February 2024

Vikalpani National Women's Federation

Baseline Survey

Organic agriculture capacity building and advocacy in Sri Lanka

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Chapter 1: Introduction

1. Project Context

The Vikalpani National Women's Federation (Vikalpani) has partnered with the Lanka Organic Agriculture Movement (LOAM) to implement an organic agriculture capacity-building and advocacy project in Sri Lanka. This project aims to improve food sovereignty through the utilization of local resources and adherence to the principles of agroecology. Vikalpani is contributing in innovative ways to the three main objectives of the project and plans to work with 100 women and 50 schoolchildren throughout the project to enhance their capacities in agroecology and food sovereignty. This baseline survey is being conducted with various objectives, one of which is to understand the background of the women farmers in the Monaragala district and their current challenges in the midst of the economic crisis. Based on the baseline survey findings, 100 women farmers and 50 schoolchildren will be selected as project beneficiaries. Additionally, this document will recommend potential areas to be considered and provide recommendations for Vikalpani to consider in the project implementation.

2. Operating Context

2.1. Economic Crisis in Sri Lanka

Sri Lanka is currently experiencing one of the worst economic crises in its history. The crisis is marked by soaring inflation, food, fuel, and medicine shortages, several hours of power cuts, and the prospects of further default on foreign debts. The ongoing economic crisis is pushing more than 25.9% of its 22 million people beneath the poverty line in 2023,[1] and many low-income families cannot afford adequate nutritional food, impacting food insecurity. Urban poor, informal labor workers and rural communities have become more vulnerable due to job losses, disrupted agriculture-based supply and value chains, and rural economies. Further, the Women and children experience the consequences adversely.

Sri Lanka defaulted on its foreign debts in May 2022 to conserve the dwindling foreign currency reserves vital for importing necessary materials from overseas. The COVID-19 pandemic triggered a collapse of tourism and foreign remittance, and local production collapsed. Apart from that, the Russian war in Ukraine and long years of corruption system in Sri Lanka exacerbated the economic crisis, and the inflation rate was recorded as 69.8% by September 2022.[2] (Year to Year rate) The food inflation was 94.9% in September 2022, and the nonfood inflation rate was 57.6%. (Electricity bill, Water bill and Kerosene oil). The government had to restrict the import of fuel, gas, and other essential items, and people had to stay in long queues to buy essential items and experience long hours of power cuts. Several sectors vital for the economy, such as manufacturing, construction,

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[1] https://www.worldbank.org/en/news/press-release/2024/04/01/sri-lanka-s-economy-shows-signs-of-stabilization-but-poverty-to-remain-elevated#:~:text=However%2C%20poverty%20rates%20continued%20to,the%20poverty%20line%20in%20202

[2] Sri Lanka Development update , 2023, World

financial services, and real estate, contracted, resulting in loss of income and employment. Sri Lanka sought external assistance to overcome the crisis, including the support of the International Monetary Fund.

The economic crisis in Sri Lanka has led to a political crisis, resulting in the resignation of former president Gotabaya Rajapaksa, prime minister Mahinda Rajapaksa, and the cabinet due to public pressure ("Aragalaya"). The legitimacy of the current president, Ranil Wickremasinghe, has been called into question, as he was appointed by a parliamentary majority whose legitimacy is also disputed. In response to protests, the President has resorted to repression to maintain his hold on power. The protests have garnered support from various groups, including students, lawyers, teachers, professionals, trade unions, and farmers, all demanding systemic change. Additionally, Ranil Wickremasinghe has proposed new laws and regulations that restrict peaceful protests and freedom of expression.

2.2. Agrochemical ban and its impact on farmers

In May 2021, the Sri Lankan government decided to ban the imports of agrochemicals, including chemical fertilizers, insecticides, and herbicides, amending the Imports and Exports (Control) Act, No. 1 of 1969, claiming the move aimed to transition the nation into organic farming. Former president Gotabhaya Rajapakse claims that this will help rein in rising healthcare costs brought about by the overuse of chemicals in agricultural production. However, the real intention of this decision was to save \$300 to \$400 million of foreign exchange as the country was facing an international debt crisis. This overnight shift to ‘organic’ farming was a complete failure as farmers dependent on chemical inputs for their crops could not begin their cultivation. Farmers were not prepared or trained to move to organic farming. Farmers started to protest against the government’s decision with these difficulties, and the government couldn’t implement a sustainable plan on organic agriculture within a short period of time.

Lately, in November, the Sri Lankan government announced that permission would be granted to the private sector to import Chemical fertilizers, Weedicides, and Pesticides, and the gazette on banning the importation of agrochemicals was revoked. Before the ban, fertilizer was distributed as a relief for the lowest prices through agrarian service offices at the village level, and today, farmers have to buy 50 KG of Uria bags for 40,000 LKR, which is not affordable. Small-scale Paddy, vegetable farmers, tea, and commercial farmers who cultivate other crops were significantly affected by the decision, and their harvest was remarkably decreased since the soil was used for the application of external agrochemicals. Farmers expected the government to give them knowledge on organic agriculture, preparation of organic inputs, and the facilitation for finding the raw materials for organic input preparation. On the other hand, the government and farmers also narrowed this transformation only to the application of compost instead of chemical fertilizer and didn’t address the concept of agroecology in a broad manner. The decision, which was taken at the wrong time, gradually triggered the economic crisis, which led to food insecurity.

2.3. Collapse of food security

According to the FAO/WFP Crop and Food Security Assessment Mission (CFSAM) to the Democratic Socialist Republic of Sri Lanka, an estimated 17 percent of its 22 million population is food-insecure.[3] World Bank's latest assessment was in August 2022, and Sri Lanka is among the top 10 countries with the highest food price inflation. Acute food insecurity has risen drastically due to import shortages, skyrocketing inflation rates, livelihood disruptions, and reduced household purchasing power.

According to recent reports from FAO and WFO, the total cereal production in 2023, including the forecast for the secondary "Yala" crops to be harvested in August 2023, is expected to be 4.1 million tones, which is 14 percent below the average of the last five years. The yields of the main "Maha" crops harvested in March 2022/23 were mainly affected by the insufficient availability of fertilizers, particularly phosphorus and potassium. Additionally, rice production in Sri Lanka is forecasted to be 3.8 million tones, also 14 percent below the last five-year average.[4] Furthermore, the production of vegetables, fruits, and export-oriented crops such as tea, rubber, coconut, and spices are significantly below average levels, leading to a decline in household income and export revenues. The fishery community has also been impacted by the economic crisis, as they have been unable to go fishing due to fuel shortages. The most affected sectors include daily wage workers (Kul workers/plantation sector workers), workers in the informal sector, urban poor, rural poor, and workers in free trade zones. The above report also highlights that the highest level of acute food insecurity was in the Estate sector (tea production) and among households relying on social protection schemes such as Samurdhi and disability benefits. This is due to the unaffordability of food and healthy diets. Households relying on unskilled wage labor (in agriculture and non-agriculture) and fishing communities also have high levels of food insecurity. Additionally, female-headed households and households with low education attainment exhibit higher food insecurity rates compared to the rest of the population.[5]

2.4. Seeking financial remedies from the International Monetary Fund

The Sri Lankan government is seeking financial assistance from other countries particularly the IMF to recover from this economic crisis. Recently, the Sri Lankan government started negotiations with the International Monetary Fund (IMF) aimed at working towards a program that accesses the economic challenges. The target is to constitute expeditious arrangements to commence the external debt-restricting process and to receive a loan of $ 2.9 bn from the IMF. The discussions are going on and still haven't come to the final stage.

