

# INCOME DIVERSIFICATION AS A SUSTAINABLE LIVELIHOOD STRATEGY FOR RURAL DEVELOPMENT: AN ASSESSMENT OF OPTIMAL CONDITIONS

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Hector Kobbekaduwa Agrarian Research and Training Institute

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## FOREWORD

In the dynamic landscape of rural development and agricultural sustainability in Sri Lanka, the imperative for income diversification as a means to uplift agrarian communities becomes ever more apparent. This study delves into the multifaceted dimensions of income diversification, encapsulating its role as a pivotal strategy for enhancing the livelihoods of farmers in the face of contemporary challenges.

According to Niehof (2004), income diversification is the process through which rural households construct varied livelihood portfolios, utilizing diverse combinations of resources to meet basic needs, elevate living standards, and mitigate risks. Against the backdrop of structural changes in the agricultural sector and the enduring prevalence of poverty in rural Sri Lanka, this research emerges as a timely exploration into the potential of income diversification as a coping mechanism amidst environmental and economic shocks.

The study meticulously analyzes the current state of income diversification in the country, drawing from micro data collected by the Department of Census and Statistics. The findings reveal intriguing insights into the sources of income for households, the prevalence of diversification, and the factors influencing these patterns. Notably, the study identifies crucial determinants such as the age and education level of the household head, household composition, health conditions, geographic location, and ownership of agricultural assets.

Additionally, the research critically evaluates past income diversification initiatives in Sri Lanka, unraveling both their successes and shortcomings. While acknowledging strengths such as well-structured project frameworks and wide-reaching networks, the study sheds light on weaknesses such as targeting inefficiencies, transparency issues, and the influence of external factors on leadership decisions.

Envisioning the future of income diversification initiatives, the study underscores the importance of addressing social, economic, and environmental sustainability factors. It delves into the intricate web of considerations, ranging from equal access to basic needs and social infrastructure to economic benefits for the community and conservation of natural resources.

As we navigate the complexities of rural development, this study serves as a valuable compass, guiding policymakers, practitioners, and stakeholders toward informed decisions that can propel income diversification as a sustainable and transformative force for rural development in Sri Lanka.

**Dr G.G. Bandula**  
**Director/Chief Executive Officer**

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### **Research Team**

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## EXECUTIVE SUMMARY

Income diversification can be defined as “a process by which rural households construct increasingly diverse livelihood portfolios, making use of increasingly diverse combinations of resources and assets in order to meet their basic needs, improve their living standards or welfare, and manage risks (Niehof, 2004)”. Hence it can be considered as one of the important aspects of employment creation for agrarian communities in Sri Lanka.

Since independence, with major structural changes taking place over decades in the agricultural sector, diverse rural and agrarian development policies were implemented by successive governments. However, the highest number of poverty incidence in Sri Lanka is recorded in the rural sector except for the estate sector. Poverty conditions are further aggravated by recent environmental and economic shocks. In this context, income diversification can be identified as one of the coping strategies to minimize these emerging challenges related to farmers’ livelihoods.

Despite huge potential associated with alternative income sources in agrarian and rural development and poverty alleviation, a systematic study has not been done in Sri Lanka to assess the optimal conditions required to implement income diversification as a sustainable livelihood strategy for rural development. Therefore, this study was conducted with the objective of assessing optimal conditions required in a particular rural setting to promote income diversification as a sustainable livelihood strategy for rural development.

The overall income diversification situation of the country which was analysed using micro data of the Household Income and Expenditure Survey (HIES) for 2019 and 2013 collected by the Department of Census and Statistics, depicted that a majority (around 60%) of households have received income from paid employment while only around 30% have received income from agricultural activities including both crops and livestock. Of the total sample, nearly 20% of the households depend on one income source and no diversification was observed. Among the households relying on cultivation of seasonal crops majority (79%) were engaged in paddy cultivation while 19% and 10% were engaged in cultivation of vegetables and cereals, respectively. Of the households engaging in cultivation of perennial crops majority cultivates plantation crops (tea, rubber, coconut) followed by minor export crops (coffee, pepper, betel, etc) category. Age of the household head, his/her level of education, number of members in the household, number of workers in the household who are above 15 years, number of members suffering from chronic illness or disability, district, gender of household head, indebtedness, and ownership of agricultural lands and ownership of livestock were found to be the major determining factors for income diversification.

The study also analysed the previous income diversification initiatives implemented in Sri Lanka to identify their key strengths, weaknesses, opportunities and threats. Having a well-structured project structure at national and regional level, provision of assistance to large number of households, availability of Island wide network was identified as key strengths. However, weaknesses of targeting, lack of transparency, corruption, frequent changes in leadership and external influences in selecting leadership rather than focusing on leadership qualities, poor addressing of actual needs of beneficiaries, lack of integrity between leadership, other officers and beneficiaries and poor monitoring and evaluation, were found to be constraints to achieve the objectives of these initiatives. The study identified that usage of multi-skills for income generation, lower cost of production due to usage of own resources, and public policy having high priority for poverty alleviation as potential opportunities to make these initiatives further successful. However, absence of a stable market for products, climate change repercussions, degradation of natural resources and economic recession were identified as major threats for the success of these initiatives.

Considering the sustainability of an income diversification initiative the study identified key factors under three major categories of social, economic and environmental sustainability factors. The major factors affecting social sustainability were: sufficient and equal access to basic needs, sufficient and equal access to social infrastructure, preserve the rights of other people's livelihood opportunities, help improve community development, inherent ability to resolve immerging issues, mechanisms for political advocacy to meet needs of income generating activity, provide opportunities for learning and self-development, encourage social cohesion, inclusion and interaction, help overcome disadvantage attributes due to personal disabilities, increase sense of environmental security and increase the level of social recognition. Major factors affecting economic sustainability were found to be helping generate employment opportunities, provide benefits to other liaison organizations, help generate benefits to entire community, and help improve existing infrastructure. The major factors affecting environmental sustainability included favour maintenance, enhancement and conservation of natural resources, increased ecological awareness of the society, help conserve natural resource base and cause reduce soil erosion, declining of water table, soil salinization.

Study findings explain that once an income diversification initiative is implemented, there are macro, and micro environmental factors which can impact the sustainability of income diversification initiative. Key recommendations outline that when designing and implementing a sustainable income diversification programme, it should be clearly stated that how the income diversification programme would achieve key social, economic and environmental sustainability factors at the initial planning stage and during monitoring and evaluation stages.

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## LIST OF ABBREVIATIONS

ACTED	-	Agency for Technical Cooperation and Development
ASMP	-	Agriculture Sector Modernization Project
ATM	-	Automated Teller Machine
CBR	-	Community-based, Rehabilitation
CDD	-	Community-driven Development
CDLIP	-	Community Development and Livelihood Improvement Project
CEPA	-	Centre for Poverty Analysis
CPS	-	Country Partnership Strategy
CR	-	Climate Risks
DPMU	-	District Project Management Unit
DSD	-	Divisional Secretariat Divisions
DSD	-	Divisional Secretariat Divisions
ECS	-	Economic Sustainability
ENS	-	Environmental Sustainability
EU	-	European Union
FAO	-	Food and Agriculture Organization
GDP	-	Gross domestic product
HH	-	Household
HHH	-	Household Head
IEDCUPS	-	Integrated Economic Development of Central and Uva Provinces of Sri Lanka
IFAD	-	International Fund for Agricultural Development
ILO	-	International Labour Organization
INGO	-	International Non-Governmental Organizations
JICA	-	Japan International Cooperation Agency
KIL	-	Key informant Interviews
MSME	-	Micro, Small and Medium Sized Enterprises
NGO	-	Nongovernmental Organization
ODA	-	Official Development Assistance
PIU	-	Project Implementation Units
PMU	-	Project Management Units

SAARC	-	South Asian Association for Regional Cooperation
SDG	-	Sustainable Development Goals
SDO	-	'Samurdhi' Development Officers
SME	-	Small and Medium-Scale Enterprises
SS	-	Social Sustainability
SWOT	-	strengths, weaknesses, opportunities, and threats
UNDP	-	United Nations Development Programme
VDF	-	Village Development Fund
VO	-	Village Organization

## CHAPTER ONE

### Introduction

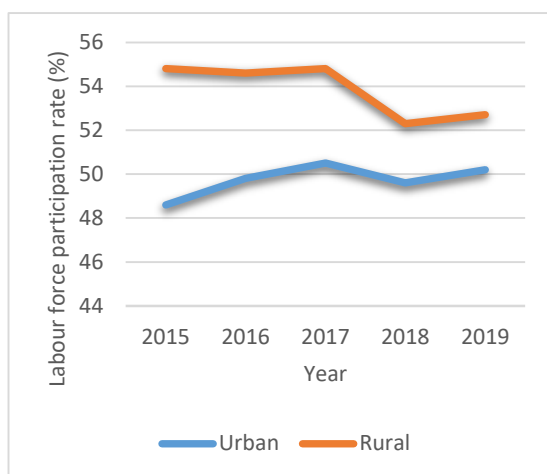
#### 1.1 Background

Income diversification can be defined as the “*process by which rural households construct increasingly diverse livelihood portfolios, making use of increasingly diverse combinations of resources and assets in order to meet their basic needs, improve their living standards or welfare, and manage risks* (Niehof, 2004)”. Accordingly, it can be considered as one of the important aspects of employment creation for agrarian communities in Sri Lanka.

A sustainable livelihood can be defined as “*a way of thinking about objectives, scope and priorities for development, in order to enhance progress in poverty elimination. It aims to help poor people achieve lasting improvements against the indicators of poverty that they define* (Ashley and Carney, 1999, p 6)”.

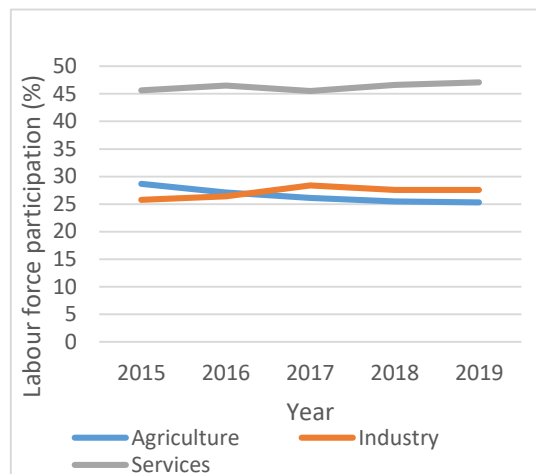
Significance of diversification into alternative income sources for rural development is not a novel concept. Vitality of diversification of income sources of the agrarian community started decades ago (Senanayake, 1987) and remains valid to the contemporary period as well. Income diversification has received increased attention from governmental and non-governmental organizations over the past few decades. The “Samurdhi Program”, and the “Gamidiriya Program” are well-known government programmes with large income diversification components. Similarly, a significant number of income diversification programmes have been implemented by International Non-Governmental Organizations (INGO) such as United Nations Development Programme (UNDP), World vision, International Fund for Agricultural Development (IFAD), and Food and Agriculture Organization of the United Nations (FAO).

Considering the labour force participation rate in Sri Lanka with regard to the residential sector, looking at the figures starting from 2015 (Figure 1) labour force participation in the agriculture sector shows a gradual decline compared to industry and service sectors (Figure 2). With ever declining resource availability in the agricultural sector such as land and water, along with farm mechanization and technological advancements specially focusing on labour saving techniques, the number of employment opportunities in the agricultural sector is gradually declining. In addition, with slowly but steadily rising population density and unemployment rate (Department of Census and Statistics, 2020), there is an increasing pressure on the amount of quality employment creation by industrial employment expansion and out migration. These factors force rural and traditional sectors to absorb excess labour either by expansion of marginal farming or moving towards alternative income activities in the rural and agrarian areas itself (Hewavitharana, 1992).



Source: Department of Census and Statistics, 2020.

**Figure 1.1: Labour force Participation Rate by Residential Sector**



Source: Department of Census and Statistics, 2020.

**Figure 1.2: Labour force Participation Rate by Industry Sector**

Apart from employment creation, diversification of income sources of agrarian communities has other applications.

There are multifaceted reasons for high prevalence of poverty among agrarian societies such as environmental shocks including droughts and floods, resource limitation, economic shocks such as demand and supply fluctuations and price fluctuations. Therefore, income diversification has been identified as a risk management strategy associated with farming (Chuang, 2019; Porter, 2012; Reardon et al, 2007).

Income diversification denotes either increase in income sources or the balance share amongst different sources. Income diversification allows achieving livelihood security not only under improving economic conditions but also under livelihood distresses such as lack of resources. Households depending on multiple income sources experience less variability in their total income than specialized households. Therefore, it does not only help survive households during crisis situations but also improve income and living standards of agrarian households, but will be a potential method to reduce agrarian and rural poverty (Ellis 2005; Reardon et al., 2007).

## 1.2 Rationale

As discussed above, diversification of income sources would lead to employment creation, increase resilience of agrarian and rural communities whilst help reduce agrarian and rural poverty amid adverse conditions such as environmental shocks. Considering the long-term development goals of the country as stated in the Sustainable Development Goals (SDG), “End poverty in all its forms everywhere (United Nations Department of Economic and Social Affairs, 2024)” is the foremost goal. Accordingly, as priority actions on poverty eradication SDGs have emphasised

the following. *“1. Improving access to sustainable livelihoods, entrepreneurial opportunities and productive resources. 2. Providing universal access to basic social services 3. Progressively developing social protection systems to support those who cannot support themselves 4. Empowering people living in poverty and their organizations 5. Addressing the disproportionate impact of poverty on women 6. Working with interested donors and recipients to allocate increased shares of Official Development Assistance (ODA) to poverty eradication 7. Intensifying international cooperation for poverty eradication”* (United Nations Department of Economic and Social Affairs, 2022). Closer examination emphasizes that most of the above actions have a significant application to the concept “income diversification of rural and agrarian communities”.

Even in the National Policy Framework of the government that was elected in 2019 “Vistas of prosperity and splendour”, under the Chapter 10: Dialogue with the village, one of the key objectives is to transform isolated villages in to fully integrated economy centres with all facilities by rural development, women empowerment, and regional development (Rajapaksa, n.d).

In addition, Sri Lanka has developed a “National Policy for Decent Work in Sri Lanka” in 2006 following the Asian regional meeting of the member states of the International Labour Organization (ILO) held in Bangkok in 2001. ILO defines decent work as “productive work for women and men in conditions of freedom, equity, security and human dignity (ILO, 2022)”. According to the Decent Work and the 2030 Agenda for Sustainable Development it has emphasised the importance of decent job creation in small businesses stating that *“micro, small and medium sized enterprises (MSMEs) are the world’s job creators (ILO, n.d. p.9)”*. Hence the report states that it is important to *“Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services (ILO, n.d. p.7)”*. This again emphasizes the importance of systematic promotion of diversification in to non-farm income sources with proper planning and policy intervention not just to create employment opportunities and help cushion external shocks faced by agrarian communities but to provide them with sustainable decent working opportunities to eradicate poverty and uplift living standards sustainably.

### **1.3 Problem Statement**

Since Independence, with major structural changes that took place in the agricultural sector over decades, diverse rural and agrarian development policies have been implemented by successive governments. However, the highest number of poverty incidence in Sri Lanka is recorded in the rural sector, being next only to the estate sector (Department of Census and Statistics, 2022). Poverty conditions are further aggravated by the recent environment and economic shocks. As an island nation resource dependent rural poor segments are among the most vulnerable to climate change. In this context, income diversification can be identified as a coping strategy



to minimize these emerging challenges related to farmers' livelihoods (i.e crop losses and yield reductions and income shocks). Despite huge potential associated with alternative income sources in agrarian and rural development and poverty alleviation, a systematic study has not been done in Sri Lanka to assess the optimal conditions required to implement income diversification as a sustainable livelihood strategy for rural development. Therefore, the findings of such study would be vital in developing sustainable rural development strategies. Further, the study will capture the level of resilience among diverse income diversification initiatives to withstand prevailing health and economic shocks of the country and will act as a special case to identify the issues emerging during a crisis situation.

#### **1.4 Research Questions**

Hence the research questions of the study are:

1. How effective are the previous and existing income diversification programmes implemented by successive governments and major INGOs in achieving their expected objectives?
2. What are the levels and determining factors of income diversification in Sri Lanka and its nexus with rural poverty?
3. What are the potentials and constraints for income diversification to develop it as a sustainable livelihood strategy for rural development?

#### **1.5 Objectives**

##### **1.5.1 Overall Objective**

The overall objective of this study is to assess the optimal conditions required in a particular rural setting to promote income diversification as a sustainable livelihood strategy for rural development

##### **1.5.2 Specific Objectives**

1. To review governments' initiatives and major foreign aid projects implemented towards income diversification of rural communities to understand the causes for successes and failures of income diversification initiatives at implementation level.
2. To analyse the nature, magnitude and determining factors of income diversification among rural communities in Sri Lanka.
3. To identify optimal conditions to develop income diversification as a sustainable livelihood strategy for rural development at the ground level.

