

Mission Organic Value Chain Development for North Eastern Region (MOVCD-NER): A Reality Check with Special Reference to Arunachal Pradesh, India

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Abstract: In 2016, the Government of Arunachal Pradesh initiated “State Organic Mission” with a vision to promote adoption of organic farming among farmers under the umbrella of “Mission Organic Value Chain Development for North-East Region (MOVCD-NER)”, a centrally funded scheme formulated exclusively for the North-East Region of India. As of 2024, forty-six (46) organic farmer producer companies (FPCs) have been formed in three phases since 2016 (Phase I- 2016 to 2018, Phase II- 2019 to 2021 and Phase III- 2022 to 2024) under which 5925 farmers are registered, and a total land area measuring 20,500 hectares have been brought under organic farming. The ultimate goal is to convert the state into an “Organic State” like Sikkim. This study was conducted on registered organic farmer producer companies (FPCs) formed during Phase-I under “State Organic Mission” in five districts of Arunachal Pradesh namely, Papum Pare, Lower Dibang Valley, Namsai, Changlang, and Anjaw. The study aimed to investigate the present ground reality of the FPCs. The study is entirely qualitative in nature, and is based on both primary data and secondary data. The findings may benefit policy-makers and various other stakeholders for ensuring long-term sustainability and meeting the ultimate goal of the State Organic Mission.

Keywords: Organic Farming, Sustainability, Sustainable Agriculture.

1. Introduction

In today’s modern world, access to healthy and nutritious diets has become a major challenge as the food market is flooded by non-organic foods containing high chemical residuals. As per the latest report published by the Food and Agriculture Organization (FAO) of the United Nations titled “Near East and North Africa – Regional Overview of Food Security and Nutrition: Statistics and Trends”, 74 percent of India’s total population could not afford healthy diet (FAO, 2023). Thus, the need for healthy food has become a major concern for Indians (Stoleru et al., 2023). This concern is more serious for people belonging to poor economic conditions as healthy food is more costly than they fail to afford it.

In search for a better alternative to conventional food

production system, widely known as modern agriculture/Green Revolution Agriculture, agricultural scientists found organic farming, one of the various approaches to sustainable agriculture (Narayanan & Narayanan, 2005, p. 1), having immense potential towards feeding the present as well as future population with sufficient, healthy and nutritious food that too without damaging the soil, water, and agro-ecosystem. Thus, it is high time for the world to revert to the age-old sustainable form of agriculture- organic farming.

Understanding the concept of organic farming requires understanding of the principles and fundamentals of organic farming. According to International Federation of Organic Agriculture Movements (IFOAM), one of the international organizations advocating organics with over 700 affiliates in more than 100 countries, there are four principles of organic farming/organic agriculture- principles of health, principles of ecology, principles of fairness and principles of care. Looking at the widely accepted standard definitions of organic farming is a key to comprehend the fundamentals of organic farming. In this respect, following four definitions are outlined below:

The United States Department of Agriculture (USDA) defined, “Organic Farming (OF) is a system which avoids or largely excludes the use of synthetic inputs (such as fertilizers, pesticides, hormones, feed additives, etc.,) and to the maximum extent feasible rely upon crop rotation, crop residues, animal manures, off-farm organic wastes, mineral grade rock additives and biological system of nutrient mobilization and plant protection”

As per the Food and Agriculture Organization (FAO), “Organic Agriculture (OA) is a unique production management system which promotes and enhances agro-ecosystem health, including biodiversity, biological cycle, and soil biological activity, and this is accomplished by using on-farm agronomic, biological and mechanical methods in exclusion of all synthetic off-farm inputs”.

According to the National Standard Agency, “Organic Farming (OF) is a system that produces products under the

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standard organic system and certified by an accredited organic certification agency”.

“Organic Agriculture refers to the creation of an ecological management system, which includes a transition or conversion period, and which meets the definition of a sustainable agro-ecosystem. On satisfying the regulatory requirements, they must be certified as ‘organic’”, as per the International Federation of Organic Agriculture Movements (IFOAM).