Sri Lanka has postponed the repayments of its private and bilateral debts with interest to 2027 and is predicted to default on its foreign debt in the near future, leading to yet another IMF austerity program. Local CSOs, individuals, and activists have recently been raising their voices for debt justice in Sri Lanka. Their main argument is that the government's debt restructuring plans in the context of the IMF program are no cure for Sri Lanka's sick political economy and only attack the socio-economic

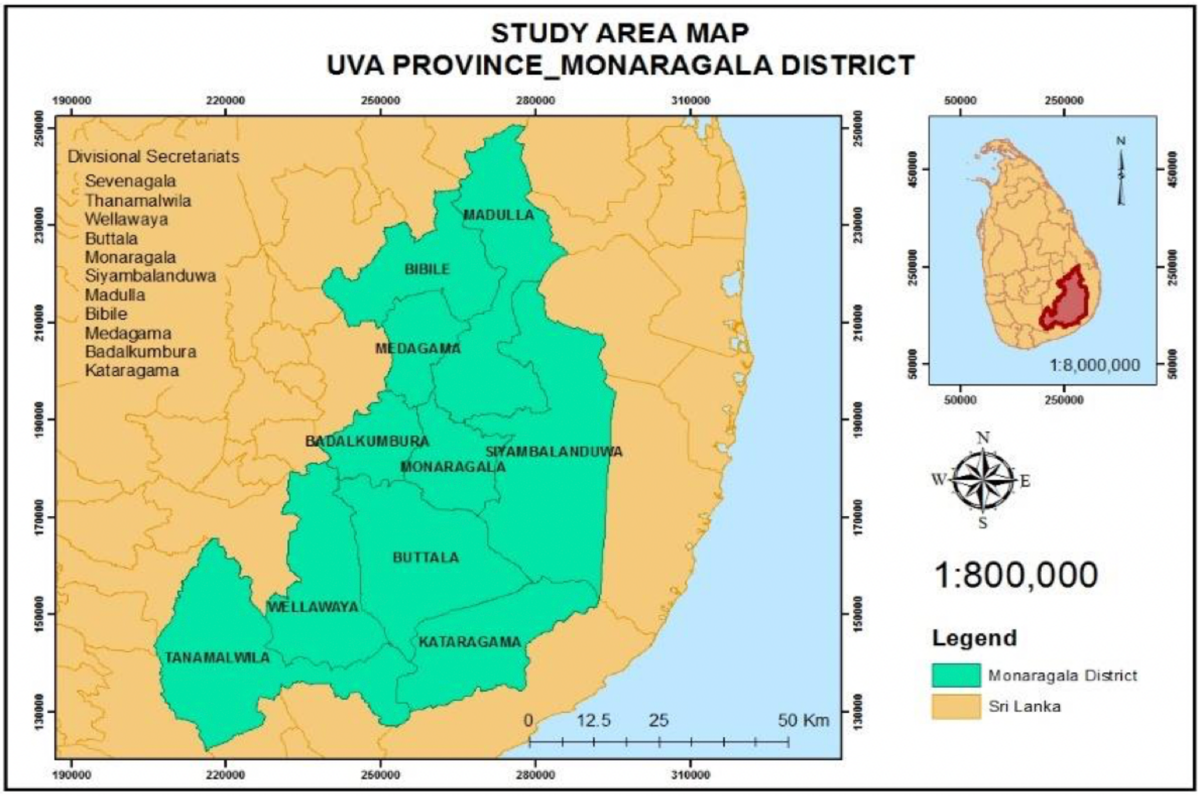
[3] https://www.wfp.org/countries/sri-lanka#:~:text=An%20estimated%2017%20percent%20of,were%20noted%20as%20food%2Dinsecure.
[4] https://docs.wfp.org/api/documents/WFP-0000149636/download/?_ga=2.203975888.1549279659.1716198167-1852457617.1714992635
[5] Ibid

rights of the working people while redistributing their few remaining assets and resources to the ruling elite. The current liberal government unconditionally follows the IMF solutions for debt restriction and economic recovery. The IMF policy measures propose further financialization, trade liberalization, and privatization, which will adversely impact people's lives.

Some of the proposed measures include reducing the budget deficit through tax increases and cutting government expenses, limiting borrowing, restructuring state-owned enterprises, managing inflation, improving tax administration, and strengthening governance and transparency.

2.5. The situation in the Monaragala District

Monaragala is the second largest district in the eastern and southeast directions of the Uva province, Sri Lanka. It has a total land area of 5959 km2 and an administrative system consisting of 11 divisional secretariats, 319 Grama Niladari Regions, and 1324 villages with 10 Pradeshiya Sabhas. The population was around 505,312 in 2022, with approximately 120,137 families residing in the district. Monaragala district is known for its intermediate and dry climate and has recently been highlighted as one of the prominent drought-affected areas of the country. The Monaragala district receives less than 1000 mm of rainfall per year. Researchers have found that despite the presence of seven river basins within the district, there was a severe hydrological drought due to water scarcity. This scarcity has impacted agriculture by causing a deficiency in precipitation, resulting in rapid soil moisture depletion. [6]



Map 1: Map of the Monaragala District, Sri Lanka

[6] https://a-a-r-s.org/proceeding/ACRS2021/5%20Disaster%20Monitoring%20and%20Prevention/ACRS21_064.pdf

In the Monaragala district, agriculture is the primary occupation for many people. Both paddy, vegetables, and cereals are cultivated in both seasons, with paddy farms being irrigated. During the Maha season, maize and groundnuts are the main crops, with over 10,000 hectares of land being used for cultivation. In addition, farmers also cultivate groundnuts on over 500 hectares of land. Furthermore, mangoes, watermelons, and oranges are the main fruit crops cultivated in the area. There is a rich crop diversity in the area, including cereals, vegetables, leafy vegetables, legumes, oil crops, root and tuber crops, fruit crops, and herbal crops. Farmers also cultivate underutilized crops such as finger millet, heen meneri, Thana haal, Alupuhul, Kekiri, and Thibbatu. Mostly, women farmers practice a vast variety of practices derived from indigenous knowledge in different stages of cultivation, and they are very knowledgeable about the perceived benefits.[7]

The area is used for monocropping, with private, multinational, and government institutions carrying out sugar cane, maize, and banana plantations. Sugarcane was introduced as a monocropping crop to Sri Lanka in the mid-19th century, and the major sugarcane plantation areas of the country are in Hingurana, Pelwatta, Sewanagala, and Kantale. In 1986, the lands for the sugar cane plantation in Pelwatta, Monaragala, were captured by the government, leading to struggles against land grabbing. An agreement was stipulated between the government, farmers, and the sugar cane company, in which farmers had to give their lands to the companies for 30 years to cultivate sugar cane. The lands were redistributed by the company for selected farmers who were willing to cultivate sugarcane. Farmers were given 4 acres for the sugar cane cultivation and ¼ acres for the settlements. Farmers were only allowed to cultivate sugar cane, and the company had the power to take back the land if farmers tended to cultivate other crops, even if the sugar cane plantations were not profitable. The company established service centers in the plantations, where farmers were provided with pesticides and fertilizer in for loans. The farmers were required to sell their harvest to the company, and the company would deduct the costs of the fertilizer, pesticides, and other expenses. As a result, sugar cane cultivation gradually became unprofitable, and many farmers ended up in debt due to their sugar cane farmlands. Furthermore, farmers became laborers on their own farmland, and many suffered from kidney disease and other skin infections due to the pesticides and other conditions in the fields.

Furthermore, rubber and bananas are cultivated as monocrops in the Monaragala district. During the off-season, farmers work as laborers in banana plantations. Hybrid banana varieties, such as Cavendish, are cultivated using pesticides.