## CHAPTER TWO

### Literature Review

#### 2.1 Definitions and Applications of Income Diversification

According to Ellis (2000), rural livelihood diversification can be defined as “the process by which rural households construct increasingly diverse portfolio of activities and assets in order to survive and to improve their standards of living” (p.15). According to Barrett et al. (2001), livelihood diversification is mostly a form of self-insurance for risks associated with farming activities. Prevalence of risk is associated with poverty. However, according to Ellis (1998), livelihood diversification is not necessarily associated with risk and uncertainties. It is also associated with success and achievement of livelihood security due to improved economic conditions. Therefore, rural livelihood diversification can occur due to both the improved economic situations and as a coping strategy for risks and uncertainties associated with farming. The above factors led to introduce two major types of determinants for income diversification which are known as “push factors” and “pull factors” (Barrett et al., 2001; Goodwin & Mishra; 2004; Mishra et al., 2010). Accordingly, push factors of income diversification referred to as negative factors that force households to diversify their income into various other means other than farming activities as a coping strategy. Resource limitations, shrinking agricultural returns to labour, climate change repercussions and insufficient financial support are among these factors. On the other hand, pull factors referred to as favourable factors/ opportunities that motivate farmers to diversify their income generating activities. Improved economic conditions and savings, regulatory adjustments and technological advancements are among the pull factors of income diversification.

Therefore, when analysing the sustainability level of income diversification, it is important to focus on the basic driving factors for income diversification and how it correlates with the sustainability level of the income generating activities.

#### 2.2 Studies Conducted by Other Countries on Income Diversification of Agrarian Communities

Among Chinese peasant farmers both push and pull factors have been the case for livelihood diversification. Frequent occurrence of natural disasters due to climate change repercussions, lack of social security, increased expenditure on education, medical care and other living expenses due to Chinese economic transition have triggered peasants to diversify their income in to multiple income generating activities (Xu, 2017). However, apart from these, the economic reforms that have occurred starting from 1978 by freeing Chinese peasant farmers from fields and allowing them to engage in diverse income generating activities have also acted as pull factors for income diversification.

In the case of African rural labour, Bryceson (1999) says that structural adjustment programmes and economic liberalization across sub-Saharan Africa during the period of 1985-1999 have occurred together with rapid expansion of rural income diversification. The author further states that it has served as an excellent coping strategy for rural poor whilst serving as a way to increase wealth differentiation. Even though studies conducted in the sub-Saharan Africa mainly looked at income diversification as a method of economic optimization it has neglected the broader process of depeasantization. The initial agrarian changes in the Sub-Saharan countries have taken place in the form of urban migration. However, rural income diversification has created a major change in rural areas by villagers taking part of *in situ* occupational changes, which has implications on the social coherence of rural households and the political equity of local communities and nation states. Such transformations are important in examining the sustainability of the rural livelihood strategies.

A study conducted by Addulai and CroleRees (2001), in Southern Mali by using panel data consisting a representative sample of rural households tried to find out determinants of income diversification using conditional fixed effects logit model. The results of the study emphasised that poorer households have lesser opportunities in non-cropping activities such as livestock rearing and nonfarm income generating activities. Therefore, the diversification levels are generally lower. A major reason for this has been identified as lack of capital distancing farmers from subsistence agriculture. Also, it was evident that participation in non-cropping sector is relatively less, considering the households that reside more remotely than to those located closer to markets. Further to that, households with heads who have higher educational levels are more likely to diversify their income compared to household heads with less educational levels.

Imai et al. (2015) conducted a study to identify whether non-farm sector employment reduces rural poverty and vulnerability using evidence from Vietnam and India using treatment-effects model. The study found out that for both case of Vietnam and India, the log per capita consumption and log mean per capita expenditure have significantly increased with the accessibility to rural non-farm employment. This is consistent with its poverty reducing role. Having access to non-farm income sources also has reduced the vulnerability for both countries. Once the non-farm income sources are disaggregated based on its type ability of sales, professionals, and clerks to reduce vulnerability was much higher compared to unskilled or manual employment in the case of both countries.

### **2.3 Studies Conducted in Sri Lanka on Income Diversification in Agrarian Communities**

Dharmadasa and Polkotuwa (2019) have conducted a study to identify determinants of income diversification at household level in Sri Lankan the estate sector based on the data of Household income and expenditure survey conducted by the Department of Census and Statistics in 2009/2010. The sample included 1736 households. Herfindhal index was used to calculate income diversification level while Censored

Tobit model was used to identify determinants of income diversification. Findings indicate that gender and age of the household head, household size, ownership of agriculture land, the number of workers above 15 years of age and availability of migrants had a significant impact on income diversification.

Senevirane and Dharmadasa (2021) have conducted a study to identify welfare implications of income diversification using 21,756 nationally representative household data from the Household income and expenditure survey of the Department of Census and Statistics in 2016 along with identifying determinants of income diversification. The data analysis was done using descriptive statistics, Probit Regression and Ordinary Least Square method. Results indicate that income diversification has significantly increased the welfare of Sri Lankan households.

Jayasinghe et al. (2017) have conducted a study to identify existing patterns and opportunities and barriers for income diversification of paddy farmers using 200 paddy farming households in the Anuradhapura District. Determining factors for income diversification was identified using Multinomial Logistic Regression model. The study found that none of the paddy farming households in the Anuradhapura District solely rely on paddy farming as their income source. Majority of the households have diversified into four income generating activities whereas nearly 90 percent of the households have diversified into non-farm income generating activities.

Wickramasinghe (2016) conducted a study to examine the present employment opportunities in the area and their sustainability and potentials of expanding non-farm employment opportunities in the Mahaweli area. The study found that development of non-farm sector is not completely related to Mahaweli areas however related to the whole economy of the country. Hence it is vital to pay attention not only to create non-farm employment opportunities but also to enhance educational facilities and level of education of children in the Mahaweli areas.

### **Measuring Income Diversification**

Xu (2017) has found several ways to measure income diversification. This includes a number of income sources (Ersado, 2006), Herfindahl index (Ersado, 2006), the share of non-farm income in total household income (Block and Webb, 2001), and Gibbs and Martins Index (Gibbs and Martin (1962). Considering the Herfindahl index the value of the index is inversely proportional to the level of diversification whereas Gibbs and Martins's index is directly proportional to the level of diversification which implies higher the index higher the level of diversification.

The equation for Gibbs and Martins index for peasants' income diversification is as follows.

$$ID = 1 - \sum_{m=1}^N p_m^2$$

P= Proportion of income from an individual source in the aggregate income

N= the number of the total income sources

Higher value of index higher the level of income diversification



## CHAPTER THREE

### Methodology

#### 3.1 Conceptual Framework

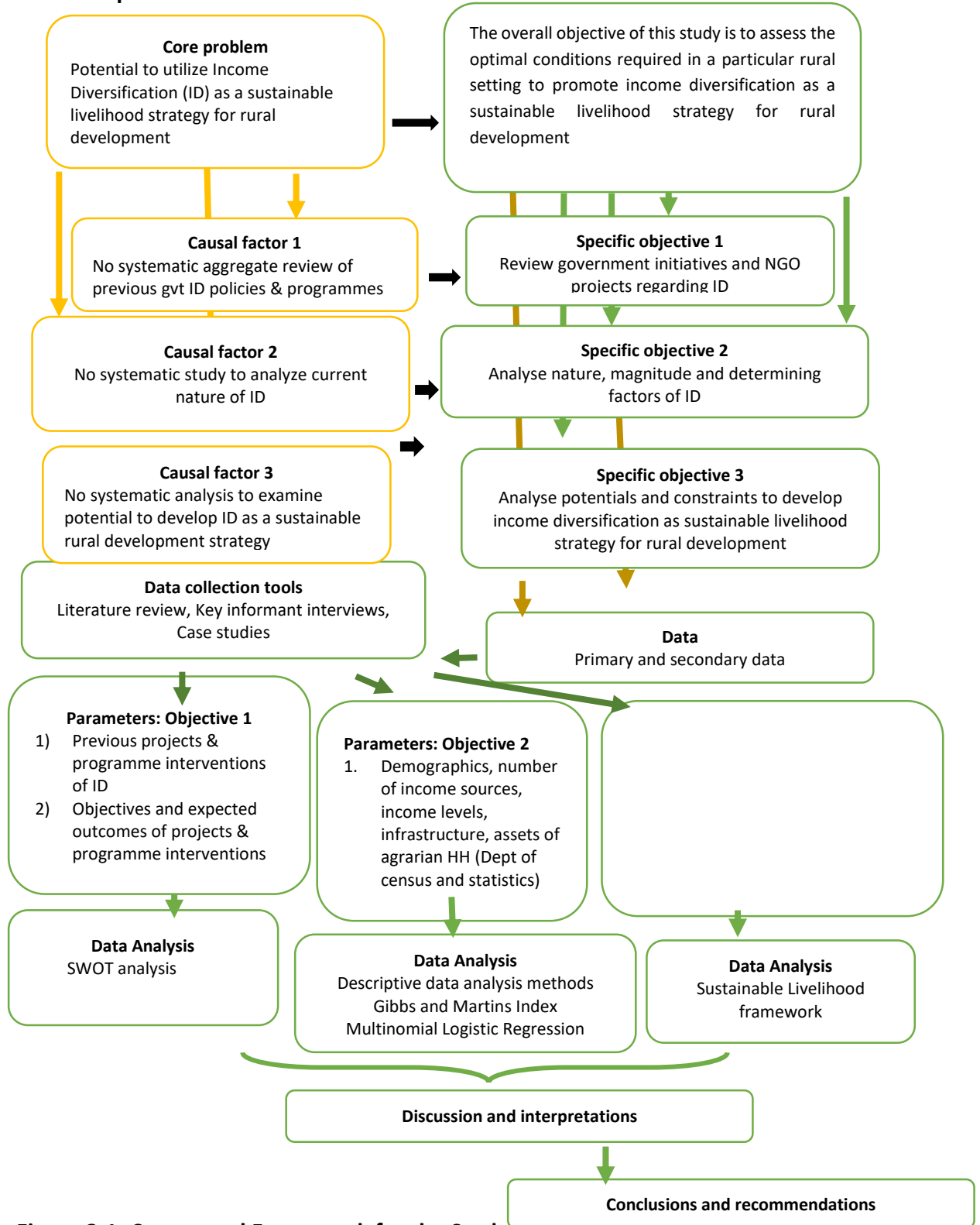


Figure 3.1: Conceptual Framework for the Study

Figure 3.1 graphically illustrates the conceptual framework of the study whereas following sections will explain it in detail.

### 3.2 Data and Data Collection Methods

#### Data

Both primary and secondary data was collected for the study.

No	Objective	Data Type
1	Objective 1	Secondary data (Project evaluation reports)
2	Objective 2	Secondary data (Micro data of Department of Census and Statistics)
3	Objective 3	Primary (Case studies, Key informant interviews, Questionnaire survey) and secondary data (Project evaluation reports)

#### Data Collection

##### Secondary Data

Secondary data required for the review of programmes and initiatives on income diversification was collected from project evaluation reports. The secondary data required for the second objective was collected from Household Income and Expenditure Survey of the Department of Census and Statistics. Micro data was collected for the periods of 2012-2013 and 2019 considering the rural sector of the country. Secondary data for the third objective was collected from respective project evaluation reports.

##### Primary Data

##### Key informant Interviews (KII)

For the first and third objectives, KIIs were carried out to gather in-depth information and understanding on the matter of question especially with project managers and village leaderships those who have first had experience. The interview guidelines were prepared based on the information required to gather.

##### Case Study

To gather primary data for the third objective of the study, case study approach was used since it provides a platform to understand complex, integrated and interdependent factors associated with sustainability nature, successes and failures of different types of income diversification initiatives and as it accommodates to use several data collection tools at the same time. Due to the prevailing situation of the

country with limited availability of fuel for transport, both telephone based KIIs, and telephone based household questionnaire survey and in person KIIs and in person HH questionnaire survey were conducted with the case study approach.

### Household Questionnaire Survey

For the third objective of the study both in-person and telephone based household questionnaire surveys were carried out for selected cases to gather information on household situation of the people who have diversified their incomes, institutional arrangements, perceptions, attitudes, potentials and constraints, problems, and opportunities associated with income diversification.

### Information on Selected Case Studies

Table 3.1 shows information on selected projects that promoted income diversification initiatives as cases for the third objective. For each selected project two locations where the selected income diversification initiative has been implemented, were selected; one to represent a success case and the other a less success. Each case study included a questionnaire survey on beneficiaries, and key informant interviews. The total sample size was 207 determined by the convenient sampling technique based on the limitations associated with the study at the time of conducting, due to the economic crisis situation experienced by the whole country. Discussions were held with project officials to get the total number of beneficiaries. Following identification of the total number of success and failure cases under each selected income diversification initiative, success cases and less success cases were selected purposively based on the discussions held with the project officers.

**Table 3.1: Information of Case Studies Selected**

No	Organization	Project name	Duration	Implementation area	No of success case	No of less case
1.	World Bank	Gamidiriya	2004-2016	Uva and Southern Provinces	1	1
2.	Ministry of Agriculture (World bank funded)	Agriculture sector modernization project	2016-2021	Uva and Central Provinces	1	1
3.	UNDP	Farmer Market Project	2017-2024	North Central and North Western Provinces	1	1
4.	ACTED	Dairy and vegetable value chain development	2017	Uva and Central Provinces	1	1



## Operationalization of Variables

**Specific objective 1:** To review government initiatives and major foreign aid projects implemented towards income diversification of rural communities to understand the causes for success and failure of income diversification initiatives at implementation level.

<b>Dimension</b>	<b>Indicator</b>	<b>Variable</b>	<b>Data Source</b>
<b>Strengths and weaknesses of the project</b>	<b>Internal characteristics of the project</b>	<b>Type of initiative</b> (Government/NGO) <b>Financial allocation</b> <b>Factors considered in project designing stage</b> (Geographic factors, Demographic factors) <b>Project objectives and outcomes</b> (Poverty reduction, livelihood creation, Improved livelihoods, Improved quality of life, inclusiveness, institutional development, creation of market linkages)	<b>Project evaluation reports, KIIs with project managers</b>
<b>Opportunities and threats for the project</b>	<b>External factors influencing project</b>	External political, environmental, economic and social factors influencing the project	<b>Project evaluation reports, KIIs with project managers</b>

- Since it is difficult to assess the impacts of very old projects at present, the review was done on the initiatives and programmes that commenced within 15 years from year 2021.

**Specific objective 2:** To analyse the nature, magnitude and determining factors of income diversification among rural communities in Sri Lanka.

Dimension	Indicator	Variable	Data Source
Nature of Diversification	Income share	1. <b>On farm income share (%)</b> (Country, Province, District, Agro climatic zone) 2. <b>Off farm income share (%)</b> (Country, Province, District, Agro climatic zone)	Household Income and Expenditure Survey. Department of Census and Statistics. (Micro data)
	Type of employment	1. <b>On farm income diversification (%)</b> (paddy, vegetables, OFCs, Other horticultural crops, annual crops) (Country, Province, District, Agro climatic zone wise) 2. <b>Off farm income diversification (%)</b> (Non-skilled wage labour, skilled wage labour, Remittances, non-farm enterprises, salaried employment) (Country, Province, District, Agro climatic zone wise)	Household Income and Expenditure Survey. Department of Census and Statistics. (Micro data)
Determining factors of income diversification	Internal factors	Age of the household (HH) head, Education level of the HH head, Indebtedness (Yes/No), Technical knowledge received by the HH, Skills received, Accessibility to loans, Health, Land Ownership, Livestock ownership, Ownership of other assets, Level of HH income, Level of HH expenditure, Spending on recreation, Agro climatic zone, Province, District, Occurrence of natural disasters, Rainfall.	Household Income and Expenditure Survey. Department of Census and Statistics. (Micro data)
	External Factors	Agro climatic zone, Province, District, Occurrence of natural disasters, Amount of Rainfall.	
Magnitude of income diversification	Level of diversification	1. Proportion of income from an individual source in the aggregate income (Country, Province, District, Agro climatic zone wise)	Household Income and Expenditure Survey. Department of Census and Statistics. (Micro data)

**Specific objective 3:** To identify optimal conditions to develop income diversification as a sustainable livelihood strategy for rural development at ground level.

Data was gathered from project beneficiaries of the selected cases using a household questionnaire survey based on selected indicators under three pillars of sustainability. Based on the literature, 14 were selected as social sustainability indicators, seven indicators were selected as economic sustainability indicators, four indicators were selected as environmental sustainability indicators. Purposively selected cases were identified based on key informant discussions held with project officials of selected income diversification programmes. Study locations were where income diversification projects have been implemented by the government (Gamidiriya and Agriculture Sector Modernization Programme), and Programmes implemented by NGOs of UNDP and ACTED. The selected variables were further narrowed down based on theory, literature review and discussions with subject experts. Variables that are most related and have an impact on policy interventions were selected. The finalized variables are as follows.