Research findings from across the globe have revealed that the practice of organic farming yields a wide variety of benefits to both producers (farmers) and consumers as compared to conventional farming. Nevertheless, organic farming does suffer from major drawbacks. One such key drawback is lower yield from organic farms when compared with non-organic farms. This clearly suggests that switching to organic farming is a risky venture. For instance, in late 2021, the world witnessed the failure of an organic farming experiment in Sri Lanka. The Sri Lankan’s organic farming model, despite governmental support, could not be sustained but rather led to economic crises. Eventually, the Sri Lankan Government abandoned its dream of becoming an organic nation following severe problems of food insecurity. This taught a lesson to the policy makers and advocates of organic farming that the sustainability of organic farming in a given geographical area cannot be taken for granted.

North-East Region (NER) of India has huge potential to become an “organic hub” due to several favorable conditions. For instance, this region is gifted with diverse agro-climatic zones, indicating that this region has immense scope for cultivation of a wide array of crops. In addition, there is availability of vast stretches of arable land, which can be brought to organic management. Nevertheless, the most striking advantage of the region from organic agriculture perspective is that the agriculture in this part of the country, unlike the mainland India, is practiced by the negligible application of agrochemical inputs. All these are key indicators of the tremendous potential of the North-Eastern Region for organic farming. Realizing this potential, the Government of India flagged off a centrally sponsored scheme exclusively for the NER with an objective to produce organic certified products, to link producers with consumers, to facilitate all sorts of support needed for the development of the value chain including inputs, seeds, certification, collection of organic produce, processing, marketing, and branding related initiatives. This scheme was entitled “Mission Organic Value Chain Development in North-Eastern Region” (MOVCD-NER), a sub-mission under the National Mission for Sustainable Agriculture (NMSA). MOVCD-NER was introduced during 2015-2016 across all the North-Eastern states with initial financial outlay of Rs. 400 crores for the first three years.

Under the MOVCD-NER, with a view to facilitate registered farmers with value-chain processing for organically grown crops, every single FPCs are provided with integrated processing units, infrastructural facilities such as collection and aggregation centre, custom hiring center, etc. In addition, 4-Wheeler transportation vehicle has also been provided to FPCs. Furthermore, one-time financial support (Rs. 3750) for a period

of three years to every single member (farmer) of the FPCs is being provided for purchasing organic inputs. Provision of another one-time financial assistance of Rs. 3750 is for creation of on-farm input production unit such as vermin compost unit, hiring the services of competent service providers such as documentation of the landholding, ICS management, and organic certification through PGS or Third-Party System under NPOP. Besides financial aids, there is provision for non-financial support for FPCs members including on-farm organic training, workshop, exposure visits, etc. In addition to this, the FPCs are also provided with a four-wheeler transportation vehicle Under the Mission, FPCs are to complete three years of cycle without the usage of off-farm crop nutrients in order to get organic certification. This three years period is termed as “conversion period”. Nevertheless, C1, C2, and C3 certificates are awarded to farmer producer companies (FPCs) upon completion of their first, second, and third years, respectively, of the conversion period (MOVCD-NER operational guidelines, 2016, Integrated Nutrient Management, Ministry of Agriculture and Farmers’ Welfare, Government of India). According to the latest figures, 358 Farmer Producer Companies (FPC), 130500 farmers, and 105259054 hectare areas have all been successfully registered under MOVCD-NER (<https://movcd.dac.gov.in/>), as shown in Figure 1, Figure 2, Figure 3, and Figure 4.