In 2022, The Department of Census and Statistics reports that in the Monaragala district, 30.7% of women are economically active, with a labor force participation rate of 30.7%, while men's participation in the labor force is 77.2%. These calculations exclude home garden activities, which are mostly carried out by women, as well as their care work and household chores. The average salary level in Monaragala district is 40,000 to 45,000 rupees, which is 133 USD to 149 USD per month. The unemployment rate in the Monaragala district is 3.9%, and many have become unemployed due to

[7] https://www.researchgate.net/profile/Nishantha-Hettiarachchi/publication/358806458_Application_of_indigenous_knowledge_in_rural_agriculture_A_study_on_existing_indigenous_practices_among_women_farmers_in_Monaragala_district_Sri_Lanka/links/621673cb791f4437f158d2ad/Application-of-indigenous-knowledge-in-rural-agriculture-A-study-on-existing-indigenous-practices-among-women-farmers-in-Monaragala-district-Sri-Lanka.pdf

the impacts of the ongoing economic crisis. The women's participation in agriculture in Monaragala is 55.5%, which is higher than that of men in the industry and the service sectors.[8]

[8] Department of census and statistic, 2022

Chapter 2: Methodology of the study

2.1. Overall approach of the study

The conceptual framework for this study is the project goal, which is to improve food sovereignty, largely based on using local resources and adhering to the principles of agroecology. To reach this goal, Viklapani's partnership with LOAM contributes to three main objectives: a farming society created with knowledge and skills in organic farming and increased sovereignty over their seeds. (objective 1) , An agro-ecological and diverse farming lifestyle has been created with a socially just, subsistence-securing and trustworthy marketing system on a circular economy level. (Objective 2) and Farmer-friendly and consumer-friendly agricultural policy campaigns are carried out. (Objective 3)

2.2. Target Population and the Sample

Vikalpani works with women farmers and schoolchildren as the target population to achieve these objectives. They work on capacity development for engaging in agroecology at different levels with these groups. The primary information was collected from 288 respondents through in-person interviews, 6 focus group discussions with women farmers groups and schools, and field observations. The survey covered six divisional secretarial areas: Buttala, Monaragala, Obbegoda, Wellawaya, and Medulla, and 23 villages in these divisional secretaries.

2.2.1. Sample details

Table 1: The following table indicates the details of the sample.

Methods	Sample type	Sample size	Description
Key person interviews	Total Women farmers	288	These women who were from age 18 years to age 73 were interviewed filling a questionnaire.
	Sample size from divisional secretariat level		
	Badalkubura	9	
	Buttala	120	
	Madulla	55	
	Monaragala	104	
Focus Group Discussions	4 FGDs with Women Farmers		These women farmers are already doing the agroecology and
	Tanwaththe	08	
	102 ela	09	
	Niyadella	05	
	O8 acres	05	
	2 FGDs with School children and teachers		
	Niyadella Secondary School	06	The discussion was conducted with teachers , principals and the school children who do agriculture as a subject
	Kumbukkana Secondary School	07	

2.3. Analysis and interpretation of the data

The study uses quantitative and qualitative research methodology to collect data for the baseline indicators and provide context-related analysis. The quantitative data was collected from the project's main beneficiaries, namely men and women, and the number of school children. The qualitative research comprised Key Informant Interviews and Focus Group Discussions to identify underlying factors and causes. Quantitative data was analyzed, and desk research was conducted to collect secondary data.

Figure 1: Vikalpani Staff member conducting a survey

Figure 2: Vikalpani staff conducting an FGD

Chapter 3 : Data Analysis and the key findings

3.1. Ownership of the lands and land usage.

Monaragala is one of the districts where multinational cooperatives use lands to cultivate mono-crops like sugar cane, banana, and mango using highly hazardous agrochemicals. Pelwaththa and Sewangala are two main sugar cane plantations in the Monaragala districts, and Dole Lanka is one of the large private companies that produce and export bananas. Gal Oya, Yala West, Ruhunu, and Udawalawe national parks are also situated within the district, and considerable land areas have been declared as forest lands and wildlife sanctuaries. The agricultural lands are used for cultivating paddy, vegetables, cereal, and other perennial crops. The government distributed the uplands (not mud lands) and paddy lands to the farmers in Monaragala to improve agriculture under development programs. In the survey, 9 farmlands were above 5 acres of the uplands, and 144 farmlands were between one to 5 acres. Most of the cultivating lands belonged to men as a result of the Land Development Ordinance in 1950, which had provisions for giving the title of the lands to the eldest son in the family. In the survey, only 52 women-owned lands out of 288. 59 lands belong to parents, which also come under the ownership of the father.

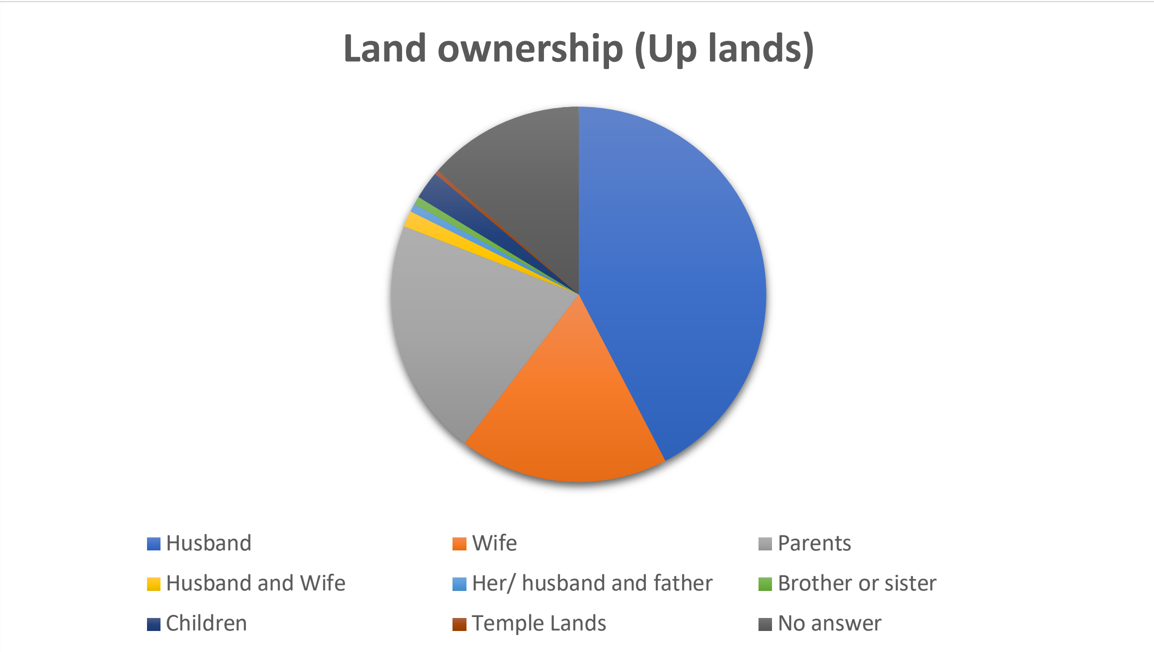


Figure 3: Status of the land ownership

The government had colonial patriarchal land laws, which prioritized men over women. Asserting women's land rights is one of Vikalpani's main campaigns. Vikalpani believes that depriving women of owning land restricts their access to agricultural resources, fiancé, knowledge, and government extension services. Further, they are excluded from the village-level decision-making process, such as farmer societies and irrigation societies, where land ownership is the primary qualification for membership.

3.2. Crop diversity of the farmlands

Farmers cultivate mixed crops in their farmlands, and some cultivate cash crops such as coconut, rubber, and tea. The following are the main crops cultivated by women farmers in their farmlands.

Table 2 : Types of crops cultivated by the women farmers

Types of crops				
Fruits	**Cash crops**	**Vegetable**	**Spices**	**Cereal**
Banana	Coconut	Cassava	Cinnamon	Mung
Mango	Tea	Chilly	Paper	Kurakkan
Lime	Beatle	Kohila	Tomato	Corn
Tea	Beatle Nuts	long beans	Brinjal	Peanuts
Orange	Rubber	Bitter guards	Ginger	
Pineapple	Coffee	Murunga	Turmeric	
Guava		Thibbatu		
Ambarella		Ladies fingers		
Anoda		Jack fruit		
Rambutan		Baby jack fruit		
		Pumpkin		
		Grren leaves		
		Potatos		

In paddy lands, they cultivate rice and other cereal crops such as mung, kurakkan, corn, and peanuts. Rice is the staple food of the inhabitants of Sri Lanka. Farmers cultivate paddy for two seasons named "Yala" and " Maha" under two monsoons. Maha season falls under the Northeast monsoon from September to March, and Yala season is effective from May to August with the Southwest monsoon. The farmers also cultivate cereal like mung and kurakkan in the middle of the season.

3.3. Access to resources in cultivation

Respondents shared that land, labor, water, seeds, fertilizers, and knowledge are the key resources of agriculture. They use family labor, and sometimes, they get paid labor, mostly women, from transplanting harvesting, and land preparations.

