

Environment friendly initiatives of Kudumbashree Mission: The Gateway for Green Microfinance in Kerala

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ABSTRACT

Green microfinance is the practice of weaving the principles of environmental sustainability into the daily operations of microfinance institutions and promoting environmentally-friendly practices and solutions (Allet *et al.*, 2015). Kerala is a state which sacrificed its environment for its development and advancement in human development indicators. Though Kerala was a consumer state with enough local agriculture and food crops' production, it imports food crops from the neighbouring states which begot its concern in food security and safety and health issues. So, the state is in dire need of organic farming and environment friendly initiatives in all sectors for which efforts have been started and run in full swing. Green microfinance is a way for this salvation as the majority are from middle and poor classes. Kudumbashree is a female based successful and fruitful enterprise in the state with more than 44 lakh women from various background. Microfinance and micro-entrepreneurship activities are run successfully all over the state in almost all fractions of the society needs, Kudumbashree is a proper gateway for implementing green microfinance in the state. This article enquires the prospects through which green microfinance can be implemented in the state analysing its environmental friendly initiatives especially paddy cultivation and organic farming. This study explored Kudumbashree website for acquiring required data.

Key words: Green microfinance, Kudumbashree, Environmental-Friendly, Organic farming, Agriculture

Introduction

The historic land reform of Kerala in 1970 begot the drastic transformation of Kerala into being a non-agrarian state. Yadu (2017) examines the contemporary consequences of 1970s' land reform. Though it showed a sweep of Kerala's agriculture from feudal production relations to capitalism giving lands to tenants and agricultural labourers from upper caste landlords (Balakrishnan, 2015); became a paradigm of land to the tiller model (Herring,

1983) and led to unprecedented advancement of social outcomes, social mobility and human development (Ramachandran, 1996; Ratcliff, 1978), it failed somewhere to keep giving importance to agriculture which resulted in seeing the cultivable land as speculative asset (Yadu, 2017). The land reform excluded the participation of Dalits and other marginalized societies who were the real tillers of the land. Those farmers who got land actually had no primary interest in agriculture as source of living which led to a novice and different class of farmers

called 'bourgeoisie' (Morrison, 1997). Various kinds of plantation farming emerged. Land grabbing in humongous level occurred and is going on in various corners of the state. It is due to exception of plantation sector in land reform of 1970 which is highly criticised. The redistribution was rendered into the middle groups who were just below the level of upper class people. The land concentration with more than 70 per cent still is mainly possessed by the upper class. Big plantation companies grab forest and government land in plenty. Kerala has a scope of revamping traditional agriculture by initiating second land reforms actions by taking back the grabbed and unused lands and distributing to the Dalits and actual tillers of the state (Yadu, 2017). Raj and Tharakan (1983) conclude that the decline in traditional agriculture in the post land reform period is not only the result of land reform of 1970s but also that of many other issues.

The agrarian transformation, one of the major negative externality for the state, made a dichotomous agrarian society with rich farmers who shifted to cash crops and poor farmers who are marginalized by traditional agricultural practices with food crops with less return and turnover (Viswanathan, 2014). From 1970s, the tradition of cultivation of food crops turned back into being cultivation of cash crops (Johnson, 2018; Viswanathan, 2014; Mythili, 2006; Karunakaran, 2014). One of the main reasons attributed to this transformation and creation of dichotomous agrarian society is that the land reforms, that was implemented by the first Government of Kerala initiating in 1956 and completing in the end of 1970s by giving land ownership to 1.2 million tenant cultivators, have exempted all plantation crops from land ceiling legislations (Raj and Tharakan, 1983; Balakrishnan, 2008). Consequently, the peasant rationality preferred cash crops as profit crops assuming the rice and other food crops can be imported freely from the nearby states (Viswanathan, 2014). The peasant rationality in change in the cropping pattern is due to price and non-price factors like agro-climatic conditions, labour availability, irrigation facilities, soil fertility, expected yield, cost of cultivation, price levels, profitability, mechanisation, impact of government strategies, etc (Mythili, 2006; Karunakaran, 2014).

