



Livelihood Enhancement of the Small Farmers in SAARC Region through Small Scale Agro-Business Focusing on Value Chain Development

Project Completion Report



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SAARC Development Fund (SDF)

Coordinating Agency:
SAARC Agriculture Centre (SAC)



SAARC Agriculture Centre (SAC)



SAARC Development Fund (SDF)

Project Completion Report (PCR)

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This document 'Project Completion Report' is the comprehensive final reported product that highlights achievements against the development objectives and accomplish the major interventions made during the course of implementation of 'Livelihood Enhancement of the Small Farmers in SAARC Region through Small Scale Agro-Business Focusing on Value Chain Development'

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**South Asia Association
for Regional Cooperation
Secretariat**

Message

The South Asian Association for Regional Cooperation (SAARC) was established in December 1985. Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka were the founder members of the regional association while Afghanistan joined the association in 200T. Globally, South Asia is the most densely populated region in the World with 2.09 billion people (2025) which represents around 25% of the world population. Over 42% of the workforce in South Asia is dependent on agriculture, with the percentage varying significantly from country to country. While the region is experiencing a slow transition to other sectors, agriculture still remains a vital source of income and employment for a vast majority of the rural population. As of 2024, agriculture, forestry and fishing contribute 15.690/o to the total gross domestic product (GDP) of the South Asia region.

Fruits and vegetables play a major role in the agricultural economy of the SAARC countries. These countries grow a large variety of indigenous and exotic fruits and vegetables. Most of the member countries of SAARC, for the past several years, maintained a positive growth in production of fruits and vegetables which is resulting in enhanced farmer incomes, poverty alleviation and improved quality of diet.

In this context, a project titled 'Livelihood Enhancement of the Small Farmers in SAARC Region through Small Scale Agro-business focusing on Value Chain Development' was implemented by SAARC Agriculture Center (SAC) in the SAARC region for the period of 2019 to 2025 . The project is aimed at poverty alleviation of the region by introducing new technologies especially, to create awareness among the rural smallholder farmers on the importance of the value-added products by establishing small scale processing centers. It is our pleasure to know that the project introduced numbers of value-added crop products like jackfruit and cassava chips, carrot and radish pickle, ginger powder, numbers of processed moringa products and popularized virgin coconut oil among the farming communities.

I am glad to know the SAC has taken an initiative to publish the 'Project Completion Report' of this successfully implemented project. I hope that this publication will act as guiding document for the researchers and the professionals who are engaged in project formulation in agricultural sectors.

On this occasion, I would like to convey my sincere felicitation to the SAARC Agriculture Center for successfully completing the project and publishing' Project Completion Report'. I also sincerely acknowledge the valuable contributions of the focal persons of different implementing agencies of the member states, Bangladesh, Bhutan, India, Maldives and Sri Lanka in completing the project activities and reporting.

Ambassador Md. Golam Sarwar
Secretary General of SAARC



SAARC Agriculture Centre

Message

SAARC Agriculture Centre (SAC) is the Regional Centre of excellence dedicated to accelerate and promote thematic discussion and capacity building in agriculture and allied science for ensuring food and nutritional security and livelihood improvement in South Asia. The SAC is relentlessly working to document, disseminate and promote farmer-friendly technologies in the broad field of crops, livestock and fisheries after due contemplation to environment, emerging pest and trans-boundary diseases, food security and safety and wellbeing for the regional growth and prosperity. In this direction, the SAC is currently working hard to mitigate conventional and emerging challenges and policy guidelines in the much-needed areas.

Based on the policies of SAC it has designed and executed the project 'Livelihood enhancement of the small farmers in SAARC region through small scale agro-business focusing on value chain development' from 2019 to 2025. The project successfully accomplished the set development objectives and achieved the outputs like reduction of post-harvest loss of fruit and vegetables, production of marketable finished products from tomato, jackfruits, cassava etc., enhanced family income and employment of rural poor through establishing processing centers in the rural areas as a production hub through market access to super chain shops at nearby cities. This success is not only the credit of project implementing team but also to the whole SAC family, SAARC and SDF authority.

I greatly acknowledge and sincerely appreciate for a whole hearted support by Dr. Md. Younus Ali, Project Coordinator, SAC, Dhaka in implementing the project and compiling this invaluable document. I sincerely acknowledge the contributions of the participating focal points of implementing agencies of different member states and other fellow colleagues who extended their untiring endeavors for preparing this valuable 'Project Completion Report'.

I honestly believe that researchers and practitioners will get regional update information related to post harvest processing of fruits and vegetables that may be helpful for using as a guide in future formulation.

My sincere gratitude to the authority of SAARC Development Fund (SDF) for their generous support by realizing the difficulty in field execution of multi-country projects with common objectives under different management systems. I hope this support of SDF to the SAC would continue in near future to implement some other innovative project for SAARC region.

Dr. Md. Harunur Rashid
Director



SAARC Agriculture Centre

Acknowledgement

This Project Completion Report (PCR) is highlighted achievements made during the implementation period in the partner members states. I hope the report would offer an overview of the project for readers and especially to the future project designers. It contained a brief overview of the project's achievements, challenges, opportunities, goals and success stories. The most significant achievement we can share with the readers are 48% reduction of post-harvest loss of fruits and vegetable crops in the SAARC region accomplished by the project.

The dynamic leadership of the Director, SAC encouraged the project team to publish the report as document, we do appreciate and acknowledged his enthusiasm to make our efforts to produce a successful report.

Successful implementation and mentionable achievements of the project was a joint effort of focal points of the collaborative Member States of SAARC, without their strong commitment it could not be possible for the project coordinator to complete the project and published the document. We are highly obliged for their enormous collaboration and support.

I appreciate the RDA Bangladesh, DAMC Bhutan, MSSRF India, MoA&AW Maldives, DoA Sri Lanka and SAC Bangladesh for their considerable contribution in this endeavor.

I would like to express my sincere gratitude to officials of the SAARC Development Fund (SDF) for their untiring efforts to publish the report

Finally, my heartfelt thanks to the consultant who cordially helped the project coordinator to produce the final project completion report of the livelihood enhancement project.

Dr. Md. Younus Ali

Project Coordinator

Livelihood Enhancement Project of SAC

Executive Summary

South Asian Region comprises one of the largest populace regions in the World with 1.6 billion people which represents 24.2 % of the World population. The agriculture sector provides employment to 70% of the population and contributes to 24-50% of GDP. Average across the region, almost 60% of the regional population depends on agriculture for their livelihood. Operating with average land holding of less than 1 hectare more than 25% fall below poverty and face acute shortage of food. This regional population is also vulnerable to malnutrition.

Fruits and vegetables significantly contribute to the agricultural economy of the SAARC Member Countries. The SAARC Member Countries produce large quantities of indigenous and exotic varieties of fruits and vegetables. Most Member Countries of SAARC in the past several years have been maintaining positive growth in the production of fruits and vegetables indicating the increasing role that they are playing in enhancing farmers' incomes, alleviating poverty and improving the quality of nutritious diet. In most of the SAARC Member Countries vegetables get obvious priorities as they are less risky to grow as compared to fruits. The agricultural sector in the region encounters some challenges which include high post-harvest loss, inadequate processing facilities and skills, poor linkages of supply chain to the specialized markets, lack of modern production and processing technologies, high price of necessary inputs. On the basis of the findings, this project "*Livelihood enhancement of the small farmers in SAARC region through small scale agro-business focusing on value chain development*" is implemented food processing model in two pilot sites in each of the participating countries.

An agricultural value chain is the integrated range of goods and services (value chain) necessary for an agricultural product to move from the producer to the final consumer. The value chain development helps small-scale agribusinesses by connecting them to wider markets, providing access to essential resources and knowledge, enabling them to add value to their products through processing and improved practices and ultimately leading to increased and more stable incomes. By integrating farmers into efficient value chains, they can move from subsistence farming to commercial production, foster greater financial stability and improve their overall livelihoods.

On the other hand, Small-scale agribusiness enhances smallholder farmer livelihoods by improving market access, ensuring fairer prices and income, fostering knowledge and technology adoption and creating diverse income opportunities through better value chains. By connecting farmers directly or through organized cooperatives to processors, traders and retailers, value chain development reduces reliance on intermediaries, encourages investment in better quality and diversified produce and builds economic resilience

The project is aimed to promote value addition of agriculture, especially value-added crop products through food processing by establishing processing centers in remote areas and to develop them as production hubs of agro-products. Rural entrepreneurship development through agro-processing was the resultant output assumed by the SAARC Agriculture Center. By the course of activities, the project targeted to enhancing livelihoods of small and marginal farm households in SAARC countries. The livelihood enhancement project implemented in five SAARC countries: Bangladesh, Bhutan, India, Maldives and Sri Lanka under the funding support of SDF during 2020 to 2025. Out of the implementing member states Maldives are in half way of completion of designed activities.

The Goal of the Project is to promote a modern agri-businesses model in selected sites with a major focus on promoting small agro-processing equipment for quick value addition to fruits and vegetables. While the major objectives of the project were to:

- Identify and replicate successful food processing technologies and models for fruits and vegetables in South and South-East Asia Region

- Increase skill and capacity of smallholder farm families on value addition to the locally produces fruits and vegetables
- Increase income and improve livelihoods of the small holders
- Promote empowerment of rural women and create employment through promotion of agri-businesses
- Develop value chain of the agricultural produces and products and mainstreaming the locally produced commodities

This Project Completion Report (PCR) is a comprehensive final report that highlighted achievements against the development objectives and accomplished the major interventions made during the course of project implementation. The report included i) project strategy and approach ii) project targeting iii) project management and coordination iv) project logical frameworks v) project costs and financing. It assessed the project implementation and effectiveness, highlighted overall project achievement. The PCR elaborated the key impact of the project and lesson-learned is one of the important components to help readers to consider the issues during designing the new project (s). It documented every step of the project to assess its overall success including publications. This report would offer an overview of the project for senior management teams to determine which aspects were successful. In addition, the completion report provided an opportunity to examine future improvement strategies and develop best practices for future projects. As of other PCR this project completion report contained the project's objective, the necessary processes and how the team fulfilled those procedures. In addition, it provided a brief overview of the project's challenge, opportunities, goals and success indicators.

During preparing the PCR, no primary data were collected for the purpose rather used secondary information and by collating all the available information, a comprehensive report is produced. The document review, consultation meeting with the concerned officials especially with the Project Coordinator and other component Focal Points, available case studies (if any) were adopted to develop the project completion report. Beside discussion with concerned officials, the following approaches were accomplished:

- Used secondary information available in the project office as well as in the office of the collaborative countries
- Information was collected through reviewing the quarterly and project reports
- Information was gathered from the concerned regional offices and IAs
- Data were collected on all sorts of project events like training, seminar, workshops and important visits of local and foreign delegates
- The project's outcomes were aligned with the development objectives sets during formulation of the project.

The overall strategy of the project was to reduce poverty through livelihood development of the poor especially rural women. Another strategy was to promote food processing for value addition and market studies as well on fruits and vegetable in SAARC Member Countries through establishing small scale processing centers in the country sides. The project design was similar to SDF investments based on group mobilization of marginal and small women in each of the participating countries. The project was target oriented (organize rural women) and to operate the established processing centers. The project intervention initiative was based on value chain analysis and value addition of crop products with market development. The project objectives were to be achieved through strengthening skill development of beneficiaries to produce value added products and linkage development with the upgrade markets of the semi-urban and urban areas.

The key achievements against the set objectives are: i) Replication of technology ii) Capacity development of small households iii) Income and livelihood enhancement and iv) post-harvest loss reduction were successfully attained during the course of project implementation.

Replication of technology

Against the objective of 'access to new technology' Bangladesh accomplished 300% enhancement in accessibility of smallholders to modern technologies with 3 technologies in baseline to 12 technologies at project closing; Bhutan achieved 175% increase technological enhancement from 4 to 11 numbers; India 267% from 3 to 11 and Sri Lanka 133% from 3 to 7 numbers. Across over countries the achievement was 215%.

Capacity building of smallholders

Better achievement in capacity building of rural households was attained by each of the participating countries of the project. Bangladesh provided skill development training to 400 beneficiaries, Bhutan provided small scale business training to 64 smallholders, India 536 families and Sri Lanka to 161 farm households; altogether 1161 farm families were received skill development training from the project.