Main category		Variable name	Measuring technique	Data Collection method
Social Sustainability indicators	1	Sufficient and equal access to basic needs	5-point Likert scale from low to high	HH questionnaire survey, key informant interviews, focus group discussions
	2	Sufficient and equal access to extended needs	5-point Likert scale from low to high	HH questionnaire survey, key informant interviews, focus group discussions
	2	Sufficient and equal access to social infrastructure	5-point Likert scale from low to high	HH questionnaire survey, key informant interviews, focus group discussions
	4	Helped achieve equal rights in terms of gender and etc	5-point Likert scale from low to high	HH questionnaire survey, key informant interviews, focus group discussions
	5	Preserve the rights of other people's livelihood opportunities	5-point Likert scale from low to high	HH questionnaire survey, key informant interviews, focus group discussions
	6	Help improve community development	5-point Likert scale from low to high	HH questionnaire survey, key informant interviews, focus group discussions
	7	Inherent ability to resolve immerging issues	5-point Likert scale from low to high	HH questionnaire survey, key informant interviews, focus group discussions
	8	Mechanisms for political advocacy to meet needs of income generating activity	5-point Likert scale from low to high	HH questionnaire survey, key informant interviews, focus group discussions

	9	Provide opportunities for learning and self-development	5-point Likert scale from low to high	HH questionnaire survey, key informant interviews, focus group discussions
	10	Encourage social cohesion, inclusion and interaction	5-point Likert scale from low to high	HH questionnaire survey, key informant interviews, focus group discussions
	11	Acknowledge cultural and community diversity	5-point Likert scale from low to high	HH questionnaire survey, key informant interviews, focus group discussions
	12	Help overcome disadvantage attributes due to personal disabilities	5-point Likert scale from low to high	HH questionnaire survey, key informant interviews, focus group discussions
	13	Increase sense of environmental security	5-point Likert scale from low to high	HH questionnaire survey, key informant interviews, focus group discussions
	14	Increase the level of social recognition	5-point Likert scale from low to high	HH questionnaire survey, key informant interviews, focus group discussions
Economical_Sustainability_01	1	Help generate employment opportunities	5-point Likert scale from low to high	HH questionnaire survey, key informant interviews, focus group discussions
	2	Provide benefits to other liaison organizations	5-point Likert scale from low to high	HH questionnaire survey, key informant interviews, focus group discussions
	3	Help generate benefits to entire community	5-point Likert scale from low to high	HH questionnaire survey, key informant interviews, focus group discussions
	4	Help improve existing infrastructure	5-point Likert scale from low to high	HH questionnaire survey, key informant interviews, focus group discussions
	5	Help improve quality of life	5-point Likert scale from low to high	HH questionnaire survey, key informant interviews, focus group discussions
	6	Help overcome indebtedness	5-point Likert scale from low to high	HH questionnaire survey, key informant interviews, focus group discussions
	7	Increased the sense of economic security	5-point Likert scale from low to high	HH questionnaire survey, key informant interviews, focus group discussions
Environmental_Sustainability_01	1	Favour maintenance, enhancement or conservation of natural resources	5-point Likert scale from low to high	HH questionnaire survey, key informant interviews, focus group discussions
	2	Increase ecological awareness of the society	5-point Likert scale from low to high	HH questionnaire survey, key informant interviews, focus group discussions

	3	Help conserve natural resource base	5-point Likert scale from low to high	HH questionnaire survey, key informant interviews, focus group discussions
	4	Cause soil erosion, declining of water table, soil salinization	5-point Likert scale from low to high	HH questionnaire survey, key informant interviews, focus group discussions

### 3.3 Data Analysis

**Objective 1:** To review government’s initiatives and major foreign aid projects implemented towards income diversification of rural communities to understand the causes for success and failure of income diversification initiatives at implementation level.

A SWOT analysis was done to understand Strengths, Weaknesses, Opportunities and Threats associated with the successes and failures of income diversification initiatives and programmes that were reviewed. This was conducted to understand the strengths and weaknesses associated at the implementation level of income diversification initiatives.

**Objective 2:** To ascertain the nature, magnitude and determining factors of income diversification among rural agrarian communities

The nature of income diversification includes type and share of income diversification categories. The magnitude includes level of income diversification. The determining factors include internal and external factors. The data was analysed at country, district, provincial levels. The change that has occurred over the years of 2012-2013 and 2019 was checked. Finally, it was compared with the poverty head count index of the specified area.

#### 1. Nature of income diversification

Type of income diversification category and share of income from each category were analysed descriptively.

#### 2. Level of diversification

The Gibbs and Martins Index was used to identify level of income diversification using STATA statistical software.

$$ID = 1 - \sum_{m=1}^N p_m^2$$

ID=Level of Income Diversification

P= Proportion of income from an individual source in the aggregate income

N= the number of the total income sources

Higher the value of index the higher the level of income diversification.

### 3. Internal and external determining factors of income diversification

Internal and external determining factors of income diversification were analysed using multinomial logistic regression model (EL-Habil, 2012) using STATA statistical software. To analyse the determining factors, multinomial logistic regression was used due to presence of categorical dependent variables. The multinomial regression model will be run for internal and external factors separately taking the same Y variables.

The empirical model for the study can be specified as follows.

$$Y_i = \beta_0 + X_i \beta_i + \epsilon_i$$

Where;

$Y_i$  = Six categories of diversification (1. Diversified in to seasonal crops, 2. Diversified in to annual crops, 3. Diversified into animal husbandry, 4. Diversified in to skilled and non-skilled wage labour, 5. Diversified in to non-farm enterprises, 6. Diversified in to salaried employment)

$\beta_0$  = Constant

#### Internal factors

X1= Age of the Household Head (HH) (years)

X2= Number of members in a household (Number)

X3= Education level of the HH head (1= up to O/L, 2= passed O/L, 3= passed A/L, 4= Degree)

X4= Indebtedness of the household (1=yes, 0=No)

X5= Technical knowledge received by the Household (1=received, 0= not received)

X6= Skills received by the Household (1=received, 0=not received)

X7= Accessibility to loans of the household (1= accessible, 0=not accessible)

X8= Health of household (1=healthy, 0=not healthy)

X9= Land ownership of the household (1=Yes, 0=No)

X10= Livestock ownership of the household (1=Yes, 0=No)

X11= Level of the household income

X12= Level of the household expenditure on food

#### External factors

X1 = Occurrence of natural disasters for the household (1=Yes, 0=No)

X 2 = Agro ecological zone household residing

X 3 = Province household residing

X 4 = District household residing

X 5 = Rainfall of the area household residing

**Objective 3:** To ascertain the potentials and constraints to develop income diversification as a sustainable rural agrarian development strategy for the ground level conditions

#### 1. Assess the level of sustainability of selected cases of income diversification using three pillars of sustainability.

The index approach was used to calculate the level of sustainability of the each selected case of income diversification (Wijesinghe et al., 2019). This is used since it

allows to combine several variables or indicators together that have mentioned in the sustainable livelihoods framework.

Firstly, sub-indices were calculated for Social Sustainability (SS), Economic Sustainability (ECS), and Environmental Sustainability (ENS). Afterwards a composite index was calculated to assess the overall sustainability of each selected case. Immediate sub-indexes consisted of another set of sub-indexes. The bottom most sub-indexes were assessed using suitable variables which represent the particular sub index.

Prior to calculate the sub-indexes data were standardized by transforming them into normalized values which enabled all data in diverse scales or units to convert into a common scale. This has permit to compare the formulated indexes in a common platform.

Step 1: Standardization of variables (Wijesinghe et al., 2019).

$$NX_m = \frac{X_{actual} - X_{min}}{X_{max} - X_{min}}$$

NX = Normalized value of relevant variable

X<sub>actual</sub> = Actual value/observation of the variable

X<sub>min</sub> = Minimum value of the variable recorded

X<sub>max</sub> = Maximum value of the variable recorded

Step 2: Calculating sub compost indices (Wijesinghe et al, 2019).

$$SCI = \frac{\sum_{k=1}^{nk} W_k X_{ki}}{\sum_{k=1}^k W_k}$$

SCI = Each sub component index (SS, ECS, ENS)

W = Weight allocated for each variable

X = Variables

Weights allocated for each variable will be calculated based on theory, literature review and expert interviews.

Step 3: Calculating Composite Sustainability Index (Wijesinghe et al, 2019).

$$CSI = \frac{W_{SSI}(SSI_i) + W_{ECSI}(ECSI_i) + W_{ENSI}(ENSI_i)}{W_{SSI} + W_{ECSI} + W_{ENSI}}$$

CSI = Composite sustainability index

W<sub>SSI</sub> = Weight allocated for Social Sustainability

W<sub>ECSI</sub> = Weight allocated for Economic Sustainability

W<sub>ENSI</sub> = Weight allocated for Environmental Sustainability

Weights allocated for each variable will be calculated based on theory, literature review and expert interviews.

## **2. Assess the opportunities and barriers, and optimal conditions to develop income diversification as a sustainable livelihood strategy for rural development**

Based on the findings of the above analysis on sustainable nature of each income diversification case, opportunities and barriers for income diversification were qualitatively analysed and finally optimal conditions to develop income diversification as a sustainable livelihood strategy for rural development were proposed.

The operational definition for optimal conditions to develop income diversification as a sustainable livelihood strategy is “for a given location the major factors and inter linkages to be considered to implement income diversification as a sustainable livelihood strategy”.





## CHAPTER FOUR

### Results and Discussion SWOT Analysis for the Income Diversification Initiatives

#### 4.1 Introduction

This chapter describes the government's initiatives and major foreign aid projects implemented towards income diversification of rural communities to understand the causes for successes and failures of income diversification initiatives at the implementation level. The selected public initiatives include "Gamidiriya" programme, "Samurdhi" programme, Agriculture sector modernization programme and two income diversification initiatives implemented by two selected NGOs. The review was done on the initiatives and programmes commenced within 15 years from year 2021.

In this chapter a SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis method was used to analyse the situation of the programmes reviewed under this study. Originally, this method was developed for analyzing the situation of business and industries. This helps explore possibilities of new efforts and solutions for problems with the identification of internal and external positives (strengths and opportunities) and negatives (weaknesses and threats) that influence the organization. Analysis of Strengths, Weaknesses, Opportunities, and Threats is vital for any industry to understand its capabilities and potential.

#### 4.2 The "Samurdhi" Programme

The Sri Lankan government launched "Samurdhi" Programme in 1995 with the main goal of reducing poverty in Sri Lanka. The "Samurdhi" Programme is the major poverty alleviation programme of the government and is implemented under the Ministry of Economic Development of Sri Lanka. It employs almost 27,600 employees island-wide under diverse job categories. Around 24,000 are "Samurdhi" Development Officers, 2,000 are "Samurdhi" Managers and others are involved in various job categories attached to the Colombo head office (Samurdhi Authority of Sri Lanka, 2011).

The main objective of the programme is to get low-income earning families to join the main stream of the country's economic process by encouraging them, whilst subsidizing them financially to enable them to maintain their living conditions at least at the critical minimum level (Samurdhi Authority of Sri Lanka, 2008).

The programme consists of six major components as follows:

- 1) Welfare programme (this consists of food stamps subsidy for fuel, nutrition package for pregnant and lactating mothers, milk feeding subsidy for children between years two and five)

- 2) Social insurance support to the poor to protect them during extreme situations such as hospitalization and the death of a family member
- 3) Savings and financial support (micro-credit and savings)
- 4) Spiritual and social development programme (anti-narcotic and anti-smoking projects, programme for preventing child abuse, women development projects, scholarship projects, cultural development projects, family development, and moral uplift projects)
- 5) Infrastructure development programme
- 6) Human resource development programme (livelihood development and empowerment) (Perera, N.D).

The Samurdhi Authority of Sri Lanka has implemented its programme in diverse means by focusing on different sectors and programmes related to rural development including the banking and financing sector, animal husbandry, fisheries programmes, infrastructure development programmes, agricultural development programmes, industrial development programmes and marketing development programmes. In the year 2011, infrastructure development projects were implemented giving high priority to irrigation and water supply where 5,969 projects were completed including roads/bridges, irrigation projects, water supply and sanitary facilities. The number of beneficiary families of those projects was 142,552. The finished value of the projects was LKR 575.13 million where out of the total amount 47.15 percent (LKR 271.18 million) was contributed by beneficiaries (Sri Lanka Samurdhi Authority of Sri Lanka, 2011).

Under the animal husbandry and fisheries development programme, the authority basically provided facilities for animal husbandry and fisheries development projects, introduced value-added projects, and provided market facilities for the beneficiaries. Furthermore, the Authority attended to all coordinating functions related to the introduction of services and new technology to the beneficiaries. Under this programme the Samurdhi Authority of Sri Lanka implemented 8,393 projects in 2011. These projects consisted of dairy farming, goat farming, breeding of pigs, egg production, broiler production, cattle sheds, marine fisheries, inland fisheries, exotic fish, fishery, and dairy products.

The industrial development programmes have been involved in the development of cottage industries and uplifting the income of beneficiaries and low-income families. Under this programme the Samurdhi Authority of Sri Lanka implemented 14,204 projects spending LKR 373.4 million during the year 2011 (Ibid, 2011). These projects consisted of the welding industry, carpentry, tailoring, blacksmith industry, masonry, lacquer industry, brick industry, jewellery and gem industry, rice processing industry, pottery, coconut fire-related products, exercise books and paper-related products, gold, and silver-related products, cement related products, leather related products, electronic products, aluminum article products, coconut oil production, joss

stick/lamp wick products, candle production, jaggery/sweet products, grinding of spices and cereals, bakery industry and machinist work.

The marketing development programme has been implementing functions with the objective of strengthening and making sustainability of ongoing small and medium-scale enterprises (SMEs). To fulfil the objective, the authority provides capital equipment to low-income families and Samurdhi beneficiaries who are engaged in small and medium-scale enterprises. The Samurdhi Authority of Sri Lanka allocated LKR 309.98 million for the selected projects in 2011 but spent only LKR 144.16 million as at the end of 2011. Under this programme, the Samurdhi Authority of Sri Lanka helped to start 7,727 projects. In addition, by using cyclic funds another 2,186 projects were started in 2011 (Ibid, 2011). Most of the projects are sales outlets for various items.

### Strengthens

1. The programme has a structured framework set up across national and regional units.
2. The Ministry of Samurdhi, Youth Affairs and Sports was set up for the administration of the programme, with three departments, each managing one of the major components of the programme.
3. The programme provides assistance to a large number of households from its beginning over the numbers reported in national poverty surveys. For example, Glinskaya (2000) revealed that though the poverty ratio was 20 percent in 1990, the Samurdhi programme covered 50 percent of the households in the country (Damayanthi, 2014).
4. Island-wide network including in remote rural areas (Samurdhi Authority of Sri Lanka, 2021).
5. Most of the women entered into income generation activities in the Samurdhi programme, a main anti-poverty program in Sri Lanka.
6. The Samurdhi Authority is one of the major stakeholders of the Divineguma programme initiated in 2012 by the Ministry of Economic Development.
7. The marketing development programme has been implementing functions with the objective of strengthening and making sustainability of ongoing small and medium-scale enterprises (SMEs).
8. The programme is rich in concepts and procedures (Damayanthi, 2014).
9. The programme is fully financed by the Sri Lankan government, and claims about half of the total welfare budget (excluding education and health), which represents almost one percent of the country's gross domestic product (US\$139 million in 1999), (Gunawardana *et al.*, 2007).
10. In terms of legal feasibility, the Samurdhi Authority Act No. 30 of 1995 established the Sri Lanka Samurdhi Authority, implemented in accordance with the Social Charter of the South Asian Association for Regional Cooperation SAARC (Hye, 1996).

## **Weakness**

### **1. Governance issues in the Samurdhi Programme**

There are several criticisms related to the Samurdhi programme and its implementation such as weakness of targeting (Glinskaya, 2000; Gunawardane, Meedeniya and Shivakumaran, 2007; Gamage, 2006), and Gunatilaka and Salih, 1999.), The politicization of the programme and achievement of targets (Fernando, 2009).

### **2. Transparency**

- 1). All poverty alleviation programmes launched by the government since 1989 became highly politicized at the implementation stage (Kelegama, 2001; Gamage, 2006).
- 2). The recruitment process of the Samurdhi Development Officers is not systematic and transparent. Around seven percent of the Officers of the Samurdhi Authority of Sri Lanka proved the situation mentioning that they do not have a systematic and transparent recruitment process (Damayanthi and Champika, 2014). This is especially prevalent in the selection of beneficiaries and infrastructure development projects (Salih, 2000). As a result, it has seen serious miss targeting in the project (Glinskaya, 2000, Salih, 2000, Gamage, 2006).
- 3). There are many other problems associated with fulfilling the Samurdhi programme's objectives such as rampant corruption involved with forgoing rent seeking behaviour of people involved (Gamage, 2006).
- 4). Subsidy and social safety net programmes are used as strategy for the maintenance of a vote bank favourable for the political parties than reducing poverty and inappropriate policy tends to overlook the issues related to equity (Gamage, 2006).
- 5). A major issue related to equity, equality, and social justice is the poor targeting of the programme. As many researchers pointed out, a major weakness of the Samurdhi programme is poor targeting (Glinskaya, 2000, Salih, 2000, Gamage, 2006, Damayanthi and Champika, 2014).
- 6). The lack of accurate, sufficient, and timely information is another weakness of the Samurdhi programme.
- 7). Accountability of officers and beneficiaries in the "Samurdhi" programme is debatable. Officers, as programme animators, should exclude those who have overcome poverty and include those in need of government assistance. Beneficiaries also have a social responsibility to relinquish the Samurdhi subsidy once out of poverty, allowing those in need to benefit. However, both parties often neglect these responsibilities, raising questions about their accountability (Salih, 2000, Gamage, 2006).