Monaragala is one of the country's highly drought-affected districts, located in dry and intermediate zones. The district's yearly temperature is 22.9ºC (73.22ºF); it is approximately 5545.6 square kilometers and is the second largest district in the country. Recent research has identified it as one of the districts where the impact of climate change has greatly affected agriculture. The district has seven river basins, and there was a severe hydrological drought due to water scarcity.

In the survey, more than 80 respondents got water for their upland cultivation from the tap line, and this data is limited to Monaragala and Buttala divisional secretaries. The sample size of Monaragala and Buttala in this study is comparatively larger than that of other divisional secretariats, which are 104 and 120, respectively, and this also impacted the data and information below. Local authorities provide tap water, and households should pay a monthly payment. During the economic crisis, the water bill was increased, and last January 2024, the National Water Supply and Drainage Board increased the water tariffs by 3% as a result of the government's policy decision to increase the value-added tax from 15% to 18% in 2024.

Further, out of 288, 60 farmers supply irrigation for their upland cultivations from their private wells using electric motors or motors run by gasoline. The electricity tariff has been increased twice since 2022, and the weighted average increased to 705% from 2014 to 2022.[9] This impacted the farmers who supplied the irrigation using motors, and their production cost rapidly increased, and some gave up cultivation as well.

The Monaragala district typically receives an average of 1500 mm of rainfall per year, mostly limited to four to five months. However, approximately one-sixth of the district receives less than 100 mm of rainfall yearly. According to a survey, 53 farmers use rainwater to cultivate their upland, while 21 use rainwater and water from their wells, and 3 use rainwater and tap water. During focus group discussions with women farmers, the issue of climate change was highlighted as a major concern. Due to the irregular timing of the annual rainfall, their two seasons are adversely affected. Furthermore, paddy cultivation is entirely dependent on rain-fed water, and the survey found that there are around 35 farmers who rely on irrigation canals or streams for water. Some areas, such as Aliyawaththa and Obbegoda, depend on water streams that originate from Aliyawaththa and Maragala mountains for cultivation. Water is also taken from Kumbukkan oya, Hulanda oya, and Manik Ganga for irrigation. Saddathissa wewa and Kaluka pitiya wewa are some of the water reservoirs where water is allocated to farmlands through irrigation channels, which are filled by rainfall. The low rainfall affects the water levels of these streams and reservoirs, thereby impacting agriculture. Both irrigated water and rainwater are used for paddy farming.

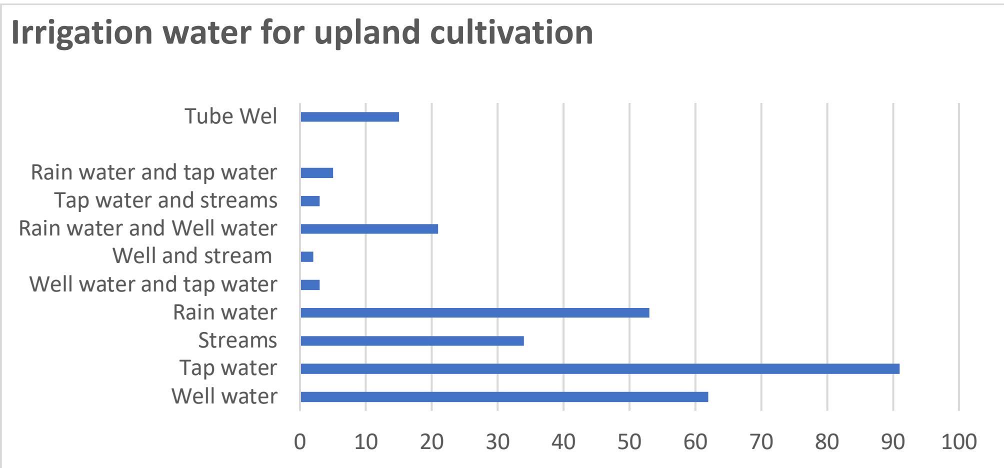


Figure 4: Irrigation methods for upland cultivation

[9] https://publicfinance.lk/en/topics/change-in-tariffs-on-monthly-electricity-consumption-1677156143

3.4. Access to seeds for upland and paddy cultivation

Seed is the primary resource in agriculture, and farmers have reclaimed their seed rights for years. In Sri Lanka, seed production activities are dominated by the farmers and the public sector, notably the Department of Agriculture's Seed and Planting Material Development Centre. The Sri Lanka Seed Market size is estimated at USD 13.08 million in 2024. [10] Apart from that, seeds are imported by the private sector, and Hayles Agriculture, CIC, OPEX, ADVANTA, and Plantchem are the major players of the seed market in Sri Lanka. A large number of seeds are imported, and recently, the Department of Agriculture and Lal Teer Seed of Bangladesh implemented a project to increase vegetable seed production in the country.[11]

The private sector demands strict seed laws restricting farmers' production, distribution, and exchange rights. Sri Lanka has the Seed Act, No 22 of 2003, which was enacted to regulate the quality of seeds and planting materials and to provide for matters connected therewith. In 2013, the government attempted to bring a new seed act called the Seed and Planting Material Act, 2013, which had to be withdrawn due to farmers' protests. The proposed act will require, among others, the compulsory 'registration' of farmers and 'certification' of all seed and planting material in Sri Lanka by a Seed Certification Service run by the Department of Agriculture. It also said no person shall "import, export, sell, offer to sell, dispose in any manner or supply or exchange with commercial intention seed and planting material except in accordance with the provisions of this Act." These provisions violate farmers' rights and their traditional practices of seed exchange. Members of the Vikalpani also conducted a series of protests against the Seed Act.

Data and information regarding the availability of seed were collected in this survey, and a Focus Group Discussion (FGD) was conducted with members of the seed production and marketing society of Vikalpani. Vikalpani has established two seed banks in villages and one in the office at Buttala. Farmers used to obtain seeds from these seed banks and exchange them with other farmers, or take them from the members of the societies. However, those who engage in commercial farming mostly purchase seeds from the market, paying a high price. Paddy seeds, used for paddy plantation, are mostly produced by farmers themselves. Sometimes, farmers may purchase seeds from agrarian service departments or seed research centers. The graph below illustrates various methods of acquiring seeds for upland farming.

[10] Source: https://www.mordorintelligence.com/industry-reports/seed-sector-analysis-sri-lanka-industry

