

An Approach towards Strengthening Sustainable Food Systems - Case Studies of FPCs in India

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ABSTRACT

In the present study an attempt is made to present in detail about the role of Farmer Producer Companies (FPCs) in achieving nutritional security through sustainable agricultural practices. For this purpose, four FPCs from different parts of India practicing natural or organic farming practices were selected. The findings of the study revealed that the selected FPCs were exclusively practicing sustainable agricultural practices and encouraging their members in the same direction. Not restricting to only few crops, these FPCs were cultivating a wide range of crops like millets, pulses, turmeric, plantation crops like coffee, cashew nut, vanilla, pepper, rubber, tamarind and nut meg etc. Moreover, they are also dealing with Non Timber Forest Product's (NTFs), honey, silk, cotton, etc. by the way of organic or natural farming. Furthermore, the selected FPCs were involved in value addition activities, processing, ginning and cosmetic products. Besides, the producer companies have established an efficient market linkages by procuring and selling at their own retail outlets, in national and international markets with a unique brand name. It is evident that these FPOs are not only contributing to food systems but also reducing the transaction cost by achieving scale economy. This ensures supply of nutritional food at a reasonable price to the consumer on one hand and increased income to the farmers on the other hand.

Key words: FPCs, nutritional security, NTFs, sustainable agricultural practices

INTRODUCTION

Indian agriculture plays a significant role in socio economic frame work of the nation and it has become a source of livelihood for more than 60 per cent of the population. India has witnessed self-sufficiency in food grain production as compared to 1950s. Moreover, India is the largest producer of milk, spices, cotton and pulses, whereas second largest producer of wheat, rice, fruits and vegetables and ranked third in production of eggs. Besides, the country is the largest producer of spices and bovine meat. On account of low production as compared to other countries, several efforts were made by the government and other stakeholders to increase the production by the way of technological interventions. Hence, in due course of time, several interventions have come into picture i.e. introducing high-yielding varieties of cereal grains, expansion of irrigation infrastructure, introducing synthetic fertilizers, and pesticides to farmers etc. way back from the period of green revolution till day. The green revolution during late 1960's enabled to enhance food grain productivity by introducing and adopting High Yielding Varieties (HYVs) of rice and

wheat. This was followed by White Resolution which was initiated during 1970's made India the leading producer of milk in the world. As time progressed, a series of interventions/revolutions have been initiated in India. Many of these have proved to be successful and created faith among the farmers that made them to adopt these practices.

These knowledge intensive technologies, no doubt on one hand have resulted in increasing the yields by efficient utilization of resources. But, on the other hand, due to adoption of these innovative technologies by the farmers to a large extent led to negative impacts like depletion of natural resources, soil and water pollution, reduced ground water table levels and soil fertility, unseasonal monsoon showers and adverse climatic conditions like floods, droughts etc. Moreover, with a pressure to maintain the increased production for the sake of poor and disadvantaged population the technologies are being further modified. However, despite of achieving self-sufficiency in production, the wider adoption of technology has resulted in various intricacies like nutritional insecurity among people especially women and children which is a major

cause of concern. Shyma *et al.* 2020 have reported that, India is the home for largest number of undernourished people in the world (24% of world's population) and also accounts for highest proportion of stunted (31%) and wasted children (51%) at global level.

In fact, Government of India and concerned state governments have come forward with various schemes in order to address these issues like mid-day meal program, Poshan Abhiyan, an overarching scheme with a high focus on nutrition. It was engendered as a mission 'for the people', giving a call for a Jan Andolan i.e. a movement by the people. Furthermore, for an efficient intake of nutritious food, there is dire need to establish sustainable food systems through promotion of sustainable agriculture.

A sustainable food system (SFS) is a food system that delivers food security and nutrition for all in such a way that the economic, social and environmental bases to generate food security and nutrition for future generations are not compromised (FAO, 2018). This means that it ensures economic, social and environmental sustainability.

In order to be sustainable, the development of the food system needs to generate positive value along three dimensions simultaneously: economic, social and environmental (Fig.1)



Figure-1: Sustainability in Food Systems

Source: Adapted from FAO, 2014

The Figure1 explains that from the economic dimension, a food system is considered sustainable if the activities conducted by each food system actor or support service provider are commercially or fiscally viable. As far as social dimension is concerned, the food system is considered sustainable when there is equity in the distribution of food at reasonable price, taking into account vulnerable groups categorized by gender, age, race and so on. In view of environmental dimension, sustainability is determined by ensuring that the impacts of food system activities on the surrounding natural environment are neutral or positive, taking into consideration biodiversity, water, soil, animal and plant health, the carbon footprint, the water footprint, food loss and waste and toxicity.

