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Impact of CSR Activities on Farmers in Uttarakhand: A Case Study of Upali Ramoli Patti of Garhwal Region

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ABSTRACT

The SEWA-THDC (a unit of Tehri Hydro-Electric Development Corporation) under the Corporate Social Responsibility (CSR) programme conducting village development work in Naugura Gad watershed in Upali Ramoli Patti in Pratap Nagar tehsil of Tehri Garhwal, Uttarakhand; sponsored by THDCIL, Rishikesh. This is an apt example of Sustainable Development as they have restored the local resources to a large extent. The programme covers 12 villages of Upali Ramoli Patti. The present paper focuses on the developmental work done by SEWA and its impact on agriculture and farmers' livelihood. The research analyses the effects of CSR related activities in Upali Ramoli Patti area where cropping patterns are changing from conventional to modern techniques and practices impacting the livelihoods of farmers who are enterprising. The study was conducted in the year 2018 which involved group discussions and semi-structured interviews with farmers, SHGs, and SEWA-THDC. This paper also discusses the potential for CSR activities on farming and local livelihood focusing on sustainable farming methods and its importance for preserving local ecosystem.

1. Introduction

At present, the whole world is facing numerous issues like climate change, population explosion, increasing gap between city and village; rich and poor. Along with this, uneven pace of development making huge gap in policy implementation. In Uttarakhand some areas have become very developed and some areas are still very backward. The remote hilly areas not flourished as the cities.

Due to subsistence nature of agriculture and in the ab sence of suitable alternatives for livelihood, migration from the hills of Uttarakhand is continuously increasing (Negi, 1974; Saxena, 1988; Soliva 2007). Agriculture is the main thrust area where appropriate enhancement can lead to economic stability among the families of rural hill people and may change their lives positively; Khanal et. al. 2015; Kharkwal and Teli, 1987; Mohammad and Bandooni, 1993). Many ventures are working on this direction under the Corporate Social Responsibility (CSR) activities, which is defined as a management concept whereby companies integrate their social and environmental concerns with their business partners and stakeholders. CSR activities include eradication of poverty and hunger, spread of education, gender equality and women empowerment and ensuring environmental balance. The Act encourages companies to spend an average of 2 percent of their net profits for the last three years on CSR activities. THDC is working through government organizations and non-government organizations to carry out rural development works.

2. Nature of the Problem

Right from its separation from Uttar Pradesh, the state of Uttarakhand has undergone many forms of changes, as the ecosystem of the hill regions is very different from the plains. We all know that there has been a rise in consumer's demand for safe and healthy food due to increasing concerns over the quality of food. The Green Revolution did not benefit Uttarakhand, as most of the area is non irrigated and also the share of cultivated area is very small. If we expect future progression of the state, that is primarily linked to the development of agriculture and allied activities. The low agricultural yield reflects the small size and scattered land holdings, difficult terrain, unfavorable climatic conditions for some crops, lack of or inadequate availability of improved inputs and technology, and lack of credit and marketing. As compared to the National average Uttarakhand's overall land holding average is lower, nearly 70 per cent of the land holdings here are marginal and 18 per cent are small. With limited land and water resources, productivity needs to be enhanced through scientific transformation of cultivation (Learmonth and Akhtar, 1982). In Garhwal region small and marginal landholders significantly high, therefore the agricultural policies should be more focused to them (Bandooni et. al 2017; SEWA-THDC had done numerous works to increase sustainability of agriculture sector in such a manner that it provides a better income generation option and makes the population move from subsistence farming to a well developed and diversified farming system (Bandooni, Pandey and Sharma, 2014; Agro-Economic Research, 1981). In Upali Ramoli Patti, the scope for extension of cultivation to new land