[11] ibid

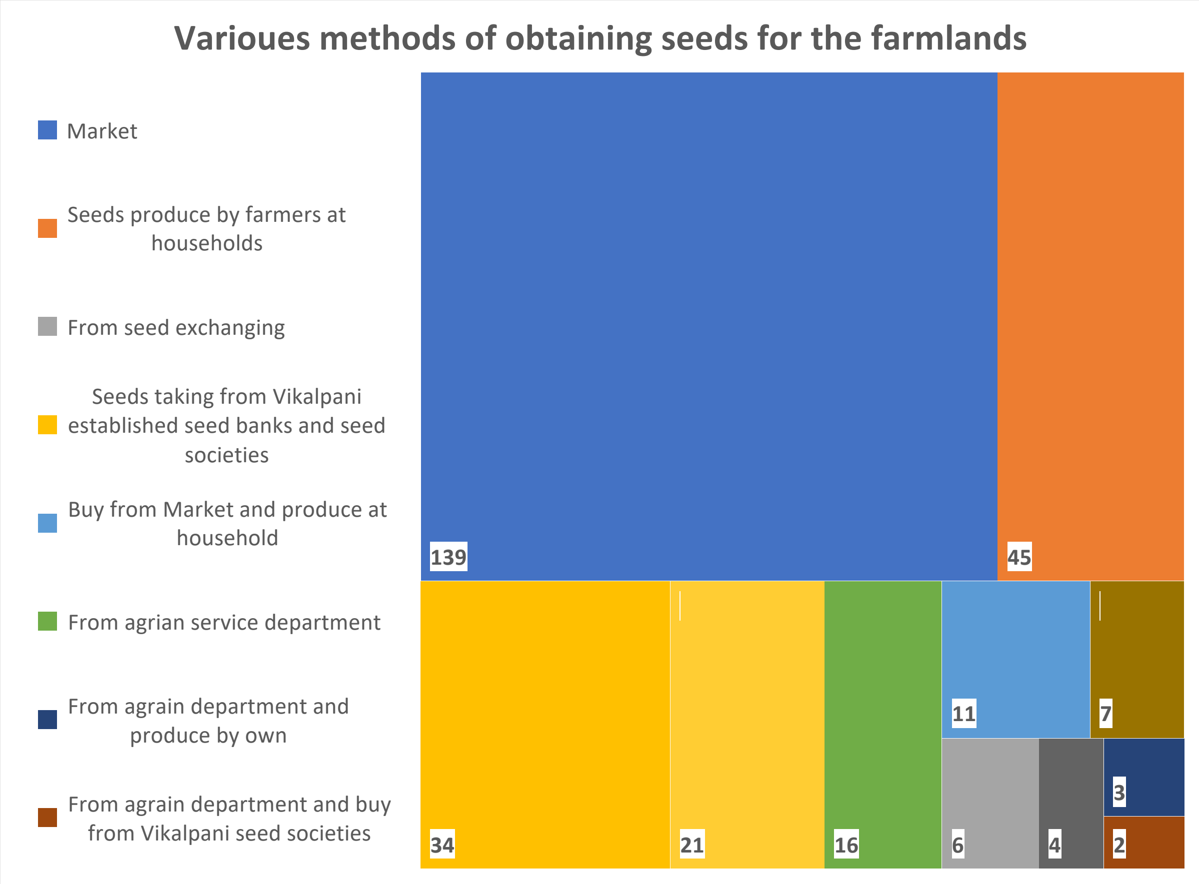


Figure 5 Different methods of access to seeds

According to the data, 139 farmers out of 288 purchased seeds from the market for their upland cultivation. Further, 45 farmers produce their seeds in-house, 34 of them either get the seeds from Vikalpani seed banks or obtain them from women's societies, and 6 farmers get the seeds from an exchange. This data presents the need to establish local seed banks and seed distribution systems led by farmers. The ones who purchase the seeds from the market mostly buy them for commercial farming, such as chilies, maize, and other vegetable crops, which they can sell as wholesale vendors. Further 113 respondents shared that they produce local seeds. They have different types of local seeds, such as vegetables, paddy, cereal, and different types of potatoes. Further, 35 of them sell the seeds they produce to the villagers, Vikalpani seed banks, and local markets.

Some of the issues pertaining to seed conservation and seed breeding were the lack of local seed varieties, water scarcity for plant nurseries, impacts from climate change, damage caused by animals and pests, lack of technical knowledge on seed conservation, lack of access to quality seeds, and high seed prices. The members of the seed society shared their experiences in the FGD and emphasized the challenges they faced as a seed production and marketing society.

The primary challenge faced by farmers was the impact of the climate. They had to wait until the rain began before planting their seeds, which resulted in a delay of around two months due to the lack of rainfall. Additionally, farmers encountered difficulties in irrigating their farms, and their electricity bills increased rapidly as they used electric water pumps for irrigation. This became costly and led some farmers to skip their regular watering schedules. To address these challenges, some farmers waited for the rainy season to transplant the seeds, while others used manual methods, such as watering plants with baskets. Some also adopted soil water conservation methods, such as incorporating hay into the soil and covering it with dry leaves.

This initiative marked the Department of Agriculture's first experience in Monaragala in producing vegetable seeds with farmers and establishing a collective seed-producing and marketing society. In some instances, farmers felt that the officers could have provided better guidance and instructions when selecting seeds, allocating seeds to seed producers, and managing the registration process. Vikalpani's officers had experience in producing seed paddy and vegetable seeds and mitigated the challenges by maintaining continuous relationships with agricultural officers, who provided technical knowledge throughout the process. They also visited farmlands as part of their office duties.

Another significant challenge for women farmers was storing and accessing the market. Vikalpani lacked cooling and storage facilities at its center, making collecting and storing farmers' seed harvests difficult. Since the project had not allocated funds to purchase seeds from the farmers, Vikalpani had to seek funds from other donors to purchase the seeds. Additionally, Vikalpani staff engaged in dialogue with the Department of Agriculture, explaining the situation, and secured some space in their cooling stores to store the seeds until a suitable market was found. Vikalpani is actively searching for new market avenues and reaching out to other CSOs and organizations to sell the seeds. Some agrarian shops in Buttala and Monaragala town were reluctant to purchase seeds from farmer societies based on advice from the Department of Agriculture, which recommended buying planting seeds only from companies like CIC and the Department of Agriculture.

The certification process was more time-consuming and stringent than initially predicted during project planning. Out of 23 farmers, two cultivated traditional seeds, Chilly and Kawupi, which were not included in the seed registration process due to mandate. Vikalpani collected these traditional seeds in the seed bank and sold them under the non-registered seed category. One woman farmer wanted to start a nursery in collaboration with the seed-producing society but was not eligible for the registration process. Additionally, two women farmers had not cultivated the entire 1/4 acre of land, which was a compulsory requirement for registration. Even though their seeds were purchased from the local seed bank of Vikalpani, they could not apply for seed registration.

Pest attacks posed another challenge for women farmers. Two farmlands belonging to two women farmers were destroyed by pest attacks, particularly snails that devoured their plants. These farmers had to start anew, and their seeds were collected for the seed bank. While agricultural officers recommended the use of pesticides, Vikalpani members promoted agroecology and natural pest-repellent methods as solutions.

3.5. Use of agricultural inputs

Some of the farmers who participated in this baseline survey practiced conventional farming using chemical fertilizers, pesticides, and other synthetic inputs. The objective of the survey was to assist them in transitioning from conventional farming to agroecology. The farmers were asked about their farming practices, and it was found that 19 of them cultivated both upland and paddy lands using agrochemicals. They were from the Madulla, Buttala, and Monaragala divisional secretariats, most of whom had gained knowledge from agricultural officers of the Agrarian Service Department. In that order, 7 and 6 of them were cultivating only paddy lands and uplands using chemical fertilizers and pesticides. Further, 38 farmers were practicing agroecology for both upland and paddy land plantations, while 109 farmers were practicing agroecology in their upland plantations. Further, there were 35 farmers who were cultivating the products only for their family consumption without using agrochemicals. The farmers who were practicing agroecology produced their own pest repellents, composts, weed-controlling techniques, and hormones for plant growth and pollination.

The farmers use Margosa leaves and their seeds as a pest repellent, and Gliricidia leaves to nourish the soil. They also create biochar using a simple system in their households to nourish their plants. Additionally, they spread the wood vinegar, a by-product of the biochar process, to further nourish their crops. Cow dung, chicken dung, goat dung, rice husks, wood dust, and cow urine were also used to produce organic inputs for their farmlands.

" We take five leaves which goats don't eat to produce compost and liquid fertilizer. Because they are suitable for nourishing the soil"

J. B. A. Dhammika , Buttala

Further, they collect them during the harvesting period in the paddy fields and put them on the soil to conserve the soil water from vaporization. Since they have less rain due to the impacts of climate change, this knowledge is more precise for the farmers.

3.6. Access to agricultural knowledge.

The Ministry of Agriculture is a central government body that is responsible for developing and implementing policies related to agriculture. The department comprises several key institutions, including the Department of Agriculture, the Department of Agricultural Development, and the Department of Animal Production and Health.

The Department of Agrarian Development has an active ground-level system to support farmers in making decisions related to agriculture. They attend meetings of farmer societies in villages where key decisions about agriculture are made. The department has officers such as agrarian development officers, development assistants, and agriculture research and production assistants who closely work with farmers on the ground.