Principles of Sustainable Food Systems

Sustainable food takes into account environmental, health, social and economic concerns and consists of eight inter-related principles like local and seasonal foods, organic and sustainable farming, reducing foods of animal origin and maximize welfare standards, excluding fish species identified at risk, use of fair-trade-certified products, promotion of health and wellbeing, food democracy and reduction of waste and packaging.

Hence, in order to achieve the sustainability at global level, the Sustainable Development was launched in 2015 with an agenda of achieving better and more sustainable future for all, by the way of "Sustainable Development Goals." The Government of India was strongly committed to 2030 Agenda of Sustainable Development Goals (SDGs) that comprises of 17 goals, 169 targets and 232 indicators agreed by national governments around the world. These goals integrate the three dimensions of sustainability to encourage a holistic concept of sustainable development across the globe (Griggs *et al.* 2013).

Challenges faced in Indian Food Systems

In spite of various efforts by Government of India and various stakeholders pertaining to

agriculture and allied sectors, yet achieving sustainability is a big challenge and following are the challenges faced in Indian food systems

1. Over utilization of natural resources, deforestation and conversion of agricultural lands for industrial activities, have created an enormous pressure on soil, air, water and forests resulting in long term process for their rejuvenation.
2. Adverse climatic conditions resulting in unseasonal rains, floods, cyclones etc.
3. Increasing urbanisation and migration towards non-farm activities.
4. Practice of monocropping especially paddy and wheat leading to reduced ground water table
5. Subsidy based policies which increases enormous utilization of inorganic fertilizers

In order to address the above challenges one of the key initiatives would be the promotion of Farmer Producer Organizations (FPOs) which has been proven successful in achieving sustainability in agriculture.

Farmer Producer Organizations

Farmers Organizations are groups of producers coming together based on the principle of membership, to pursue specific common interests of their members and developing technical and economic activities that benefit their members and maintaining relations with partners operating in their economic and institutional environment. In due course of time different forms of FPOs were initiated like Farmers Interest Groups (FIGs), Commodity Interest Groups (CIGs), Cooperatives, Farmers' associations, federations, Self Help Groups (SHGs) and Farmer Producer Companies (FPCs).

These aggregation models were capable of creating an efficient supply chain system and thus safeguarding the farmers from distress sale. However, the success was found to be limited. By

and large, the experiences of performance of cooperatives has been poor with an exception of cooperative sugar factories and dairy cooperatives in Maharashtra and Gujarat. Apart from these cooperatives, Amalsad cooperative Society for sapota and farming co-operative (Gambhira) in Gujarat, MAHAGRAPES in Maharashtra, HOPCOMS and CAMPCO in Karnataka, Mulkanoor women cooperative groups in combined Andhra Pradesh etc., have performed well. There are also a few successful women's farming groups in Andhra Pradesh. These successful models could not be emulated in other regions of the country.

In recent times, the instrument of Farmer Producer Company (FPC), registered under Companies Act 2013, is emerging as the most effective means of FPOs to cater to the needs of farmers at the grass root level. FPCs offer a wide range of benefits compared to other formats of aggregation of the farmers. The main objective of mobilizing farmers into member-owned producer organizations, or FPCs, is to enhance production, productivity and profitability of agriculturists, especially small farmers in the country. The main activities of FPCs consist of production, harvesting, processing, procurement, grading, pooling, handling, marketing, selling, and export of primary produce of the members or import of goods or services for their benefit. It provides for sharing of profits/benefits among the members. Moreover, they extend their services in marketing, financial, welfare, educational and technological aspects.

Till recently, around 9000 FPOs have been promoted in India in the post scenario of amendment to Companies Act in 2002. However, the scenario of promotion of these new generation of FPOs revealed that there is a skewed distribution across the states in their growth. Maharashtra, Uttar Pradesh, Tamil Nadu and Madhya Pradesh constitute more than 50 per cent of FPCs registered in India (Richa *et al.* 2020). The FPCs across the countries are involved in various activities right from input supply to marketing and exports.

However, few of them are exclusively involved in practicing sustainable agricultural practices for achieving nutritional security. Such FPCs from different parts of the country were identified and detailed information about their sustainable practices were collected from various published sources as well as from telephonic survey and explained below in detail.