Income and livelihood enhancement

Averaged across the two/three sites, the family income of the project beneficiaries due to project implementation increased by 40% in Bangladesh; 55% in Bhutan, 2.8% in India and 46% in Sri Lanka. The overall enhancement of family income across project implementing countries was 25%

Post-harvest loss reduction

The post-harvest loss reduction of interventional crops (banana, jackfruit, tomato) observed 26% reduction in Bangladesh; 67% with interventional crops (moringa and radish) in Bhutan; 37% with interventional crops (moringa and coconut) in India and 33% with interventional crops (cassava, banana and peanut) in Sri Lanka. The overall post-harvest loss of vegetables and fruit crops was 48% against the target of 10%.

Employment generation

Considering the labor use in farming by the project beneficiaries and the staff employed in the processing centers, the employment generation was enhanced by 39% in Bangladesh, 95% in Bhutan, 42% in India and 28% in Sri Lanka. Across over implementing countries the employment enhancement was 54%.

Except Bhutan all other participating countries/organizations completed their financial activities of the project within 2023. It has been observed that maximum works of the project undertaken during the year 2022 followed by the year 2021, 2023 and 2020. Maximum implementing agencies completed the construction of their processing centers by the year 2022 and purchased equipment for the centers during 2023 and 2024 (Bhutan). Activities for accessibility to modern technologies, capacity development and business promotional activities continued throughout the project period from 2020 to 2023, while only Bhutan continues certain activities till 2025.

Considering the overall performance of the project, it successfully formed the planned numbers of producer groups (two in each center) with required numbers of members (50/group with both male and female) in each of the project sites of the member states. Succeeded in establishing two to three food processing centers with required equipment for value addition activities (packaging of chips and sauces, sealers etc. for producing the cassava or jackfruit chips and other products from moringa and coconut). It has been reported that the vacuum fried jackfruit chips are gained popularity in Bangladesh and numbers of service providers have already been started to produce the chips.

The key lesson learned of the project are:

- The women producer groups need market support from large food companies to survive in long run. The processing center would have to take initiative to make certain market linkage to the cities for the producer groups

- Dwarf varieties of coconut and moringa crops are to be developed and distributed to the farmers to continue and extension or popularize the value-added products being marketed by the producer's group in support of the livelihood enhancement project
- The market volume of moringa value added products (leaf powder, paste, tea etc.) is still limited in the country like Bhutan, Bangladesh and Sri Lanka, so more extension works are to be needed
- With the expansion of surface water irrigation systems coconut or moringa cultivation as field crop may replace in near future by maize or other high value short seasoned crops, so land-productivity are to be increased many folds by introducing appropriate inter or mixed cropping
- The marketing of value-added vacuum fried chips from banana and cassava is acute for the producer groups, which might be improved by using contractual vendors under profit share concept
- Well-designed proper packaging systems for the salable products of the producer groups is yet to be introduced, necessary skill development training on wrapping and good quality attractive packaging would enhance market demand and ensure higher price
- Business would need enough cash flow, the staff at the center would have to take lead role so that the producer groups can get chief credit from the local banking systems, which will help to enhance their production of crops/products

Instead of 2018 actually the project became operational/effective in 2019 due to addressing the tithing troubles of starting the multinational project, initially in some member states, it suffered from non-compliance of Government procedures. Delayed start of the project forced to delay the establishment of processing centers and procurement of required machineries, so country like Sri Lanka faced difficulty in marketing of processed value-added products. It is to be recommended that i) the processing centers still need some supports from the project-participated implementing agencies to establish linkage with the large companies and use the centers as production hubs of the targeted products ii) The established food processing centers with its producer groups are to be operated as a production hubs and the representatives of food/beverage companies will collect these finished products as per weekly schedule iii) The dilemma of marketing is to be improved to sustain introduced Income Generating Activities (IGAs) of the producer groups iv) Linkage or bonding between producer groups and local extension workers/agencies is to be made stronger through regular interaction and by arranging exchange visits v) Considering the Indian success for moringa value chain, the SAC may take new initiative to design a follow up project on the extension of moringa value chain in the SAARC countries.

Acronyms

BDT	Bangladesh Currency (Taka)
Btn	Bhutanese Ngultrum
ETC	Extension and Training Centre, Sri Lanka
GAP	Good Agricultural Practices
GDP	Gross Domestic Product
GPP	Good Post-harvest Practices
IA	Implementing Agency
ICAR	Indian Council for Agriculture Research
ICT	Information and Communication Technology
IGA	Income Generating Activity
INR	Indian Rupee
IPM	Integrated Pest Management
Kg	Kilogram
LKR	Sri Lankan Rupee
MSSRF	M.S. Swaminathan Research Foundation
PCR	Project Completion Report
PCD	Project Coordinating Director
PD	Project Director
RDA	Rural Development Academy
RRF	Results and Resource Frameworks
SAARC	South Asian Association for Regional Cooperation
SAC	SAARC Agriculture Centre
SDF	SAARC Development Fund
SDG	Sustainable Development Goal
SME	Small and Medium Enterprise
SSC	Secondary School Certificate
TSS	Total Suspended Solids
USD	United States Dollar (currency)

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Project Completion Report

Livelihood Enhancement of the Small Farmers in SAARC Region through Small Scale Agro-business Focusing on Value Chain Development

1. Background Information

In spite of the increase in food production in the SAARC region, poverty and malnutrition remains as a major issue in the region. The region with more than 70% of population inhabiting in rural areas and engaging in agriculture is trapped in malnutrition. Low crop productivity, limited income sources, limited skills and technologies to diversify livelihood sources are some of the constrained and or the reasons, which restrained the rural folks to come out of the poverty trap. Eradication of poverty and hunger has become a global mission now with the United Nations' commitment to address the issue (SDGs).

With the improvement in communication systems (road connectivity and access to ICT and services (extension) farmers are more aware of the market, consumer demand, product diversification, status of traditional food and products and pride of local food products. A common problem of smallholder farmers and families is the limited financial resource and skill to adopt small processing units to process seasonal fruits and vegetables into marketable products. The social structure of South Asia, where women folks tend to stay home can actually take benefit of this model (small scale processing unit operated by women producer groups) as they can produce various products, sell and can generate income. The income generation would indirectly support empowerment of women in better managing the family and their own needs.

Depending on the product diversity and quality, these small/micro household processing units can be successfully linked to upstream value chain in urban centers where traditional/local foods are gradually becoming popular. In addition, these household processing units can also be an incentive to downstream production systems, where farmers would have opportunity to invest or bring back the traditional crops both in their backyards and farm.

At a time when we are faced with the issue of income disparity, poverty, employment and rural-urban migration, intervention at household or family level with clear upstream (value chain, group-community, federation) and downstream (production) linkages has the potential to revive the rural economies and sustainable livelihood system. In contrast, South East Asia has diversity of SME Models and small processing units that has enhanced and sustained rural economies.

2. The SAARC Agriculture Centre (SAC)

The Head of the States or government established the South Asian Association for Regional Cooperation (SAARC) on the 08th Day of December 1985. Seventh Asian Nations: Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka were the founder members of the regional association. Later Afghanistan became the eighth member country in 2007.

SAARC Agriculture Centre (SAC) is the Regional Centre of excellence dedicated to accelerate and promote thematic discussion and capacity building in agriculture and allied sectors for ensuring livelihood, food and nutritional security in South Asia. Realizing the immense contribution of



agriculture over the lives and livelihoods of the people of South Asia, the Apex body of the South Asian Association for Regional Cooperation (SAARC) established the SAC as the First Centre to cater the farming-sector needs of its Member States and currently the Centre has earned the prestige and honor to became the “Centre of Excellence in South Asia”.

The SAC is relentlessly working to document, disseminate and promote farmers-friendly technologies in the broad field of crops, livestock and fisheries after due contemplation to environment, emerging pest and trans-boundary diseases, food security and safety, climate change and finally the consumer health and wellbeing for the regional growth and prosperity. In this direction, the SAC is currently working hard to mitigate conventional and emerging, challenges programs, project and policy guidelines in the much-needed areas. The Regional programs and capacity building are prioritized in areas such as family farming, good agricultural practices, trans-boundary diseases affecting animals, crops and fishes, blue economy and emerging pest and pathogens. SAC has dedicated regular programs on “SAARC Food Bank,” “Seeds without Border,” SAARC Agriculture PhD Scholarships etc. It gives immense pleasure in creating a unified vision related to the opportunities and challenges for the entire South Asia which will fulfill the aspirations of people involved in farming.

Vision: To establish an exploitation and poverty-free society, where justice, good governance, gender-equality and environment concerns will prevail.

Mission: Not relief, but release the potential of the disadvantaged rural communities by ensuring their active participation in resource management towards their sustainable socio-economic development.

Goal: To develop socio-economic status of the poor and extreme poor in view of poverty reduction and livelihood development through systemic management of resources with the emphasis of women empowerment.

3. The Project

South Asian Region comprises one of the higher largest populace regions in the World with 1.6 billion people which represents 24.2 % of the World population. The agriculture sector provides employment to 70% of the population and contributes to 24-50% of GDP. Average across the region, almost 60% of the regional population depends on agriculture for their livelihood. Operating with average land holding of less than 1 hectare more than 25% fall below poverty and face acute shortage of food. This regional population is also vulnerable to malnutrition.

Fruits and vegetables have been contributing significantly to the agricultural economy of the SAARC Member Countries. The SAARC Member Countries produce significant quantities of indigenous and exotic varieties of fruits and vegetables. Most Member Countries of SAARC in the past several years have been maintaining positive growth in the production of fruits and vegetables indicating the increasing role that they are playing in enhancing farmers’ incomes, alleviating poverty and improving the quality of nutritious diet. In most of the SAARC Member Countries vegetables are obvious priorities as they are less risky to grow as compared to fruits. The agricultural sector in the region encounters some challenges which include high post-harvest loss, inadequate processing facilities and skills, poor linkages of supply chain to the specialized markets, lack of modern production and processing technologies, high price of necessary inputs. On the basis of the findings, this project “Livelihood enhancement of the small farmers in SAARC region through small scale agro-business focusing on value chain development” is proposed to test the model in 2 pilot sites per participating countries.

3.1 Goal of the Project

Promoting modern agri-businesses model in selected sites with a major focus on promoting small agro-processing equipment for quick value addition to fruits and vegetables.

3.2 Objectives of the Project

- To identify and replicate successful food processing technologies and models for fruits and vegetables in South and South-East Asia Region
- To increase skill and capacity of smallholder farm families on value addition to the locally produces fruits and vegetables
- To increase income and improve livelihoods of the small holders
- To promote empowerment of rural women and create employment through promotion of agri-businesses
- To develop value chain of the agricultural produces and products and mainstreaming the locally produced commodities

3.3 Outputs

- Promoted the culture of Entrepreneurship
- Incremental sales received by farmers and others
- Increased access to improved technologies and good post-harvest practices (GPP)
- Infrastructure facilities established and upgraded as a result of SDF support
- Enhanced Capacity of farmers and others regarding improved technologies and good post-harvest practices (GPP)

3.4 Outcomes

- By 2020, at least 75% of the farmers using the new practices and earning at least 15% more income than under the conventional methods (none will be left behind earning less)
- Post-harvest losses for selected vegetables and fruits reduced by 10 % as a result of new practices

3.5 Project Information

- Project starting date: 08 October 2018 (As per PFA signed)
- Project cost: 2.15 million USD including IAs contribution (1.71 million USD from SDF and 0.43 million in kind contribution from IAs)
- Project duration: 02 Years
- Participating Member Countries: 05 (Except Afghanistan, Nepal and Pakistan)

3.6 Project Duration: 08 October 2018 to 07 Oct 2021 (original); till 31 Oct 2025 (modified)

3.7 Funding Agency: SAARC Development Fund (SDF)

3.8 Project Coordinating Agency: SAARC Agriculture Centre (SAC)

4. Implementing Partners

- Rural Development Academy (RDA), Bangladesh
- Department of Agricultural Marketing and Cooperatives, Bhutan
- M.S. Swaminathan Research Foundation (MSSRF), Chennai, India
- Ministry of Agriculture and Animal welfare, Maldives
- Extension and Training Center (ETC), Department of Agriculture, Sri Lanka

4.1 Rural Development Academy (RDA), Bangladesh

The Rural Development Academy (RDA), Bogra was established on 19 June, 1974 as a specialized Rural Development Institution for training, research and action research. It is located at 16 kilometers away from Bogra town by the highway towards Dhaka. The Academy campus covers an area of 48.50 hectares of which 19.00 hectares has been apportioned for office, residence, etc. and remaining 29.50 hectares earmarked for demonstration farm for undertaking research in farming, horticulture, floriculture, tissue culture, pisciculture, livestock, Poultry etc. The academy executed the 'Livelihood enhancement through small scale agro-business focusing on value chain development' project from 2019 to 2024 in Bogura and Gazipur sites through forming producers' groups.