Similarly, the mass gulf migration of Keralites from 1970s which begot a positive drastic transformation of Kerala economy also caused the changing pattern of cropping in the state with labour short-

age. It was due to the increase in the land price which impelled real estate business, cash crop cultivation and housing (Foxa *et al.*, 2017; Johnson, 2018; Prakash, 1998; Kannan, 1998).

As a result, 65 per cent decline occurred in the wetland area under paddy in the last three to four decades in Kerala (Viswanathan, 2014). Karunakaran (2014) explored a wide supply demand gap of rice in the state. During 1960-61, the shortage of rice was only 40.12 percent of the total demand increased to 83.45 percent in 2009-10. He forecasts it to be 10606.55 thousand tonnes in 2026 in the state (Karunakaran, 2014). Until 1970, the area under paddy cultivation was almost stagnant. Since 1975, the farmers started a slow shift from paddy to cash crops which became fast since 1980s. As 33.16 percent of the total cropped area was confined for paddy cultivation in 1960-61, in 2009-10 it was just 8.77 percent (Karunakaran, 2014; Johnson, 2018). Consequently, the production of rice is concentrated in Palakkad and Alappuzha districts, which accounted for 34 per cent and 24 per cent, respectively, of total rice production in Kerala in 2016-17 (Johnson, 2018).

Tapioca is similar to the pattern of rice in terms of area under cultivation. Its cultivation was very high in 1975-76 and started to decline (Johnson, 2018). The area under coconut cultivation and its production was very high in Kerala. Its growth was highest in Palakkad, Kozhikkode and Kannur which contributed 62 percent of the total in 2016-17. Coconut became the 'preferred substitute crop' due to its lower labour intensity (Johnson, 2018).

So, the process has continued still for all the years importing major food crops of rice and other vegetables which led the neighbouring states to cultivate exclusively for the state using much pesticides in more than ample level. Though changing governments of the state had brought many measures and policies to promote food crop cultivation, in state Five Year Plans and others, it was in vain as the state policies were not fully capable of maintaining all strata of farmers in flourished and sustained ways (Viswanathan, 2014).

The agrarian transformation was only in favour of rich large and medium-sized cash crop producers. The majority of small and marginal farmers and landless labourers were the worst affected till the day who intervene in traditional low value food crop cultivation (Viswanathan, 2014).

Three distinct phases of drastic change in the

cropping pattern of the state can be articulated from mid-1950s to the present (Johnson, 2018). From 1956-57 to 1974-75, the area under cultivation of both food and non-food crops increased; from 1975-76 to 1994-95, the area under food crops declined, and the area under non-food crops increased as to cross over that under food crops; and (3) from 1995-96 to 2016-17, the area under food crops continued to decline and the area under non-food crops remained stagnant (Johnson, 2018).

As rice had the lowest increase in average farm prices among the major crops from 1970s to 1996 (George and Chattopadhyay, 2001), farmers selected other crops like coconut to get more economic benefit. Likewise, the institutional policies and measures like liberalization, multi-trade agreements and the prospective state measures and the peasant rationality made a large segment of farmers to turn the paddy fields and other wetland into garden crop plants and plots for real estate for fetching more economic return. Apparently, farmers and people were unaware of the long-term environmental and ecological impacts of this misbalance. In addition, the government also failed to make every citizen aware of this natural distress and ignored the low-scale traditional farmers to cope up with the international agreements.

Share of agriculture crops

The democratic decentralization of Kerala, though it started before two decades, has failed in shaping sustainable livelihood opportunities in agriculture and industry. The major decay of agricultural tradition in the state is the result of structural transformation of Kerala economy which begot for a humongous shift in the state's crop composition with increase in coconut and rubber and decline in rice and tapioca (Harilal and Eswaran, 2017; Kumar, 2005; Foxa *et al.*, 2017).

The share of agriculture in GSDP is declining highly since last four decades (Nair and Dhanuraj, 2016; Harilal and Eswaran, 2017). Johnson (2018) analysed 15 crops at the State level indicates that the share of area under 10 selected food crops (rice, sugarcane, pepper, ginger, turmeric, cardamom, areca nut, tapioca, banana and plantain, and cashew) declined, and the share of area under five selected non-food crops (sesamum, coconut, tea, coffee, and rubber) remained stagnant from 1956-57 to 2016-17 in their respective categories. And the cropping pattern was more diverse from 1956-57 to 1986-87 and

less diverse from 1986-87 to 2016-17 (Johnson, 2018).