is very limited as most of the area is reserved under forest area and grazing land. The maximum villages of Upali Ramoli Patti are situated under extreme and harsh social, economic and ecological conditions and villagers are struggling for their livelihood and daily sustenance. Youth out-migration seems many villages of the area, in the absence of able-bodied men, women have started looking after the fields (Bhandari and Reddy, 2015; Lama, Kharel and Ghale, 2017; Oberoi and Singh, 1983; Rawat 1987). The main basis of livelihood in Upali Ramoli Patti area is agriculture and animal husbandry. Towards SEWA-THDC initially there were several challenges but the main aim was to create employment through agriculture and horticulture. The alternative areas of diversification were towards cereal crops, horticulture crops and farmers awareness. Development of livestock and forest resources were already a part of their strategies. All the villages of Upali Ramoli Patti all the people have been doing agriculture by traditional methods only and among the crops only cereals are produced. The yield production was very less in proportion to the labor. It was observed by the unit that meeting the needs of the growing population is not possible through traditional farming alone. Department of Geography, Development and Research Center of Shaheed Bhagat Singh Evening College, making efforts to make sustainability in agricultural system, with the help of THDC at Upali Ramoli Patti.

3. Study Area

The Upali Ramoli Patti is located in the Pratap Nagar tehsil of district Tehri Garhwal of Uttarakhand state. Geographically, it is situated between 30°32′″N to 30°37′″N latitude and 78°25′″E to 78°31′″E longitude. The geographical area of Upali Ramoli Patti is 45.445 sq. km. The Naugura Gad is a tributary of Jalkur gad which makes confluence with Tehri reservoir. In Upali Ramoli Patti there are 27 villages. The altitude of the area varies from 1450 metre to 2050 metre. Forest area covers around the 30 percent of the total geographical area of Upali Ramoli, 21 percent of the area is covered with sparse forest and 20 percent with agriculture land. Wasteland covers 18 percent and grassland covers 8 percent area of the watershed. Forest mainly covers the upper part of the watershed, which is high elevation range and slanting surface, east and south east facing slope. Elevated high range are covered with forest mainly, east and south east facing slope direction. Agricultural land is particularly confined to the valley and spur parts, and also moderate to high inclined slope has terrace farming.

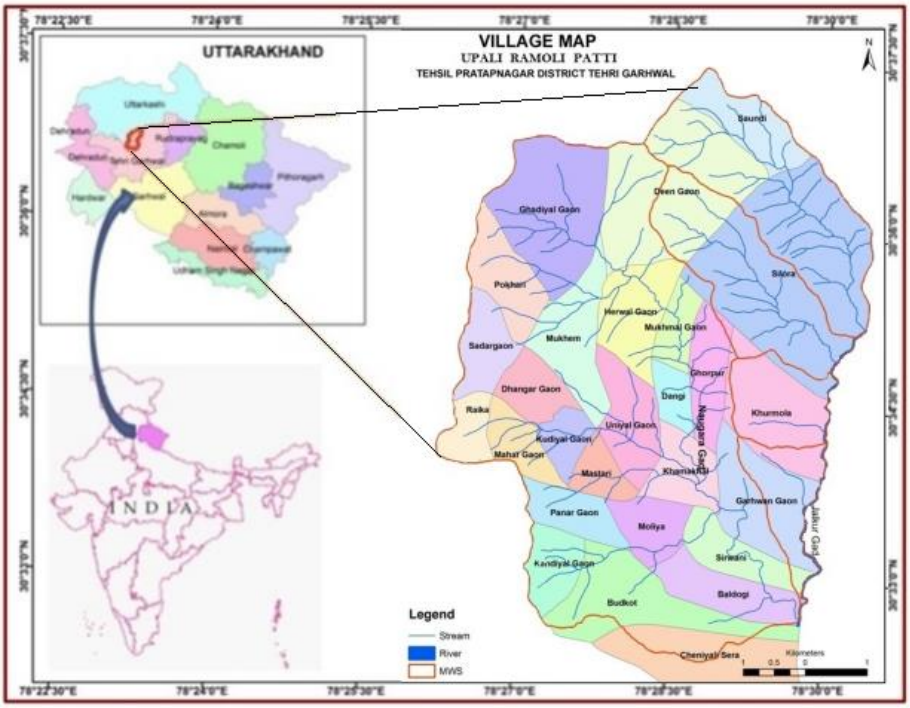

Figure 1: Study Area

The average sex ratio of the watershed is 911 females per 1000 males. Main working population is 41 percent of the total populations, out of which male working population is 42 percent, and female constitutes 40 percent of the total workforce. The area is backward in terms of literacy. The average literacy rate of the area is 42 per cent in which male literacy is approximately 69.39 percent and female literacy is very low being 22.73 percent (Bandooni, et al., 2014). The females are mostly involved in the household activities, cultivation and animal husbandry which generates lesser income.