4.2 Department of Agricultural Marketing and Cooperatives, Bhutan

The Department of Agriculture is one of the oldest Government Departments in the country. It was established in 1961, working towards a self-reliant, productive, diverse, resilient and sustainable agriculture food system in the country. While Department of Agricultural Marketing and Cooperatives (DAMC) was established in October 2009 and started to operate as a Department from March 2010 with the appointment of a director. The main reasons for its establishment are: Firstly, to better equip and prepare the Ministry of Agriculture and Forests to cater to the needs of the rapid transition of the agriculture sector from a primarily subsistence to a major market economy. Secondly, to strengthen the Ministry of Agriculture and Forests to effectively implement the Cooperative (Amendment) Act of Bhutan, 2009 (CAB 2009).

4.3 M.S. Swaminathan Research Foundation (MSSRF), Chennai, India

M S Swaminathan Research Foundation (MSSRF) established in 1988 is a not-for-profit trust. MSSRF was envisioned and founded by Professor M S Swaminathan, agriculture scientist with proceeds from the First World Food Prize that he received in 1987. The Foundation aims to accelerate use of modern science for sustainable agricultural and rural development. MSSRF focuses specifically on tribal and rural communities with a pro-poor, pro-women and pro-nature approach. The Foundation applies appropriate science and technology options to address practical problems faced by rural populations in agriculture, food and nutrition.



4.4 Extension and Training Center (ETC), Department of Agriculture, Sri Lanka

The major task of the unit is to provide services for farmers to enhance agricultural knowledge, improve skills and develop their attitudes in order to increase production. The Agro Enterprise Development works basically done by the Division of Agribusiness Development. The division has undertaken the task of promoting agribusiness and giving necessary guidance required to carry out food crop production adopting Good Agricultural Practices in Sri Lanka (SL GAP). Eleven schools of Agriculture function under the Extension and Training Centre and National vocational qualification level-6 and level 5 (NVQ-6 and NVQ-5) are conducted in 06 and 05 schools of Agriculture respectively.

The major task of the Agriculture Training is to supervise and monitor the activities related to training conducted under the direct command of Extension and Training Center with a view to developing knowledge skills and attitudes of human resources those who engaged in agricultural activities Island wide. Accordingly, two In-Service Training Institutes (ISTI) and four District Agriculture Training Centre (DATC)

5. Project Completion Report (PCR)

The project completion report is a comprehensive final reported product that highlights achievements against the development objectives and accomplish the major interventions made during the course of project implementation. The lesson learned is one of the important components of the PCR, which helps the readers to consider the issues during designing the new project (s). A project completion report is a final item that the Project Director delivers at the end of a project. The project director documents every step of the project to assess its overall success. This report offers an overview of the project for senior management teams to determine which aspects were successful. In addition, the completion report provides an opportunity to examine future improvement strategies and develop best practices for future projects.

Generally, a project completion report contains the project's objective, the necessary processes and how the team fulfilled those procedures. In addition, it provides a brief overview of the project's challenge, opportunities, goals and success indicators. The summary may also contain a concluding statement to outline the report's content. The project completion report often contain the essential information but may vary in length, the typical information generally illustrates in the completion report are:

- Initial project parameters, including requirements from stakeholders, budget and schedule
- Evidence of objectives, goals and achievements
- Evidence that customers have received their deliveries
- Invoices from suppliers, interested parties and other sources
- Release or transfer leftover resource records
- Feedback from top management, team members and stakeholders on each phase's performance evaluations
- Separate archive folder containing all project files and correspondence
- Request for permission to close the project

Typically, a project closure report starts with the project's name, the team or individual members' names, the project director and executive sponsors' names and the current date. This information enables the implementation of the report and assists senior management or stakeholders in identifying the project's details. Listing the relevant team or its members also facilitates the institutional ability to contact the team with further questions or request explanations.

5.1 Introduction

This Project Completion Report (PCR) is prepared by collecting/using secondary information available in the project office as well as in the office of the collaborative countries. All information were collected through reviewing the quarterly reports of the project in the PD office and with the concerned regional offices at the collaborative countries. Information was gathered on all sorts of project events like training, seminar, workshops and important visitors. After collecting all necessary documents, the consultant thoroughly reviewed and compiled all the existing reports (baseline reports, quarterly reports, case studies etc.), leaflets, booklets of the project implementing partners/countries (Bangladesh, India, Sri Lanka and Bhutan). Information on post-harvest losses of project's interventional crops, employment generation due to establishment of processing centers, financial transactions of the established processing centers etc. were taken from the 'End-Line Study Report' of the livelihood enhancement project. The project's outcomes are aligned with the development objectives sets during the project formulation.

5.2 Purpose of PCR

- The project completion report is prepared to document the important interventions made under the project

- To highlight the results, outcomes and extract valuable lessons for future endeavors
- It provides a comprehensive summary of the project's goals, execution and results, ensuring clear communication to stakeholders and informing future project planning
- Essentially, it's a tool for accountability, learning and improvement

5.3 Coverage of PCR

The Project Completion Report (PCR) more or less covered the following aspects of the livelihood enhancement project:

- i. Summarized project outcomes
- ii. Documented final deliverables
- iii. Verified acceptance and
- iv. Assessed lessons learned
- v. Reviewed post-harvest improvement
- vi. Recognition of outstanding works
- vii. All verifiable project deliverables and
- viii. Visit of project monitoring team
- ix. Archived final records

5.4 Approach and Methodology

The PCR is the end product of the development project, so practically no primary data were collected for the purpose rather used secondary information and by collating all the available information, a comprehensive report is produced. The document review, consultation meeting with the concerned officials especially with the Project Coordinator and other component Focal Points, available case studies (if any) and nearby site visits (to assess on-going product development and marketing) were adopted to develop the project completion report. Wherever possible meeting with available field staff were done to validate the available data/information to overcome some of the confusions. The following approaches were accomplished:

- Used secondary information available in the project office as well as in the office of the collaborative countries
- Information were collected through reviewing the quarterly and project reports
- Information were gathered from the concerned regional offices and IAs
- Data were collected on all sorts of project events like training, seminar, workshops and important visits of local and foreign delegates
- The project's outcomes were aligned with the development objectives sets during formulation of the project.

During preparing the Project Completion Report, the following key areas were covered:

- Reviewed all the quarterly and annual reports of the project produced during the project's tenure
- Prepared an appropriate template of the project completion report and approve it before hand from the project coordinator
- The completion report included a concise overview of the project (objectives, overall success/impact etc.)
- Documented all completed project outputs, including reports, products and services

- Reviewed the project's effectiveness, performance and adherence to the original plan
- Identified all key insights (lesson learned) and recommendations for future projects
- Formally reviewed the project's performance, including a discussion of successes and failures
- Acknowledged individuals or teams who contributed significantly to the project's success
- Ensured inclusion of knowledge gained during the project that shared with relevant stakeholders

Finally, after completion of the PCR the consultant made a power point presentation highlighting major issues and outcomes of the project in the concluding workshops of the project. The SAC organized the workshop/seminar on-line. After incorporated the feedback of participants of the workshop/seminar the final PCR was submitted to the Director of the SAARC for acceptance and approval. This Project Completion Report is prepared in collaboration with the Director, SAC, Project Coordinator, Component Focal Point of collaborative institutions and other concerned officials of SAC and SAARC.

6. Project Strategy

The overall strategy of the project was to poverty reduction and livelihood development of the poor especially rural women by combining the value chain analysis for value addition and market studies on fruits and vegetable in SAARC Member Countries through establishing small food processing centers in the country sides. The trained women producer group members were the driven forces for operating the processing centers and marketing of the value-added marketable products of fruits and vegetables. In each of the member countries (implementing agencies) there were two hubs (processing centers) for processing of the raw crop products to value added marketable products. The processing centers were established by involving beneficiaries in decisions as to where infrastructure would be built through a Participatory Rural Appraisal (PRA) process and by close cooperation at the district and central levels.

The project design was similar to SDF investments based on group mobilization of marginal and small women in each of the participating countries. The project was target oriented (organize rural women) and to operate the established processing centers. The project intervention initiative was based on value chain analysis and value addition of crop products with market development.



Group mobilization at India

The project objectives were to be achieved through strengthening skill development of beneficiaries to produce value added products and linkage development with the upgrade markets of the semi-urban and urban areas.

The project used Autonomous and Government officials to organize women groups in the vicinity of established processing centers according to agreed criteria. The processing centers were equipped with site specific necessary machineries to produce the value-added products. The project organized skill development training for the beneficiaries so that they can produce the marketable products and open market access. The project made fund provision for the participating women groups to purchase raw crop products (tomato, jackfruit, moringa etc.) from the group farmers to process it as value added ones. No bank or financial organization was attached with the women groups for credit facilities.

The project established community infrastructure i.e. crop processing centers was aimed at supporting (a) demand driven value added products-mainly chips (banana, cassava, jackfruit), moringa (tea, leaf powder, leaf pest, capsule, table, soup), sauce (tomato), prickle (radish), virgin coconut oil, spiced peanut packs etc. (b) marketing facilities (motorized vans, linkage with urban and semi-urban super markets) markets and landing stages) to assist communities to market their products.

The project had central coordination office at Bangladesh in addition of the two regional offices at each of the country. In Bangladesh the regional project office was at Rural Development Academy (RDA), Bogura and in other partner countries they have their regional offices attached with the office of the implementing agencies like Bhutan with Department of Agricultural Marketing and Cooperatives, India with M.S. Swaminathan Research Foundation (MSSRF), Chennai, Maldives with Ministry of Agriculture and Animal welfare and Sri Lanka with Department of Agriculture.

To minimize delays associated with the flow of funds project budgeting was decentralized within the bounds of the existing budgetary and administrative procedures of the Government of Bangladesh (GoB). In practice this meant that SDF funds were managed outside the GoB system. The funds were disbursed to the office of the Project Director (PCD) at Dhaka, Bangladesh as per their share. The funding authority (SDF) also disbursed the resources directly to the accounts of the focal points of the respective Implementing Agencies in the member states. Annual work plans and budgets were prepared by all the partner implementing agencies.

7. Project Targeting

The targeting and approach of the project was aligned with the Poverty Reduction Strategy of the SAARC member states that strongly focused on rural agriculture development as one of the means of poverty reduction. The project targeted to form producer groups around each of the food processing centers in the each of the participating member states. The group members were mostly female and selected from marginal/small households. The project aimed to activate the female members of the family as earning members by involving them in crop production and processing activities. To support the objectives crop processing centers were established massive training programs planned from the producer group members. In total the project aimed at targeting some 400 households, broken down as shown in the table below.

Number of Households by Group

Sl #	Name of country	Name of site	# Processing Center Developed with Producer Group	# Project Beneficiary	
				Primary	Secondary
1	Bangladesh	Bogura	1	50	500
2		Gazipur	1	50	500
Sub-total			2	100	1000
3	India	Dindigul, Tamil Nadu	1	50	500
4		Kuttanad, Channi	1	50	500
Sub-total			2	100	1000
5	Sri Lanka	Anuradhapura	1	50	500
6		Monaragala	1	50	500
Sub-total			2	100	1000
7	Bhutan	Chukha	1	50	500
8		Samtse	2	50	500
Sub-total			3	100	1000

Sl #	Name of country	Name of site	# Processing Center Developed with Producer Group	# Project Beneficiary	
				Primary	Secondary
9	Maldives	3 island of Sh. Atoll	1	50	500
10		3 island of Sh. Atoll	1	50	500
Sub-total			2	100	1000
Total			11	500	5000

The group extension approach was planned to be facilitated by the field officials of the participating agencies of the member states who formed the producer groups for preparing value added crop products like chips, prickles, sauce etc. The participating agencies of member states used these groups for technology transfer and capacity building. Technology transfer and enhancing crop production was undertaken quite effectively by the project, although some difficulties were experienced due to limited mobility of agency's staff at the field level in some which is far from their city offices. Capacity building of agency-staff was also made in line with the crop/food processing activities and marketing.

8. The Project Management

The 'Livelihood Enhancement of the Small Farmers in SAARC Region through Small Scale Agrobusiness focusing on Value Chain Development project' was implemented by the SAARC Agriculture Center (SAC) in association with the line departments of the member states like a) Rural Development Academy (RDA), Bangladesh, b) Department of Agricultural Marketing and Cooperatives, Bhutan, c) M.S. Swaminathan Research Foundation (MSSRF), Chennai, India, d) Ministry of Agriculture and Animal welfare, Maldives, e) Department of Agriculture, Sri Lanka. The project implementation was coordinated by the Project Coordinator stationed in SAC, Dhaka. The SAARC Secretariat, Katmandu, Nepal shouldered overall monitoring responsibility and guided the SAC for smooth implementation of the project. While as a funding agency, the SAARC Development Fund (SDF) monitored the financial management of the livelihood enhancement project.