- 8). Previous research indicates that the “Samurdhi” programme lacks effectiveness in impoverished provinces or districts with severely inadequate infrastructure (Glinskaya, 2000, Gunatilaka and Salih, 1999). Despite the crucial role of small groups, officer participation in meetings is rare, hindering communication and people empowerment. Officer inefficiencies sometimes prevent the programme from reaching its targets, exemplified by the underspending of the allocated budget by the Samurdhi Authority in 2011—only LKR 144.16 million out of the allocated LKR 309.98 million was spent (46.5 percent of the total allocation) by the end of the year.
- 9). According to the Department of Census and Statistics (2011 data), in 2007 the Centre for Poverty Analysis (CEPA) found that the Samurdhi ration programme, “which constitutes 80% of the total programme budget, misses about 40% of the households in the poorest quintile while almost 44% of the budget goes to households in the top three quintiles.”
- 10). A review of the project by the World Bank concluded that: “Based on the empirical analysis of the distributional outcomes, Samurdhi does not emerge as an efficient transfer programme. It is modestly successful in reaching the intended beneficiaries, but it transfers a large portion of its resources to the non-poor.”
- 11). In 2012, the World Bank noted a significant decline in Sri Lanka's public spending on social safety net programmes, dropping from 2.2 percent of GDP in 2004 to 0.3 percent in 2009. This shift transformed Sri Lanka from a nation with substantial safety net expenditure to one with limited resource allocation for such programmes. The primary safety net initiative, Samurdhi, faced challenges of poor targeting and insufficient benefit adequacy, as reported by the Department of Census and Statistics in 2013.
- 12). Despite being an official development programme for economic integration, Samurdhi has been criticised by international actors such as the FAO as being an approach to welfare that promotes dependency rather than aiding the socio-economic development of Sri Lankan citizens. The FAO sees it as a mechanism that makes the initiative difficult to sustain over time (Kelegama, 2001).

### **Opportunities**

1. Limited threat from other micro-finance institutions in remote areas due to the security level of such institutions.
2. Public policy gives high priority to poverty alleviation and empowering the poor people.
3. Enhancing, the incorporation of people to share constructive experiences.

## Threats

1. Political influence (Damayanthi and Champika, 2014).
2. Limited support of other relevant institutions due to their inefficiencies.

### 4.3 An Evaluation of Samurdhi Banks in Poverty

Under the Samurdhi programme, the Samurdhi Bank is one of the major components of the programme. It consists of micro credit, savings, and social insurance which consistently supported to reduce the vulnerability of the poor during occasions such as death, hospitalization and child birth. In 2013 there were 1,400 Samurdhi banks Island-wide. The total number of members was 3,157,719 as at the end of 2013 (Dinamina, 2013, cited in Damayanthi, 2013, p. 52) cites Dinamina, 2013). Of them, 65.6 percent were females. The Asian Development Bank identified the Samurdhi Banking Union system as the world's fourth-largest micro financial structure. The Bank has LKR million 4,212 worth share capital. The Samurdhi Banks have released 3,721,662 loans worth amounting to LKR 4,835 million as at 31.12.2009 ([www.samurdhi.gov.lk](http://www.samurdhi.gov.lk)). According to the Samurdhi Authority of Sri Lanka, 76 percent (790) bank societies have been self-financially sufficient. As of 31st December 2011, the Samurdhi banks unions had 5,524,025 accounts including member, non-member group, *Diriya Maatha*, *Kekulu* and *Sisuraka*. The total amount of deposits had grown from LKR 768.96 million in 1999 to LKR 18,907.33 million in 2011. During the year 2011, 522,226 members had taken credit facilities worth LKR 13,189 million. The recovery rate for the year 2011 was 111.90 while the bad debt rate was reported as 5.51 percent.

The Samurdhi Authority has introduced a number of credit programmes for 53 various activities such as 'Mihijaya' loans programme for self-employment and income-generating activities, loans for fisheries and cultivation, 'Kirula' Development credit scheme, housing loan, 'Viduli Athwela' credit scheme to provide support for getting electricity connections for beneficiary houses, Consumer loans, Distress loans and 'Swasakthi' loan scheme.

This SWOT analysis is based on the study on evaluating the performance of the Samurdhi Banks, conducted by Hector Kobbekaduwa Agrarian Research and Training Institute in 2013 by M.K. Nadeeka Damayanthi and P.A. Jayamini Champika. The study has also attempted to identify the problems related to efficient and effective service delivery. The research utilized both primary and secondary data. Primary data was collected from the customers of the Samurdhi bank and key informants such as the Samurdhi Development Officers (animators), 'Samurdhi' Managers, leaders of the 'Samurdhi' Bank Societies.

This study was carried out in Kalutara, Kurunegala, Batticaloa, Anuradhapura, Monaragala, Ratnapura, Vavuniya and Jaffna districts with the objective of performance evaluation of the Samurdhi Banks and to identify issues and difficulties faced by both beneficiaries and officers related to service delivery. The total sample

was 547 including the 'Samurdhi' Bank customers; 'Samurdhi' beneficiaries and non-beneficiaries and officers.

As revealed by the survey, around 20 percent of the Bank customers are non-beneficiaries. Of the total customers, 12.8 percent (61) were former Samurdhi recipients. However, of them, only 41 percent had returned their subsidy due to improvement of family income. Fifty percent of the bank customers mentioned that they did not face problems related to service delivery. The positive features of the 'Samurdhi' Bank include low interest rate for credit, customer could repay the loan instalment and deposit money through field level SDO without visiting the bank, improvements in banking habits, cooperation and affability of staff, creating job opportunities through credit for income generation activities, improvement of family income as well as social networks. Social insurance scheme which was implemented under the micro-finance programme is another major positive point for the poor.

### **SWOT Analysis**

This section analyses internal strengths, weaknesses as well as external threats and opportunities of Samurdhi Banks as a micro-finance provider for poor or marginalized groups.

#### **Strengths**

1. Island-wide bank network including in war-affected areas and remote rural areas
2. Around 23,000 grassroots-level field officers work island-wide and most of them have close relationships with people
3. Adequate and organized human resources to evaluate the proposals before releasing credit and supervising and monitoring after the release of the loan
4. Some of the banks with well-established banking networks are equipped with modern equipment like computers
5. Most of the women were entered into the income generation process
6. The Samurdhi Authority has been one of the affiliated institutes of the Ministry of Economic Development
7. The Samurdhi Authority is one of the major stakeholders of the *Divineguma* programme
8. A considerable amount has been invested in state banks and already developed assets include savings (LKR 18,907 million) and shareholding capital (LKR 5,370 million)
9. Continuous provision of government funds for compulsory savings
10. Having a broad customer base Island wide



## Weaknesses

1. Lack of supervision of field staff.
2. Failure to utilize the full strengths of field staff to achieve the Samurdhi movement's goals.
3. Under the Samurdhi programme, the government provides a huge fund to uplift the poor. However, it has been found that the selection process is not very clear or transparent for the beneficiaries. Often, the selection is bias due to the personal intervention of the officers. As many bank customers mentioned, in the field survey on the evaluation of Samurdhi Banks in poverty alleviation (2012), selection of beneficiaries for livelihood development projects under the *Divineguma* programme is not much transparent. Further, even though some people have been selected as beneficiaries they themselves do not know what the selection criteria are and how they were selected for the programme (Damayanthi and Champika, 2014).
4. Poor adoption of new technologies. For example, lack of computer and IT facilities and Automated Teller Machine (ATM) facilities have not been introduced for the customers yet.
5. Pawn loan service, though in high demand, was not implemented in most of the areas.
6. Lack of knowledge on circulars (bank officers & field officers).
7. Delay/ not receiving some circulars.
8. Problems such as conflict among members related to small groups (due to bad debt or other issues) and difficulty of reformulation of available small groups.
9. The physical environment of the bank is not very attractive.
10. Lack of adequate storage/recording facilities.
11. Initial and Maximum credit amount not being sufficient.
12. Banking unions ('Maha Sangam') meetings are not held on time/regularly.
13. Banks are not established even in high potential and necessary areas (eg. Vahalkada area).
14. Inefficiencies/ poor performance of Samurdhi Development Officers at grassroots level.
14. Lack of feasibility studies on self-employment loans.
15. Lack of concessions for cultivation losses.
16. Gifts for special promotions are not very attractive when compared to other commercial/state banks.
17. No opportunity to obtain instant loans and personal loans without group assurance.
18. Beneficiaries are not much aware of procedures and profit share.

19. Take more time for transactions in certain banks (eg. One month).
20. High proportion of savings that should be available in individual as well as group accounts to obtain a loan.
21. Lack of attention for elderly and differently-abled people in terms of credit and savings.
22. Not having a proper system to monitor the officers.
23. Not having any security system for the bank and money that is brought from other banks.
24. Issues of the limited amount of money (maximum LKR 150,000) one can withdraw at a time even if withdrawing a bigger amount.
25. Do not follow common law related to collateral, maximum loan amount, and release compulsory savings.
26. Lack of media publicity for programmes launched by Samurdhi banks.
27. As per Damayanthi and Champika (2014), around 12 percent of the Samurdhi Bank customers faced issues of inefficiency and ineffectiveness of service delivery. Also, bank customers (17 percent) mentioned that the issue of the loans by the banks was delayed from one week to two months due to inefficiencies of the officers.

### **Opportunities**

1. A considerable number of customers are willing to engage in a pawn credit scheme.
2. Limited threat from other micro-finance institutions in remote areas due to security of such institutions.
3. Low interest of Samurdhi loans compared with the interest rates of the loans in other Micro-credit institutions.
4. A considerable number of customers have good loan history, bank habits, and built-up trust with the bank and wish to apply for a high amount of loans.
5. Public policy giving high priority to poverty alleviation and empowering the poor.
6. Demand for educational loans.
7. Possibility of providing more quick service to customers via ATM as they have already been introduced in the country.
8. High level of people's participation in meetings and programmes launched by the Samurdhi Authority.

## Threats

1. Activities of other micro-finance institutions/private and state banks Eg: School-based savings schemes, offering attractive gifts for special occasions, personal loans with two guarantors instead of group guarantees, availability of simple conditions, home-based loan delivery and collection, high loan amount issued by other micro-finance institutions, speedy/instant loans.
2. Bad debts.
3. Political influence for loans.
4. Limited support of other relevant institutions due to their inefficiencies.

### 4.4 The 'Gemidiriya' Community Development and Livelihood Improvement Project

This section analyses internal strengths, and weaknesses as well as external threats and opportunities of 'Gemidiriya' Community Development and Livelihood Improvement Project as a micro-finance provider for poor or marginalized groups.

Sri Lanka has initiated the 'Gemidiriya' Community Development and Livelihood improvement project, which is based on a long-term vision for reducing poverty. Poverty is a major problem affecting the development of Sri Lanka. Poverty can be described as a characteristic that reflects people's inability to fulfil the basic needs that are vital for their living and to gain social justice. Large regional disparity can be seen (urban 18.3%, rural 24.4%, estates 12.62%) in Sri Lanka. The population below the 1\$/day poverty line is 66% and the population below the poverty line of 2\$/day is 44% in Sri Lanka ([www.socialwatch.org](http://www.socialwatch.org)) when compared with indicators such as the quantity of calorie intake, literacy, life expectancy, rate of infant deaths, equal status for women, environmental protection in development activities, etc.

The 'Gemidiriya' (village strength) Community Development and Livelihood Project was initiated in 2004 in response to the Sri Lankan government's Poverty Alleviation Strategy of 2003. The project is based on the community-driven development (CDD) model which aims to improve the livelihoods of rural communities through formation of self-governed local institutions, so as to enable greater decision-making, resource mobilisation, monitoring, and evaluation of sustainable investments at the village level. 'Gemidiriya' has received funding from the World Bank for a period of 12 years, conditional upon its successful implementation (De Silva et al., 2010).

The project covers 11 districts in Phase I and Phase II. Phase II is implemented in 962 villages and covers seven districts. Badulla, Ratnapura, Hambantota, Monaragala, Kegalle, Nuwara-Eliya and Polonnaruwa (De Silva et al., 2010).

Overall, the project activities are controlled by the Project Management Units (PMU). Under the PMU there are District Project Management Units (DPMU) and seven Project Implementation Units (PIU) under the DPMUs. All the VOs selected for the

implementation of village-level project activities come under the DPMUs. Sub-committees are formed under the Village Organizations (VOs) to implement village-level project functions i.e. infrastructure development, capacity development, livelihood improvement, and operating the revolving fund. Small groups (consisting of five members) are formed for the easy operation of sub-committees. Each village organization is headed by a leader (Chairperson), with four members for the other functions - Secretary, Treasurer, and Auditor.

According to the study Samaraweera (2019), clearly shows that the majority of the beneficiaries (63%) have raised their income by 20% due to the programme. Most of the beneficiaries increased their income in the agricultural sector and 30% of them were able to increase their income by Rs. 1000 –2000 monthly (Samaraweera, 2019). According to the study, only eight (10 percent) Samurdhi beneficiaries could increase their income by 20% while in the case of *Gemidiriya* beneficiaries, it was 32%. That is mainly due to the high-interest rate (16%-18%) in the Samurdhi programme compared to the *Gemidiriya* programme (2%-6%). Therefore, the effectiveness of the income increment for the people in *Gemidiriya* is higher than the Samurdhi programme.

### Strengths

- 1) The implementation process of the *Gemidiriya* programme at the village level is comparatively successful when considering about social and economic impact of the project.
- 2) According to the study implemented in three Divisional Secretariat Divisions (DSD) of Matara District, Sri Lanka, most of the beneficiaries have been granted credit for self-employment activities (80 percent) and majority of them are women.. This shows women get more involved in self-employment activities facilitated by *Gemidiriya* loans (Samaraweera, 2019).
- 3) A considerable level of female participation is visible when looking at the implementation stage of rural CDD projects. Also, this study reveals that the involvement of the young labour force is higher in rural-level project implementation while the elderly people's contribution to risk management is negligible (Wijekoon, 2016).
- 4) The implementation process of the *Gemidiriya* programme at the village level is comparatively a success considering the social and economic impact of the project. There was considerable economic enhancement in terms of inducing investment, income increment, and reduction of unemployment rate.
- 5) Under the *Gemidiriya* programme rural communities were empowered by providing knowledge, enhancing their skills, and building capacity of rural communities to identify, decide, and implement the correct development plan. This programme builds sustainable village development, organises rural communities enhances team-working ability, and creates linkages (Samaraweera, 2019).
- 6) Most of the women entered into income-generation activities.

- 7) Under the *Gemidiriya* programme rural communities were empowered by providing knowledge, enhancing the skills of communities, and building the capacity of rural communities to identify.

### **Weaknesses**

- 1) In the surveyed sample, 43 % of beneficiaries were unable to invest extra in their income-generating activities (Samaraweera, 2010).
- 2) Moreover, 35 % showed that lack of public awareness is the main weakness of the programme, and public awareness campaigns through extension services should be launched to demonstrate the benefits of the *Gemidiriya* programme to attract more beneficiaries (Samaraweera. G. C. 2010).
- 3) Lack of publicity among the community about the programme.
- 4) Market linkage is not very much strong.
- 5) The strength of the extension service is not strong enough to capture the maximum benefits from the programme.

### **Opportunities**

- 1) According to (Samaraweera, 2010), 33% of beneficiaries have potential to make products at lower costs to compete in the market by using underutilized family labour and abundant resources available in villages and remote areas. The study recommends that the *Gemidiriya* Community Development and Livelihood Improvement project has been a successful approach in village development and poverty alleviation.
- 2) Multi skills of the village people can be utilized to enhance their income. According to Samaraweera (2010), 43% of beneficiaries said they had to utilize multiple skills to earn money, such as preparing sweets, making bag and sewing.
- 3) According to a study conducted by Wijekoon (2016), village organization leaders' readiness for project risk management is at the competent level.

### **Threats**

- 1) It is revealed that their major threat is the absence of a proper and constant market for their product followed by a lack of storage facilities and the price threat.
- 2) Limited support of other relevant institutions due to their inefficiencies.

## 4.5 Climate Change Adaptation Project

### Addressing Climate Change Impacts on Marginalized Agricultural Communities Living in the Mahaweli River Basin of Sri Lanka

The project has two components. The first is designed to improve food and livelihood security for target farm households; the second addresses capacity gaps at the village and divisional administration to support replication of the adaptive actions.

The overall goal of the proposed project is to: build diversified and resilient livelihoods for marginalized farming communities in the Mahaweli River Basin through effective management of land and water resources.