Agriculture instructors affiliated with the Department of Agriculture provide technical assistance to farmers. They offer guidance on the appropriate use of agrochemicals, such as pesticides and fertilizers, for crops in different seasons. As part of their duties, they visit farmlands in the village. In the baseline survey, 7 respondents reported that agriculture instructors visit their farmlands when informed. 70 respondents said that instructors actively visit their farmlands and provide instructions, while 90 respondents said that the instructors do not regularly visit their farmlands. These ground-level mechanisms play a vital role in distributing new technological knowledge related to agriculture. They have a good relationship between village-level farmers' societies and irrigation societies, and they contribute directly to the decision-making process. Researchers have found that land ownership is a crucial factor in becoming a member of the farmers' and irrigation societies. Genderdiscriminatory colonial laws have excluded women from owning lands for decades, resulting in women being left behind in the village-level agri-related decision-making structure, limiting their access to new technology and agricultural knowledge.

Vikalpani is an organization that provides agricultural training to farmers through farmer field schools. They have two schools where farmers can learn about agroecology. Vikalpani has also trained all its members, with some participating in exchange visits at local and international levels. The organization has 7 women trainers who have developed their skills as facilitators on agroecology. Furthermore, women farmers share their knowledge of compost preparation and other techniques with their groups.

In addition, villagers have rich farming knowledge that is passed down from their ancestors through practices, experiences, and sharing. Many shared that they received knowledge from their parents, elders in the family, and siblings. Approximately 6 of them also participated in the training.

The team inquired about the knowledge, training, and capacity requirements, and the following were the key suggestions.

I. Production of organic inputs, including organic fertilizer and pest repellents.
II. Agroecology for home gardening
III. Plant nursery development
IV. About traditional agricultural methods
V. Seed conservation and seed breeding by farmers
VI. Paddy cultivation (SRI method, parashot method)
VII. Wormy culture
VIII. Planting in small spaces such as plot farming, sky farming
IX. Farming methods with low irrigation
X. Natural hormone and vitamin production for plants
XI. Post harvesting activities
XII. Soil conservation and techniques for reducing soil degradation
XIII. Marketing and trading the farmer’s products through farmer-led markets.
XIV. Value addition process for the products
XV. Certification of the farmlands (PGS, GAP etc)

3.7. Access to market

One of the main challenges faced by Vikalpani members is gaining access to the market. Vikalpani is working on finding sustainable solutions to expand the village-level market and connect small-scale producers with the provincial and national level markets.

The baseline survey focused on finding the background information on available marketing opportunities for the farmers. The following chart displays the number of people who produce their products to sell.

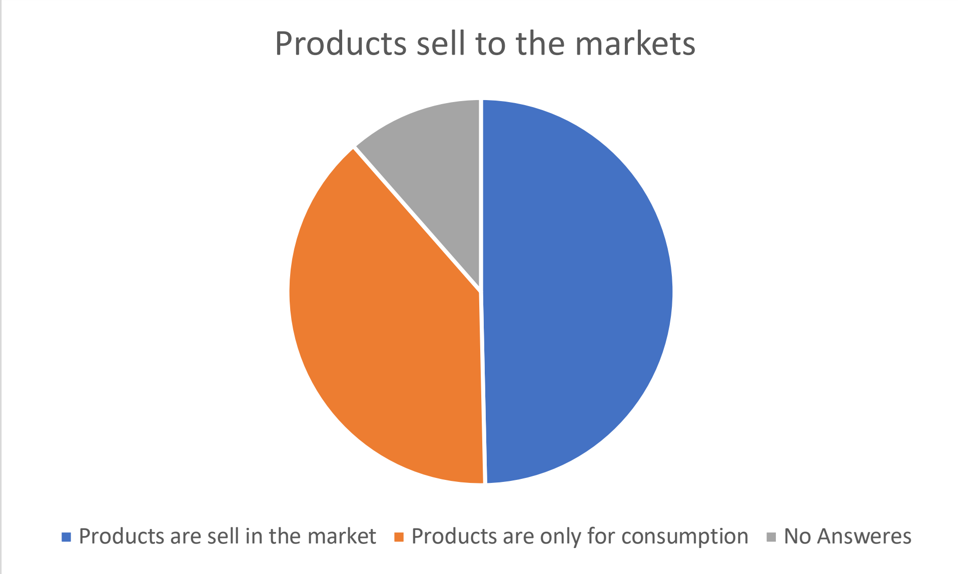


Figure 6: Access to markets

The farmers were asked about their available market opportunities and following are the key markets and vendors they provide the products.

1. Sell at home
2. Sell at nearby shops or shops in the nearest town
3. Sell the products to wholesale buyers or buyers who come to their farmlands
4. Sell at the village level weekly markets
5. Exchange with the neighbors
6. Sell at the farmer's markets led by women's societies of Vikalpani
7. Sell at the marketplace at the agriculture department
8. Going to door by door
9. Sell to the mobile selling vehicles

The markets in the area are quite diverse, and during the harvesting season, outside vendors often come to the village to collect products such as maize, paddy, and other grains. However, farmers tend to have less bargaining power during this time because these products are readily available in the area. Many small-scale farmers end up selling their products in village-level markets, which means that there are no specific marketing avenues for organic products, and farmers don't get a good price for them. The distance between Monaragala and the capital city, Colombo, is around 350 km, and transportation is the main issue for reaching national-level markets where farmers could get a better price for their organic products.

Out of the total number of producers, 49 apply value-adding techniques to their products before selling them. The remaining manufacturers sell their products as they are, without any value-adding. Among those who practice value addition, some prepare coconut oil from coconuts, grind grains into powder, sell coconut husks, and make rubber sheets and latex. Thus, the techniques, resources, and knowledge for value addition to their products is still a gap.

Transportation is a major challenge faced by small-scale farmers who need to transport their products to market. Women farmers are especially impacted as they often need to reach the market early in the morning, but there are limited transportation options available in rural areas. To transport their products, farmers use various means such as walking, cycling, using motorbikes, buses, tractors, tuk tuks, or hiring private vehicles. However, during economic crises, transportation costs can rise, which increases the production cost for farmers. Unfortunately, they cannot pass on these increased costs to consumers since it would make their products too expensive to sell.

Some of the key challenges faced by women farmers in accessing the markets are as follows.

1. Famers have less bargaining power when deciding the prices.
2. Difficulties in transportation facilities.
3. Damages and wastage in transportation and lack of resources and knowledge on quality transportation methods.
4. Price fluctuations
5. Lack of certification or quality assurance methods at the ground level for certifying the organic products.
6. Negative behavior of the middlemen.
7. Distance and issues for reaching out to the national and provincial level markets
8. Lack of village-level farmers' markets and regional-level selling centers led by producers
9. Monopoly and behavior of the middlemen.
10. Lack of resources, knowledge, and infrastructure for value addition

3.8. Access to finance facilities

Access to regulated financial facilities is a critical issue for rural women. They face challenges such as presenting collateral like land and stable assets, adequate financial literacy, and high interest rates due to economic crises. In Sri Lanka, only 16% of private lands belong to women, and patriarchal land laws such as the 1950 Land Development Ordinance, Thesavalamei Law, Muslim law, and Kandian law have limited women's access to lands. This directly impacts women's ability to access regulated financial facilities. Juan Pablo Bohoslavsky, the Independent Expert on Foreign Debt and Human Rights at the UN Human Rights Council, in his report in 2018, indicated that 2.8 million Sri Lankans, of whom 2.4 million are women, are entangled in a microfinance debt trap.

The microfinance business involves providing high-interest loans to women from low-income backgrounds who don't have regular income or other assets to access cheaper financial services from banks or other formal financial service providers. This has led to a socio-economic and humanitarian crisis at the grassroots level, resulting in over-indebtedness, debt-related suicides, dispossession, displacement, domestic violence, and family disputes.

In this survey, respondents were asked about their situations of access to finance. 148 respondents obtained loans from Commercial banks (including public and private commercial banks), commercial banks, rural banks, microfinance companies, Vikalpani Women's groups, and government-related projects or departments. The Central Bank of Sri Lanka is the authoritative body that registers and regulates banks, finance institutions, dealers, and finance companies in Sri Lanka. The following chart indicates the type of lenders and financial institutions women had reached for their financial purposes.