As part of financial management, the SDF approved the no-cost extension of the project for the implementing agencies as per request. Officially the project initiated in 2018 with the commencement of inception workshop but actual field activities started in 2019 and continued till Oct 2021. The 1st no-cost time extension without enhancement or revision of funding by implementing agencies was materialized in Oct 2021, 2nd time extension was in Oct 2022, 3rd in Oct 2023 and 4th in 2024 and ultimately the project closed its activities on 31st Oct 2025. The project management made the time extension mainly due to non-completion of planned field activities including construction of processing centres and purchasing of required machineries for the processing centres of the project in participating countries.

8.1 Project Coordination

The project was designed by the SAC, Dhaka and approved by the SAARC Secretariat, Nepal following the pre-set project evaluation criteria. The SDF (SAARC Development Fund), a specialized body under SAARC was the funding authority and released project funds as per requisition of the SAC. The project activities were operated at three levels. At Dhaka the overall management and co-ordination was carried out, at the member states level planning and co-ordination of field operations were undertaken, at the agency level field activities were implemented. At the headquarters of SAC a central Project office was established and a Project Director (PCD) was appointed. The financial authority of the project exercised by the Director, SAC stationed at Dhaka. The SDF directly released the required fund to the partner states

as per requisition of the implementing agencies. The overall field operation of the project was implemented by the respective agencies of the member states using their manpower and operational strategy. The project activities mainly establishing the processing centers, skill development training of producer group members and producing value added products of the interventional crops were coordinated by the implemented agencies.

9. Project Inception Workshop

The inception workshop of the livelihood enhancement project was held in two tiers, one at the SDF secretariat in Bhutan with all IAs and another at the national level in each of the participating countries. In Bangladesh the inception meetings were organized at the Rural Development Academy (RDA), Bogura, while Bhutan organized their inception meeting at Chukha city, India in Chennai and Sri Lanka in Kandi city.

10. Project Logical Frame Work (Log Frame)

A log frame, or logical framework, is a structured project management tool used in development projects to plan, manage and evaluate a project's progress. It outlines the project's objectives, activities and expected outcomes and links them with measurable indicators and assumptions. The log frame helps ensure clarity, alignment and accountability throughout the project lifecycle.

Breakdown of the key components of a log frame:

1. Narrative Summary

- Goal

The overarching, long-term objective of the project. This is the ultimate impact the project aims to achieve.

- Purpose (Outcome)

The specific, immediate change or result expected from the project. This is the intended effect on the target beneficiaries.

- Outputs

The tangible products, services, or deliverables that the project will produce.

- Activities

The specific tasks and actions that will be undertaken to produce the outputs.

2. Indicators

- These are specific, measurable, achievable, relevant and time-bound (SMART) metrics used to track progress towards achieving the objectives.
- Indicators are defined for each level of the narrative summary (Goal, Purpose, Outputs, Activities).

3. Means of Verification

- This section specifies how the indicators will be measured and verified
- It identifies the data sources, methods and tools used to collect information on the indicators.

4. Assumptions

- These are external factors outside the project's control that must hold true for the project to succeed
- Identifying assumptions helps assess potential risks and develop mitigation strategies.

Log frame Matrix

Narrative summary	Indicator	Means of verification	Assumption
Goal	<ul style="list-style-type: none"> • Value addition to fruits and vegetables through up-scaling small agro-processing • Development of modern agri-businesses model 	<ul style="list-style-type: none"> • Baseline survey • Endline Impact Survey and report • Project closing workshop 	<ul style="list-style-type: none"> • Establish strong collaboration between SAC and IAs • Regular fund flow as per plan
Purpose (Outcome)	<ul style="list-style-type: none"> • At least 75% farmers using new practices • At least 15% more income than earlier • At least 10% post-harvest loss-reduction for interventional vegetables and fruits 	<ul style="list-style-type: none"> • Mid-term Report • Case studies • Endline Impact Survey and report • Annual project meeting 	<ul style="list-style-type: none"> • Establish strong collaboration between SAC and IAs • Regular fund flow as per plan • No political or other natural hazards during implementation
Output	<ul style="list-style-type: none"> • Promoted culture of Entrepreneurship • Incremental sales received by farmers and others • Increased access to improved technologies and good post-harvest practices (GPP) • Infrastructure facilities established and upgraded • Enhanced capacity of farmers and others on improved technologies and good post-harvest practices (GPP) 	<ul style="list-style-type: none"> • Annual report • Case studies • Annual project meeting • Annual workshop/ seminar 	<ul style="list-style-type: none"> • Establish strong collaboration between SAC and IAs • Regular fund flow as per plan • No political or other natural hazards during implementation
Input/ Activity	<ul style="list-style-type: none"> • Establish 2-3 small agro-processing units per pilot site • Small agro-business established in all pilot sites • Farmer group established (or strengthened) for agribusiness • Promotion of modern production technologies in each of the producer group • Skill and capacity development training of participating farmers on commercial production, processing and marketing • Establish trade linkage between community and Supermarket in each pilot site • Functional saving account in operation • Value chain development using agro-processing equipment and technologies 	<ul style="list-style-type: none"> • Quarterly report • Project monitoring report • Field visit report 	<ul style="list-style-type: none"> • Establish strong collaboration between SAC and IAs • Regular fund flow as per plan • No political or other natural hazards during implementation

Narrative summary	Indicator	Means of verification	Assumption
	<ul style="list-style-type: none"> • Effective participation of small holders to value chain activities • Institutionalization of Farmer Producer Organizations for agribusiness • Establish model pilot area for agro-processing • Replication of agro-processing model to nearby communities/areas and other countries 		

11. The Project Cost and Financing (Original)

Originally the project had a total cost of USD 2.154323 million, of which 1.718601 million planned to be contributed by SDF and 0.435722 million by the member states mostly through kinds. The SDF funding along with co-financing by the member states is shown in the Table 1. SDF funding was primarily used for development of food processing facilities (processing centres in each of the participating countries) and as project operational costs (staff salaries, inputs, labours, travelling, training, workshops/seminars etc.). While the funding from members states was used as kinds like office spaces, lands for processing centres etc. and through using expertise of officials of concerned agencies of the participating countries.

The fund was channelled through SDF to SAC (Dhaka) of SAARC and IAs of member states. The Project Coordinator office stationed at SAC, Dhaka.

Table 1. Budget allocation of the project by the participating member states

Project financing	Amount in USD	
Total amount requested from SDF	1,718,601	
Total contribution through co-funding (in kind)	4,35,722	
Total Gross Funding	21,54,323	
Amount requested by individual Implementing Partner (IP)		
	SDF Financing	Co-financing
Afghanistan (amount in USD)	194,621	29193
Bangladesh (Amount in USD)	184,314	27740
Bhutan (Name of IP/amount in USD)	191,334	28234
India (amount in USD)	192,742	27802
Maldives (amount in USD)	189,933	112500
Nepal (amount in USD)	209,000	28000
Pakistan (amount in USD)	191,942	28791
Sri Lanka (amount in USD)	184,715	27611
SAC amount in USD)	180,000	25851
CIRDAP		100000
Total	1,718,601	435,722

12. Basic Information with Actual Cost and Financing Incurred

Though the project was designed for implementing in 8 member countries but in reality, it was finally implemented in 5 member states (showed in Table 2). So, the planned funding of SDF as stated in other section could not be utilized fully. The project allocated funds against Afghanistan, Pakistan and Nepal was unused due to non-functioning of the project in those countries. The table below (Table 2) showed the basic information in brief including the objectives and split the final fund allocations for each of the participating member states.

Table 2. Basic information of the project

Project Name	Livelihood Enhancement of the Small Farmers in SAARC Region through Small Scale Agro-business focusing on Value Chain Development			
Key Dates				
SAARC Secretariat Approval	Signing	Effectiveness	Original completion	Actual completion
	08-Oct-18	08-Oct-19	07-Oct-21	25-Oct-25
Actual Cost and Financing (USD)				
Member State	SDF	Member state	Total	
Rural Development Academy (RDA), Bangladesh	184,314	27,740	212,054	
Department of Agricultural Marketing and Cooperatives, Bhutan	191334	28234	219,568	
M.S. Swaminathan Research Foundation (MSSRF), Chennai, India	192742	27802	220,544	
Ministry of Agriculture and Animal welfare, Maldives	189933	112500	302,433	
Department of Agriculture, Sri Lanka	184715	27611	212,326	
SAARC Agriculture Center (SAC)	180000	25851	205,851	
Total	1,123,038	249,738	1,372,776	
Number of beneficiaries				
Total	Direct	Indirect	Women	Other
	1,000	10000	856	
Project Objective				
To identify and replicate successful food processing technologies and models for fruits and vegetables in South and South-East Asia Region				
To increase skill and capacity of smallholder farm families on value addition to the locally produces fruits and vegetables				
To promote empowerment of rural women and create employment through promotion of agri-businesses				
Executing agency	SAARC Agriculture Center, Dhaka, Bangladesh			

13. The Implementing Agencies with Field Locations

The implementing agencies in each of the participating member states were elaborated in the introductory sections, while the following table showed the current addresses of existing focal persons who shouldered the responsibility of project operation till closing.

Table 3. List of Focal Points of IAs under the livelihood enhancement project of SAC

Sl. No.	Name of IAs	Name of Focal Points and address	Contact Details (Email & Mobile)
01	Rural Development Academy (RDA)	Dr. Monirul Islam Deputy Director, RAD, Bogura, Bangladesh	monirulju2016@yahoo.com +88017378145997
02	Department of Agriculture Marketing	Sonam Lhamo Deputy Chief Post Production Officer, National Post Harvest Center, DAMC, Ministry of Agriculture and Livestock, Bhutan Mobile: 00975 17407993	+00975 17407993 sonamlhamoslhamo@moaf.gov.bt
03	M.S.Swaminathan Research Foundation	Dr. Rengalakshimi Executive Director MSSRF, Chennai, India	rengalakshmi@mssrf.res.in +919444387103
04	Ministry of Agriculture and Animal Welfare	Mr. Hoossain Faisal/Mariyam Simla MOA&AW, Maldives	hussain.faisal@agriculture.gov.mv; mariyam.simla@agriculture.gov.mv +9609150055
05	Department of Agriculture	G.N. Arunathilaka, Additional Director (Agribusiness), Division of Agribusiness Development, Department of Agriculture, Gannoruwa, Peradeniya, Sri Lanka.	gnarunathilaka@gmail.com +94812 388 465

14. Assessment of Project Implementation

The Livelihood Enhancement of the Small Farmers in SAARC Region through Small Scale Agrobusiness focusing on Value Chain Development Project implemented by the SAC (SAARC Agriculture Centre) over a seven years period from Oct 2018 to Oct 2025. The project was designed to improve the livelihoods of the small households especially the rural women in the SAARC region. The project was in the conformity with the value addition (food processing) of several crops like banana, jackfruit, tomato, moringa, radish, coconut, cassava, peanut in the region. The project was jointly implemented by the SAARC countries of Bangladesh, Bhutan, India and Sri Lanka through utilizing their national agencies like RAD Bogura (Bangladesh), Department of Agricultural Marketing and Cooperatives, (Bhutan), MSSRF, India and Department of Agriculture, (Sri Lanka) under the coordination of SAC, Dhaka. The project followed the formation of producer group around the food processing centers for mobilization of beneficiaries in an integrated manner to practicing value addition of targeted crops. All the project activities under each of the processing centers were implemented as per target and in some cases it exceeds the targets. The extent of success in achieving the objectives of the project is discussed below.

The impact study conducted by the project during the end of project completion reported that the project achieved 25% higher family income after completing the project against 15% higher income targeted in the development objectives. The project achieved 48% reduction of post-harvest loss of interventional

fruit crops (banana, jackfruit, tomato, moringa, radish, coconut, cassava and peanut) over the existing losses against the target of 10% reduction. Against the development objective of 'enhancement of rural employment' the project achieved 54% against the target of 25%. The beneficiaries reported 47% higher incremental sales of their project interventional crops and had achieved opportunity of access to improved crop production technologies (215%). The project organized large numbers of skill development training on various subjects related to food processing and improved technologies that helped the beneficiaries to adopt improved technologies in their farms. Smooth implementation of all the project activities is contributed in generating the quantifiable impacts stated above.