Considering the impact of climate change on irrigation and poverty in the Mahaweli Basin, large parts of the downstream districts of the River Basin receive irrigation through a network of reservoirs and feeder canals (referred to as major irrigation) administered by the Mahaweli Authority.

Impacts of climate-related rainfall variability are buffered in major irrigation areas by large stocking reservoirs and a well-administered irrigation distribution system. Climate risks are minimized due to the availability of irrigation water at the “right” time and food production as measured by cropping intensity remains high. Mahaweli Settlement Schemes receive assured irrigation through trans-basin diversion. However, other areas of the basin have not benefitted from such development.

Many upland or rain-fed farming areas lay scattered in the upper, middle, and lower catchments without assured irrigation and exposed to natural hazards such as drought, floods, and landslides. Some of these lands are entirely rain-fed, with cultivation times coinciding with monsoon rainfall. Some farmlands are serviced by small irrigation structures such as cascading village tanks and anicuts or canals conveying rainwater in the upper elevations. Socio-economic analysis shows that poverty and food insecurity are highest among such rain-dependent farmers who have no access to assured irrigation. Farmers in rain-fed systems (called upland farmers) have been traditionally poorer than settlers. Due to a lack of irrigation at the right time, in the right quantities, productivity is affected and in turn, the crops do not fetch a high market value. Generally, one season (*Maha*) is cultivated fully. Livelihood insecurity is high during the lean rainfall season from April to September. Farmers become labourers and often migrate out of the village in search of employment.

This project would allow the Ministry of Environment to test the corresponding menu of actions and indicators that are included in the current National Environment Action Plan 2008-2012.

These actions include selecting and cultivating high-yielding and drought-tolerant rice varieties, adopting suitable land and crop management practices, adjusting rain-fed farming practices to rainfall variability, adopting a surveillance and forecasting system

to measure the impacts of climate change, and adjusting home gardening practices to a seasonal cropping calendar to address the demand for irrigation water.

The component directly addresses rainfall variability- which is the key climate change problem identified in the Basin and the resultant impact upon and vulnerability of rain-dependent farm families. Outputs and activities under Component 1 aim to minimize climate-induced livelihood risks and develop livelihood capital to overcome income poverty and food insecurity.

The targeted DSDs are particularly vulnerable to food insecurity in the low rainfall months of *Yala* (minor season) when farm work is scarce. Due to remoteness, access to markets, and constraints of technology (and finances) other livelihood options are unavailable to these farm families. There are documented instances where families have just one small meal a day during the dry months or forgo free medical facilities due to unaffordability of the bus fare. Women are the worst affected by the unavailability of water for domestic chores and sanitation during the dry season.

In response to Sri Lanka's vulnerability to climate change, the Adaptation Fund financed the project "Addressing Climate Change Impacts on Marginalized Agricultural Communities Living in the "Mahaweli River Basin of Sri Lanka" implemented by the United Nations World Food Programme and executed by the Ministry of Environment and Wildlife Resources and the United Nations Development Programme. The project focuses on developing community resilience by developing household food security and building sustainable livelihoods for rain-fed small-holder farming households in Polonnaruwa (Lankapura and Medirigiriya) and Nuwara Eliya (Walapane) districts. In parallel, the project builds institutional capacity at the village, local, regional levels to reduce risks associated with rainfall variability.

The component is designed to reach 14,039 families through 235 Farmer Organizations, to implement concrete adaptation actions (home garden development, livelihood and crop diversification, and incentive payments) within the target DSDs. There are important cross-cutting benefits across the outputs. Chiefly building human and social capital for livelihood development through skills training and self-help groups, linking modern research and technology with poor farm families, and strengthening local extension services by providing incentives to monitor results. This component will address food insecurity and build household adaptive capacity through 5 key outputs;

### **Strengths**

- 1) Increased capacity to manage common and household natural assets
- 2) Increased women's participation and income generation
- 3) Effective and informed service delivery to farm households

- 4) Increased incomes through project-related activities such as alternate livelihoods, increased crop production, and cash-for-work for the target community.
- 5) Increased cropping intensity and cultivated extent, resulting in increased production in small irrigation systems in target locations
- 6). Reduced post-harvest losses and better food storage in target households
- 7). Home garden-based agricultural produce (value added) developed in target households
- 8). Women in vulnerable households will be encouraged to undertake a food-based cottage industry in the target area
- 9). Increased access to microfinance and skills for business management for women
- 10). Reduction in economic vulnerability during minor rainfall season in households in the target area
- 11). Continuous attempts made by government authorities to adhere to international standards
- 12). Existence of government authorities at the national, provincial, and local levels dedicated to the conservation of ecosystems.
- 13). Local farmers should be better involved in the management and maintenance of the tank as they engage with such resources often to fulfil their domestic consumption as well as agriculture requirements.
- 14). Spatial equity promoted through rural transformation programmes has reduced service inequities between rural and urban areas through the provision of basic public services and enhancing the living standards that reduce the expansion of urban sprawl.
- 15). Nutritional enrichment of the diet of rural populations. Project interventions have sought to enhance the self-sufficiency of the population by increasing the production of paddy and other agricultural products (e.g. - pulses, fruits, etc). The community is also able to supplement their diet through inland fisheries and other aquatic plants (e.g. - lotus seeds and yams).

### **Weaknesses**

- 1). The unavailability of a water use plan that ensures efficient use of water is a challenge. Without a water use plan, all dependent paddy lands may not receive water from the relevant tank; equitably. (This can be a drawback for new farmers to enter the system as they lack bargaining power in the community.)
- 2). A reliable maintenance plan is essential for the sustainability of these tank improvements. However, the State often does not allow farmers to evolve their management mechanisms and quite often overlooks traditional,



communal management devices, by imposing their plans and methodologies on the farmer organizations.

- 3). Ecological challenges such as invasive species are a continuous challenge to the maintenance of the tanks.
- 4). The lack of cohesion between the government agencies and farmer organizations on the responsibility for maintenance hampers the regular addressing of minor maintenance issues. As a result, summation of minor maintenance works eventually requires a large-scale involvement with the compulsory intervention of a technical agency at a higher cost.

### **Opportunities**

1. Sri Lanka is endowed with a significant number of favourable climatic conditions such as two active monsoons and a favourable average temperature conducive to plant growth throughout the year, given its geographical location.
2. Unavailability of a water use plan that ensures efficient use of water is a challenge, therefore it is recommended that the field officers work with the Agriculture Research and Production Assistant of the Department of Agrarian Development to develop a water use plan.
3. Ecological challenges such as invasive species are a continuous challenge to the maintenance of the tanks. Controlling this threat requires constant intervention and the community that resides in the area and uses the tank for bathing and fishing etc. are best poised to meet this need.
4. Local farmers should be more involved in the management and maintenance of the tank as they engage with such resources often to fulfil their domestic consumption as well as agriculture requirements. Given their deep-rooted use of the system, they are a valuable repository of traditional knowledge that could be effectively integrated to lay policy foundations to make more effective interventions.
5. Ecosystem-based approaches must be integrated into government protocols on tank rehabilitation. Farmers must be made aware of the importance of buffer zones and protecting the salinity levels of the tank water to gain the maximum benefit from these resources. Healthy ecosystems would positively impact the nutritional intake, through inland fishing and aquatic plants.
6. Increasing the availability of water for drinking and domestic use by households located in the periphery of the tank.
7. Creating an opportunity to engage in other economic activities such as cadjan weaving and brick-making

## Threats

1. The favourable climatic conditions Sri Lanka is endowed with, have been changing at unprecedented rates in the recent past, which culminated in Sri Lanka being identified as one of the most vulnerable nations to the impacts of climate change.
2. While degradation of natural resources could happen within a short period, the restoration of degraded ecosystems is a long-term process that calls for continuous commitment and investments.

### 4.6 Developing Local Resources in Community-based, Rehabilitation (CBR) Programme in Sri Lanka

This SWOT analysis is based on the research study on Developing Local Resources in Community-based Rehabilitation (CBR) Programme in Sri Lanka: Follow-up Study in Anuradhapura, authors are Masateru Higashida, Menikralage Gamini Illangasingha, M.R. Shantha Kumara Japan Overseas Cooperation Volunteer, Japan International Cooperation Agency (JICA), Japan and Department of Social Services, Sri Lanka.

When considering Community-based, Rehabilitation (CBR) Programmes, the World Health Organization (WHO) has been strongly promoting community-based rehabilitation (CBR) all over the world since the 1980s. CBR is positioned as a strategy within general community development for the rehabilitation, equalization of opportunities, poverty reduction, and social inclusion of disabled people (International Labour Organization et al., 2004).

The above study examines the factors of developing local resources in the CBR programme in rural areas in Sri Lanka. Of all the resources, the study mainly focuses on community workshops. An action research approach based on qualitative methods was applied in the Anuradhapura district as a follow-up to the previous research. Actions include meetings with stakeholders, as well as outreach courses. The study used narrative data from semi-structured interviews with the participants of community workshops (n=24), separate focus group discussions with participants (n=34), and CBR core group officers (n=5), and the author's field notes in social work practice. Data was analyzed within the framework of strengths, weaknesses, opportunities, and threats (SWOT).

After commencing work as a social worker in an overseas volunteer position in February 2013, the first author applied action research to social work practice (Higashida, 2014a; Higashida, 2014b; Higashida et al., 2015). A mixed-methods approach adopting more qualitative and less quantitative data was used. The research period reported in this article was from July 01, 2013, to October 20, 2014.

The Action Strategy and Process of this study were based on the results of research (Higashida, 2014b), the CBR core group officer and the first author planned to develop community workshops in the Anuradhapura district in line with dialogue with the

second author, who is the chief social services officer and also recommended launching community workshops in each division in reference to the model practice of the R-division. We decided to promote the launch of community workshops with disabled people and their family members in the district, towards the development of local resources to empower disabled people and improve their quality of life.

Focus group discussions were separately carried out with participants of community workshops (3 groups, n=34) and CBR core group officers (n=5, twice). Questions as probes for discussions were developed based on the aim of the study. Although data from the first session of focus group discussion with CBR core group officers was used in previous research this study conducted the second session of group discussion, whilst analyzing in an integrated way (Higashida et al., 2015). Data from field notes in social work practice was also used to analyze the results of the study.

Data analysis was based on the framework of a strengths, weaknesses, opportunities, and threats (SWOT) analysis used to analyze narrative data. Sharma & Deepak (2001) also used this method to evaluate the CBR programme in Vietnam. The characteristics of SWOT were clarified by Kuipers et al. (2003). Strengths were defined as positive characteristics that were internal to local resources and could support future development, and advantages of the resources. Weaknesses were described as negative internal characteristics and the disadvantages of local resources. Opportunities were defined as positive characteristics and favourable trends that were external to local resources and could be harnessed. Threats were defined as negative characteristics that were external to local resources and acted as obstacles, competing demands, or forces that could cause damage in the future. In the process of the SWOT analysis, the procedure of the KJ method (Kawakita, 1967) was also referred to as the following: carefully transcribing and reading narratives in interviews and focus group discussions; putting transcribed data onto sticky notes; putting the sticky notes on a whiteboard; grouping similar sticky notes; naming each group. Two raters independently determined whether each narrative indicated a strength, weakness, opportunity, or threat. In classifying narrative data, consensus was reached among the raters by discussion. Data from the first author's field notes was used in the process of interpretation and analysis.

### **Matrix of the SWOT by Participants of Community Workshops and CBR Core Group Officers**

#### **Strengths**

- 1) Both groups observed a rise in income. Disabled individuals and local officers alike discussed capacity development.
- 2) In terms of positive group dynamics, participants noted a "sense of unity and equality". Local officers also recognized "unity among disabled people and their families".
- 3) Local officers mentioned "awareness raising" in the focus group discussion.

- 4) Expansion of future opportunities” such as religious events, compulsory education, advanced training centers, and self-employed jobs. In addition, “making friends” is important for participants.

### **Weaknesses**

- 1) All local officers agreed with the idea of the “decrease and immobilization of the participants”
- 2) Gap of degrees in disabilities and capacities
- 3) Instability of the venue
- 4) Difficulty in procurement of tools and equipment
- 5) Lack of operating funds
- 6) Decrease and immobilization of the participants
- 7) Difficulty in procurement of tools and equipment

### **Opportunities**

- 1) Presence of model activities
- 2) Opportunities for interaction and mutual support
- 3) Existing techniques
- 4) Accumulated past experiences within the district
- 5) Existing resources and collaborators
- 6) Evaluation of the matter at a national level
- 7) Possibility of funding from the central government

### **Threats**

- 1) Both noted “poor transport links and accessibility”
- 2) Lack of understanding by families
- 3) Secondary effects of disability benefits
- 4) Inconsistent support by the officers



## CHAPTER FIVE

### The Nature, Magnitude and Determining Factors of Income Diversification among Rural Agrarian Communities

#### 5.1 Introduction

This chapter focuses on the second objective of the study which describes the nature, magnitude and determining factors of income diversification among rural agrarian communities. The nature of income diversification includes type and share of income diversification categories. The magnitude includes level of income diversification and the determining factors include internal and external factors.

#### 5.2 Nature of Income Diversification

Table 5.1 illustrates the number of households fallen under each income-generating category with their percentages.

**Table 5.1: Income Categories of Households**

Income Source	Seasonal Crops		Perennial Crops		Animal Husbandry		Non-farm Enterprises		Paid Income		Cash Receipt		Windfall Income	
	2013	2019	2013	2019	2013	2019	2013	2019	2013	2019	2013	2019	2013	2019
No of Households	3409	3275	2629	2991	672	672	4766	4970	12764	12076	10586	11420	7949	5498
% of Total No of Households	17	17	13	15	3	3	24	25	63	61	52	58	39	28

Source: Household Income and Expenditure Survey (2012/2013 & 2019), Department of Census and Statistics

As demonstrated in Table 1, the majority of households (63% and 61% in the year 2013 and 2019 respectively) has received income from paid employment followed by the income received from cash receipt. Only 33% and 35% have received income from agricultural activities (from seasonal crops, perennial crops, and animal husbandry) and 24% and 25% of households have received income from non-farm enterprises during 2013 and 2019, respectively.

Table 5.2 illustrates the percentage share from each income category to the total income of the household. As revealed by the data, 5938 households in the year 2013 and 6288 households in the year 2019 depend only on one income source and no diversification could be observed among those households.

**Table 5.2: Percentage Share of Each Income Category to the Total Income by Number of Households**

Percentage Share to the Total Income	Number of Households													
	Paid Income		Seasonal Crops		Perennial Crops		Animal Husbandry		Non-farm Enterprises		Cash Receipt		Windfall Income	
	2013	2019	2013	2019	2013	2019	2013	2019	2013	2019	2013	2019	2013	2019
0	7403	7696	16758	16497	17538	16781	19495	19100	15401	14802	9581	8352	12218	14274
0-25	1111	1003	2924	1959	1199	1547	230	295	591	650	6098	6284	4922	3941
26-50	1801	1895	147	558	481	585	134	137	800	863	1424	1563	1746	990
51-75	2467	2287	55	297	327	347	92	97	941	978	741	913	730	409
76-99	4547	4030	25	230	449	334	157	107	1596	1558	698	651	404	106
100	2838	2861	258	231	173	178	59	36	838	921	1625	2009	147	52

Source: Household Income and Expenditure Survey (2012/2013 and 2019), Department of Census and Statistics

**Table 5.3: Combination of Income Activities among Agricultural Households in 2013**

Year	Income Category	Seasonal Crops	Perennial Crops	Animal Husbandry	1+2	1+2+3
2013	No. of Households	3122	1011	639	1011	639

Source: Household Income and Expenditure Survey (2012/2013), Department of Census and Statistics

**Table 5.4: Combination of Income Activities among Agricultural Households in 2019**

Income Category	Seasonal Crops	Perennial Crops	Animal Husbandry	1+2	1+3	1+2+3
No. of Households	3273/2248	2140	370	770	220	35

Source: Household Income and Expenditure Survey (2019), Department of Census and Statistics

Tables 5.3 and 5.4 illustrate the combination of income-generating activities among households that rely on agricultural activities as their main income source in 2013 and 2019 respectively. Among a total of 3122 households that mainly depend on seasonal crops, 639 households were engaged in all three activities while 1011 households were engaged in only two income activities i.e., seasonal crops and perennial crops in 2013. Among 3273 households that were dependent on seasonal crops in 2019, 2248 households were engaged only in seasonal crops while 770 households were engaged in seasonal and perennial crops, 220 households were engaged in seasonal crops and animal husbandry and 35 households were engaged in all three activities.

**Table 5.5: Number of Households by Crop among Seasonal Crop Category**

Crop	2013		2019	
	Total No of Households	%	Total No of Households	%
Paddy	2711	79	2579	68
Chillie	89	3	91	2
Onion	81	2	66	2
Vegetables	663	19	6	17
Cereals	335	10	300	8
Yams	62	2	42	1
Tobacco	21	1	15	0
Other	95	3	49	1

Source: Household Income and Expenditure Survey (2012/2013) and 2019, Department of Census and Statistics

Among the households that rely on agricultural activities majority (79% and 68% in 2013 and 2019 respectively) were engaged in paddy cultivation followed by vegetables and cereals respectively in both years.