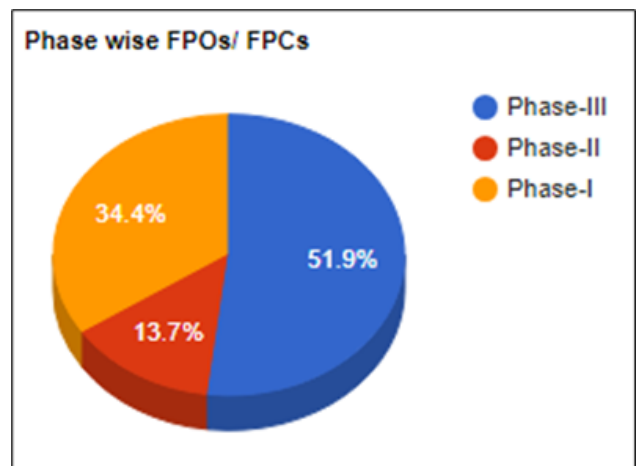


Fig. 1. Registered FPOs/FPCs under MOVCD-NER

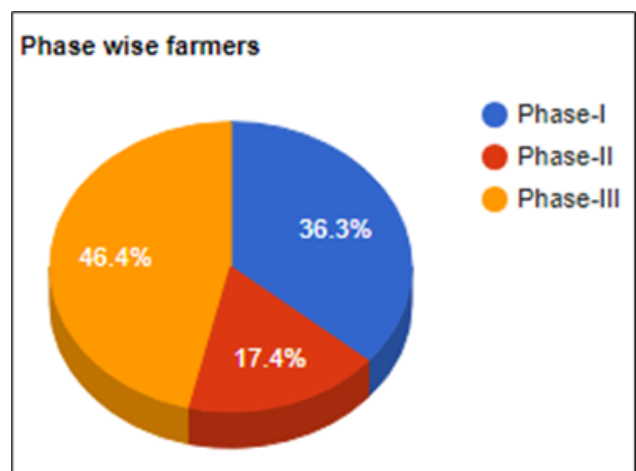


Fig. 2. Registered farmers under MOVCD-NER

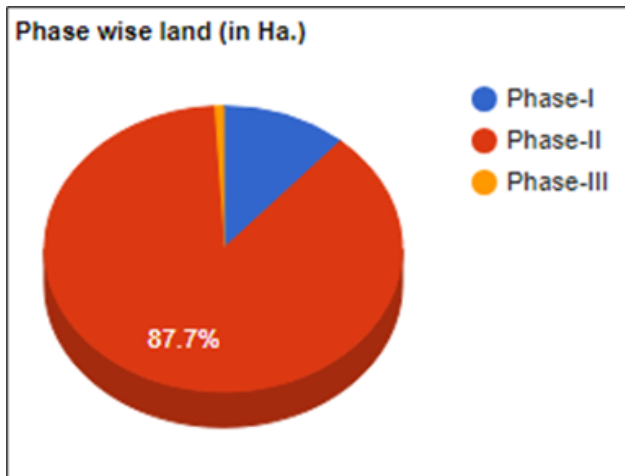


Fig. 4. Registered area under MOVCD-NER

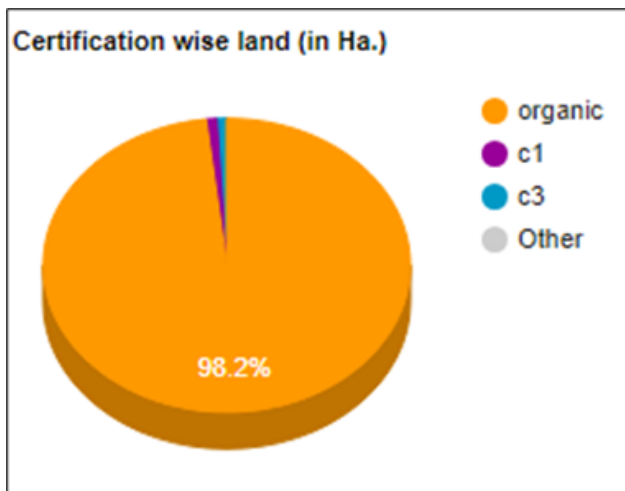


Fig. 4. Registered certified area under MOVCD-NER

MOVCD-NER is comprised of four components: 1) Value Chain Production; 2) Value Chain Processing; 3) Value Chain Marketing and Support Services; and 4) Institution Development (*Ministry of Agriculture & Farmers Welfare's Annual Report, 2020–21*). The total amount spent by the federal government on MOVCDNER since its adoption is shown in Table 1.

Year/Phase	Allocated Fund (Rs. Crore)	Expenditure (Rs. Crore)
2015-16 (Phase-I)	125	112.11
2016-17	100	47.63
2017-18	100	66.22
2018-19 (Phase-II)	182.93	174.78
2019-20	160	103.8
2020-21	137.17	88.55
2021-22 (Phase-III)	174.81	N. A
2022-23	198	N. A
Total	1177.91	593.09

Source: Department of Agriculture & Farmer Welfare, 2022-23

In 2016, the government of Arunachal Pradesh flagged off “State Organic Mission” under the umbrella of centrally sponsored scheme titled “Mission Organic Value Chain Development in North-Eastern Region” (MOVCDNER), with

the sole purpose to convert the state into an “organic state”. Ever since, the State Government has successfully implemented three phases of the mission across different districts. At present, under the mission about 13641 farmers, 46 Farmer Production Company (FPC), an area of 20500 hectares, 6 integrated processing units (IPU), etc have been registered, created and brought in under organic practice. The main crops which are being promoted under the mission includes Glutinous Rice, Mustard, Arhar, Ginger, Large Cardamom, Pineapple, Kiwi, Turmeric, Soyabean, Orange, Black Paper, Buckwheat, Foxtail Millet, off-season vegetables- Pear, Plum and Peach, King Chilly, Walnuts, and Finger Millet (*Directorate of Agriculture Department, Government of Arunachal Pradesh, 2022*). Figures 5, Figure 6, Figure 7, and Figure 8 depict the status of organic certified area, FPC formation, and registered farmers under MOVCD-NER in Arunachal Pradesh since its inception 2016.