During 1999-2000 to 2015-16, the state's agricultural sector observed a variation of 43.71% in the area of paddy production. From 1990-2000 to 2015-16, Kollam district showed the largest decline in the paddy production with 91.08 percent followed by Ernakulam, Idukki and Thiruvananthapuram by percent of 86.13, 75.63 and 73.41 respectively. On the contrary to all districts, Kottayam proved to be the best by having an increase in paddy production of 2.84 percent. Taking variation from 2005-06 into account, districts except Alappuzha and Kottayam showed decline in the paddy production as Kollam showed highest decline by 78.46 percent followed by Ernakulam, Idukki and Thiruvananthapuram by percentage of 76.14, 69.75 and 54.96 respectively. The statistical details of district wise trend of paddy production from 1990-2000 to 2015-16 has been given in the Table 1.

Kerala was active in case of the land area and production of paddy in the first few decades of the second half of the twentieth century. The land area of paddy cultivation has been compressed considerably into a meagre level. Likewise, the production of paddy also has been decreased. Trend in the area, production and productivity of paddy production in the state from 1955-56 to 2015-16 has been given in the Table 2.

Though there is high extent decrease in area and production of paddy cultivation with negative growth rate, productivity remains stagnant with increase and decrease at positive rate. This is not a good sign though it shows positive in all the years. It is because of the drastic decline in the area of production. 1975-76 showed the highest positive growth rate in both three indicators with 9.18 percent, 33.29 percent and 22.12 percent respectively for the area, production and productivity.

According to the report of Government of Kerala on the area of paddy cultivation in Kerala, whilst it was nearly 6.78 lakh hectares in 1985-86, it was reduced into 2.9 lakh hectares in 2004-05. This shows the decline of about 3.88 lakh hectares or 57 percent of area under paddy cultivation in Kerala within twenty years. In addition, as the paddy cultivations couldn't bring much profit to the farmers, they turned to other crops. Likewise, as the result of globalization, gulf migration and real estate business, paddy crops have been converted to other crops or other building and business proposes (Government

of Kerala n.d.).

The Minimum Support Price (MSP) for paddy, announced by the Government of Kerala is higher than that of Central government to protect paddy cultivation and cultivators. In addition, the selling price of crops of farmers is influenced by the MSP, not the market equilibrium of supply and demand (Nair and Dhanuraj, 2016). The proper economic valuation and its estimates of economic and ecological opportunity cost of paddy conversions can help the people and the farmers and farming minded people aware of the need of paddy field and wetland conservation for the paddy cultivation. Likewise, the government incentives for the paddy cultivation are much higher now. It can be boosted through applying measures and practices that is

populist and small scale farmers-oriented (Viswanathan, 2014).

High state interventions in the credit market disordered the agricultural credit system in the state. With the hands of both Central and Governments, cooperative institutions have become the lead in the agricultural credit providers with short and medium term agricultural loans which saves them from the moneylenders (Nair and Dhanuraj, 2016). Many primary agricultural credit societies (PACS) are running on less, some are dormant and under liquidation panic. As a panacea for this, the Vaidyanathan Committee has recommended mainly limiting government control on the cooperatives and giving representation to the depositors in its management for turning it sustainable and au-

Table 1. District-wise Trend in Area of Paddy Production from 1999-00 to 2015-16

SI No	District	Area (Ha)			% variation	
		1999-00	2005-06	2015-16	From 1999-00	From 2005-06
1	Thiruvananthapuram	7969	4705	2119	-73.41	-54.96
2	Kollam	17426	7218	1555	-91.08	-78.46
3	Pathanamthitta	6716	3291	2534	-62.27	-23
4	Alappay	35326	28768	31724	-10.20	10.27
5	Kottayam	15822	12557	16272	2.84	29.58
6	Idukki	3640	2932	887	-75.63	-69.75
7	Ernakulam	42894	24934	5950	-86.13	-76.14
8	Thrissur	42887	31074	24625	-42.58	-20.75
9	Palakkad	109704	113919	81120	-26.05	-28.79
10	Malappuram	23495	14885	8687	-63.03	-41.64
11	Calicut	6495	4703	2872	-55.78	-38.93
12	Wayanad	17304	11503	9204	-46.81	-19.99
13	Kannur	11710	9223	5478	-53.22	-40.60
14	Kasaragod	8386	6030	3843	-54.17	-36.27
Total	349774	275742	196870	-43.71	-28.60	