**Table 5.6: Number of Households by Activity among Perennial and Animal Husbandry Income Category**

Crop/Income Generating Activity	2013		2019	
	Total No of Households	%	Total No of Households	%
Tea, Rubber	1087	32	1237	29
Coconuts	1002	30	1108	26
Coffee, Pepper, Betel, etc	460	14	660	15
Banana/Fruits	405	12	323	7
Horticulture	13	0	41	1
Other Crops	248	7	217	5
Meat	54	2	78	2
Fish	227	7	143	3
Eggs	160	5	167	4
Milk	286	9	297	7
Other Food Items	34	1	67	2

Source: Household Income and Expenditure Survey (2012/2013 and 2019), Department of Census and Statistics



Table 5.6 describes the number and percentage of households engaged in different income-generating activities among the other agricultural income category. It reveals that the great majority of households were engaged in plantation crops (tea, rubber, coconut) related activities followed by minor export crops (Coffee, Pepper, Betel, etc) category in both years.

**Table 5.7: Number of Households by Activity among Non-Farm Enterprises Income Category**

Income Generating Activity	2013		2019	
	Total No of Households	%	Total No of Households	%
Mining & Quarrying	143	3	103	2
Manufacturing	884	18	1016	19
Construction	124	3	187	4
Trade	1980	40	1803	34
Transport	994	20	1099	21
Guest houses, restaurants, bars, hotels, etc	119	2	119	2
Other services	1024	21	965	18

Source: Household Income and Expenditure Survey (2012/2013), Department of Census and Statistics

Among the nonfarm enterprises' income category major proportion of households were engaged in trade (40% and 34% in 2013 and 2019 respectively), followed by transport and manufacturing-related activities.

### 5.3 Level of Income Diversification

The level of income diversification among households was calculated using the Gibbs and Martins Index for both years (2013 and 2019) and the overall index value for year 2013 is 0.6858 while the overall index value for year 2019 is 0.6941.

The index was calculated for each individual household in both data sets and the index value for the year 2013 varied between 0 and 0.7883 while the values for 2019 varied from 0 to 0.7879. The total number of households fall into each category of diversification with their percentages are shown in Table 7.

**Table 5.8: Number of Households in Each Diversification Category**

Index	Diversification Category	Number of Households		Percentage	
		2013	2019	2013	2019
0-0.2	Undiversified	8626	10120	49.1%	51.2%
0.2-0.4	Poorly Diversified	3353	3534	19.1%	17.9%
0.4-0.6	Moderately Diversified	4700	5038	26.8%	25.5%
0.6-0.8	Diversified	891	1080	5.1%	5.5%
0.8-1	Highly Diversified	0	0	0.0%	0.0%
Valid		17570	19772	100.0%	100.0%
Missing		2587	0		
Total		20157	19772		
Subpopulation		17389 <sup>a</sup>	19649 <sup>b</sup>		

a. The dependent variable has only one value observed in 17286 (99.4%) subpopulations.

b. The dependent variable has only one value observed in 19586 (99.7%) subpopulations.

As illustrated in Table 5.8, great majority of households fell into the undiversified category in both years (49% and 51% in 2013 and 2019 respectively) followed by the moderately diversified category where the percentage of households are 27% and 26% in 2013 and 2019 respectively. According to the analysis, only 5 percent of households were in the diversified category in both years and no household has reported in the highly diversified category.

#### 5.4 Determinants of Income Diversification

Determining factors of income diversification were estimated using a Multinomial Logistic Regression Model and the regression was done for both datasets of years 2013 and 2019. The results of the regression analysis conducted are presented in Table 5.9. Moderately diversified category was taken as the base category.

The data set for the year 2013 covered 20157 households and the dataset for the year 2019 covered 19772 households. Compared to the base category, the results indicate that independent variables such as the age of the household head, level of education of the household head, number of members in the household, number of workers in the household above 15 years, number of members suffering from chronic illness or disability, district, gender of household head, indebtedness, ownership of agricultural lands and ownership of livestock are the factors which were significant in determining the level of income diversification among the household sample of the year 2019. All factors which act as determinants of income diversification except district were significant in determining the level of diversification among the household sample of the year 2013.

**Table 5.9: Coefficients of Multinomial Logistic Model for Determinants of Income Diversification**

INDEX <sup>a</sup>		2013	2019
<b>Undiversified</b>	Intercept	0.574***	0.411
	HHH Age	-0.016***	-0.014***
	HHH Education	-0.037***	-0.026***
	No of Members	-0.058***	-0.065***
	No of Members Working (15 yrs or Above)	-0.085***	-0.412***
	No of Members Passed O/L or Above	0.001	-0.031
	No of Members Passed A/L or Above	-0.067**	-0.037
	No of Members Suffering from Chronic Illness or Disability	-0.132***	-0.120***
	District	-0.002***	-0.004***
	HHH Gender	-0.431***	-0.122***
	Debts	0.952***	0.646***
	Owned Agri Land	0.292***	0.622***
	Owned Livestock	0.368***	0.523***
<b>Poorly Diversified</b>	Intercept	0.148	0.171
	HHH Age	-0.006***	-0.006***
	HHH Education	-0.037***	-0.040***
	No of Members	-0.025*	-0.017
	No of Members Working (15 yrs or Above)	-0.002	-0.080***
	No of Members Passed OL or Above	0.013	0.008
	No of Members Passed AL or Above	0.006	-0.020
	No of Members Suffering from Chronic Illness or Disability	0.013	-0.060**
	District	-0.001	-0.001
	HHH Gender	-0.159***	-0.106
	Debts	0.186***	0.053
	Owned Agri Land	0.129	0.063
	Owned Livestock	0.073	0.260***
<b>Diversified</b>	Intercept	-1.617**	-1.025***
	HHH Age	0.007**	0.010***
	HHH Education	0.024*	0.036***
	No of Members	0.055**	0.025
	No of Members Working (15 yrs or Above)	0.183***	0.254***
	No of Members Passed OL or Above	0.004	0.005
	No of Members Passed AL or Above	-0.009	-0.046
	No of Members Suffering from Chronic Illness or Disability	0.082	0.004
	District	-0.001	0.007***
	HHH Gender	0.201**	0.075
	Debts	-0.902***	-0.697***
	Owned Agri Land	-0.203	-0.603***
	Owned Livestock	-0.107	-0.484***

Legend: \* <0.1; \*\* p<0.05; \*\*\* p<0.01

Source: Household Income and Expenditure Survey (2012/2013 and 2019), Department of Census and Statistics

Compared to the base category, the age of the household head is statistically significant at a 5% significance level and positively associated with the likelihood of income diversification. This implies that when household head become older the likelihood of income diversification is higher, compared to young ones. This is an indication of the experience of risks associated with the older population and because of this knowledge, they are more willing to diversify their income than the younger population.

Compared to the base category, both the number of members in a household and the number of working members who are older than 15 years are significant and positively linked with the likelihood of income diversification. This is evident that every additional member living in a household contributes to an increase in the need for total household income due to increased total consumption of the family.

The education level of the household head is also significant and has a positive association with the likelihood of income diversification. This is because people who have higher education level are more likely to diversify their income as their educational level facilitate them to enter into highly paid employment.

The gender of the household head is also statistically significant and positively associated with the likelihood of income diversification.

The number of members in a household who are suffering from chronic illness or disability is statistically significant and positively correlated with the likelihood of income diversification. This is not a surprising result because any member who is suffering from chronic illness or disability caused to increase the need for total household income. District as one of the independent variables is also statistically significant.

Debt amount, availability of their own agricultural lands, and holding ownership of livestock are also statistically significant but negatively associated with the likelihood of income diversification. These negative relationships are more surprising, but we can justify these negative relationships in different ways.



## CHAPTER SIX

### **The Potentials and Constraints to Develop Income Diversification as a Sustainable Rural Agrarian Development Strategy at the Ground Level**

#### **6.1 Introduction**

To fulfil this objective, four income diversification programmes were analysed as case studies of those income diversification programmes out of which two were implemented by the government of Sri Lanka and initiated by the World Bank funds while the other two were implemented by the United Nations Development Programme and ACTED a non-profit organisation with European Union funds.

#### **6.2 Introduction to Case Studies**

##### **6.2.1 Case Study One: 'Gamidiriya' Programme**

###### **An Introduction to 'Gamidiriya' Programme**

Community Development and Livelihood Improvement Project (CDLIP), also known as *Gamidiriya* or *Gama Naguma* project, is a World Bank funded community driven rural development programme implemented in Sri Lanka. The programme that commenced in 2004 as a small pilot initiative in three villages in the Polonnaruwa district, later expanded to nine other high poverty-stricken districts in Sri Lanka, covering over 4500 villages. Village-centered community driven development is the key concept behind CDLIP.

CDLIP was initiated and executed with the vision strengthened, empowered, formally organized rural communities active in the path to progress. It was expected to achieve this vision by; Empowering village communities to form, strengthen and maintain institutional mechanisms, oriented to self-decision making, planning, resource mobilization, implementation and monitoring and evaluation for community development and livelihood improvement.

When CDLIP programme enters into a village it follows these steps.

Step 1- Informing villagers about CDLIP via government representatives of the village and project facilitators.

Step 2- Getting the consent of the villagers to accept the project.

Step 3- Formulation of Maha Sabha

- Membership should consist of 80% of the village households
- 50% of membership should be women
- Should consent to adhere to non-negotiable principles, and ten golden rules, which ensure good governance

Step 4- The village officially becomes a CDLIP beneficiary and funds are directly transferred to the village

Once it is established, the project operates as a village organization or a people's company.

Firstly, the villagers are expected to form small groups among village households, each consisting of five to seven members. Small groups are expected to join Village Organizations (VO) and elect a member from each small group to represent them at VO. Members of the VO elect a board of directors and committee members from the VO membership. To participate in savings and credit activities, savings and credit groups are formed, out of which savings and credit clusters are set up, leading to forming Village Savings and Credit Organizations (VSCO).

CDLIP signs an agreement with the VO, permitting the transfer of funds to the Village Development Fund (VDF). The VDF is reallocated to three primary fund categories aimed at institutional development, livelihood support, and community and social infrastructure development of the village community. The funds are allocated to guarantee inclusiveness of all target groups. When constructing infrastructure facilities under CDLIP, the project renders only up to 70% of the financial contribution. The balance lies with the community in terms of finances (10%) and labour (20%), which imparts a strong sense of ownership to the community.

CDLIP is well organized at national, district, zonal and village levels. By vigilant participatory planning, training and capacity building, skills development, and learning by doing the members have become community professionals. Thus, with the concept community driven development CDLIP empowers villages to accomplish and sustain their own development.

As the case studies on *Gamidiriya* programme, two *Gamidiriya* Projects implemented in Badulla and Hambantota districts were selected.

## **6.2.2 Case Study Two: Agriculture Sector Modernization Programme**

### **An Introduction to Agriculture Sector Modernisation Programme**

The Agriculture Sector Modernization Project (ASMP) is implemented with the objectives of increasing agriculture productivity, improving market access, and enhancing value addition of smallholder farmers and agribusinesses in the project areas. The Ministry of Agriculture (MOA) with \$58.63 million from International Development Agency of the World Bank, is implementing the five-year Agriculture Sector Modernization Project (ASMP) in five provinces and seven districts: Northern province (Jaffna and Mullaitivu), North Central province (Anuradhapura and Polonnaruwa), Eastern province (Batticaloa), Central province (Matale) and Uva province (Monaragala). The five additional Districts funded under EU co-financing through World Bank are Killinochchi, Vavuniya (2 Districts of the Northern Province), Ampara (1 District from Eastern Province), Badulla (1 District from Uva Province), and Kandy (1 District from Central Province). An amount of EUR 23.31 million (US\$ 28 million) is allocated as a grant by the European Union (EU) to the ASMP

through World Bank to support five more districts, increasing the total number of project Districts up to 12 in the 6 provinces. The ASMP aims to support smallholder farmers to produce competitive high-value agricultural products, improve their ability to respond to market needs and access domestic and international markets and become efficient and sustainable market participants (Agriculture Sector Modernization Project, 2023)

The project seeks to contribute to two CPS focus areas, namely: “Supporting Structural Shifts in the Economy” and “Improved living standards and social inclusion” through:

- (a) Improving agricultural productivity and competitiveness to strengthen the links between rural and urban areas and facilitate Sri Lanka’s structural transformation;
- (b) Providing and strengthening rural livelihood sources, employment opportunities in agriculture and along agriculture value chains, as well as market access for the poor, bottom 40 percent, and vulnerable people, thereby improving income sources and livelihood security in lagging rural areas; and
- (c) Contributing to improved flood and drought management, through project’s linkages to the water and irrigation sectors and a climate-smart agriculture approach.

This project has three components.

1. The first component, Agriculture Value Chain Development, seeks to promote commercial and export-oriented agriculture; attracts and leverages investments from farmer producer organizations and agribusinesses for high value agriculture production and value addition; and provide the enabling environment, incentives, and access to finance such investments through matching grants, technical assistance support, linkages to the commercial banking sector, and a Partial Credit Guarantee (PCG) facility. It has three sub components as follows: (i) Investment preparation support; (ii) Matching grants to farmer producer organizations and agribusinesses; and (iii) Partial credit guarantee.
2. The second component, Productivity Enhancement and Diversification Demonstrations, aims at supporting smallholder farmers to produce competitive and marketable commodities, improves their ability to respond to market requirements, and moves towards increased commercialization. It has four sub components as follows:
  - (i) Farmer training and capacity building; (ii) Modern agriculture technology parks; (iii) Production and market infrastructure; and (IV) Analytical and policy advisory support.



3. The third component, Project Management, Monitoring and Evaluation, will support the Project Management Units (PMUs) of Ministry of Primary Industries (MOPI) and Ministry of Agriculture (MOA) and the Provincial Project Management Units (PPMUs) in the participating provinces in project management and coordination, technical supervision, financial management, procurement, social and environmental safeguards, and monitoring and evaluation.

The selected case study is pineapple scale up programme which has been implemented in Bandiyawa area of the Monaragala District. The location was selected based on the availability of water, land and suitability to produce a quality produce. Earlier cultivation pattern was to cultivate for one season and leave the lands fallow for the next season due to water scarcity. The project has given assistance to construct wells and irrigation system along with pineapple plants to cultivate 2acre land. The project which started in 2018 was successful. However, the fertilizer issue and fuel issue had serious implications for the extracting the full potential of the project. The second case study selected under the ASMP was chillie seed producing programme implemented in Dambulla and Galgamuwa area.

### **6.3.3 Case Study Three: Farmer's Market Programme Implemented by the UNDP**

#### **An Introduction to Farmers' Market Programme**

The two-case study locations the study selected were the Wayamba Isuru Farmers' Market in the Kurunegala District and Farmers' Market in Parangiyawadiya in the Anuradhapura District. The Farmers' Market Programme in Sri Lanka is a government-led initiative that aims to increase the income of rural ecological producers who are trying to adapt eco-friendly agricultural practices as an initiative for climate change. The programme is implemented by the Provincial Department of Agriculture of the North Western Province and North Central Province of Sri Lanka with assistance of the Climate Change Adaptation Project (CCAP) which has been implemented by the United Nations Development Programme (UNDP) in collaboration with the Ministry of Disaster Management. The programme was facilitated by the Jana Thakshan, a Non-Governmental Organization. In respect of quality assurance, the Provincial Department of Agriculture served as the major service provider (Hansika and Wijerathna, 2021).

### **6.3.4 Case Study Four: Integrated Economic Development of Central and Uva Provinces of Sri Lanka (IEDCUPS) Implemented by ACTED**

#### **An Introduction to IEDCUPS**

This programme was implemented in Sri Lanka by the Non-Government Organization called ACTED with the European Union Aid as the donor. The project period was from 14/07/2017 to 13/07/2021. Programme was implemented in Monaragala and Badulla Districts in Uva Province and Nuwara Eliya and Matale Districts in the Central Province.

Humanity and Inclusion, CEFENET Sri Lanka, Human Development Organization and 'Future in Our Hands' were the project partners. The objective was to contribute to poverty alleviation in Uva and Central Provinces of Sri Lanka by bringing public, private and civil actors together via a coordinated multi-stake holder approach. Major objective includes sustainably improve the livelihoods of the most vulnerable rural and estate communities in Badulla, Matale, Moneragala and Nuwara Eliya through the promotion of integrated, climate-resilient and inclusive socio-economic development. It has supported over 300 Micro, Small and Medium Entrepreneurs (MSMEs) operating in agriculture value chains while providing special attention to vulnerable groups such as estate communities, women and people with disabilities. It has helped tailored, risk sensitive business development, enhanced market linkages and support services. During the Covid-19 pandemic the project has supported local enterprises with business recovery plans, emphasising building resilience (European Union, n.d).

