as
\[
\sum_{t=1}^{n} R_t / (1+i)^n = \text{CBR}
\]
\[
\sum_{t=1}^{n} I_t / (1+i)^n
\]

Where,
- \( R_n \) = Return in each year
- \( I_n \) = Investment in each year
- \( n \) = number of year
- \( i \) = interest at multiplying rate

The analysis indicates that the green business based on bamboo and wood crafts has positive Net Present Value with Cost-Benefit Ratio of more than one. This implies that bamboo and wood based activities can be financially viable on long run.

The study also attempted to analyze the impact of green business undertaken by the tribal women group in the Pre-Globalization era i.e. from 1985-86 to 1991-92. The tribal women were engaged in green business based on collection of firewood, small fodder & timber Non-Timber forest products during Pre-Globalization Period.

### Table-3. Cost-benefit analysis on trading of NTFPs per tribal women SHG in the pre-globalization era

<table>
<thead>
<tr>
<th>Distance from Base Year</th>
<th>Year</th>
<th>Investment</th>
<th>Return</th>
<th>MF</th>
<th>PV of Investment</th>
<th>PV of Return</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1985-1986</td>
<td>3600</td>
<td>5400</td>
<td>1.89</td>
<td>6804</td>
<td>10206</td>
</tr>
<tr>
<td></td>
<td>1986-1987</td>
<td>4500</td>
<td>6400</td>
<td>1.72</td>
<td>7740</td>
<td>11008</td>
</tr>
<tr>
<td></td>
<td>1987-1988</td>
<td>5300</td>
<td>7700</td>
<td>1.57</td>
<td>8321</td>
<td>12089</td>
</tr>
<tr>
<td></td>
<td>1988-1989</td>
<td>6500</td>
<td>8800</td>
<td>1.44</td>
<td>9360</td>
<td>12672</td>
</tr>
<tr>
<td></td>
<td>1989-1990</td>
<td>7800</td>
<td>10400</td>
<td>1.31</td>
<td>10218</td>
<td>13624</td>
</tr>
<tr>
<td></td>
<td>1990-1991</td>
<td>8800</td>
<td>11700</td>
<td>1.2</td>
<td>10560</td>
<td>14040</td>
</tr>
<tr>
<td></td>
<td>1991-1992</td>
<td>10300</td>
<td>12800</td>
<td>1.1</td>
<td>11330</td>
<td>14080</td>
</tr>
<tr>
<td>Total 1</td>
<td>151400</td>
<td></td>
<td></td>
<td></td>
<td>64333</td>
<td>87719</td>
</tr>
</tbody>
</table>

**NPV**: 23386  
**CBR**: 1.36

Source: Field Study

**MF-Multiplication Factor, CBR>1 is considered to be viable**

The table-3 indicates that the green business has positive Net Present Value with Cost-Benefit Ratio of more than one even during the Pre-Globalization era. During the Pre-Globalization era, Cost-Benefit
Analysis was done for a period of seven years. 1992-1993 was considered as base year for the analysis.

When we compare the cost-Benefit Analysis on Green Business by tribal women during the Pre and Post Globalization, period, it is clear that Post-Globalization era has higher increamental income with relatively better Benefit-Cost Ratio. The Net Present Value on Green Business by tribal women groups during the Post-Globalization scenario has more than 6.5 times value than the Pre-Globalization era.

When further studied about the success of Green Business during Post-Globalization era, it was revealed from the study that proper training, social mobilization by Government agencies, timely finance, product diversification and market linkage of the SHG products by Odisha Rural Marketing Society (ORMAS) were the driving forces leading to viability of the activities by tribal women.

Due to green business operations by tribal women groups, “green request” is being received from consumers with particular reference to products of natural. Popularization of green business also created “Green Consumers” who prefer to purchase eco-friendly green products and avoid environmentally harmful consumption. Graph-2 depicts the percentage of requests received during last 100 transactions by tribal women SHGs and types of consumers. It is clear that 66 per cent of the requests were green requests for green products only where as the remaining are for other products. Similarly 59 per cent of the consumers are green consumers who prefer to purchase only eco-friendly green products.
The earlier studies undertaken in Odisha, other parts of India and world recommends that the business enterprises took care of local ecological and human concerns where as the findings of current study reveals that local tribal informal groups can also take up micro-enterprises by themselves by taking care of local environment. The management of Common Property Resources can be taken up by tribals by devising institutional mechanism for benefit sharing between local people and state. Green business operations can also create its own consumer base by competing with other products. The study concludes that micro-enterprises set up by tribal women through management of common property resources can also generate profit without affecting local environment.