Source: Authors' calculation of data taken from Govt of Kerala 2016; Agricultural Statistics 2015-16, Government of Kerala

Table 2. Area, Production and Productivity of Paddy in Kerala from 1955-56 to 2015-16

Si. No.	Year	Area	Variation (%)	Production ('0000 MT)	Variation (%)	Productivity (Kg/Ha)	Variation (%)
1	1955-56	759368		86.9		1144	
2	1965-66	802329	5.66	99.74	14.78	1243	8.65
3	1975-76	876022	9.18	132.94	33.29	1518	22.12
4	1985-86	678281	-22.57	117.31	-11.76	1729	13.90
5	1995-96	471150	-30.54	95.3	-18.76	2022	16.95
6	2005-06	275742	-41.47	63	-33.89	2285	13.01
7	2015-16	196870	-28.60	54.9275	-12.81	2790	22.10

Source: Authors' calculation of data taken from Agricultural Statistics 2015-16, Department of Economics & Statistics, Government of Kerala; Govt. of Kerala 2016

tonomous. Though Kerala didn't sign with the agreements to implement the recommendations of the committee, it is less financing agriculture compared to other states. In addition, the major credit is given for short term loans followed by medium term loan. Very less loans are provided for long term agricultural purposes. The repayment of loans are not possible on time for many farmers as the required output is not come due to lack of highly modernised inputs like fertilizers, mechanised tools, etc. which led the state to be in the front of large farmers' suicide rated states. Most of them are small and marginal farmers who had less than 1 acre of land. A study found that many suicide death occurred by consuming the pesticide named Furidan (Palackal, 2019).

Need of Organic farming

Kerala state is in the process of organic boom. Since the drastic agrarian transformation occurred, it affected the environment, economic condition, health and food security (Palackal, 2019). The import of food crops from other states adversely affect the poor people unless their real income increase to its purchase power (Patnaik, 2010). Due to agricultural transformation, wetlands mainly paddy lands were converted and filled up for non-agricultural use. It is a reason for high irreversible ecosystem crisis for the state (Viswanathan, 2014; Harilal and Eswaran, 2017). Due to mismanagement of land use, though many environmentalists warned the state of unprecedented calamities in the state even many years ago, the state apparently started to taste the consequences in large levels from 2018 floods followed by deluge and large level landslides in 2019. The environmental calamities are on the clouds every coming year in various forms in the State which have to be suffered by all strata of the people. Though the government of Kerala passed the Kerala Conservation of Paddy Land and Wetland Bill, 2007 which is to protect paddy fields from illegal reclamation, it seems of no result as many paddy fields have been converted for another different purposes. In addition, as usual, this bill is also a burden for the small scale farmers of Kole wetlands as the government has the power of seizing the land that is not cultivated. This also insists the exigency of being the government measures fully in accordance with the needs and requirements of the small scale farmers (Viswanathan, 2014).

The agrarian transformation has adversely af-

ected the health of the Keralites too. The dependence on neighbouring states for the major food items persuaded them to produce and supply with short time using pesticides and high fertilizers which are included in the eating items too. Palackal (2019) examined that 75 percent of vegetables are coming from outside the state. Some chemical tests have proved the presence of severe level of some pesticides like particles of Profenofos which is banned in India, except for tea and cotton, in some common vegetables (Palackal, 2019). The insecticides that found in the imported vegetables would affect the nervous system by which the nerve communication might be blocked. Breast cancer is common in the state due to such pesticides (Palackal, 2019).