15. Assessment of Project Effectiveness

The development objectives of the project were to improve food security and upgrade livelihoods of target farm families through value addition of selected crops including developing of rural infrastructures (food processing centers). The project fairly achieved the physical targets of income generation, through developing producer groups and producing value added products (chips of jackfruit, cassava; tomato sauce; moringa tea, powder, pest; virgin coconut oil, etc.) as well as initiated development of food processing centers at the remotest corners of the participated member states. The impact studies of the project done under the third-party consultancy system conducted by an individual senior consultant confirmed comparatively better increase in food production, family incomes and crop production in the project area.

16. Project Achievement by RRF

The Results and Resources Framework (RRF) is a tool used by different international organizations to translate their strategic plans into concrete actions and track progress towards achieving development and organizational goals. It essentially bridges the gap between high-level strategic objectives and the practical steps needed to achieve them, including resource allocation and performance monitoring.

The framework outlines both the intended development outcomes (e.g., improved livelihoods, reduced inequality) and organizational effectiveness and efficiency results (e.g., improved operational processes, enhanced capacity). These are metrics used to track progress towards the stated results. They help monitor whether the organization is on the right track and making a difference.

Irrespective of the participating member states, the livelihood enhancement project sets to achieve a target of 15% income improvement of the farmers, attaining a 10% reduction of post-harvest loss of project's interventional crops and escalation of rural employment among the targeted households by 25% after implementing the project. The project achievement against the pre-set target is elaborated in the following section by the participating countries.

16.1 Bangladesh



The following Table 4 summarized the achievement against the RRF of the project in Bangladesh. The project targeted the growth of family income of the rural households by 15%. Averaged across the two sites of Bangladesh the family income of the project beneficiaries increased by 40% during the project period. Similarly, the post-harvest loss reduction of interventional crops (banana, jackfruit, tomato) observed 26% reduction against the target of 10%. Improvement in rural employment generation using skill development training and introduction of modern varieties as well as value

chain development was targeted by 25% and after completing the project activities it has been observed that it increased over 38% in the project areas. Beside these three indicators, highest improvement achieved in case of `access to improved technology` (300%) followed by capacity building of participating farmers (100%) incremental sales of crop products increased by 35% than the before project situation.

Table 4. Project Results and Resources Framework (RRF) in Bangladesh

Outcome indicator	Target	Baseline/ control	Impact study	Increase over control (%)
Enhancement of annual family income (USD)	15%	3157.01	4431.45	40.4
Post-harvest loss reduction (%)	10%	14.10	10.40	-26.2
Employment generation/family/season (#)	25%	9.30	12.90	38.7
Incremental sale by farmers (USD)		0.50	0.67	35.1
Access to improved technology (%)		3.00	12.00	300.0
Capacity building of farmers (%)			400.00	100.0

16.2 Bhutan

The following Table 5 summarized the achievement against the RRF of the project in Bhutan. The project targeted the growth of family income of the rural households by 15%. Averaged across the two sites of Bhutan, the family income of the project beneficiaries increased by 55% during the project period. Similarly, the post-harvest loss reduction of interventional crops (moringa, radish) observed 67% reduction against the target of 10%. Improvement in rural employment generation using skill development training and introduction of modern varieties as well as value chain development was targeted by 25%, while after completing the project activities, it increased over 94% in the project areas. Beside these three indicators, highest improvement achieved in case of `access to improved technology` (175%) followed by capacity building of participating farmers (100%) incremental sales of crop products increased by 14% than the before project situation.

Table 5. Project Results and Resources Framework (RRF) in Bhutan

Outcome indicator	Target	Baseline/ control	Impact study	Increase over control (%)
Enhancement of annual family income (USD)	15%	1928.57	2983.33	54.7
Post-harvest loss reduction (%)	10%	51.20	16.90	-67.0
Employment generation/family/season (#)	25%	7.40	14.40	94.6
Incremental sale by farmers (USD)	-	0.42	0.48	13.6
Access to improved technology (%)	-	4.00	11.00	175.0
Capacity building of farmers (%)	-	-	64.00	100.0

16.3 India

The following Table 6 summarized the achievement against the RRF of the project in India. The project targeted the growth of family income of the rural households by 15%. Averaged across the two sites of

India the family income of the project beneficiaries increased by 3% during the project period. Similarly, the post-harvest loss reduction of interventional crops (moringa, coconut) observed 37% reduction against the target of 10%. Improvement in rural employment generation using skill development training and introduction of modern varieties as well as value chain development was targeted by 25% and after completing the project activities, increased over 41% in the project areas. Beside these three indicators, highest improvement achieved in case of 'access to improved technology' (267%) followed by capacity building of participating farmers (100%) incremental sales of crop products increased by 23% than the before project situation.

Table 6. Project Results and Resources Framework (RRF) in India

Outcome indicator	Target	Baseline/ control	Impact study	Increase over control (%)
Enhancement of annual family income (USD)	15%	5426.76	5582.92	2.8
Post-harvest loss reduction (%)	10%	24.60	15.40	-37.4
Employment generation/family/season (#)	25%	4.30	6.10	41.9
Incremental sale by farmers (USD)	-	0.28	0.35	22.6
Access to improved technology (%)	-	3.00	11.00	266.7
Capacity building of farmers (%)	-	0.00	536.00	100.0

16.4 Sri Lanka

The following Table 7 summarized the achievement against the RRF of the project in Sri Lanka. The project targeted the growth of family income of the rural households by 15%. Averaged across the two sites of Sri Lanka the family income of the project beneficiaries increased by 46% during the project period. Similarly, the post-harvest loss reduction of interventional crops (cassava, banana, peanut) observed 33% reduction against the target of 10%. Improvement in rural employment generation using skill development training and introduction of modern varieties as well as value chain development was targeted by 25% and after completing the project activities, it increased over 27% in the project areas. Beside these three indicators, highest improvement achieved in case of 'access to improved technology' (133%) followed by capacity building of participating farmers (100%) incremental sales of crop products increased by 35% than the before project situation.

Table 7. Project Results and Resources Framework (RRF) in Sri Lanka

Outcome indicator	Target	Baseline/ control	Impact study	Increase over control (%)
Enhancement of annual family income (USD)	15%	2191.00	3194.40	45.8
Post-harvest loss reduction (%)	10%	23.70	15.90	-32.9
Employment generation/family/season (#)	25%	3.60	4.60	27.8
Incremental sale by farmers (USD)	-	0.68	1.26	85.3
Access to improved technology (%)	-	3.00	7.00	133.3
Capacity building of farmers (%)	-	0.00	161.00	100.0

16.5 Overall RRF Achievement

The resource and result framework of the livelihood enhancement project targeted an achievement of 15% higher family income after completing the project with a duration of three years Oct 2018 to Oct 2021. In this context it is to be mentioned that the impact study conducted by the SAC in 2024 reported 25% higher family income. Reduction of post-harvest loss was another important indicator assessed by the impact study and reported 48% reduction of post-harvest loss of interventional fruit crops than the existing losses against the reduction target of 10%. The report also highlighted the enhancement of some other sets of development indicators like employment generation (54%), incremental sales (47%) and access to improved technologies (215%) and in capacity building of farmers through skill development training. Details of the achievement of result framework by indicators are shown in the following Table 8.

Table 8. Project Results and Resources Framework (RRF)

Outcome indicator	Target	Baseline/ control	Endline survey/ Impact study	Increase over control (%)
Enhancement of annual family income (USD)	15%	3215	4009	25
Post-harvest loss reduction (%)	10%	28	15	48
Employment generation/family/season (#)	25%	6	10	54
Incremental sale by farmers (USD)	-	0.4715	0.6911	47
Access to improved technology (%)	-	3	10	215
Capacity building of farmers (%)	-	-	290	100

17. Project Key Impact

During 2023-24 the SAC conducted an impact study of the livelihood enhancement project through third party by employed an individual consultant who collected information directly from producer group members of two sites of each of participating agencies of the member states. The operating staff of the processing centers were also used as a source of information. The impact assessment reported:

- An achievement of 18% to 55% (varied by countries) higher family income of the participatory producer group members than their earlier income due to project activity
- The project also contributed in enhancement of rural employment generation that ranged from 19 to 49 persons per family during the project period. The higher manpower utilized by the project households in their increased farming activities and marketing of value added products
- The producer group members produced and marketed 155 to 650 Kg value added finished products by using the processing centers
- Due to the project activity the post-harvest loss of different crops reduced by 04% to 34%
- The participatory agencies of the project member states conducted training of beneficiaries and staff of processing centers on food processing and value addition of interventional crops.
- It has been reported that India provided training to 536 persons, Bangladesh 400 persons, Sri Lanka 151 persons and Bhutan 64 persons.

The producer group members were being trained on how to produce value added products from their harvested crops and to be marketed in the local markets and how to establish linkage with super markets of the nearby cities. The project activities encouraged the producer members to consider the chips making as one of their incomes generating activities (IGA) and using these learnings:

- In Bangladesh one of the staff at RDA started the chips making as his own business
- Recently some other people have already taken over the jackfruit chips making as their business and started marketing their products in the school gates and other popular places in Bangladesh
- In Bhutan, moringa tea and cassava chips are becoming popular and the trained members of the producer groups started it as one of their small business options
- The processing centers in India making varieties of chips & moringa tea and supplies to the nearby shops
- Moringa leaf powders and pests are also marketed by the Indian processing center
- In Sri Lanka, cassava chips and spicy peanut processed packs are being popularly marketed by the processing centers.

18. Key Lesson Learned

- The women producer groups need market support from large food companies to survive in long run. The processing center would have to take initiative to make certain market linkage to the cities for the producer groups
- Dwarf varieties of coconut and moringa crops are to be developed and distributed to the farmers to continue and extension or popularize the value-added products being marketed by the producer's group in support of the livelihood enhancement project
- The market volume of moringa value added products (leaf powder, paste, tea etc.) is still limited in the country like Bhutan, Bangladesh and Sri Lanka, so more extension works are to be needed
- Arrangement of regular coordination meeting with the producer groups and officials of processing centers would help smooth implementation of project activities
- Training for the group members should be organized at the beginning of the project according to the requirement
- With the expansion of surface water irrigation systems coconut or moringa cultivation as field crop may replace in near future by maize or other high value short seasoned crops, so land-productivity are to be increased many folds by introducing appropriate inter of mixed cropping
- Higher income from per unit are of land under coconut or moringa cultivation may increase enough by introducing practicing apiculture into the plantations
- The marketing of value-added vacuum fried chips from banana and cassava is acute for the producer groups, which might be improved by using contractual vendors under profit share concept
- Well-designed proper packaging systems for the salable products of the producer groups is yet to be introduced, necessary skill development training on wrapping and good quality attractive packaging would enhance market demand and ensure higher price
- Business would need enough cash flow, the staff at the center would have to take lead role so that the producer groups can get chief credit from the local banking systems, which will help to enhance their production of crops/products

19. Year wise Achievement of the Project

The project design sets certain investment indicators to achieve its development objectives. Development of infrastructures facilities was targeted for value addition activities of some selected interventional crops. Beneficiary's accessibility to improved crop and food production technologies were enhanced through introducing new crop varieties and advanced production systems. Skill development training for beneficiaries and concerned staff was used as one of the important methodologies for technology dissemination into the community people. Investment was planned for forming producer groups to facilitate entrepreneurship development. The following sections elaborated the country wise physical and financial achievement made by the project during its implementation years.



Fig. Demonstration of improved technology

19.1 Bangladesh

In each of the member states, the project interventions were practiced in two sites by forming producer groups and establishing food processing centers. Both physical and financial investments were made targeting the selected sites.

19.1.1 Physical Achievement



packaging materials were purchased in 3rd and 4th years. Training on i) Value Chain and Agro-processing, b) operation and maintenance of equipment c) product handling, marketing and food safety standards d) farm business management. Project also arrange exposure visits for the participating farmers to agro-processing plants and marketing facilities in the country.

The following Table 9 summarized the physical progress of the project by implementing years. Two agro-processing shed one at Bogura and another at Gazipur were constructed in the 1st year. For both Bogura and Gazipur sites vacuum fryer, packaging machine, slicer, oil spinner, sealer, weighting balance, mag, plastic dram, burner, suspend, agitator as well as lab equipment for quality control like pH meter, Acid test kits, TSS meter, etc. were purchased in 2nd and 3rd years. Inputs like organic manure, Trichoderma, high yielding varieties seeds, organic pesticide, processing chemical, processing raw materials and

Table 9. Physical Achievement (number) of Bangladesh during the Project period

Project intervention (Item)	2020	2021	2022	2023	Total
Development of infrastructure facilities	2	5	8	9	24
Access of Farmer to Improved Technology and Good Post-harvest Practices	25	25	50	0	100
Capacity Development of farmers	0	25	75	0	100
Promotion of Entrepreneurship	0	0	50	50	100
Others	0	0	0	0	0
Total	27	55	183	59	324

19.1.2 Financial Achievement

The financial progress of the project followed the planned physical activities and purchase of works, goods and services. In the 1st year of the project operations the processing centers at two project sites were constructed that consumed the major allocated resources for infrastructure development. Some small equipment and necessary goods were purchased in the successive years of the project for value addition purposes. Majority of the training programs (discussed above) for the beneficiaries were conducted in the 1st to 3rd year of project operations. Similarly, the technology transfer activities performed in the 1st to 3rd year of the project. Promotional activities for entrepreneurship development was done in the 3rd of the project and consumed the total allocation.