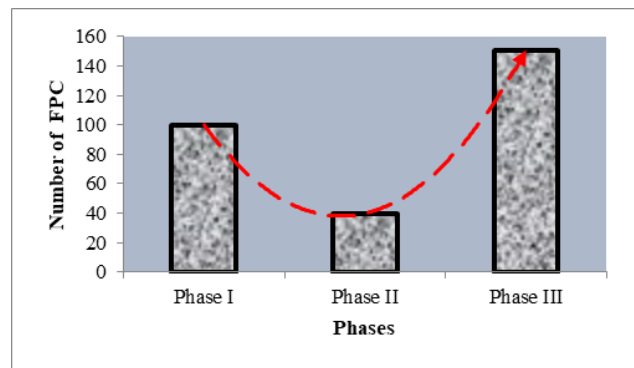


Fig. 5. Phase-wise formation of FPCs in Arunachal Pradesh

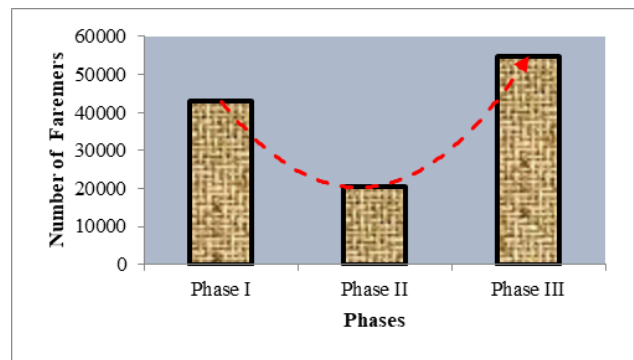


Fig. 6. Phase-wise registered farmers in Arunachal Pradesh

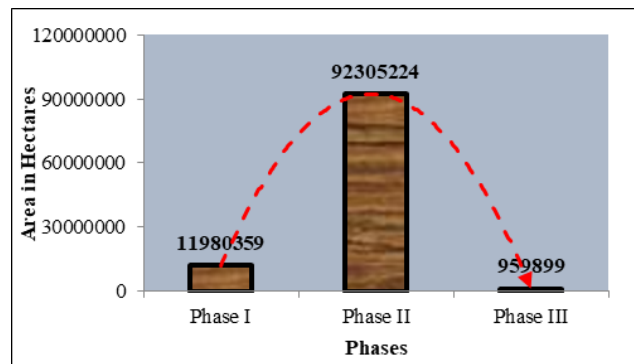


Fig. 7. Phase-wise registered farmers in Arunachal Pradesh

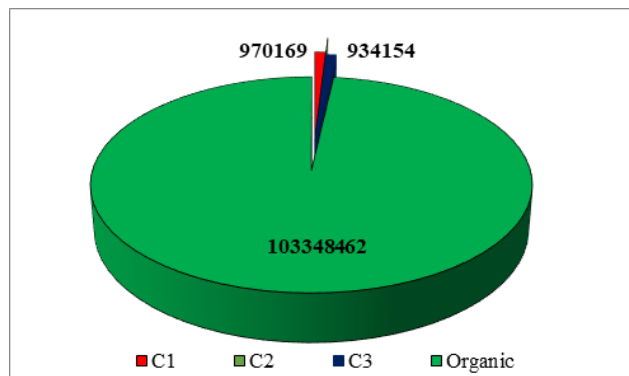


Fig. 8. Organic certified area in Arunachal Pradesh

The upward trend line in the above figures clearly indicates rapid growth in area under organic certification, number of registered farmers and number of FPCs under State Organic Mission since its inception in 2016. Nevertheless, all these figures are based on the secondary data obtained from the concerned department. Along this line, no empirical research work has been carried out despite the fact that it has been seven years since the “State Organic Mission” was introduced. Owing to the research paucity, what is the ground reality of the mission is not well understood, indicating existence of a clear-cut research-gap. In this light, the five most prominent research questions which arise are:

- 1) Whether registered members of FPCs received financial aid during the conversion phase as outlined under the MOVCD-NER operational guidelines?
- 2) Whether registered farmers ever participated in organic related skill development/knowledge enhancement programs such as on-farm training, workshop, seminar, exposure visit?
- 3) Whether FPCs received organic certification upon completion of the conversion period?
- 4) Whether FPCs received infrastructural support such as integrated processing unit, collection and aggregation center?
- 5) Whether FPCs are still operational or got defunct?