Realising the health impacts, food security and safety, Kerala people tended to do organic farming. The organic farming was triggered during COVID-19 lockdown. COVID-19 reminded the state its lack of self-reliance and self-efficiency in agriculture as it became consumer too in necessary food grains. The COVID-19 and the lockdown affected the supply chain as the other states feared on their-own people and market-close. During lockdown period, many people started focusing on organic farming in the form of field farming, kitchen farming and terrace farming. If such attempts are being kept and making adequate innovations and developments through the impetus from government side, then this Dutch Disease is simply curable as it made people sensed well. This Dutch disease, as the term indicates ignoring primary sector and considering other sectors for development, started in 1970s with gulf boom that affected 10 major crops to be produced in meager level (Parameswaran, 2011). Many public and private institutions and organizations have come up with many projects for organic farming. The major one is *Jaiva Keralam* (Organic Kerala). The Biodiversity Board and Kerala's Agriculture Department, the Kerala government released a policy document in 2010 on organic farming which promised to turn about 2 lakh hectare cultivable land for organic farming. Many markets for organic farming products have been started in various nooks and crannies of the state like Organic Bazaar, *Jaiva Krishi Sevana Kendram* (Centre for Service for Organic Farming) (Palackal, 2019). Many Self Help Groups and Women led organizations conducts massive organic farming. The most successful one is that of Kudumbashree which has hundreds of units

exclusively for organic farming through Neighbourhood Groups and Joint Liability Groups.

Women Involvement

Women are more active in agricultural production all over India due to the male migration and the consequent female headship in the house. The active participation of women in agriculture have induced the governments to introduce special programs focused on women in the field like Mahila Kisan Sasakhshan Pariyojana (MKSP) (Vennila and Ramesh, 2019). The fruitful result of agriculture production by women is possible through giving training programmes to women's self-help groups, capacity building programs, microfinance and micro-entrepreneurship activities, transparent provision of credits, skill and leadership development programs (Vennila and Ramesh, 2019).

Kudumbashree

Kudumbashree is a mission for poverty eradication and women empowerment initiated by the State Poverty Eradication Mission (SPEM) of the Government of Kerala. It was formally launched on 18th May, 1998 after many related endeavours. The Kudumbashree initiated a blend of strategies that includes identifying and implementing various government programmes and policies at the community-based organization level, formulating strategies for anti-poverty planning in ward level and development of women's micro-enterprises, and thrift and credit societies (Anita *et al.*, 2008). It is one of the largest microfinance institution in India which is in full swing with sundry ventures and practices for the social and economic development of women in Kerala.

Within the ambit of Local Self Government, Kudumbashree's whole practical area is under a federated three-tier community based organizations. Neighbourhood Groups (NHGs) at the low level which includes groups of neighbouring women, Area Development Societies (ADS) at middle level which is at ward level and Community Development Societies (CDSs) at LSG level of Panchayat, Municipality or Corporation.

Though Kudumbashree gives membership to all adult women, it is confined to being a single member from a household. Nonetheless, any woman, irrespective of membership, can take part in the discussions and talks of NHGs and even it training and awareness programs. Normally, to get loan from the

banks for the poor is difficult. But the processes in Kudumbashree makes it easier to the members. It injects confidence and mental strength to the members through group dynamics to work successfully in group which the bank realizes its reliability and is ready to allot loans (Dhanya and Sivakumar 2010).

Green Microfinance

"Green microfinance tries to induce changes in decision-making and behaviour of microfinance clients – either passively (refusing to finance harmful activities) or actively (providing environmentally conditioned micro-financial and non-financial services, possibly combined with targeted subsidies) – in order to reduce clients' vulnerability to environmental stresses and/or to mitigate the impact of their practices on the environment, for reasons of financial risk reduction, livelihood improvement and/or conservation and restoration of natural resources" (Huybrechs *et al.*, 2015). Green microfinance is the microfinance for environmentally friendly initiatives.

Methods

The study depended on both qualitative and qualitative methods. The study used data mainly from the Kudumbashree website. In addition, the secondary sources have been used for getting literature collection pertained to the green microfinance initiatives and its practices, the environmentally friendly initiatives of Kudumbashree and the environmental protection in Kerala through government initiatives and strategies, and other enterprises like microfinance activities. Books, articles, newspaper reports, etc related to Kudumbashree along with Kudumbashree annual reports have been used. Many reports of Government of Kerala on agriculture, land etc have also been used.