Table 10. Financial Achievement (USD) of Bangladesh during the Project period

Project intervention (Item)	Approved budget	2020	2021	2022	2023	Total
Development of infrastructure facilities	30000	29050.00	450.00	300.00	200.00	30000
Access of Farmer to Improved Technology and Good Post-harvest Practices	23331	4331.00	15000.00	4000.00	0.00	23331
Capacity Development of farmers	91409	0.00	21165.00	70244.00	0.00	91409
Promotion of Entrepreneurship	39573	0.00	0.00	20350.00	19223.00	39573
Total	0	0.00	0.00	0.00	0.00	0

19.2 Bhutan

In each of the member states, the project interventions were practiced in two sites by forming producer groups and establishing food processing centers. Both physical and financial investments were made targeting the selected sites.

19.2.1 Physical Achievement

The physical activities of the project performed during the project period are summarized in the following Table 11.

Development of infrastructures for food processing was one of the major activities of the project that included purchase of vacuum fryer, packaging machine, slicer, oil spinner, sealer, weighting balance, mag, plastic dram, burner, suspend, agitator as well as lab equipment for quality control like pH meter, Acid test kits, TSS meter, etc. The



Fig. Food processing center and processed products at Chukha, Bhutan

construction of processing centers included retention wall, wash rooms, stores etc. was done in the 2nd and 3rd years of the project while small equipment necessary for processing of crop products collected in the 1st to 5th years. Construction of stores and collecting some other small equipment were completed in the 5th year. Technology transfer activities for the interventional crops and processing and marketing activities continued throughout the project period (Table 11). Similarly for capacity development of beneficiaries, the project organized different kinds of training programs like i) Group formation and baseline survey, ii) Value addition and post-harvest processing, iii) Preparation noodles, pickles, moringa products and cassava flour, iv) Bakery products, v) Financial management etc. Exposure visit for the beneficiaries was also arranged. Promotional activities for the finished products (radish, ginger pickles, moringa tea etc.) was continued through the project period. The intensity of the physical activities of the project is shown in the following table 11.

Table 11. Physical Achievement (number) of Bhutan during the Project period

Project intervention (Item)	2020	2021	2022	2023	2024	2025	Total
Development of infrastructure facilities	12	25	26	9	33	10	115
Access of Farmer to Improved Technology and Good Post-harvest Practices (8)	0	24	42	68	53	50	237
Capacity Development of farmers (6&7)	21	34	42	68	53	60	278
Promotion of Entrepreneurship (pickle, Radish perilla, paste, ginger candy, ginger pickle, cassava cracker/cookies/flour, Moringa tea, powder)	0	16	47	73	53	61	250
Baseline survey, Inception meeting (12); group formation	95	1	4				100
Total	128	100	161	218	192	181	980

19.2.2 Financial Achievement

The procurement of works, goods and services during the project period is elaborated in the following Table 12. The financial progress of the project followed the activities of physical purchase and majority of the funds under infrastructure development was consumed during 2nd and 3rd years of the project when the processing centers were constructed in two sites. In 5th year of project implementation almost one third of allocation was spent on construction of stores, toilets in the processing centers and for purchasing the rest of the equipment. The capacity development of beneficiaries through skill development training continued throughout the project period but expedited during 3rd and 4th year. Similarly the business promotional activities including entrepreneurship development got momentum during 5th and 6th year of implementation. The project exhausted the full amount of allocation against each of the interventional items. The following Table 12 showed details of the expenditures.

Table 12. Financial Achievement (USD) of Bhutan during the Project period

Project intervention (Item)	Approved Budget	2020	2021	2022	2023	2024	2025	Total
Development of infrastructure facilities	159890	1389	44244	49200	9755	45345	9957	159890
Access of Farmer to Improved Technology and Good Post-harvest Practices	3609	0	1030	894	1009	644	32	3609
Capacity Development of farmers	15092	775	1396	4886	4922	2115	998	15092
Promotion of Entrepreneurship	4435	0	188	303	336	2408	1200	4435
Others	8308	5858	0	356	795	409	890	8308
Total	191334	8022	46858	55639	16817	50921	13077	191334

19.3 India

In each of the member states, the project interventions were practiced in two sites by forming producer groups and establishing food processing centers. Both physical and financial investments were made targeting the selected sites.

19.3.1 Physical Achievement

The physical activities of the project performed during the project period are summarized in the following Table 13. Development of infrastructures for food processing was one of the major activities of the project that included purchase of vacuum fryer, packaging machine, slicer, oil spinner, sealer, weighting balance, mag, plastic dram, burner, suspend, agitator as well as lab equipment for quality control like pH meter, Acid test kits, TSS meter, etc. The construction of processing centers included, wash rooms, stores etc. was done in the 2nd and 3rd years of the project and small equipment necessary for processing of crop products collected also in the 2nd to 3rd years.

Technology transfer activities for the interventional crops and processing and marketing activities continued throughout the project period except 4th year (Table 13). Similarly for capacity development of beneficiaries, the project organized different kinds of training programs like: i) Group formation and baseline survey, ii) Value addition and food safety, iii) Exposure visit, iv) Bakery products, v) Financial management (Book/record keeping) etc.



Fig. Hands on beneficiary training at the processing center, India

Promotional activities for the finished products (Moringa powder, Moringa Soup, Moringa Rice Mix, Moringa tablets, Moringa Capsules, Moringa Adai Mix, Moringa Atta mix, Edible coconut oil, Virgin Coconut oil and coconut Powder) was continued through the project period. The intensity of the physical activities of the project is shown in the following Table 13.

Table 13. Physical Achievement (number) of India during the Project period

Project intervention (Item)	2020	2021	2022	2023	Total
Development of infrastructure facilities (building and machineries)	1	2	2	1	6
Access of Farmer to Improved Technology and Good Post-harvest Practices	100	100	100	60	360
Capacity Development of farmers (Training and refresher training)	30	70	50	50	200
Promotion of Entrepreneurship (Moringa powder, Moringa Soup, Moringa Rice Mix, Moringa tablets, Moringa Capsules, Moringa Adai Mix, Moringa Atta mix, Edible coconut oil, Virgin Coconut oil and coconut Powder)	50	50	50	50	200
Others	100	100	0	0	200
Total	281	322	202	161	966

19.3.2 Financial Achievement

The procurement of works, goods and services during the project period is elaborated in the following table 14. The financial progress of the project followed the activities of physical purchase and majority of the funds under infrastructure development was consumed during 2nd and 3rd years of the project when the processing centers were constructed in two sites. In 4th year of project implementation almost one third of allocation was spent on construction of stores, toilets in the processing centers and for purchasing the rest of the equipment. The capacity development of beneficiaries through skill development training continued throughout the project period but expedited during 2nd and 3rd year. Similarly the business

promotional activities including entrepreneurship development got momentum during 3rd and 4th year of implementation. The project exhausted the full amount of allocation against each of the interventional items. The following table 14 showed details of the expenditures.

Table 14. Financial Achievement (USD) of India during the Project period

Project intervention (Item)	Approved Budget	2020	2021	2022	2023	Total
Development of infrastructure facilities	71969.45	12500.00	39674.22	15250.00	4545.45	71969.67
Access of Farmer to Improved Technology and Good Post-harvest Practices	28030.30	3850.50	8270.71	11500.75	4408.34	28030.30
Capacity Development of farmers	14015.15	2025.50	7550.00	3280.00	1159.65	14015.15
Promotion of Entrepreneurship	38560.60	3550.00	5670.50	18961.10	10378.78	38560.38
Project Inception meeting, group formation and organization in to Producer Organization	52668.70	14252.52	20401.00	10476.68	7538.50	52668.70
Total	205244.20	36178.52	81566.43	59468.53	28030.72	205244.20

19.4 Sri Lanka

In each of the member states, the project interventions were practiced in two sites by forming producer groups and establishing food processing centers. Both physical and financial investments were made targeting the selected sites.

19.4.1 Physical Achievement

The physical activities of the project performed during the project period are summarized in the following Table 15. Development of infrastructures for food processing was one of the major activities of the project that included purchase of vacuum fryer,



Fig. Machineries at the processing center, Sri Lanka

packaging machine, slicer, oil spinner, sealer, weighting balance, mag, plastic dram, burner, suspend, agitator as well as lab equipment for quality control like pH meter, Acid test kits, TSS meter, etc. The construction of processing centers included wash rooms, stores etc. was done in 2020 and 2021 of the projects while small equipment necessary for processing of crop products collected in the 1st to 4th years. Construction of main buildings of processing centers completed in 2023 when major portion of resources

for infrastructure development were consumed. Technology transfer activities for the interventional crops and processing and marketing activities continued during the years of 2021 and 2023 (Table 15). Similarly for capacity development of beneficiaries, the project organized different kinds of training programs like i) Basic awareness training About SDF program, ii) Marketing survey, iii) Survey data evaluation training, iv) Business planning training, v) Food technology training etc. Exposure visit for the beneficiaries was also arranged. Promotional activities for the finished products (banana chips, cassava chips, spicy peanut packs etc.) was continued through the project period. The intensity of the physical activities of the project is shown in the following Table 15.

Table 15. Physical Achievement (number) of Sri Lanka during the Project period

Project intervention (Item)	2020	2021	2022	2023	Total
Development of infrastructure facilities	2	47	9	7	65
Access of Farmer to Improved Technology and Good Post-harvest Practices	1	0	0	1	2
Capacity Development of farmers	0	0	2	3	5
Promotion of Entrepreneurship	2	2	0	5	9
Others	3	1	7	2	13
Total	8	50	18	18	94

19.4.2 Financial Achievement

The procurement of works, goods and services during the project period is elaborated in the following Table 16. The financial progress of the project followed the activities of physical purchase and majority of the funds under infrastructure development was consumed during 3rd and 4th years of the project tenure when the construction of processing centers was completed in two sites. In 5th year of project implementation, majority of the allocated fund was spent for purchasing of vacuum fryers, wash rooms in the processing centers and for collecting of small equipment necessary for packaging and marketing. The capacity development of beneficiaries through skill development training could not be started in 1st two years of the project, initiated continued in 3rd and 4th years of project period but expedited during 5th year. Similarly, the business promotional activities including entrepreneurship development got momentum in 5th year of implementation but started and continued from 1st year of the project implementation. The project exhausted the full amount of allocation against each of the interventional items. The following Table 16 showed details of the expenditures.

Table 16. Financial Achievement (USD) of Sri Lanka during the Project period

Project intervention (Item)	Approved Budget	2020	2021	2022	2023	Total
Development of infrastructure facilities	142603	18131	21617	74959	27896	142603
Access of Farmer to Improved Technology and Good Post-harvest Practices	1059	554	0	0	505	1059
Capacity Development of farmers	2629	0	0	508	2121	2629
Promotion of Entrepreneurship	4193	561	141	0	3490	4192
Others	8543	2598	403	4226	1317	8544
Total	159027	21844	22161	79693	35329	159027

19.5 All Implementing Agencies

The project is designed for attaining value addition to certain selected crops through food processing techniques and established two to three processing centers in each of the partner countries to produce value added products like jackfruit, cassava chips, tomato sauce, varieties of moringa products (tea, leaf powder, paste etc.). The following section articulated the progress of the project across the member states (implementing agencies). The member states operated the project through reputed Government and semi-Government institutions.



19.5.1 Physical Achievement

The year wise progress of the targeted physical activities cumulative of all participating member states (Bangladesh, Bhutan, India and Sri Lanka) is showed in the following Table 17. It is important to mention that except Bhutan all other participating countries/organizations completed their physical activities of the project within 2023. The figures showed under 2023 and 2024 columns are the progress data of only Bhutan, no other countries showed any figures in these columns. Figures under 2023 and 2024 came to the face due to addition of all country's data. Irrespective of the member states and physical items, maximum works undertaken during the year 2022 followed by 2021, 2023 and 2020. Considering the physical items, maximum implementing agencies completed their processing centers by year 2022 and purchased equipment for the centers during 2023 and 2024 (Bhutan). Activities for accessibility to modern technologies, capacity development and business promotional activities continued throughout the project period 2020 to 2023. Only Bhutan continues certain activities till 2025.