**Table 6.1 Sample Distribution Information of Each Case Study**

District	ASMP programme	IEDCUPS programme of ACTED	Farmers' Market Project of UNDP	Gami Diriya programme of World Bank	Total
Anuradhapura			27		27
Badulla				25	25
Dambulla	5				5
Hambantota				29	29
Kurunegala			27		27
Matale	10	14			24
Monaragala	29	26			55
Nuwara Eliya		15			15
Total	44	55	54	54	207

## 6.4 Demographic Data of Each Case Study

### 6.4.1 Age of the Household Head

**Table 6.2: Age of the Household Head**

Age of HH Head	ASMP	%	IEDCUPS	%	Farmers' Market Programme	%	Gami Diriya	%	Total	%
<= 30	2	5	2	4	3	6	0	0	7	3
31 - 40	7	16	6	11	2	4	9	17	24	12
41 - 50	13	30	19	35	14	26	14	26	60	29
51 - 60	10	23	16	29	21	39	19	35	66	32
61 - 70	11	25	12	22	14	26	6	11	43	21
> 70	1	2	0	0	0	0	6	11	7	3
Total	44	100	55	100	54	100	54	100	207	100

Source: Authors' Survey Data (2022)

The table shows age distribution of households heads selected for the four case studies. The percentage of heads of households aged 41 to 50 is the highest for ASMP and IEDCUPS programmes, which ranges from 30% to 35%. For Farmers' Market Programme and *Gami Diriya* Programme the highest percentage of household heads were aged between 51 to 60 years where the range is 35 % to 39%. Except for *Gamidiriya* programme the percentage of household heads aged 70 or older is the lowest in other programmes ranging from 0% to 2%. In the case of *Gamidiriya* Programme the lowest number of household heads in the range equal or less than 30 years was not apparent.

#### 6.4.2 Number of Members in the Household

**Table 6.3: Number of Members in the Household**

Number of Members in the Household	ASMP	%	IEDCUPS	%	Farmers' Market Programme	%	Gami Diriya Programme	%	Total	%
1	0	0	0	0	2	4	0	0	2	1
2	4	9	2	4	5	9	7	13	18	9
3	14	32	5	9	10	19	8	15	37	18
4	13	30	21	40	12	22	19	35	65	32
5	5	11	14	26	19	35	11	20	49	24
6	2	5	6	11	5	9	4	7	17	8
7	6	14	4	8	1	2	4	7	15	7
8	0	0	0	0	0	0	1	2	1	0
9	0	0	1	2	0	0	0	0	1	0
Total	44	100	53	100	54	100	54	100	205	100

Source: Authors' Survey Data (2022)

Table 4.3 illustrates the number of members in a household. According to the findings, the number of members in the household varies from one to nine whereas for all four projects, the maximum number of household members varies from three to five. According to the household income and expenditure survey of the census and statistics, the average Sri Lankan household size is about 3.7. The findings of the survey are closer to this value.

#### 6.4.3 Gender of the Household Head

**Table 6.4: Gender of the Household Head**

Gender of HHH	ASMP	%	IEDCUPS	%	Farmers' Market Programme	%	Gami Diriya Programme	%	Total	%
Female	3	7	2	4	12	22	11	20	28	14
Male	41	93	51	96	42	78	43	80	177	86
Total	44	100	53	100	54	100	54	100	205	100

Source: Authors' Survey Data (2022)

Table 6.4 illustrates the gender distribution of the household head. It can be noted that both in the ASMP and IEDCUPS projects, more than 93 percent of the households were male headed whereas in Farmers' Market programme and *Gamidiriya* Programme around 80 percent is male headed. This implies that for these projects nearly 20 percent of the households are female headed households. One of the major reasons for this could be the orientation of both the programmes have emphasized women empowerment.

#### 6.4.4 Educational Level of the Household Head

**Table 6.5: Educational Level of the Household Head**

Educational level of HH Head	ASMP	%	IEDCUPS	%	Farmers' Market Programme	%	Gami Diriya Programme	%	Total	%
One to Five	8	18	5	9	5	9	5	9	23	11
Six to Ten	6	14	12	23	13	24	12	22	43	21
Upto O/L	16	36	18	34	27	50	25	46	86	42
Passed O/L	2	5	4	8	0	0	0	0	6	3
Upto A/L	8	18	8	15	5	9	9	17	30	15
Passed A/L	3	7	3	6	4	7	3	6	13	6
Diploma	0	0	3	6	0	0	0	0	3	1
Degree	1	2	0	0	0	0	0	0	1	0
Total	44	100	53	100	54	100	54	100	205	100

Source: Authors' Survey Data (2022)

Table 6.5 shows the educational level of the household head. It is notable that majority of the household heads have received education up to GCE Ordinary Level. However, the number of household heads who have passed GCE Advanced Level and above is significantly low for all the case studies. This indicates that the education level of all the beneficiaries is relatively low.

#### 6.4.5 Primary Income Source of the Household Head

Table 6.6 shows the primary employment of the household head. The findings reveal that for all four case studies, the primary employment of the household head is related to agriculture where it can be either farming or animal husbandry. This was followed by self-employment for all three case studies except for the ASMP.

**Table 6.6: Primary Income Source of the Household Head**

Primary Occupation of HH head	AS MP	%	IEDCUPS	%	Farmers' Market Programme	%	Gami Diriya	%	Total	%
No Occupation	1	2	3	5	0	0	0	0	4	2
Agricultural Labour	0	0	1	2	0	0	2	4	3	1
Farming/Animal Husbandry	38	86	39	71	28	52	21	39	126	61
Skilled Labour	2	5	2	4	2	4	6	11	12	6
Non-Agricultural Labour	0	0	1	2	0	0	0	0	1	0
Self-Employment	0	0	7	13	9	17	11	20	27	13
Private Sector Employee	2	5	0	0	7	13	5	9	14	7
Government/Semi Government Employee	1	2	2	4	8	15	9	17	20	10
Total	44	100	55	100	54	100	54	100	207	100

Source: Authors' Survey Data (2022)

#### 6.4.6 Secondary Income Source of the Household Head

Table 6.7 shows the secondary income source of the selected beneficiaries for all four case studies. Household heads of the majority of sample beneficiaries of the all four case studies did not have a secondary income source. However, few of the beneficiaries have farming activities and self-employment as their secondary income source considering all four case studies.

**Table 6.7: Secondary Income Source of the Household Head**

Secondary Occupation of HHH	ASMP	%	IEDCUPS	%	Farmers' Market Programme	%	Gami Diriya Programme	%	Total	%
No Occupation	33	75	43	78	23	43	32	59	131	63
Agricultural Labour	1	2	0	0	0	0	0	0	1	0
Farming/Animal Husbandry	5	11	4	7	17	31	13	24	39	19
Skilled Labour	0	0	0	0	0	0	1	2	1	0
Self-Employment	4	9	5	9	14	26	8	15	31	15
Private Sector Employee	0	0	1	2	0	0	0	0	1	0
Government/Semi Government Employee	1	2	2	4	0	0	0	0	3	1
Total	44	100	55	100	54	100	54	100	207	100

Source: Authors' Survey Data (2022)

## 6.5 Level of Income Diversification for All Four Case Studies

### 6.5.1 Number of Income Sources

**Table 6.8: Number of Income Sources of Sample Households for Four Case Studies**

Income Source	ASMP		IEDCUPS		Farmers' Market Programme		'Gami Diriya' Programme		Total	
	Count	%	Count	%	Count	%	Count	%	Count	%
0	0	0	1	2	0	0	0	0	1	0
1	3	7	5	9	0	0	6	11	14	7
2	12	27	18	33	8	15	23	43	61	29
3	13	30	18	33	14	26	9	17	54	26
4	10	23	11	20	14	26	11	20	46	22
5	6	14	2	4	6	11	4	7	18	9
6	0	0	0	0	8	15	1	2	9	4
7	0	0	0	0	3	6	0	0	3	1
9	0	0	0	0	1	2	0	0	1	0
Total	44	100	55	100	54	100	54	100	207	100

Source: Authors' Survey Data (2022)

The number of income sources of sample households varies from two to nine for Farmers' Market Programme. For *Gamidiriya* programme the number of income sources ranges from one to six whereas for ASMP and IEDCUPS programmes it varies from zero to five. In the case study IEDCUPS, there was a household that claimed to have no income source which means though that household was provided with funding assistance of ACTED, at the moment they are unemployed. The highest number of income sources that the households are engaged in varies from two to four. Considering the ASMP case study, the majority of the households were engaged in three income sources whilst for IEDCUPS case study, the majority were engaged in two to three income generating activities. For households involved in Farmers' Market Programme, the highest number of households were engaged in three to four income generating activities whereas for *Gamidiriya* case study majority had two income generating activities.

Compared to Table 6.7 even though the findings revealed that the most of the household heads did not have a secondary income source this data reveals that the other members of the household are engaged in income generating activities as well.

### 6.5.2 Level of Income of Sample Households for Four Case Studies

Table 6.9 shows the level of total monthly household income for all four case studies. A significant variation could be observed with regard to the total income level for different case studies. Considering the three case studies of ASMP, Farmers' Market Programme and *Gamidiriya* Programme majority of the households had received an income from less than or equal to Rs 20,000 to Rs 40,000. However, as many as 33 percent of households who are beneficiaries of IEDCUPS had received an income above Rs 300,000. In the case of IEDCUPS this is a significant variation.

**Table 6.9: Level of Monthly Income for Sample Households for Four Case Studies**

Income Category (Rs)	ASMP		IEDCUPS		Farmers' Market Programme		Gami Diriya Programme		Total	
	Count	%	Count	%	Count	%	Count	%	Count	%
<= 20000	3	7	6	11	37	69	15	28	61	29
20,000 – 30,000	13	30	1	2	3	6	10	19	27	13
30,000 – 40,000	8	18	2	4	3	6	8	15	21	10
40,000 – 50,000	4	9	1	2	3	6	5	9	13	6
50,000 – 60,000	1	2	6	11	3	6	4	7	14	7
60,000 – 70,000	2	5	1	2	0	0	1	2	4	2
70,000 – 80,000	1	2	4	7	2	4	2	4	9	4
80,000 – 90,000	0	0	2	4	0	0	1	2	3	1
90,000 – 100,000	1	2	2	4	1	2	1	2	5	2
100,000 - 150,000	3	7	8	15	1	2	2	4	14	7
150,000 – 200,000	3	7	3	5	0	0	1	2	7	3
200,000 – 300,000	4	9	1	2	0	0	1	2	6	3
> 300,000	1	2	18	33	1	2	3	6	23	11
Total	44	100	55	100	54	100	54	100	207	100

Source: Authors' Survey Data (2022)

**Table 6.10: Proportion of Income Received from Concerned Income Diversification Activity**

Proportion Income (%)	ASMP		IEDCUPS		Farmers' Market Programme		Gami Diriya Programme		Total	
	Count	%	Count	%	Count	%	Count	%	Count	%
<10	6	14	6	11	27	50	9	17	48	23
10 - 20	10	23	4	7	9	17	11	20	34	16
20 - 30	8	18	4	7	8	15	12	22	32	15
30 - 40	4	9	18	33	6	11	7	13	35	17
40 - 50	3	7	5	9	2	4	2	4	12	6
50 - 60	3	7	6	11	2	4	4	7	15	7
60 - 70	1	2	2	4	0	0	0	0	3	1
70 - 80	3	7	2	4	0	0	1	2	6	3
80 - 90	3	7	4	7	0	0	0	0	7	3
90 - 100	3	7	4	7	0	0	8	15	15	7
Total	44	100	55	100	54	100	54	100	207	100

Source: Authors' Survey Data (2022)

Table 6.10 explains the proportion of income received from concerned income diversification activity considering the total income. Considering ASMP project, out of total sample beneficiaries, majority (23 percent) received 10-20 percent of their income from concerned income diversification activity. About 18 percent of households have received about 20-30 percent of their income from the concerned income diversification activity which is the second highest.

Considering IEDCUPS programme, about 33 percent of the sample beneficiaries received 30-40 percent of their income from concerned income generating activity. About 11 percent of sample beneficiaries had received both less than 10 percent and 50-60 percent of their income from concerned income diversification activity.

In the Farmers' Market Programme, about 50 percent of the sample farmers have received less than 10 percent of their income from the particular income generating activity whilst about 17 percent of the sample farmers have received about 10-20 percent of their income from a specific income generating activity. 15 percent of the sample farmers have received 20-30 percent of the household income from concerned income generating activity.

With regard to the *Gamidiriya* programme, 22 percent of the households have received 20-30 percent of household income from concerned income diversification activity whereas 20 percent of the households had received 10-20 percent of income from concerned income diversification activity. This was followed by 15 percent of the households that received less than 10 percent of income from concerned income diversification activity.

## **6.6 Sustainability Analysis of the Case Studies**

### **6.6.1 Level of Sustainability**

There are a number of definitions for sustainable livelihoods. One of the most commonly used definition for sustainable livelihoods is "a livelihood comprises the capabilities, assets (stores, resources, claims and access) and activities required for a means of living: A livelihood is sustainable which can cope with and recover from stress and shocks, maintain or enhance its capabilities and assets, and provide sustainable livelihood opportunities for the next generation, and which contributes net benefits to other livelihoods at the local and global level and in the short and long term (Chambers and Conway, 1992)".

Then by the Institute of Development Studies a modified definition has proposed as follows "a livelihood comprises the capabilities, assets (including both material and social resources) and activities required for means of living. A livelihood is sustainable when it can cope with and recover from stress and shocks, maintain or enhance its capabilities and assets, while no undermining the natural resource base".

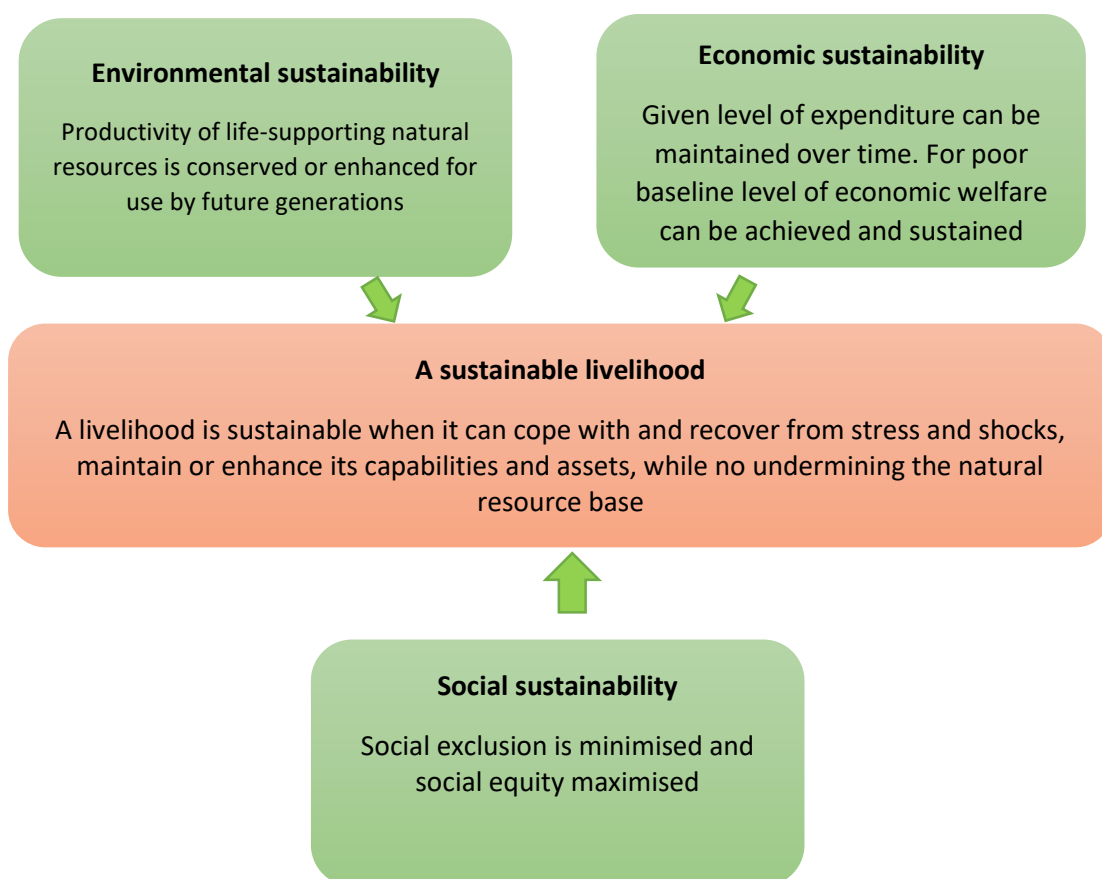
According to Sustainable Livelihood Framework, livelihoods are sustainable when they are;

1. Resilient in the face of external shocks and stresses
2. Not dependent on external support (or if they are, this support itself should be economically and institutionally sustainable)
3. Maintain long-term productivity of natural resources
4. Do not undermine the livelihoods of, or compromise the livelihood options open to others



Another way of conceptualizing many dimensions of sustainability is to distinguish between environmental, economic, and social aspects of sustainable systems.