The study analysed district-wise Trend in Area of Paddy Production from 1999-00 to 2015-16 finding its variation from 1999-2000 and 2005-06. In addition, area, production and productivity of paddy in Kerala from 1955-56 to 2015-16 were found. For both of these, the data has been taken from Agricultural Statistics 2015-16, Department of Economics & Statistics, Government of Kerala; Govt. of Kerala 2016. In addition, the analysis part analysed the percent share of area of cultivation under Joint Liability Groups (JLG). The study finds that as

Kudumbashree as many microfinance and microenterprises related to environmental friendly initiatives, it can simply adopt green microfinance particular to these dimensions. For this, as limitation of study, the article only analysed paddy cultivation and organic farming maintained by Joint Liability Groups (JLG) in the state. Mainly percentage and average methods have been used for analysis along with finding variation.

Analysis and Discussion

Kudumbashree

Presently, the Kudumbashree workers aimed at organic farming get lands for lease and are mildly supported with cash and kind like fertilisers and free seeds (Harilal and Eswaran, 2017). The government should support and implement the measures focusing the positivity of the farmers, especially paddy farmers, by giving proper incentive mechanisms and giving higher price than MSP for the procurement. The paddy cultivation and horticulture production programmes initiated by Kudumbashree should be sustained well by giving proper focus in credit provisions and its transparency, giving its members incentives and subsidies without fail. By making this and as the Kudumbashree practices are all over the states in ample level, the whole state can be made self-reliant in organic farming production (Viswanathan, 2014). The paddy and other food crops cultivation can be articulated in the state. It is possible with difficulty. It requires cooperative labour process which is shown the prowess by Kudumbashree but with no enough transparent proper credit provision. In addition, for the success, the consistent and recurrent support from three tier government institutions

should be maintained always without fail (Harilal & Eswaran, 2017).

Joint Liability Groups

Joint Liability Group (JLG) are separate form of group of women joined from NHG. JLG members should be NHG members whether it is from single NHG or multiple NHGs. JLGs were started when Kudumbashree started collective and organic farming, land leasing farming under Mahila Kisan Sashaktikara Pariyojana (MKSP). Each JLG will have four to ten NHG members. After identifying cultivable land in the nearby area of Kudumbashree members, they will form JLGs and apply to ADS for registration. Afterwards, their process of JLG starts. Monitoring and reporting are done monthly from JLG secretary to CDS via ADS which reaches at district mission coordinator of Kudumbashree wherefrom it finally reaches Kudumbashree State Mission office. As per the Kudumbashree website data, the total number of women farmer in JLGs was 3,54,122 as on 1st September 2020. Presently, each JLG has a 5 member strength on an average. In addition, each 7 members have an average 1 hectare land for farming.

Farming in JLGs

In 2013-14, the area of farming by JLGs was in 48,348 hectares. In it, 33.93 percent area was used for paddy cultivation, 30.07 percent for banana farming, 20.12 percent for tuber, 12.10 percent for vegetables and 3.77 percent for the remaining cultivated items (Kumaramkandath and Verghese, 2017). The current status of JLG cultivation is depicted in Table 3.

The number of Joint Liability Groups (JLG) doing cultivation is 57475 out of 70555 registered JLG in the first season of 2019-20 during May-September,

Table 3. Area Share of Cultivation of Agricultural Products (Area of items (in Ha))

Items	Season I	Share (%)	Season II	Share (%)
Paddy	7086.08	23.36	6151.51	24.62
Banana	9298.53	30.66	7122.03	28.51
Tubers	6038.35	19.91	4955.22	19.84
Vegetables	6476.59	21.35	4966.05	19.88
Leafy Vegetables	180.65	0.60	287.25	1.15
Others	1250.17	4.12	1498.73	6.00
Total Area Under Cultivation	30330.37	100	24980.81	100

Source: Authors' calvualtion from MKSP Basic Data – Kudumbashree Website. Retrieved from <https://www.kudumbashree.org/monitor-progress/170/1160>

2019 and 42,783 in the second season during September 2019- February 2020. Total area of cultivation was 30330.37 hectares in the first season and 24980.81 hectares in the second season. The data shows that the paddy cultivation which is the need of the hour of the state is shared secondly with 23 percent after banana cultivation which is 30.66 percent of the total area in the first season. The same pattern is vivid in the second season with 28.51 percent and 24.62 percent respectively. Tubers includes both yam and Colocasia.