1. Aadhimalai Pazhangudiyinar Producer Company Ltd, Nilgiris, Tamil Nadu

Adhimalai Pazhanagudiyinar Producer Company Limited (APPCL) has been incorporated in the year 2013 with the support of key stone foundation, a NGO and is owned by the indigenous communities of Nilgiri Biosphere Reserve (NBR), Tamil Nadu and one of the first of its kind at national level. The challenge faced by the communities of NBR is lack of sustainable means of livelihood wherein the farmers were unable to market their produce and were highly affected by market fluctuations. This resulted in unfair or non-remunerative price for their produce. Against this backdrop, in order to provide a fair price to the farmers, minimize the market fluctuations and to ensure an efficient marketing system, the key stone foundation which has been working in NBR for the past two decades has taken an initiation to incorporate a Producer Company in order to secure the livelihoods of these indigenous communities. This resulted in the incorporation of Adhimalai Pazhanagudiyinar Producer Company Limited in the year 2013 registered under Indian Companies Act of 1956.

Adhimalai PC aims at providing a sustainable livelihood support and income generation through fair trade practices to the community while preserving their traditional way of life and conserving the environment. Moreover it works towards the development of indigenous people in the country, particularly, the NBR and cultivate all kinds of organic farming products and non-timber forest produce (NTFPs). The company

currently has 1609 shareholders, all of whom are indigenous communities in the Nilgiri Biosphere Reserve. With regard to the financial performance, during the year 2020-21, the company's revenue turned out to Rs.1.09 crore as against Rs.83.5 Lakh during 2019-20.

Organogram of APPCL: Aadhimalai's PPCL constitute Board of Directors (07) and members from the indigenous communities representing different regions of NBR in which the PC operates. Aadhimalai's has 50 employees of which 42 are women and out of 7 directors of the company, 3 are women. Women manage the production units, travel to other organizations to impart training and represent their community in local and national forums. Moreover, the PC organizes Annual General Meetings (AGMs) and discusses various activities related to procurement planning and quality produce etc.

APPCL also has a team of advisors who play a major role in advising the members on various initiatives like bee keeping, value addition, setting up of processing centres at various locations and maintaining producer relationships.

Business Activities of APPCL: The PC Encourages traditional farming practices by adopting organic method of cultivation, follows sustainable practices like conservation of natural resources, livestock rearing and also harvest the forest produce. Moreover, the PC is also involved in processing of harvested produce, trading, landscaping as well prepare various handicrafts.

Major Crops of APPCL

- The Producer Company is involved in organic cultivation of coffee, pepper, silk cotton, millets, pulses, cereals, spices and fruits.
- Moreover the members are involved in collection of honey, harvest forest produce like amla, shikakai, soap nuts & berries, phoenix leaves seasonally from the adjacent

forests.

- APPCL procured and processed over 30 tonnes of NTFP and agri produce, and have over 50 different varieties of products.

Strategies for Sustainable practices

- In order to promote sustainable agricultural practices by its members, the company organizes trainings & exposure visits on sustainable harvesting of forest produce, product development, honey hunters training, traditional ayurvedic preparations like Triphalachurna. Organic agriculture has been traditionally practised by the adivasi community in NBR. Hence, the producer company will be supporting the farmers with PGS certification by offering a premium procurement price for the produce. PGS offers a hassle free and trust based peer to peer certification to the farmers.

Marketing Strategies

- Aadhimalai sells coffee, pepper, silk cotton, millets, pulses, cereals, spices and fruits to both Indigenous families and neighbouring communities, ensuring sustainable livelihoods for its members. The company pays them prices that are 30 per cent higher than the market price.

The PC markets its products either under Aadhimalai's own brand names or rebrands for its customers in the customer designed packaging. For the sale of forest honey, the company has established four retail outlets called "Honey Huts". Moreover, the company has established retail stores in various parts of the country and the consumer can locate the nearby store from the company's official website.

1. Umang-Mahila Producer Company Limited, Naini, Ranikhet town, Almora District, Uttarakhand

Umang MPCL is a federation of 200 self-

help women's groups formed in order to provide sustainable livelihood for the communities of the Ganges-River basin. UMPCL is guided by the concerns of economy, ecology and equity. Efforts over the past few years have led to the consolidation of this growing network of women who are engaged in various activities, leading to a fresh balance in the quality of their lives. The company has been incorporated with the main objective of protecting natural resources and empower local people to retain their ownership.