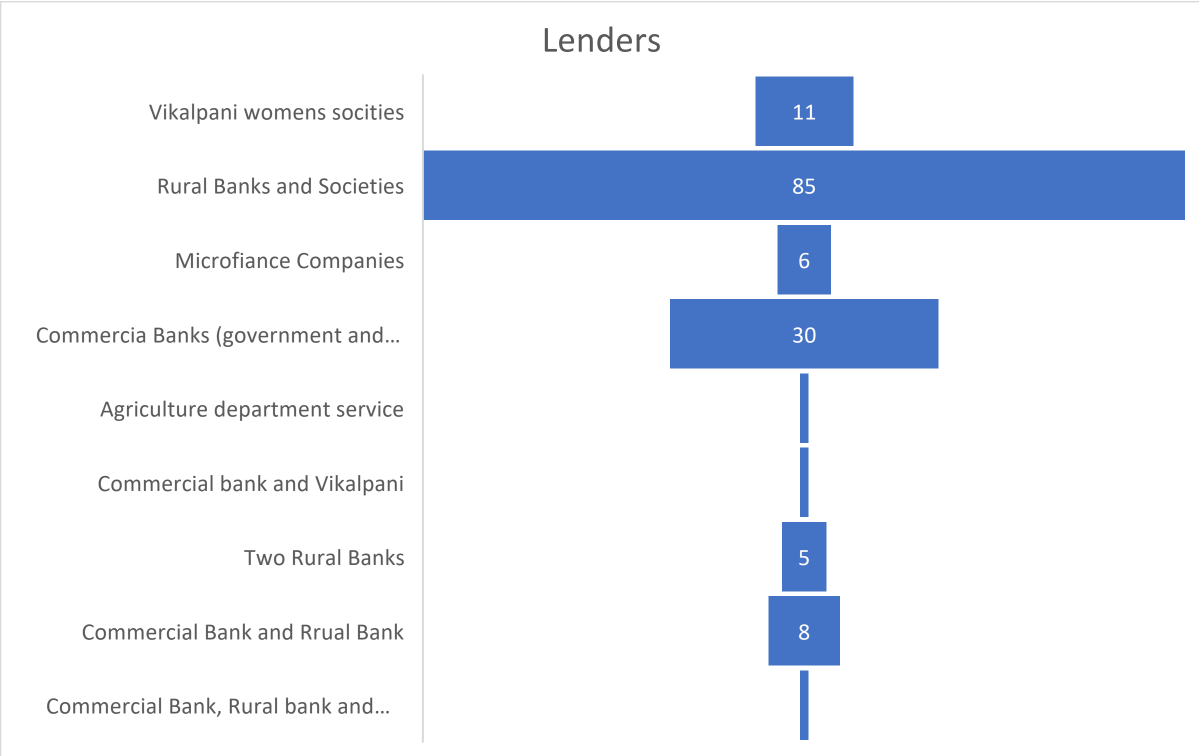


Figure 7: Sources of loans obtained by the women farmers

Out of 148 respondents, 11 had obtained loans from Vikalpani women's societies. Vikalpani encourages women's groups to start savings activities within their small groups. The group members give loans from their collective savings, and the group decides the interest rates, loan amounts, and compulsory saving amounts in compliance with the guidelines given by Vikalpani. Almost all the groups practice this group-saving method, which is helpful for their day-to-day expenses. Some groups have more than Rs 100,000 as their assets, and they provide loans with higher amounts. The common interest rate is 2%, and since the groups are small and well-known to each other, they are accountable for repaying the loans to ensure the sustainability of their society. Furthermore, some groups conduct farmers' markets, where they save a portion of their income weekly, and some groups provide food for the meetings and workshops conducted by Vikalpani and save the income they receive in women's society. The treasurer is responsible for maintaining the books and other records of the loans and handling the loan process. The society gathers monthly to review the loan applications and approve the loans.

Out of 148 respondents, 85 obtained loans from rural banks and rural societies that function as saving and lending institutions at the village level. These entities are considered rural banks if they are either more ground-extended banks or if they were founded by a group of people with a common purpose in the villages. Some banks have been established as government projects or operate under special regulations. Women are more inclined to reach out to rural banks and financial institutions due to their easy access, minimal or no collateral requirements, use of local language, lower financial literacy requirements, and lower interest rates than other options.

Figure 8 indicates the maximum and minimum values of the bank loans obtained by the women farmers, and Figure 9 indicates the maximum interest rates charge by the banks