JLGs cultivate mainly paddy, bananas, tubers, vegetables, leafy vegetables and others all over the states. Its district wise data of area of cultivation has been given in the following two tables 4 and 5. The tables contain two seasons of cultivations. First season is from May to September 2019 and the second season is during September 2019 to February 2020. There is lapse of data for some districts for cultivation of some crops in the second season.

The year 2019 was the second consecutive year of natural calamity for the state with landslide and flood which affected the state economically. Malappuram and Wayanad are the most affected districts which is seen in the cultivation of JLGs in 2019. The calamity happened in the first season of cultivation period of JLGs. The table shows the data of area share of JLG cultivation of paddy, banana, tubers and vegetables. In the first season, Kasaragod and Kannur shared the highest share of land in the

cultivation with 21.78 and 21 percent respectively. Pathanamthitta has the least shared area with 0.15 percent. In the second period, Malappuram has the highest share of the cultivation area with 27.76 percent which is highest in the year followed by Kannur with 21.96 percent. The data shows the impact of natural disaster of the year on Malappuram with having 10.36 percent in the first season though it had the highest share in the state after the period of disaster. Idukki and Malappuram shared the highest area for banana cultivation with 21.32 percent and 12.8 percent respectively. In the second season, Malappuram shared the highest with 40 percent followed by Kasaragod with 13 percent. For tubers, Kasaragod is the first in the both seasons with 19 and 30 percent respectively followed by Idukki (13) and Malappuram (16.29) in both seasons. These latter three districts shared the larger area for vegetables with Idukki (17.4) and Kasaragod (14.33) in the first season and Malappuram (26.12) and Kasaragod (21.55) in the second season.

The percent share of area of cultivation of leafy vegetables and others along with that of total area of cultivation has been explained in the table 5. In the first season, the share of cultivated area of leafy vegetables is highest in Kasaragod (20 percent) followed by Alappuzha (18 percent). It was Thiruvananthapuram (24 percent) and Alappuzha (15 percent) in the second season. The area for cul-

Table 4. Share of Area of Cultivation under MKSP in 2019-20(Area in Ha) (%)

No	Districts Season I/II	Paddy		Banana		Tubers		Vegetables	
		I	II	I	II	I	II	I	II
1	Thiruvananthapuram	1.38	1.24	5.16	5.45	7.44	4.31	5.17	4.99
2	Kollam	1.07	0.00	3.28	0.00	4.63	0.00	2.43	0.00
3	Pathanamthitta	0.15	2.29	0.23	6.48	0.37	9.09	0.14	3.21
4	Alappuzha	10.31	10.62	2.53	1.88	6.20	5.91	6.79	3.85
5	Kottayam	4.46	5.67	2.59	4.08	4.82	6.75	1.30	1.88
6	Idukki	0.21	0.00	21.32	0.00	13.25	0.00	17.40	0.00
7	Ernakulam	8.91	5.31	9.74	8.92	7.94	8.01	12.96	7.61
8	Thrissur	3.16	6.61	6.09	6.39	7.01	8.05	12.31	13.19
9	Palakkad	13.78	9.16	8.23	6.84	3.01	1.31	5.17	3.27
10	Malappuram	10.36	24.76	12.80	39.69	7.68	16.29	8.52	26.12
11	Kozhikode	1.93	0.94	3.29	1.36	0.81	0.19	1.02	0.42
12	Wayanad	1.20	0.00	7.39	0.45	6.82	0.00	1.31	5.44
13	Kannur	21.30	21.96	7.04	5.64	10.65	9.85	11.14	8.48
14	Kasaragod	21.78	11.44	10.30	12.82	19.38	30.25	14.33	21.55
	Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: Authors' calculation from MKSP Basic Data – Kudumbashree Website.

Retrieved from <https://www.kudumbashree.org/monitor-progress/170/1160>

tivation of other items was higher in Thrissur (37 percent) and Malappuram (21 percent) in the first season and Kasaragod (15 percent) and Idukki (14 percent) in the second.