**Areas of concern**

In spite of higher incremental income, better value of the products and favorable Cost-Benefit Ratio, tribal women experienced difficulties in undertaking and sustaining the Green Business on forest based produces which are given below:

i. Tribal women have experienced difficulty in getting timely clearance from Forest Department to collect small timber, bamboo and related NTFPs to prepare and sale their products.

ii. Identification of key activity based on wood and bamboo craft by tribal women SHGs was done by the block administration without effective involvement by Forest Department and Banks.
iii. Funds released by banks for business related activities are diverted to other activities and consumption purposes by tribal women SHGs.

iv. Project reports for income generating Green Business activities are deficient due to non-inclusion of essential elements such as value addition and technology in majority of the tribal SHGs.

v. Only 40 to 50 per cent of the tribal women SHGs formed could reach to the third stage of evolution. Moreover, grading exercises had not been properly conducted by independent agencies in case of majority of the SHGs.

vi. Less than prescribed assistance against the Revolving Fund was provided to the tribal women SHGs for starting the business.

vii. There are defaults in repayment of loans and arrangements to monitor recoveries have also been deficient. Defaults in repayment ranged from 3.5 to 5 per cent of the SHGs covered under the study.

viii. Market surveys were not conducted properly and little attention was paid to improve technology on identified Green Business activities among 40 to 50 per cent of the tribal women SHGs.

ix. Since similar activities are taken up by big business houses, tribal women Self Help Groups find it difficult to compete with their products in the market. Their products are also less preferred by consumers due to better packaging and products diversification by organized business establishments.

**Conclusion and recommendation**

The mandate of Green business is to reach out to all the tribal forest dependent poor families to link them to sustainable livelihoods opportunities and nurture them till they come out of poverty and enjoy a decent quality of life without affecting local ecology. Intermediate tier of Panchayati Raj Institution i.e. Block and banks facilitate the tribal women SHGs for undertaking Green Business through government sponsored programme.

In spite of inclusive social mobilization, community institution building, financial inclusion, promotion of sustainable livelihood and employment in rural areas of Odisha, tribal women still struggle to have gainful micro enterprises through green business based on minor forest produces.
The following measures are suggested to improve the effectiveness of Green Business by tribal women in order to have sustained impact on their livelihood.

i. Activity based clusters need to be developed in different parts of tribal areas based on the skill, resource endowment and market facilities at local level.

ii. There should be proper coordination among Forest Department and primary collectors of women SHGs to collect small timber, bamboo and related NTFPs as per the guideline for undertaking Green business.

iii. Annual Training Calendar should be prepared for tribal SHG and its federations on various issues relating to Green Business such as credit, marketing and skill development. Appropriate training module may be developed to cater to the capacity gap requirements of various stakeholders. Adequate training and sensitization may be done for the tribal SHGs, development functionaries and bank officials as well. Proper training for all the stakeholders may lead to capacity building of tribal women SHGs on all aspects of Green Business and sustainable livelihood.

iv. Non Government Organizations (NGOs), Community Based Organizations (CBOs) and bankers should be nominated as Self Help Promoting Institutions (SHPIs) for mobilizing qualitatively better groups to undertake Green business based on Minor Forest Products.

v. The women tribal SHGs may be involved in forest conservation and management so that it may facilitate them to access Non Timber Forest Produces without affecting local environment. Continuous dialogue and partnership among Forest Department and SHGs needs to be strengthened to protect forest areas without affecting livelihood of tribal people.

vi. Timely grading of groups should be done by the local administration and Banks jointly for tribal women groups undertaking Green Business. The grading needs to highlight corrective measures to make Green Business viable by protecting local ecology.
vii. Viable projects for Green Business may be identified for the SHGs and accordingly projects reports may be prepared covering all aspects of the proposed activity including skill development and marketing.

viii. Bank officials may be involved in all stages of implementation including training of members of tribal women Self Help Groups.

ix. The green products of tribal Self Help Groups should have tax rebate so that they can compete with the similar products of bigger business establishments.

x. State should incentivize the federation of tribal SHGs engaged in green business through creation of market infrastructure for their products. Government should invest on marketing facilities, better product design, diversification of products keeping in view the market trend, innovative technology, packaging, leveling of product and advertisement to compete in the market.

xi. Developing marketing linkage and market related information may be made available to tribal women SHGs to undertake sustainable livelihood options.

REFERENCES