4. Aims and Objectives

1) To examine the various programs initiated for CSR activities in the study area
2) To assess the impact of Corporate Social Responsibility activities on farmers in the study area

5. Methodology

The present work is based on field work, observation, experiences and interaction with locals, administrators, social workers, scientists and others. Multiple rounds of group discussion were conducted with local farmers. The data was collected and compiled to extract the relevant information in.

This was further expressed through simple statistical techniques as percentiles and depicted through various tables, graphs etc wherever required.

6. Result and Findings

In Upali Ramoli patti around 65 percent of households are dependent on the agriculture and allied activities. This includes cultivation, animal husbandry and forest-based activities. The major crops of the area are paddy, corn, kauda, jhungora, chaulai, soyabean, pulses and vegetables during the Kharif season. During the Rabi season wheat, mustard, pea, gram, potato and vegetables are grown. Initially, locally grown crops like potatoes, turmeric, ginger and vegetables production were encouraged in consideration of local climate, soil and geographical conditions; later cereal crops production and commercial farming were encouraged to improve the income of farmers. Many ***CSR activities*** have been incorporated in the study area to boost the agricultural system, some of which are as follows:

i. Seed distribution Programme

Agriculture is the main source of livelihood of people living in the area. The main objective of food distribution programme was to promote vegetable production, cash crop and organic farming to maximize farmer's income. The farmers were being trained in conserving seeds. Farmers were actuated for experimentation in cropping. Under the seed distribution programme improved vegetable seeds of Cauliflower, Cucumber, Onion, Zucchini, Pumpkin, *Rye*, Okra, Beans, Kidney beans, Bitter gourd, Tomato, Radish, Potato, Turmeric, Ginger and cereal crops seeds of wheat and maize were distributed to make people empowered by getting more production from farming and that commenced from the year 2012. Families who have so far used improved seeds, distributed under CSR activities are getting more benefits from vegetable production than traditional cereal crops. In order to make farmers aware of vegetable production, Development and Research Centre, Deengaon distributed seedlings of vegetable plants free of cost among 60 progressive farmers interested in growing vegetables. Farmers have got more income than they expected due to cultivation of improved vegetable. Taking inspiration from this, the farmers of other villages have also showed their interest in vegetable production and benefited from high yield variety of seeds (Table 1).

Table 1: Distribution of High Yield Variety of Seeds

S. No.	Particular	Remark
01	Name of Activity	Distribution of HVY seeds
02	Villages	(05) Sera, Pokhri, Dharangaon, Deengaon, Mukhem
03	No. of SHG	04 SHGs
04	Name of SHG	Jai Nagraja SHG, Khadya Suraksha SHG, Nagdevta SHG, Bhairav Devta SHG
04	No. of Farmer	16 individual farmers

Source: Primary Survey, 2018.

ii. Potato Production

Potato seeds were distributed in the study area to different villagers and self help groups in November 2017 and February 2018 by the Development and Research Centre. As per the guidelines of SEWA-THDC, 80 percent of seeds were distributed to SHGs and rest 20 per cent to the progressive farmers of different villages. The potato production was very satisfying in the study area for both individual farmers and SHGs and good profits were earned by them. This is clearly depicted in following table (Table 2).