Table 17. Physical Achievement of the Project

Project intervention (Item)	2020	2021	2022	2023	2024	2025	Total
Development of infrastructure facilities (building and machineries)	17	79	45	26	33	10	210
Access of Farmer to Improved Technology and Good Post-harvest Practices	126	149	192	129	53	50	699
Capacity Development of farmers (Training and refresher training)	51	129	169	121	53	60	583
Promotion of Entrepreneurship	52	68	147	178	53	61	559
Others	198	102	11	2	0	0	313
Total	444	527	564	456	192	181	2364

19.5.2 Financial Achievement

The year wise progress of the targeted financial activities cumulative of all participating member states (Bangladesh, Bhutan, India and Sri Lanka) is showed in the following Table 18. It is important to mention that except Bhutan all other participating countries/organizations completed their financial activities of the project within 2023. The figures showed under 2023 and 2024 columns are the progress data of only Bhutan, no other countries showed any figures in those columns. Figures under 2023 and 2024 came to the face due to addition of all country's data. Irrespective of the member states and physical items, maximum works undertaken during the year 2022 followed by the year 2021, 2023 and 2020. Considering the physical items, maximum implementing agencies completed their processing centers by the year 2022 and purchased equipment for the centers during 2023 and 2024 (Bhutan). Activities for accessibility to modern technologies, capacity development and business promotional activities continued throughout the project period 2020 to 2023. Only Bhutan continues certain activities till 2025.

Table 18. Financial (USD) Achievement of the Project

Project intervention (Item)	Approved Budget	2020	2021	2022	2023	2024	2025	Total
Development of infrastructure facilities	404462	61070	105985	139709	42396	45345	9957	404463
Access of Farmer to Improved Technology and Good Post-harvest Practices	56029	8736	24301	16395	5922	644	32	56029
Capacity Development of farmers	123145	2801	30111	78918	8203	2115	998	123145
Promotion of Entrepreneurship	90635	9969	5812	39667	33887	2408	1200	92942
Others	69520	22709	20804	15059	9651	409	890	69521
Total	743791	105284	187012	289748	100059	50921	13077	746100

19.6 SAC Achievement

As coordinating agency, SAC (SAARC Agriculture Center) used project budget mainly for different monitoring purposes. The field activities of implementing agencies were directly monitored and in some cases assisted to organize the events by the SAC. The year wise physical and financial activities of the SAC is discussed in the following sections.

19.6.1 Physical Achievement

The budget allocation for physical and financial activities of the project for SAC was bit different from the implementing agencies, as the nature of activities were dissimilar. The table 19 below summarized the physical activities performed by the SAC during the project period. Analyzing the activities completed, it has been observed that 'regional agri-business training' for the officials of participating implementing agencies was the number one job done by the SAC followed by the program support activities. The SAC assisted the implementing agencies to organize producer groups, procurement of machineries for the processing centers, staff and farmers training etc., which consumed a major part of their project activities. The SAC also organized inception and closing workshops involving the officials of participating implementing agencies. Monitoring of project activities was another important task performed by the SAC during the project tenure. Completion of end line survey and project closing report were also done by the SAC as part of their responsibility. The details of the physical activities done by the SAC as coordinating organization are showed in the following table 19.

Table 19. Physical Achievement (USD) of SAC during the project period

Project intervention (Item)	2020	2021	2022	2023	2024	2025	Total
Workshop and group formation	2.00	2.00	2.00	2.00	2.00	2.00	12.00
Monitoring and Evaluation (travel and participation)	4.00	3.00	2.00	13.00	6.00	3.00	31.00
Program support costs	15.00	30.00	16.00	14.00	12.00		87.00
Procurement of machineries (spot visit etc.)	6.00	3.00	4.00	0.00	0.00	0.00	13.00
Regional agri-business training	48.00	15.00	16.00	16.00	16.00	14.00	125.00
Support to national program	0.00	3.00	3.00	2.00	1.00	0.00	9.00
Hiring Consultant	0.00	0.00	0.00	0.00	1.00	1.00	2.00
Project closure	0.00	0.00	0.00	0.00	0.00	1.00	1.00
SAC Coordinating agency fee						6.00	6.00
SAC contribution (in kind)							0.00
CIRDAP contribution (in kind)							0.00
Total							286.00

19.6.2 Financial Achievement

The budget allocation for financial activities of SAC of the project was bit different from the implementing agencies, as the nature of activities were dissimilar. The table 20 below summarized the financial activities performed by the SAC during the project period. Analyzing the activities completed, it has been observed that 'regional agri-business training' for the officials of participating implementing agencies was the number one job done by the SAC consuming USD 46186/- followed by the program support activities' by consuming USD 20672/-. The SAC assisted the implementing agencies to organize producer groups, procurement of machineries for the processing centers, staff and farmers training etc. under the budget head of program support costs, which consumed USD a major part of their project activities. The SAC also organized inception and closing workshops involving the officials of participating implementing agencies consuming an amount of USD 9964/-. Monitoring of project activities was another important tasks performed by the SAC during the project tenure and used USD8483/-. Completion of end line survey and project closing report were also done by the SAC through hiring third party consultant and used USD 13499/- as part of their responsibility. The details of the financial activities done by the SAC as coordinating organization are showed in the following table 20.

Table 20. Financial Achievement (USD) of SAC during the Project period

Project intervention (Item)	Approved Budget	2019+2020	2021	2022	2023	2024	2025	Total
Workshop & group formation	19000	5067	1805	990	713	1390	0	9964
Monitoring and Evaluation (travel and participation)	28000	823	646	246	4638	1524	608	8483
Program support costs	19000	3609	7723	3792	3061	2535	-47	20672
Procurement of machineries (spot visit etc.)	4000	2310	1137	1500	0	0	0	4948
Regional agri-business training	46000	10972	3089	8816	7592	8515	7202	46186
Support to national program	28000	0	3084	2999	1380	620	0	8083
Hiring Consultant	22000	0	0	0	53	13446	0	13499
Project closure	14000						1438	1438
SAC Coordinating agency fee	45371						5202	5202
SAC contribution (in kind)	25851							0
CIRDAP contribution (in kind)	100000							0
Total	351222	22781	17483	18343	17438	28028	14403	118476

20. Project Output

The project activities generated visual results to the livelihood developments of the targeted beneficiaries. The following section indicated results of the project to the project area as well as to the improvement of lifestyles of the target population. The projects' outputs have been shown against the project member states (through implementing agencies). The project impact report/end line survey quantified outputs of the project; some of which are:

20.1 Livelihood Improvement

Changes in ownership of land assets as well as family income were taken into consideration to assess the improvement of livelihoods of the target population. Appreciable progress has been made in improvement of family income of the project beneficiaries.

20.1.1 Land holdings

The project interventions assisted the beneficiaries to improve their livelihoods in respect of size of landholdings and annual family income. It is mentioned that though the project was designed for three years duration but it continued for six to seven years that has also contributed to the changes. Averaged across implementing agencies and countries the land size of project beneficiaries increased by 14% than the non-project farmers. Among the project implementing countries highest increase achieved by the beneficiaries of Sri Lanka followed by Bangladesh, Bhutan and India. Noticeable enhancement showed by Sri Lanka and Bangladesh farmers than Bhutan and India. The Table 21 below showed the details of the landholdings of beneficiaries.

Table 21. Change in size of land holdings of the project beneficiaries

Country	Project (decimal)	Control (decimal)	Change (%)
Bangladesh	99	123	24
Bhutan	219	233	6
India	356	373	5
Sri Lanka	250	321	28
All	231	263	14

20.1.2 Family income

Visible changes have been occurred in annual family income of the project beneficiaries due to project interventions. It is mentioned that though the project was designed for three years duration but it continued for six to seven years that has also contributed to the changes. Averaged across implementing agencies and countries the annual family income of project beneficiaries increased by 30% than the before project period. Among the project implementing countries



Moringa Technology demonstration field, India

highest increase achieved by the beneficiaries of Bangladesh followed by Sri Lanka, Bhutan and India. Noticeable enhancement showed by the farm households of all the implementing countries. The Table 22 below showed the details of the changes in annual family income of beneficiaries.

Table 22. Changes in annual Family income of project beneficiaries

Country	Before*	After*	Change (%)
Bangladesh	334680	518480	55
Bhutan	225725	275600	22
India	385500	450421	17
Sri Lanka	746150	958320	28
All	423014	550705	30

*Income showed in local currency of each of the countries (1 USD = BDT 120, Btn 84.47, INR 84.56 and LKR 290.80)

20.2 Post-harvest loss reduction

The livelihood enhancement project attributed value addition of harvested crops through food processing practices. So post-harvest loss reduction was one of the important development objectives of the project. The following Table 23 showed the achievement attained by different implementing agencies. Averaged across implementing agencies and countries the post-harvest reduction attained by 44% than the before project situation. Among the project implementing countries highest post-harvest loss reduction achieved by the beneficiaries of Bhutan followed by Sri Lanka, Bangladesh and India. Noticeable success showed by the farm households of all the implementing countries. The Table 23 below showed the details of the post-harvest loss reduction achieved by the beneficiaries.

Table 23. Post-harvest loss reduction occurred due to SDF project activity

Country	Before	After	Change (%)
Bangladesh	14.1	10.4	-26
Bhutan	51.2	16.9	-67
India	25.6	20.8	-19
Sri Lanka	23.7	15.9	-33
All	29	16	-44

20.3 Employment enhancement

The project activities (formation of producer groups, establishing processing centers, technical training etc.) put positive impact on the employment opportunities in the rural areas. The producer group members engaged more laborers in their farms and hired skilled staff for operation of the centers as well as marketing of the value-added products. The following table 24 summarized the employment enhancement occurred due to implementation of the project.

Averaged across implementing agencies and countries the employment of labor/staff increased by 54% than the before project situation. Among the project implementing countries highest employment enhanced by by the beneficiaries of Bhutan followed by India, Bangladesh and Sri Lanka. Noticeable success showed by the farm households of all the implementing countries. The Table 24 below showed the details of the employment enhancement scenarios achieved by the beneficiaries.



Processed crop products at Samtse site, Bhutan

Table 24. Employment enhancement (#) by farmers/producers due to SDF project activity

Country	Before (No./family)	After (No./family)	Change (%)
Bangladesh	9.3	12.9	39
Bhutan	7.4	14.4	95
India	4.3	6.1	42
Sri Lanka	3.6	4.6	28
All	6	10	54

20.4 Incremental sale

Tangible increased in the daily and seasonal sale of crops (products) observed by the project beneficiaries due to project activities. It is noted that the project activities continued for almost seven years in the particular sites that impacted on positive results on the higher sale of crop products too. Averaged across implementing agencies and countries the incremental sale of crop products increased by 64% than the before project situation. Among the project implementing countries highest incremental sale value of crop products by the beneficiaries occurred in Sri Lanka followed by Bangladesh, India and Bhutan. Noticeable success showed by the farm households of all the implementing countries. The Table 25 below showed the details of the incremental sale value of crop products achieved by the beneficiaries.

Table 25. Value of incremental sales received by SDF supported farmers

Country	Before (Kg/family)	After (Kg/family)	Change (%)
Bangladesh	58.4	78.9	35
Bhutan	35.4	40.2	14
India	23.5	28.8	23
Sri Lanka	204.7	379.3	85
All	81	132	64

21. Investment against Project Intervention

The following section discussed on physical and financial investment of the project as per investment indicators like a) Infrastructure development b) Capacity development c) Access to production technology d) Promotional activities and e) Other investments.

21.1 Development of Infrastructure for Post-harvest Facilities

The physical infrastructures elucidated in the table included the processing centers and associated small structures and machineries required for processing crop products. The infrastructures development made by the livelihood enhancement project in the participating countries are summarized by the project years in the following Table 26. Highest numbers of physical structures developed by Bhutan



Food Processing Center at Sri Lanka (source End line survey report)

followed by Sri Lanka, Bangladesh and India. Out of total 210 physical structures made by the project, Bhutan alone shared 55%, Sri Lanka shared 31% Bangladesh 11% and India rest 3%. Considering the project years' highest infrastructures established in 2021 followed by 2022, 2024, 2023 and 2020. Considering physical infrastructures 2022 was observed as most effective year of the project duration.