In order to address the above research questions, the present study was conducted. The significance of the present research work is four-folds. Firstly, as the present study is the first of its kind, and hence, it addresses the existing research-gap. Secondly, findings of the research work shall shed lights into the present ground reality. Thirdly, findings would also be used to predict whether the State Organic Mission will sustain or not. Fourthly, the findings may be of vital importance to the policy-makers and various other stakeholders for ensuring long-term sustainability and meeting the State Organic Mission’s ultimate goal.

2. Study Area

Arunachal Pradesh represents the eastern most state of the Indian Territory. At present, Arunachal Pradesh is currently divided administratively into 27 districts. It is situated between the latitudes of 26°30’N and 29°28’N and the longitudes of 91°25’E and 97°24’E, as shown in Figure 9.

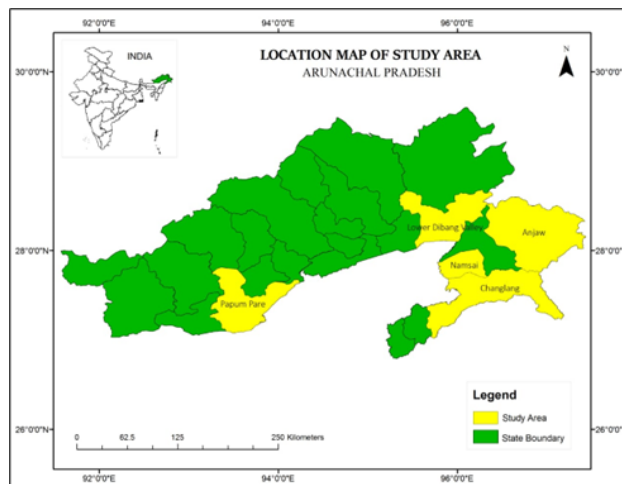


Fig. 9. Location map of study area-Arunachal Pradesh

3. Materials and Methods

The present study was conducted only on FPCs which were formed under Phase-I of “State Organic Mission” in Arunachal Pradesh, India during 2015-16. This was primarily because the FPCs formed during Phase-II (2018-19 to 2020-21) and Phase-III (2021-22 to 2023-24) did not complete their conversion period (also called Transition Period) at the time when the present study was initiated. Out of the first 10 FPCs created during Phase-I across ten districts of Arunachal Pradesh, the study area in the present research was restricted to five districts of Arunachal Pradesh, as shown in Figure 9, wherein highest number of farmers were registered under FPO during Phase-I namely, Lower Dibang Valley (466 Farmers), Changlang (434 Framers), Namsai (424 Farmers), Papum Pare (390 Farmers), and Anjaw (359 Farmers), respectively.

Data pertaining to total Farmer Producer Companies (FPOs), areas brought under organic management and certified farmers across North-East States under MOVCD-NER were accessed from MOVCD-NER official portal (<https://movcd.dac.gov.in/>). Information with respect to financial and non-financial assistance as well as infrastructural supports to every registered farmer and farmer producer companies (FPCs) both on-farm and off-farm were collected from MOVCD-NER operational guidelines, 2016, published by Integrated Nutrient Management Division, Ministry of Agriculture and Farmers’ Welfare, Government of India.

On the other hand, the data with respect to number of Farmer Producer Company (FPO), number of registered farmers under each FPO, crops being promoted, organic accredited certification agencies, etc., in context of Arunachal Pradesh under “State Organic Mission” were obtained from Directorate of Agriculture Department, Arunachal Pradesh, India.

A pilot survey was carried out in the study area prior to the final field survey during the month of November, 2023. The primary objective of the pilot survey was to explore the location of the targeted FPCs in the respective study areas (districts), identify the Managing Director (MD) of FPCs, establish a formal relation, and conduct face-to-face interview.