The general body of Mahila Umang Producers Company comprises of these SHGs as institutional shareholders and subsequently, members are selected as Board Members of the company. Umang a unique women centric company encourages financial independence among through micro finance groups and livelihood opportunities through traditional farming. The company offers its farmer member's higher market price between 20-22 per cent and moreover they receive a bonus at the end of every year. Besides, UMFPCCL has earned a total revenue of Rs. 1.8 crore during the year 2018-19.

Strategies for Sustainable practices

Umang encourages its members to improve farm productivity through sustainable methods like revival of cultivation of traditional rain-fed crops, introduction of suitable value added crops like chamomile and strawberries, providing good quality seeds and rootstock of indigenous crops and fruit trees, providing training regarding organic farming practices and improvements in soil fertility, introducing upland minor irrigation systems and ecological restoration and renewal of traditional methods for soil and moisture conservation. Moreover, it empowers women through confidence-building mechanisms in order to increase participation in socio-political arenas and gaining financial independence through engagement in sustainable income generating activities.

Furthermore, it is promoting Participatory Guarantee System as a certification process for

organic foods and establish bridges between farm-gates and urban consumers. The PGS system of certification is based on peer review process which enables small farmers to aggregate small farm outputs collectively and engage directly with markets with a greater sense of confidence and dignity.

In order to make their products i.e. millets, legume, seeds and fruit preserves available to large number of consumers, the company markets the produce of the farmer members with the brand names of Himkhadya and Kumaoni and is involved in retailing of millets, legume, seeds and fruit preserves. Around 600 women farmers within Uttarakhand sell their produce to Umang brands.

2. *Susag Millets Producer Company Limited, Visakhapatnam, Andhra Pradesh*

Susag Millets Producer Company Limited (SMPCL) familiarly known as 'Millet Sisters' was established in 2016 and is operating with 100% Millet Sisters. It was promoted by Sarada Valley Development Samithi (SVDS) with the support of NABARD and was registered under Companies Act on 10-02-2016. Susag Millets Producer Company Limited aims to enhance livelihood among millet farmers through production, processing and marketing of millets, and conserve the ecological diversity of the area through conservation of natural resources viz., land, water and forest. The producer company has been working on enhancing the productivity, procurement, processing and marketing of millets, pulses, turmeric, pepper, tamarind and other diversified products with an objective to enhance the food and nutrition security among tribal women and to increase the income levels of the millet sisters. As of now, the FPC covers an area of more than 2000 acres cultivating millets through natural farming and also promotes cultivation of tamarind and spices like pepper and turmeric.

Organogram of the FPC: The producer company has a potential management structure and well trained staff involved in various activities. The company

constitutes five (05) Board of Directors who are all women are also organizes Annual General Body Meetings. For democratic and transparent business activities, SMPCL has formed three sub committees via

- 1) Production, Procurement and Marketing Committee
- 2) Finance Mobilization Committee
- 3) Social Audit Committee

SMPCL has appointed a fulltime CEO to look after day to day business, 1 part time accountant, 9 field coordinators, 1 stock in-charge, 2 field marketing persons, 1 sales woman for managing Rural Mart and 1 MIS in-charge.

Year on year with the efforts and initiatives taken by the promoter as well as the producer company, the latter could be able to increase the paid up share capital by 64 per cent and turnover of Rs.43 lakh during 2019-20.

Strategies for Sustainable practices

SMPCL aims for conservation of natural resources and enhance the livelihood of the millet farmers. To achieve these, the producer company is involved in following practices

1. Promotion of millets through natural farming in order to address malnutrition and nutritional insecurity among the tribal women
2. The company is providing bio-inputs like jeevamruth, ganajeevamruth etc. for millet cultivation by the way of natural farming.
3. Convergence with line departments like agriculture department and krishi Vignan Kendras (KCKS) for technical guidance for its members in natural farming methods.
4. Capacity Building Programs: SMPCL is involved in organizing trainings on preparation of bio-inputs, organizes exposure visits to food processing

industries, livelihood enhancement based trainings to the millet sisters to encourage them on entrepreneurship

5. *Marketing*: SMPCL has acquired FSSAI license and organic certification. It has established market linkages for its members by arranging retail outlets near apartments, local sandies, local shops. Stalls are also being arranged in Dwacra Bazars and SARAS with the encouragement of NABARD and VisakhaUtsavfor its produce.