Total area of cultivation was 30330.37 percent hectare in the first season and 24980.81 hectare in the second season. Kasaragod and Idukki has the higher share in area for cultivation under JLG with 15.5 percent and 14 percent. The unabrupt deluge and heavy landslide begot in the reduction of area of cultivation in those districts which had larger share of cultivated area in the previous years. Malappuram is the most affected district in this aspect as it was in the front of all cultivation except leafy vegetables. This has proved in the second season when Malappuram was highest with 27 percent and Kasaragod with 17 percent. Pathanamthitta and Kozhikode was the lower shared districts with 0.39 percent and 1.84 percent in the first season and Kozhikode and Wayanad in the second season with 0.75 percent and 1.28 percent respectively. Kannur and Kasaragod got higher share in almost all the items mainly in the first season and the second too as the both got less affected in the year.

Land availability is a major problem in agriculture sector of Kudumbashree. Many JLGs are difficult to get incentives and loans on prescribed time. Some are farming by the money of their pocket seeing that it would make only positive trend in their

life. Taking Bhagyashree JLG in Thrissur which has 13 acres of farming land, got only barren land which was not in use for nine years, for farming where earlier there was tile factory. After struggling the family who were on poverty line became middle class due to strenuous effort in farming activities.

“.....The transformation at the individual level is also equally interest-ing in these stories. Danaseelan, Anila’s husband, who was a wage labourer in construction field for long time now works with his wife and her friends. The family which once lived at the verge of poverty line has now transformed into a middle class family. The couple has indeed managed to bring better education facilities for their two children one of who is currently studying outside Keralam. Anila who is currently the convener of collective farming Groups in the local Panchayat is currently the leader of around 102 groups” (Kumaramkandath&Verghese 2017).

Conclusion

In fact, Kudumbashree district mission has hundreds of projects and various microenterprises all over the states with a large number of women participation. It has a plenty green microenterprises in various forms to promote environmentally friendly system in the state. It is the agency of many state-led

Table 5. Share of Area of Cultivation under MKSP in 2019-20 (Area in Ha) (%)

No	Districts Season I/II	Leafy Vegetables		Others		Total Area Under Cultivation	
		I	II	I	II	I	II
1	Thiruvananthapuram	9.96	23.91	15.52	6.04	5.19	4.34
2	Kollam	9.17	0.00	5.32	0.00	2.97	0.00
3	Pathanamthitta	1.41	12.87	4.34	7.28	0.39	5.44
4	Alappuzha	17.74	14.98	3.64	2.91	6.12	5.44
5	Kottayam	10.02	5.94	2.29	2.39	3.23	4.49
6	Idukki	0.00	0.00	22.72	0.00	13.87	0.00
7	Ernakulam	2.21	0.70	5.54	7.28	9.66	7.40
8	Thrissur	2.21	0.70	7.47	37.05	6.95	9.90
9	Palakkad	11.29	5.16	5.62	1.55	7.74	5.27
10	Malappuram	13.84	12.18	6.84	21.35	10.06	27.25
11	Kozhikode	0.00	0.24	0.00	0.15	1.84	0.75
12	Wayanad	2.21	0.35	7.44	1.13	4.50	1.28
13	Kannur	0.00	10.10	7.92	8.34	11.96	11.27
14	Kasaragod	19.93	12.88	5.36	4.54	15.50	17.18
	Total	100.00	100.00	100.00	100.00	100.00	100.00

Source: Authors’ calculation from MKSP Basic Data – Kudumbashree Website.
Retrieved from <https://www.kudumbashree.org/monitor-progress/170/1160>

green initiatives like Haritha Karma Sena. The major environmentally friendly initiatives of Kudumbashree are organic farming and paddy cultivation under Joint Liability Groups (JLG), Jaivika, Agri Business ventures, bio pharmacy, fallow-less land village programme, paper products, green bytes, etc. Since Kudumbashree itself is popular and one of the largest microfinance enterprises in India, it also gets thrift of crores from itself and gets loans from other banks. So, green microfinance in Kerala can be applied simply using the windows. Therefore, Kudumbashree mission with its microfinance, green microenterprises and other environmentally friendly initiatives is a proper gateway for green microfinance in the state. Kudumbashree requires some reforms in itself focussing the required adequate credit exclusive for the green initiatives. In addition, the government has started focussing environmental friendly initiatives. Though some of them are not practically fruitful partially, others are fruitful as it proves everything can be done with proper government intervention. Government can start micro-lending programmes exclusively for environmentally friendly initiatives by which green microfinance can be prospered in the state. If so, Kudumbashree can be made agent too as it is successful in the similar role in many programs.

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