1. Environmental sustainability is achieved when the productivity of life-supporting natural resources is conserved or enhanced for use by future generations
2. Economic sustainability is achieved when a given level of expenditure can be maintained over time. In the context of the livelihoods of the poor, economic sustainability is achieved if a baseline level of economic welfare can be achieved and sustained. (The economic baseline is likely to be situation-specific, though it can be thought of in terms of the “dollar a day” of the international development).
3. Social sustainability is achieved when social exclusion is minimised and social equity maximised.



Source: Compiled by Authors based on the literature

As the methodology describes the level of sustainability for different case studies were analysed using selected indicators under three pillars of sustainability. Based on the literature fourteen were selected as social sustainability indicators, seven indicators were selected as economic sustainability indicators, four indicators were selected as environmental sustainability indicators. Using the principal component analysis, the

study could narrow down to 20 uncorrelated variables which include 11 social sustainability indicators, five economic sustainability indicators and four environmental sustainability indicators as shown below.

**Table 6.11: Results Table of Principle Component Analysis for Sustainability Indicators**

		Variable name	PC 1	PC 2	PC 3	PC 4	PC 5	PC 6	PC 7	PC 8
Social Sustainability indicators	1	Sufficient and equal access to basic needs	0.658							
	2	Sufficient and equal access to social infrastructure			0.568					
	3	Preserve the rights of other people's livelihood opportunities					0.706			
	4	Help improve community development	0.563							
	5	Inherent ability to resolve immerging issues		0.549						
	6	Mechanisms for political advocacy to meet needs of income generating activity								0.561
	7	Provide opportunities for learning and self-development	0.500							
	8	Encourage social cohesion, inclusion and interaction		0.637						
	9	Help overcome disadvantage attributes due to personal disabilities		0.515						
	10	Increase sense of environmental security	0.575							
	11	Increase the level of social recognition	0.505							
Economical_Sustainability_01	1	Help generate employment opportunities				0.654				
	2	Provide benefits to other liaison organizations				0.599				
	3	Help generate benefits to entire community		0.667						
	4	Help improve existing infrastructure		0.598						
	5	Increased the sense of economic security	0.573							
Environmental_Sustainability_01	1	Favour maintenance, enhancement or conservation of natural resources	0.709							
	2	Increase ecological awareness of the society	0.660							
	3	Help conserve natural resource base	0.634							
	4	Cause soil erosion, declining of water table, soil salinization							0.673	

Then to calculate the Composite Index each indicator is given with a weight as shown below, based on the literature review, key informant discussions and discussions with the research team (Table 6.12).

**Table 6.12: Weight Allocation for Indicators**

		Variable Name	Weight %	Total
Social Sustainability indicators	1	Sufficient and equal access to basic needs	20	100
	2	Sufficient and equal access to social infrastructure	20	
	3	Preserve the rights of other people's livelihood opportunities	10	
	4	Help improve community development	5	
	5	Inherent ability to resolve immerging issues	10	
	6	Mechanisms for political advocacy to meet needs of income generating activity	5	
	7	Provide opportunities for learning and self-development	10	
	8	Encourage social cohesion, inclusion and interaction	5	
	9	Help overcome disadvantage attributes due to personal disabilities	5	
	10	Increase sense of environmental security	5	
		Increase the level of social recognition	5	
Economical Sustainability	1	Help generate employment opportunities	30	100
	2	Provide benefits to other liaison organizations	10	
	3	Help generate benefits to entire community	10	
	4	Help improve existing infrastructure	20	
	5	Increased the sense of economic security	30	
Environmental Sustainability	1	Favour maintenance, enhancement or conservation of natural resources	30	100
	2	Increase ecological awareness of the society	20	
	3	Help conserve natural resource base	25	
	4	Cause soil erosion, declining of water table, soil salinization	25	

Finally, Table 6.13 shows the level of sustainability for different case studies

**Table 6.13: Level of sustainability for different case studies**

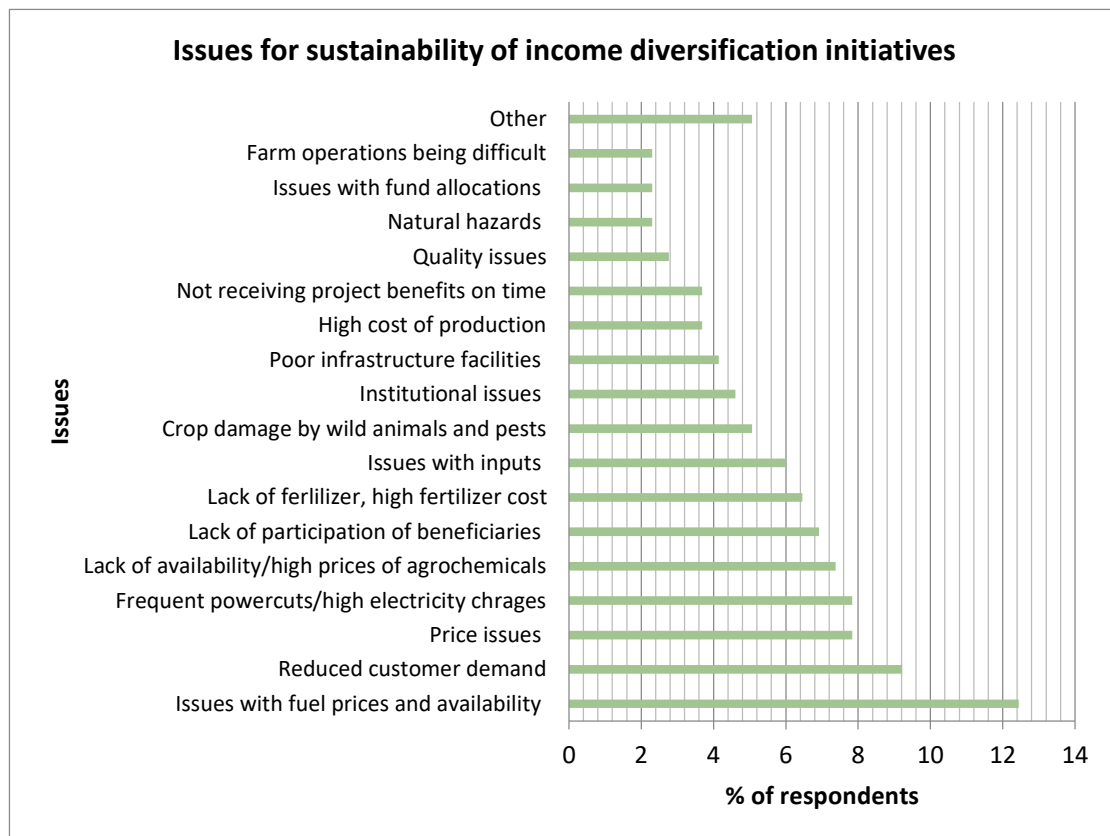
Case study	Sub compost indices-Social	Sub compost indices-Economical	Sub compost indices-Environmental	Composite Sustainability Index
ASMP	0.25*	0.25*	0.21*	0.24*
IEDCUPS	0.30*	0.39*	0.18*	0.29*
Famers' Market Programme	0.22*	0.39*	0.05*	0.22*
Gami Diriya Programme	0.19*	0.21*	0.28*	0.23*

\* Denote significant at 5%

Source: Authors' Survey Data, 2022

### 6.6.2 Key Factors Affecting Sustainability of Income Diversification Initiatives in a Given Context

The following section discusses the factors affecting level of sustainability of the case studies. Figure 6.2 shows the major factors that affect the level of sustainability of different income diversification initiatives as stated by the sample beneficiaries. It is observed that the mostly stated six issues namely issues with fuel prices and availability, reduced customer demand, price issues, frequent power cuts and high electricity charges, lack of availability and high prices of agro-chemicals and issues with inputs are mainly related to the recent economic crisis. Therefore, the issues that are shown in the figure can be broadly categorized into two major categories as external and internal environmental factors that have an impact on the level of sustainability of income diversification initiative. As shown in Table 6.14 external environmental factors can be further categorized as technological, economic, political and legal, global and environmental factors. However, the income diversification entity as a household or as a cooperative has zero or a very little control over these factors. For example, many of issues arisen following the recent economic crisis, Covid-19 pandemic or Easter attack a local small entity has almost no control over.



**Figure 6.2 Issues Affecting Sustainability of Income Diversification**

**Table 6.14: External Environmental Factors**

External environmental factors	
Technological factors	Input issues
Economic factors	Reduced demand
	Price issues
	Power generating issues
	Fuel issue
	Agrochemical issue
	Poor infrastructure facilities
	High cost of production
	Issues with fund allocations
	Reduced productivity
	Macro-economic impacts collapse business
Political and legal factors	Legal issues on extracting raw materials
Global factors	Macro-economic impacts collapse business
Environmental factors	Crop damages by wild animals and pests
	Natural hazards

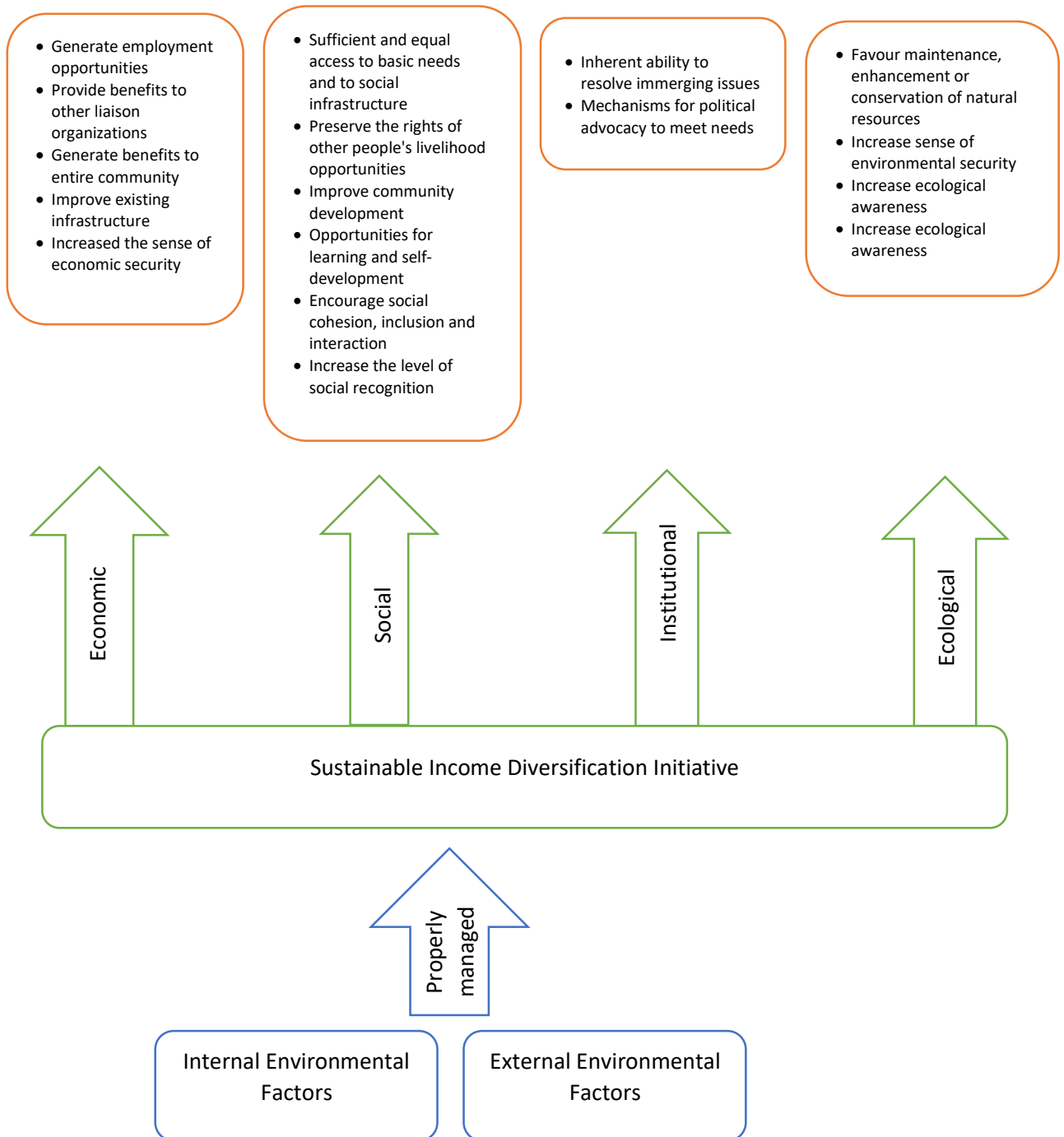
The other set of issues identified under internal environmental factors, as shown in Table 4.15, can be further categorized into factors related to human resources, value systems, financial and market resources, and plans and policies of project implementation. The key factor is either the household or any other relevant stakeholders of income diversification, has the ability to address these issues before or after they arise.

**Table 6.15: Internal Environmental Factors**

Internal environmental factors	
Human resources	Lack of participation and coordination between beneficiaries
Value system	Perceptions on farm operations being difficult
Financial and market resources	Poor infrastructure facilities
	Issues with fund allocations
Plans and policies	Institutional issues
	Poor infrastructure facilities
	Not receiving project benefits on time
	Quality issues
	Issues with project planning and implementation

Above two are the significant factors that should pay attention to when making a plan to implement sustainable income diversification initiative.

Based on the above findings, the optimum conditions required to develop sustainable income diversification initiative have been illustrated in Figure 6.3.



**Figure 6.3: Optimum Conditions to Implement a Sustainable Income Diversification Initiative**

Source: Compilation of Authors



## CHAPTER SEVEN

### Conclusion and Recommendations

#### 7. 1 Conclusions

1. The study reviewed five major income diversification initiatives implemented in Sri Lanka since 2006 to understand key strengths, weaknesses, opportunities and threats associated with those projects.
2. Having a well-structured project structure at national and regional level, provision of assistance to a large number of households, availability of Island wide network were identified as key strengths. In addition, increased women participation, community empowerment, and continuous attempts of the government authorities to adhere to international standards were other key strengths.
3. However, weaknesses of targeting lose transparency, corruption, frequent changes in leadership and external influences in selecting leadership rather than focusing on leadership qualities, poor addressing of actual needs of beneficiaries, lack of integrity between leadership, other officers and beneficiaries and poor monitoring and evaluation were found to be hindering factors to achieve the objectives of these initiatives.
4. The study identified that usage of multi-skills for income generation, lower cost of production due to usage of own resources, and public policy having high priority for poverty alleviation as potential opportunities to make these initiatives further successful.
5. Absence of proper and constant market for products, climate change impacts, degradation of natural resources and economic recession were identified as major threats to the success of these initiatives.
6. A majority (around 60%) of households has received income from paid employment while only around 30% has received income from agricultural activities including both crops and livestock. Of the total sample, nearly 20% of the households depend on a single income source and no diversification was observed. Among the households relying on cultivation of seasonal crops the majority (79%) were engaged in paddy cultivation while 19% and 10% were engaged in cultivation of vegetables and cereals, respectively. Of the households engaging in cultivation of perennial crops majority cultivates plantation crops (tea, rubber, coconut) followed by minor export crops (coffee, pepper, betel, etc) category.
7. Major determining factors are, age of the household head, his/her level of education, number of members in the household, number of workers in the household who are above 15 years, number of members suffering from chronic illness or disability, district, gender of household head, indebtedness, and ownership of agricultural lands and ownership of livestock.



8. Major factors affecting the social sustainability were found to be sufficient and equal access to basic needs, sufficient and equal access to social infrastructure, preserve the rights of other people's livelihood opportunities, help improve community development, inherent ability to resolve emerging issues, mechanisms for political advocacy to meet needs of income generating activity, provide opportunities for learning and self-development, encourage social cohesion, inclusion and interaction, help overcome disadvantage attributes due to personal disabilities, increased sense of environmental security and increased the level of social recognition.
9. Major factors affecting economic sustainability are: help in generating employment opportunities, providing benefits to other liaison organizations, help in generating benefits to the entire community, and help in improving existing infrastructure.
10. Major factors affecting environmental sustainability included favour maintenance, enhancement and conservation of natural resources, increased ecological awareness of the society, help conserve natural resource base and reduce soil erosion, declining of water table, soil salinization.
11. Study findings explain that once an income diversification initiative is implemented, there are macro, and micro environmental factors which can have an impact on the sustainability of income diversification initiative. The levels of control the project implementers have on internal environmental factors are higher compared to macro environmental factors.

## **7.2 Recommendations**

1. When designing and implementing a sustainable income diversification programme, the ways in which the income diversification programme would achieve key social, economic and environmental sustainability factors at the initial planning stage and during monitoring and evaluation stages should be clearly identified.
2. Emphasis should be given to factors identified as “key determinants” during beneficiary selection and their impact on sustainable project implementation should be evaluated. Eg: According to the study findings, likelihood of income diversification is high among older household heads. This can be attributed to the experience and risk-taking ability in elderly population as their knowledge and experience accommodate risks compared to the younger population.
3. During project design, implementation, and monitoring and evaluation stages, a clear plan should be in place to address potential macro and micro environmental issues and beneficiaries should be well trained to thrive in a crisis situation, using diverse coping or diversification mechanisms. Thus, the project will continue without consistent external support.

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