Based on information collected during the pilot survey, a structured schedule consisting of open-ended questions was

designed for primary data collection. The final field survey was conducted in the month of February, 2024 to collect empirical data. For this purpose, focus group discussion was conducted with members (farmers) of the target FPCs. Besides focus group discussion, an observation method was utilized.

Since this study was being carried out on registered members of organic FPCs, purposive random sampling technique was employed for empirical data collection. Apart from primary data, this study is also supplemented with key findings about organic farming reported in scholarly works. Hence, the present study is based on both primary data and secondary data.

4. Results

This section presents the empirical findings obtained through face-to-face interviews with the managing directors (MDs) of surveyed FPCs, conducted during both the pilot survey and the subsequent field survey. Additionally, it includes information gathered through focus group discussions with FPC members, primarily farmers.

During the focus group discussions, members of the surveyed Farmer Producer Companies (FPCs) were asked seven (7) closed-ended questions. The responses of the respondents are presented in the following sections.

Table 2 presents the responses of the interviewed members of the FPCs related to the question- *Whether received one-time financial assistance (Rs. 3750 per hectare) from government in the first three years of conversion for procurement of biofertilizers, biopesticides, and neemcake?* It is evident that all the participants received the one-time financial assistance during the initial years of conversion.

Table 3 presents the responses of the surveyed FPCs when asked *“Whether received one-time financial assistance (Rs. 3750 per hectare) from government for creation of on-farm input-production infrastructure such as liquid manure tanks, NADEP, compost tanks, botanical extracts etc”*. It is clear that all the interviewed members of the FPCs had received one-time financial aid.

Table 4 presents the responses of the interviewed farmers regarding their participation in any organic related skill/knowledge enhancement programs. It is clearly seen that none of the surveyed FPCs members had reported to have participated in any sort of organic related skill/knowledge enhancement program.

Table 5 shows the responses of the surveyed FPCs pertaining to the question *Whether received organic certificates upon completion of conversion period?* It is clear that all the surveyed FPCs received organic certification post conversion phase.

The surveyed FPCs were asked *“Whether they received integrated processing units for value addition and processing?”* The responses are provided in Table 6. It is clear that except the FPC of Papum Pare district, all the other surveyed FPCs were provided with integrated processing units (Table 6). Same result was observed when they were asked about the collection and aggregation centers, as shown in Table 7.

Next question asked to the surveyed FPCs was with respect to the renewal of their organic certification. The responses of the surveyed FPCs are presented in Table 8. It is clear that only the FPC of the Changlang district had renewed their organic certification in the last three years. The rest could not renew it.

In order to check the present status of the surveyed FPCs, the

Table 2
Responses of FPC members

<i>Whether received one-time financial assistance (Rs. 3750 per hectare) from government in the first three years of conversion for procurement of biofertilizers, biopesticides, and neemcake?</i>	
Name of Farmer Producer Company	Response (Yes/No)
Lower Dibang Valley Organic Ginger Producer Company	Yes
Konchen Agriculture Organic Producer Company	Yes
Chongkam Organic Agro Producer Company	Yes
Papum Pare Farmer Producer Company	Yes
Chiroidor Organic Producer Company	Yes

Source: Field Survey, February 2024

Table 3
Responses of FPC members

<i>Whether received one-time financial assistance (Rs. 3750 per hectare) from government for creation of on-farm input-production infrastructure such as liquid manure tanks, NADEP, compost tanks, botanical extracts?</i>	
Name of Farmer Producer Company	Response (Yes/No)
Lower Dibang Valley Organic Ginger Producer Company	Yes
Konchen Agriculture Organic Producer Company	Yes
Chongkam Organic Agro Producer Company	Yes
Papum Pare Farmer Producer Company	Yes
Chiroidor Organic Producer Company	Yes

Source: Field Survey, February 2024

Table 4
Responses of FPC members

<i>Whether participated in organic related skill/knowledge enhancement program such as on-farm training, workshop, exposures visit?</i>	
Name of Farmer Producer Company	Response (Yes/No)
Lower Dibang Valley Organic Ginger Producer Company	No
Konchen Agriculture Organic Producer Company	No
Chongkam Organic Agro Producer Company	No
Papum Pare Farmer Producer Company	No
Chiroidor Organic Producer Company	No