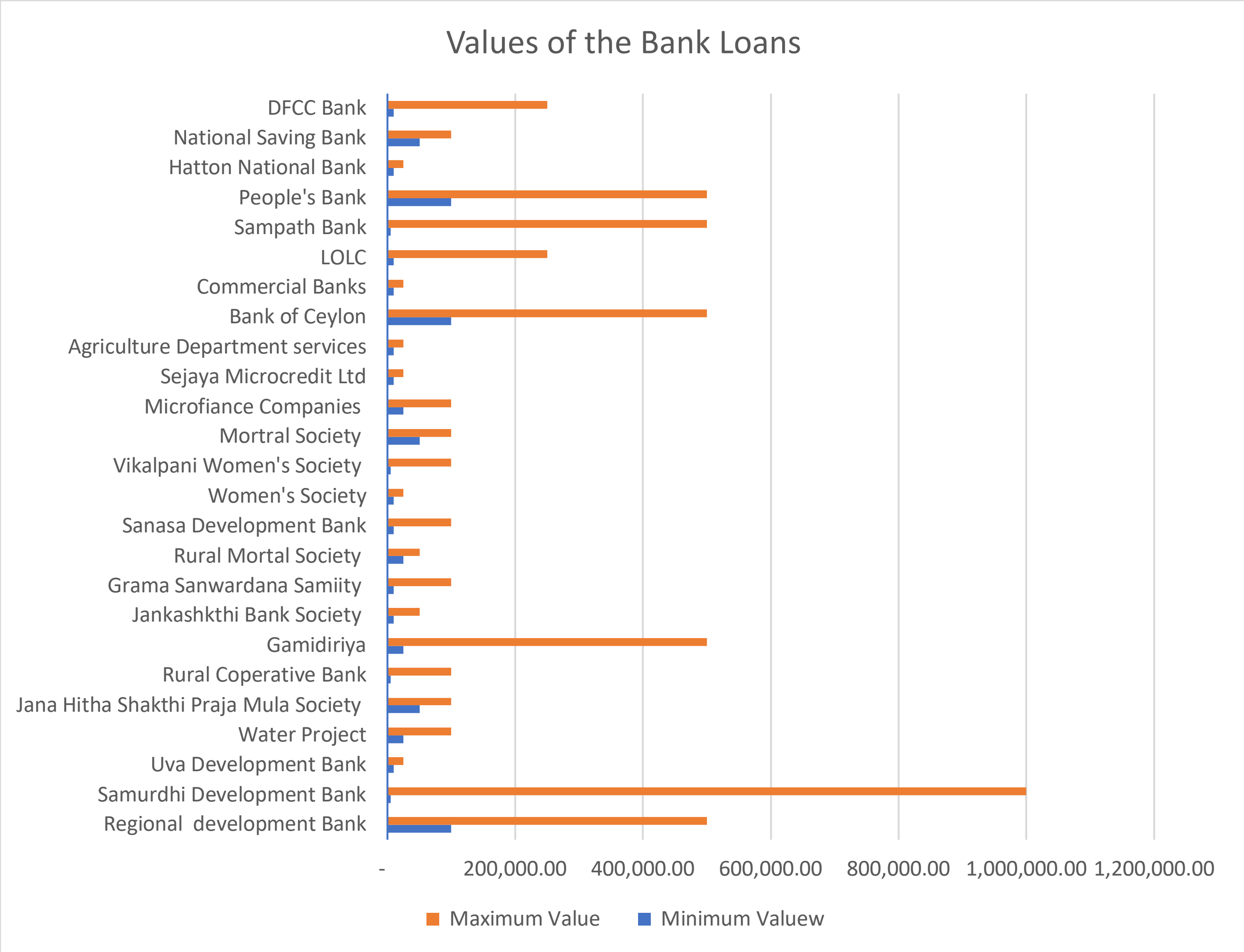


Figure 8 Maximum and Minimum values of the bank loans

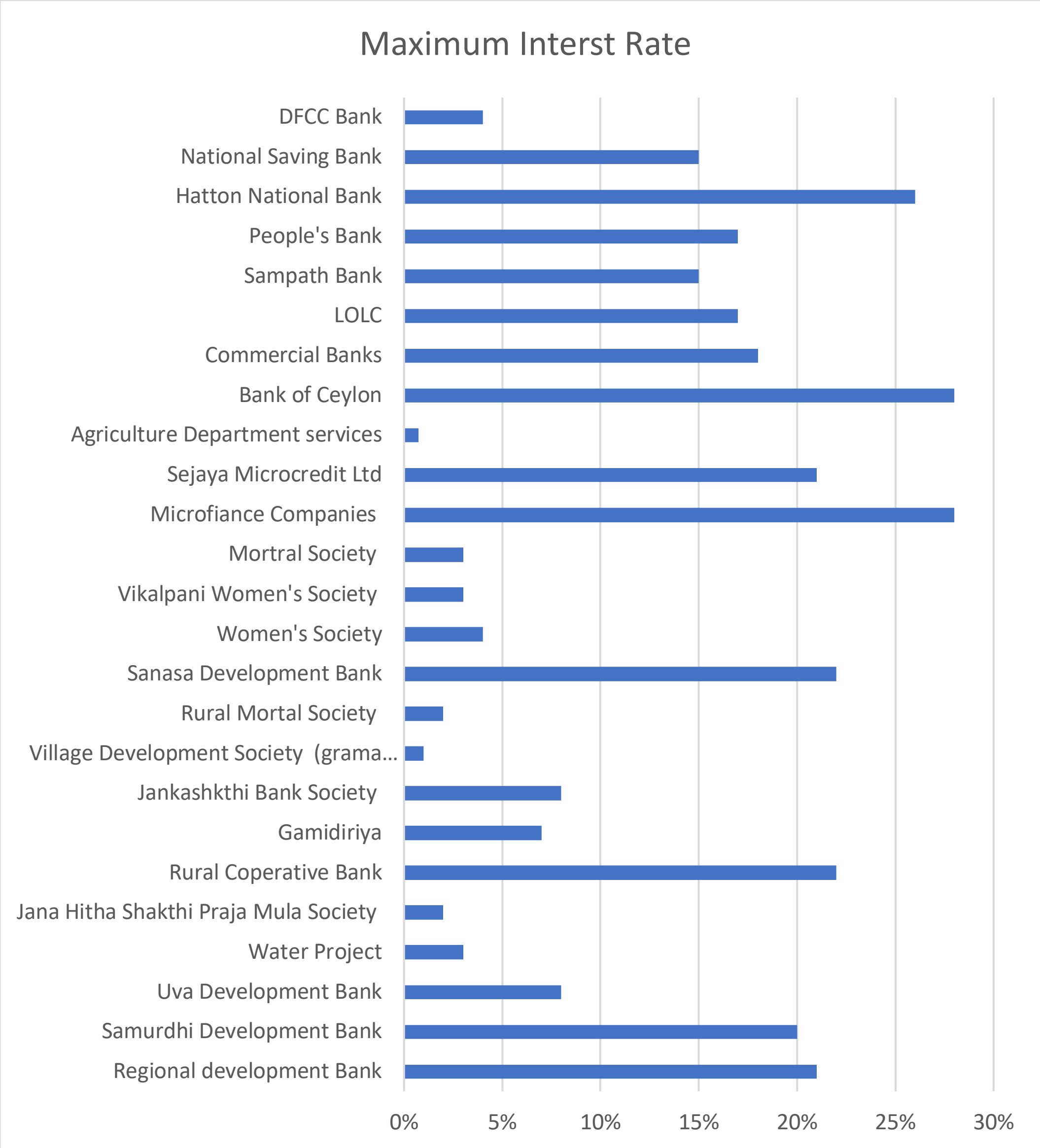


Figure 9 Maximum Interest Rates of the Loans obtained by the banks

Chapter 4: Recommendations

01. The report shows that women own less land than men, and some land is owned by their parents. Therefore, Vikalpani can start collective farmlands where women farmers can cultivate common farmland and share labor, harvest, and income. Discussions with landowners or the local authorities can be held to allocate the necessary land for farming.

02. Women farmers primarily practiced crop diversity in their home gardens, while those who received agroecology training utilized technical methods such as crop rotations. However, many did not implement crop diversity in their commercial farms, opting to grow high-income cash crops. Some focused on cultivating mono-crops to cater to market demands. Therefore, Vikalpani should develop training programs to promote crop diversity in home gardens and commercial farmlands. A crop calendar can be created for women farmers, and they can be educated on its economic benefits. These methods can be included in the training manuals that Vikalpani plans to develop for this project.

03. Access to water in agriculture is one of the main challenges faced by women farmers in the Moanragala district. The impact of climate change has worsened the situation. Vikalpani should expand capacity development programs for climate-resilient agriculture among women farmers by introducing crop varieties that require less water. Some women farmers manage their farmlands based on available water resources and accessibility. Organized exchanges and learning sessions should be held to share knowledge on such practices among the farmers. It's good to identify the women farmers who need support for irrigating their farmlands and provide necessary equipment such as water containers, pipes, and motors for irrigating their farmlands. The schools interviewed had the same issues, and necessary equipment can be provided to continue the school home gardens.

04. Vikalpani should take the lead in promoting local seed-producing initiatives, which may include supporting seed-producing and conservation societies, seed banks, seed sharing, and exchange practices. It is crucial to incorporate seed conservation and multiplication modules into Vikalpani's programs, which can be implemented in the Vikalpani Farmer Field Schools. Additionally, establishing seed banks in school home gardens and educating children on seed conservation are important steps. Many farmers rely on hybrid seeds from the market for their commercial farming. Research should be conducted to understand the reasons behind this, and Vikalpani could play a role in producing seeds for commercial farming through advocacy initiatives. Women's knowledge of seed conservation is invaluable, and these practices should be documented and shared within farming networks. Since Vikalpani has experience registering and stipulating seed-producing and marketing societies, it can promote these models in other villages as well. Further, Vikalpani could establish collective seed-storing facilities and cooling stores.

05. The establishment of organic input production societies can be a significant initiative for Vikalpani to provide the required organic inputs for women farmers, such as compost, organic liquid pest repellents, and plant nutrients. Further, the module that Vikalpani plans to develop can include diverse methods for producing organic inputs, and these practices can be taught at farmer field schools. Further, Vikalpani should collect and document the different knowledge, rituals, and practices such as Kem kramaya,

06. The report highlights the challenges women farmers face in accessing agricultural knowledge due to societal structures and norms. However, Vikalpani has developed alternative methods to share women's knowledge in agroecology and continues to provide training and raise

awareness within communities. Vikalpani can further establish farmer field schools to promote integrated farming models. Additionally, Vikalpani can initiate a research division to conduct studies on agroecology, food sovereignty, and other relevant areas. Implementing people-led development approaches in advocacy initiatives could also be beneficial. Increasing exchange with other farmers' groups can help share diverse knowledge, and leveraging established farmer field school web pages by IPAM can aid in distributing knowledge and supporting farmer schools. Moreover, Vikalpani can develop training packages to provide agroecology training and utilize online platforms such as YouTube and other social media to promote its activities.

07. Access to the market and finance was another significant challenge faced by the farmers. Vikalpani has experience in developing farmers' markets at the village level, where women have easy access to the market, and they have collection centers and sales points. Such models should be expanded in each village, and a collective network should be built to promote their products. Further, Vikalpani farmers can be capacitated with relevant marketing strategies to market their products under one brand. More resources need to be allocated for the market development.

08. Vikalpani emphasizes alternative savings practices and funding for women's initiatives as key components of its mission. The group's savings models within women's groups, along with its low-interest rate loan schemes, make a significant contribution to meeting the financial needs of rural women. Expanding these models is essential, and Vikalpani should launch a campaign advocating for progressive policy changes in women's finances. Further strategies can be articulated to expand the financing capabilities of the rural bank where women have easy access with fewer collaterals. This can be proposed to the government as a policy recommendation.