Table 2: Production and Cost Benefit Analysis of peas and potato in selected villages

S.No.	Description	Production	Income (in Rs)
1	No. of villagers	24	-
2	No. of SHGs	7	-
3	No. of villages	8	-
4	Total seed distribution	2500 kg	-
5	Farmers Production	4772 kg	95,440.00
6	SHG Production	3290 kg	65,800.00
7	**Total Production**	**7377 kg.**	**161,240.00**

Source: Primary Survey, 2018

iii. Promotion of Turmeric Cultivation

The climatic condition for cultivation of turmeric is very suitable in the area. For centuries traditional seeds are used for cultivation. The production from traditional turmeric seeds is not as high as from improved turmeric seeds. Commercial production of turmeric as compared to cereal crops can enable the local farmers to earn more income. Keeping this in mind, the Center for Development and Research encouraged the farmers to adopt turmeric as a commercial cultivation. In the year 2012, using improved turmeric each farmer had produced approximately 1 quintal of turmeric which was worth Rs. 6800-

7100. This has increased the trend towards commercial turmeric cultivation as other farmers are also coming forward.

iv. Production of Ginger

Like turmeric, this area is also excellent for ginger cultivation and till 2016 only a limited number of households were producing ginger commercially. But now it is becoming popular and many villages and SHGs are growing ginger. The production of ginger was done in four self- help groups of Sera village and two groups of Budkot and Beldogi village, the details for which are given below (Table 3).

Table 3: Seed Quantity and Ginger Production

S No.	Farmer/SHG	Village	Seeds (Kg)	Production sale (kg)@50	Income (in Rs)
1	Bhawani Devi SHG	Budkot	100	300	15,000
2	Jai Nagaraja SHG	Sera	200	1000	50,000
3	Khadyasuraksha SHG	Sera	150	600	30,000
4	Bhairav Devta SHG	Sera	150	450	22,500
5	Nag Devta SHG	Sera	150	500	25,000
6	Narsingh Devta SHG	Beldogi	100	150	7,500
7	Farmer	Budkot	50	125	6,250
8	Farmer	Sera	100	250	12,500

Source: Primary Survey, 2018

Ginger has an advantage that it has long time preservation period, hence the risk of getting destroyed is less and moreover as it has medicinal properties, its demand is always there. Farmers using improved seeds of ginger are getting more income than conventional seeds. As in the above table it can be seen that the farmers and SHGs have earnings ranging from approximately Rs 6000/- to Rs 50,000/-These farmers are also getting more earning from ginger products like ginger pickle, ginger chutney and dry ginger.

v. Development of Polyhouses

Poly house farming is the same as greenhouse farming. The "poly" part of the name refers to polyethylene plastic, which is the material used to cover the house, and being transparent to translucent lets sunlight in for photosynthesis and plant growth, while reducing detrimental organisms from affecting the crop. Poly-house farming protects plants from extreme weather conditions, where crops can be grown in a controlled environment. It enables growth of off - season crops with higher yield. The requirement of water is not much, while the low labor-intensive method helps in controlling pests and diseases. Moreover, the quality of produce is high when compared to open field cultivation as it has proper drainage and aeration which enhances production capacity. People believe that handling of harvesting, spreading of products and transporting is easy with poly house cultivation and they can expect uniform plant growth throughout its life cycle.

In the year 2014-15, Four poly houses of 100 square meters were constructed at different villages of Upali Ramoli Patti which have increased to ten in number. This will facilitate non-seasonal vegetable cultivation and to get more production and reasonable profit from farming. A total of ten households got benefit from these polyhouses.

vi. Farm Machinery Bank

Indian agriculture is undergoing a gradual shift from dependence on human power and animal power to mechanical power because increasing cost for upkeep of animal and growing scarcity of human labor.

Table 4: Farming tools distributed by SEWA- THDC

S.No.	Name of Equipment	Use
01	Mini crop Thresher	Use to separate wheat from wheat straw.
02	Rice mill	Paddy grinding
03	Flour mill	Wheat grinding
04	Power wider 5.5 Hp	Use for tillage.
05	Power tiller 7.5 Hp	Use for tillage with deep rotary set
06	Power tiller 7.5 Hp	Use for tillage with paddy wheel
07	Power spray Machine	Spray pesticides
08	Chap cutter	Chapping process for animal feed.
09	Misc. gardening tools	