Source: Field Survey, February 2024

Table 5
Responses of FPC members

<i>Whether received organic certificates upon completion of conversion period?</i>	
Name of Farmer Producer Company	Response (Yes/No)
Lower Dibang Valley Organic Ginger Producer Company	Yes
Konchen Agriculture Organic Producer Company	Yes
Chongkam Organic Agro Producer Company	Yes
Papum Pare Farmer Producer Company	Yes
Chiroidor Organic Producer Company	Yes

Source: Field Survey, February 2024

Table 7
Responses of FPC members

<i>Whether received infrastructural support such as collection and aggregation centre?</i>	
Name of Farmer Producer Company	Response (Yes/No)
Lower Dibang Valley Organic Ginger Producer Company	Yes
Konchen Agriculture Organic Producer Company	Yes
Chongkam Organic Agro Producer Company	Yes
Papum Pare Farmer Producer Company	No
Chiroidor Organic Producer Company	Yes

Source: Field Survey, February 2024

Table 8
Responses of FPC members

<i>Whether organic certificate have been renewed in last three years?</i>	
Name of Farmer Producer Company	Response (Yes/No)
Lower Dibang Valley Organic Ginger Producer Company	No
Konchen Agriculture Organic Producer Company	Yes
Chongkam Organic Agro Producer Company	No
Papum Pare Farmer Producer Company	No
Chiroidor Organic Producer Company	No

Source: Field Survey, February 2024

Table 9
Responses of FPC members

<i>Whether FPC is still active or partially active or defunct?</i>	
Name of Farmer Producer Company	Response
Lower Dibang Valley Organic Ginger Producer Company	Defunct
Konchen Agriculture Organic Producer Company	Active
Chongkam Organic Agro Producer Company	Defunct
Papum Pare Farmer Producer Company	Defunct
Chiroidor Organic Producer Company	Defunct

Source: Field Survey, February 2024

MDs of the surveyed FPCs were asked “*Whether FPC is still active or partially active or defunct?*”. Their responses are presented in Table 9. Out of five surveyed FPCs, only one FPC is still operational (active), while the rest are completely defunct.

5. Conclusion

The present study investigated the present scenario of the FPCs created during Phase-I of the MOVCD-NER in Arunachal Pradesh. Results showed that the Mission (MOVCD-NER), operational in the state of Arunachal Pradesh since 2016, has led to remarkable growth in area under organic certification, organic farmers and organic farmer producer companies (FPCs), respectively. As of 2024, three phases of the mission have been introduced. The surveyed FPCs members reported that they had received the one-time financial support during the initial stage of conversion to organic farming. Apart from financial aid, it was also found that the FPCs were provided with infrastructural support including integrated processing units, collection and aggregation centers. This is a positive sign indicating the government's support to help farmers switching to organic farming. Nevertheless, only

providing infrastructural and financial aid to farmers is not enough for ensuring sustainability of the state organic mission for achieving its target. Farmers must be equipped with organic related skill and technical know-how since organic farming vis-à-vis is highly skill and knowledge-based. In this regard, it is worth mentioning that the finding indicates none of the surveyed FPCs members had participated in any organic related skill/knowledge enhancement programs such as on-farm training, seminar, exposure, and workshops. Certification plays a key role in organic farming business since it helps farmers fetching premium prices for their organic produce, resulting in a higher profitability. In the present study, all the surveyed FPCs were provided with organic certification upon completion of the conversion phase. Nevertheless, the managing directors (MDs) of the surveyed FPCs reported that they had not been able to renew their organic certification in the last three years except for the FPC in Changlang. The MDs narrated that the biggest drawback of organic certification is that the validity of organic certification lasts for only one year, and hence, certificate needs to be renewed by paying a huge capital (often not less than 1 lakh). Above all the findings, the most striking was related to the present status of FPCs. It was found out that

four out of five surveyed FPCs were completely defunct namely, the FPC of Papum Pare, Namsai, Lower Dibang Valley, and Anjaw, respectively. Although organic farming, an emerging lucrative farming venture, is gaining prominence across the globe as it ensures win-win situation to both producers (farmers) and consumers, yet organic farming does have major drawbacks, the most cornerstone being the lower yield and higher renewal cost of organic certification. Overall, the findings of the present study highlight call for urgent intervention by the concerned authorities to revive the defunct Farmer Producer Companies (FPCs) in the study area. This can be achieved by addressing the grievances of farmers, ensuring their active participation, and fostering an environment conducive to sustained growth. Such efforts will be vital for the continued success and sustainability of the agricultural mission in Arunachal Pradesh.

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