3. *Indian Organic Farmers Producer Company Ltd, Kerala*

The Indian Organic Farmers Producer Company Limited (IOFPCL) is one of the largest organic producer company in India, owned and managed by the farmers themselves. IOFPCL was founded in the year 2004, and incorporated under the Companies Act of 1956, to take on the challenges faced by member farmers in the production and marketing of Organic and Fairtrade certified products in the domestic and international markets. It aims to grow and market organic/fair trade products from member-farmers primarily and also from other such groups, in a cooperative and sustainable manner

The company serves more than 2500 primary producer members in Kerala, Karnataka and Tamil Nadu and is governed by the Board of Directors elected from the member shareholders. It has all together 552 shareholders covering around 35 villages in Kerala cultivating organic Pepper, Coffee, Ginger, Turmeric, Vanilla, Cocoa, Cashew, Coconut, Nutmeg, Rubber.

Strategies for Sustainable practices

IOFPCL renders following services to its members for strengthening sustainable practices i.e.

- promote and popularize organic agriculture among farmers

- Disseminate information on latest technology to organic producers regarding
- Undertake training and capacity building of individuals and institutions
- Provide advisory services regarding organic practices
- The company also promotes entrepreneurship development programmes for its farmer members
- It develops, compiles and publishes package of practices, books, and periodicals related to organic farming

Moreover, IOFPCL invites the farmers as members those who are exclusively practicing organic cultivation. Linking farmers to markets is a major challenge followed by fetching a remunerative price for the quality produce. However, the company could address the issues particular organic produce procured from the farmers. IOFPCL is mainly engaged with the procurement of Organic and Fair Trade certified Cocoa, coffee, pepper, vanilla, cashew, nutmeg, turmeric, ginger and coconut based on the demands of the domestic and International markets. The company has its own processing units and produces various value added products like Cocoa powder, Cocoa butter, Chocolates, Cocoa nibs Cocoa Dried Beans, Coconut Oil, DC powder, Virgin Coconut Oil, Spices Powders, Coffee Powder.

In order to encourage the farmers in organic practices, the company has provided direct marketing facility to its members and retail chain linkage has been provided through its website www.jaiva.com. Moreover, IOFPCL is also involved in exports of crops mentioned above and has exported more than 300 tones to Europe and Canada. The company has also acquired Organic Certification and Fair trade Certification. Besides, the producer company has achieved an annual turnover of Rs. 2.06 crore during 2020-21.

Table 1
Strategies of FPCs towards Sustainable Agricultural Practices

| Sl.No. | Name of the FPC | Strategies | Crops dealt |
|--------|---|---|--|
| 1 | AadhimalaiPazhangudiyinar Producer Company Ltd, Niligiris, Tamil Nadu | Organic farming products and fair trade practices | Coffee, pepper, silk cotton, millets, pulses, cereals, spices and fruits. Honey, amla, shikakai, soap nuts & berries, phoenix and non-timber forest produce (NTFPs). |
| 2 | Umang-Mahila Producer Company Limited, Naini, Ranikhet town, Almora District, Uttarakhand | organic farming practices, cultivation of traditional rain fed crops and ecological restoration | millets, legume, seeds and fruit preserves |
| 3 | Susag Millets Producer Company Limited, Visakhapatnam, A.P | Natural Farming practices | millets, pulses, turmeric, pepper, tamarind and other diversified products |
| 4 | Indian Organic Farmers Producer Company Ltd, Kerala | Organic farming products and fair trade practices | Organic Pepper, Coffee, Ginger, Turmeric, Vanilla, Cocoa, Cashew, Coconut, Nutmeg, Rubber. |

CONCLUSION

The stock taking of these FPOs revealed that the collectivization of farmers coupled with good practices like organic and natural farming practices, ecological restoration and renewal of traditional methods for soil and water conservation methods, promotion of subsidiary income methods like sericulture, collection and marketing of non-timber forest produce etc. are contributing to sustainable food system and nutritional security of Indian population. These practices will go a long way in

attaining sustainability by reducing the depletion of natural resources. Moreover, collectivization ensures reduction in transaction costs and thus ensuring higher income to the farmers on one hand and providing safe food at a reasonable price to general public on the other hand. In this direction, efforts should be made by policy makers to promote the collectivization encompassing integrated component of sustainable practices and promoting opportunities for livelihood promotion, the policies also should ensure equitable distribution of promotion of FPOs across the country.

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