Source: Primary Survey, 2018

Further, use of mechanical power has a direct bearing on the productivity of crops apart from reducing the drudgery and facilitating timeliness of agricultural operations. Government of India and state government make available various types of farming tools at subsidized rates. 80 per cent cost of equipment is paid by government as subsidy and 20 equipments to small and marginal farmers to improve

mechanization in places with low farm power availability which is applied for different operations.

vii. Mushroom Cultivation

Mushroom cultivation is also an option to improve the socio-economic condition of farmers and solve employment related problems in the area. The main objective of the Mushroom Development Unit supported by SEWA-THDC is to promote the cultivation and consumption of mushrooms and create employment opportunities in order to help alleviate poverty and malnutrition in rural communities in the project area. Unit is operating with the help of trained personnel. In recent years, total production and consumption of button and oyster mushroom has increased. The unit has created new employment opportunities for rural women and the youth. Sale of mushrooms has doubled during past three years.

viii. Plantation of Apple and other fruit plants

The physio-climatic conditions of middle Himalaya are best for growing subtropical to temperate and sub- tropical fruits (Shastri, 1984). Apple and walnut can be best grown in upper reaches of the area. While sub-tropical fruits like orange and lemon grown in the lower parts of the area. Unfortunately, farmers in this area have never been exposed to horticulture activities. To educate farmers, SEWA- THDC conducted Progeny-cum-Demonstration Orchard also fruit sapling and seeds were distributed to the farmers. The area has immense scope for off-season vegetable cultivation, fruit cultivation, commercial crops. Apple plantation work under the project were successfully executed in Upali Ramoli villages, during the project period many households were benefited. Their work may bear fruit in coming years and result of that their income may rise in due course of time. The main objectives of SEWA behind the horticulture development were to bring maximum area under cultivation of fruits ranging from sub-tropical to temperate fruits, to raise the income of farmers, slope stabilization and to reduce the soil erosion. To increase the area under fruits around 2000 plants of Orange, Mango, Lemon and Apple were distributed to many households in 12 villages. 2,500 Apple and walnut plants were distributed to farmers of Upali Ramoli patti. The Apple plantation was first introduced in Sondhi and Rekka village. The Survival and growth rate is 80 percent of those 2500 plants. Awareness and training programmes on cost benefits were conducted by the SEWA-THDC. Now the other farmers too are creating opportunities by growing apple plants in their farms. Firstly, training programmes were organised among different villages related to plantation methods. Afterwards digging of pits were done by the farmers in their field site.

7. Analysis

The activities undertaken by SEWA-THDC under the CSR initiative program in Upali Ramoli Patti of Pratap Nagar in Tehri Garhwal district of state Uttarakhand has done a commendable developmental work by introducing various activities to promote the growth of agriculture and farmers' livelihood. Though initially several challenges were faced but the focus was to create livelihood through various agricultural activities. The various activities such as seed distribution programme, promotion of turmeric and ginger cultivation as commercial crop, poly house setup, farm machinery bank, mushroom cultivation, apple and other fruits cultivation were taken up. These were diversified through growth of cereal crops and horticulture apart from livestock and forest resources. The major breakthrough was the shift of agricultural practices from subsistence to commercial farming by cultivating improved variety of vegetables and increasing their production. Hence, efforts were made to make sustainability in agricultural system.

To improve the present condition of the land and production of the produce various awareness programs and farmers' seminars were organized to discuss scientific methods with agricultural experts from time to time. These visits make the farmers aware of the benefits of improved seeds and give them opportunities to learn efficient cropping methods by talking with the experts.

8. Conclusion

A number of programs are being run concurrently by SEWA-THDC to address the twin issues of unemployment and poverty alleviation. Better convergence of the programmes to avoid duplication and ensure that the fruits of the schemes reach the targeted beneficiaries. The survey suggests that policy structures need to be framed to facilitate effective implementation of these programs and to ensure that allocation results are reflected in the outcomes. CSR is the need of the hour in any developmental or restoration activity that is being carried in any region. It is also an endeavour towards sustaining livelihoods in the hilly regions.

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