Table 26. Development of physical Infrastructure for Post-harvest Facilities

Country (Agency)	Year of implementation						Cumulative progress
	2020	2021	2022	2023	2024	2025	
Bangladesh (RDA)	2	5	8	9	0	0	24
Bhutan (DAMC)	12	25	26	9	33	10	115
India (MSSRF)	1	2	2	1	0	0	6
Sri Lanka (ETC, DA)	2	47	9	7	0	0	65
All	17	79	45	26	33	10	210

The financial achievement by project year was measured by the expenditure made against physical infrastructures during the fiscal year for each of the country. The year wise financial achievement for physical infrastructures of the project by the participating member states is showed in the following Table 27. The financial progress of the year actually followed the physical structures procured during its duration. Out of the total expenditures made for developing physical infrastructures by the project was USD 404463/-, of which, 35% spent in 2022, 26% in 2021, 15% in 2020, 11% in 2024, 10% in 2023 and 02% in 2025.

Table 27. Financial achievement of the project under infrastructure development for Post-harvest Facilities

Country (Agency)	Year of implementation						Cumulative progress
	2020	2021	2022	2023	2024	2025	
Bangladesh (RDA)	29050	450	300	200	0.00	0	30000
Bhutan (DAMC)	1389	44244	49200	9755	45345	9957	159890
India (MSSRF)	12500	39674	15250	4545	0.00	0.00	71969
Sri Lanka (ETC, DA)	18131	21617	74959	27896	0	0	142603
All	61070	105985	139709	42396	45345	9957	404463

21.2 Capacity Development of farmers

The capacity development of beneficiaries was targeted in the project and its physical progress elucidated in the table included skill development training on various related subjects and also the financial management of the producer groups. The capacity development made by the livelihood enhancement project in the participating countries are summarized by the project years in the following Table 28. Highest numbers of capacity development training to the beneficiaries were imparted by Bhutan followed by India, Bangladesh and Sri Lanka. Out of total 583 participants attended training programs organized by the project, Bhutan alone shared 48%, shared 34% Bangladesh 17% and Sri Lanka rest 2%. Considering the project years' highest training courses imparted in 2022 followed by 2021, 2023, 2025 and 2020. Considering organizing training programs 2022 was observed as most effective year of the project duration.



Capacity development training, India

Table 28. Physical achievement of the project for capacity development of beneficiaries

Country (Agency)	Year of implementation						Cumulative progress
	2020	2021	2022	2023	2024	2025	
Bangladesh (RDA)	0	25	75	0	0	0	100
Bhutan (DAMC)	21	34	42	68	53	60	278
India (MSSRF)	30	70	50	50	0	0	200
Sri Lanka (ETC, DA)	0	0	2	3	0	0	5
All	51	129	169	121	53	60	583

The financial achievement by project year was measured by the expenditure made for capacity development during the fiscal year for each of the country. The year wise financial achievement for skill development training of the project by the participating member states is showed in the following Table 29. The financial progress of the year actually followed the physical numbers of participants in the training courses during its duration. Out of the total expenditures made by the project for skill development USD 123145/-, 64% spent in 2022, 24% in 2021, 7 in 2023, 02% in 2020, 02% in 2024 and 01% in 2025.

Table 29. Financial achievement of the project for capacity development of beneficiaries

Country (Agency)	Year of implementation						Cumulative progress
	2020	2021	2022	2023	2024	2025	
Bangladesh (RDA)	0.00	21165.00	70244.00	0.00	0.00	0	91409
Bhutan (DAMC)	775	1396	4886	4922	2115	998	15092
India (MSSRF)	2026	7550	3280	1159	0.00	0.00	14015
Sri Lanka (ETC, DA)	0	0	508	2121	0	0	2629
All	2801	30111	78918	8203	2115	998	123145

21.3 Access of Farmer to Improved Technology and Good Post-harvest Practices

The accessibility of farmers to the development/modern practices elucidated in the table included the improved production technologies like varieties/saplings, production systems, good post-harvest practices, food processing to prepare chips and other dries products. The physical numbers achieved for improving



Marketing of virgin coconut oil, India

accessibility of farmers made by the livelihood enhancement project in the participating countries are summarized by the project years in the following Table 30. Highest numbers of physical numbers of farmers accessibility activities imparted by India followed by Bhutan, Bangladesh and Sri Lanka. Out of total 699 farmers to technology accessibility ensured by the project, India alone shared 54%, Bhutan shared 34% Bangladesh 14% and Sri Lanka rest less than 01%. Considering the project years' the highest farmers' accessibility achieved in 2022 followed by 2021, 2023, 2020, 2024 and 2025. Considering farmers' accessibility to technology, 2022 was observed as most effective year of the project duration.

Table 30. Physical achievement of the project for access to improved technology

Country (Agency)	Year of implementation						Cumulative progress
	2020	2021	2022	2023	2024	2025	
Bangladesh (RDA)	25	25	50	0	0	0	100
Bhutan (DAMC)	0	24	42	68	53	50	237
India (MSSRF)	100	100	100	60	0	0	360
Sri Lanka (ETC, DA)	1	0	0	1	0	0	2
All	126	149	192	129	53	50	699

The financial achievement by project year was measured by the expenditure made during the fiscal year for each of the country. The year wise financial achievement for farmer's accessibility to production technology disseminated by the project by the participating member states is showed in the following Table 31. The financial progress of the year actually followed the physical numbers of the farmer's accessibility to technology during its duration. Out of the total expenditures made for farmers accessibility to production technologies by the project was USD 56029/-, of which 43% spent in 2021, 29% in 2021, 16% in 2020, 11% in 2023, 01% in 2024 and <01% in 2025.

Table 31. Financial achievement of the project for access to improved technology

Country (Agency)	Year of implementation						Cumulative progress
	2020	2021	2022	2023	2024	2025	
Bangladesh (RDA)	4331	15000	4000	0.00	0.00	00	23331
Bhutan (DAMC)	00	1030	894	1009	644	32	3609
India (MSSRF)	3851	8271	11501	4408	0.00	0.00	28030
Sri Lanka (ETC, DA)	554	0	0	505	0	0	1059
All	8736	24301	16395	5922	644	32	56029

21.4 Promotion of Entrepreneurship

The physical development of entrepreneurship elucidated in the table included the potential members of producer groups, who were able to develop their business using the food processing facilities established by the project. The entrepreneurship development made by the livelihood enhancement project in the participating countries are summarized by the project years in the following Table 32. Highest numbers of members adopted



Processed food at Samtse, Bhutan

entrepreneurship using the project facilities in Bhutan followed by India, Bangladesh and Sri Lanka. Out of total 559 members developed as entrepreneurs by the project, Bhutan alone shared 45%, India shared 36% Bangladesh 18% and Sri Lanka rest 02%. Considering the project years' highest entrepreneurs were developed in 2024 followed by 2023, 2021, 2024, 2025 and 2020. Considering entrepreneurship development 2023 was observed as most effective year of the project duration.

Table 32. Physical achievement of the project for promotion of entrepreneurship

Country (Agency)	Year of implementation						Cumulative progress
	2020	2021	2022	2023	2024	2025	
Bangladesh (RDA)	0	0	50	50	0	0	100
Bhutan (DAMC)	0	16	47	73	53	61	250
India (MSSRF)	50	50	50	50	0	0	200
Sri Lanka (ETC, DA)	2	2	0	5	0	0	9
All	52	68	147	178	53	61	559

The financial achievement by project year was measured by the expenditure made during the fiscal year for each of the country. The year wise financial achievement for entrepreneurship development of the project by the participating member states is showed in the following Table 33. The financial progress of the year actually followed the physical numbers of entrepreneurs during its duration. Out of the total expenditures made by the project for entrepreneurship development was USD 92942/-, out of which 43% spent in 2022, 36% in 2023, 11% in 2020, 11% in 2020, 06% in 2021, 03% in 2024 and 01% in 2025.

Table 33. Financial achievement of the project for promotion of entrepreneurship

Country (Agency)	Year of implementation						Cumulative progress
	2020	2021	2022	2023	2024	2025	
Bangladesh (RDA)	0.00	0.00	20350.00	19223.00	0.00	0	39573
Bhutan (DAMC)	00	188	303	336	2408	1200	4435
India (MSSRF)	3550	5671	18961	10379	0.00	0.00	38560
Sri Lanka (ETC, DA)	561	141	00	3490	00	00	4192
All	9969	5812	39667	33887	2408	1200	92942

21.5 Investment in Other Areas

The investment made by the project other than the items/indicators discussed above has been elucidated in the table that included workshop/seminar, staff salaries and miscellaneous project costs. The Costs incurred by the project against other investment by the livelihood enhancement project in the participating countries are summarized by the project years in the following Table 34. Highest numbers of physical costs were incurred against other investment items by India followed by Bhutan, Bangladesh and Sri Lanka. Out of total 313 physical items of the project, India alone shared 64%, Bhutan 32%, Sri Lanka shared 04% and Bangladesh 00%. Considering the project years' highest investment made against another category in 2020 followed by 2021, 2022, 2023, 2024 and 2025. Considering other investment of the project 2020 was observed as most effective year of the project duration.

Table 34. Physical achievement of the project against other investment

Country (Agency)	Year of implementation						Cumulative progress
	2020	2021	2022	2023	2024	2025	
Bangladesh (RDA)	0	0	00	00	00	00	00
Bhutan (DAMC)	95	1	4		0	0	100
India (MSSRF)	100	100	0	0	0	0	200
Sri Lanka (ETC, DA)	3	1	7	2	0	0	13
All	198	102	11	2	0	0	313

The financial achievement by project year was measured by the expenditure made during the fiscal year for each of the country. The year wise financial achievement for physical infrastructures of the project by the participating member states is showed in the following Table 35. The financial progress for other investment of the year actually followed the physical structures procured during its duration. Out of the total expenditures made by the project for other investment was USD 69521/-, of which 33% spent in 2020, 30% in 2021, 22% in 2022, 14% in 2023, 01% in 2024 and 01% in 2025.

Table 35. Financial achievement of the project against other investment

Country (Agency)	Year of implementation						Cumulative progress
	2020	2021	2022	2023	2024	2025	
Bangladesh (RDA)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bhutan (DAMC)	5858	0	356	795	409	890	8308
India (MSSRF)	14253	20401	10477	7539	0.00	0.00	52669
Sri Lanka (ETC, DA)	2598	403	4226	1317	0	0	8544
ALL	22709	20804	15059	9651	409	890	69521

22. External Visitor in Project Sites

External visitors in projects are individuals who are not part of the core project team but need access for specific purposes. Generally, these visitors are high officials including clients, consultants, vendors, or other stakeholders with a vested interest in the in the agricultural project. Visitors made comments on the positive progress of the progress and the issues need to be emphasized for achieving the objectives. Numbers of high officials including interested consumers were visited the activities of livelihood enhancement project in Sri Lanka and Bangladesh. The table 36 below detailed out the visits of external officials with their observations and comments.

Table 36. External visitors of the project

Sl #	Identification of Visit	Time of visit	Duration (Day)	Activities/Observations
1	Secretary General, SAARC Secretariat, Nepal	Apr 2023	One day	Met with beneficiaries and observed the products (chips)
2	Director, ARD and SDF, SAARC Secretariat, Nepal	Oct 2023	One day	Project activities (Sri Lanka)
3	Foreign Secretary, Bangladesh	Jan 2022	One day, RDA, Bogura, BD	Products, machineries, beneficiaries
4	Program manager, Welthungerhilfe, Dhaka	Jun 2023	One day, Kapasia, Gazipur, BD	Products and machineries
5	Executive Chairman, BARC, BD	Oct 2022	One day, SAC	Assess the progress of livelihood enhancement project
6	Member Director, NRM, BARC, BD	May 2024	One day, SAC	Products observation
7	PSO, Postharvest Technology Division, BARI, BD	Jun 2023	One day, Bogura	Observed training

23. Technical Training by SAC

The project Director Office of livelihood enhancement project, Dhaka organized numbers of technical trainings for the project officials at different venues of the project areas (member states). Trainings were conducted either under physical presence of the participants or arranged on-line training due to COVID incidence. Details of training venues, participant numbers, execution time and duration of the courses are shown in the following table 37.

Table 37. Training program arranged by the SAC

Sl #	Name of the courses	Venue	Number of participants	Time of execution	Duration (Day)
1	Contemporary and strategic issues in agri-business management focusing value chain development	Chennai, India	8	27-29 Nov 2023	3
2	Developing regional agri-business, product development and marketing	ICIMOD, Katmandu, Nepal	15	25-28 Feb 2025,	5
3	Agri-business focusing on agro-food processing	IIHR, Bangalore, India	10	11-15 Sep 2022,	5
4	Regional Training on Agri-business and management	RDA, Bogura	10	19-24 Mar 2020,	5
5	Value chain development on fruits and vegetables	on-line (virtual)	25	2022 (Aug)	3
6	Contemporary and strategic issues in food and agri-business	on-line (virtual)	22	3-4 Mar 2021	2

24. Workshop/Seminar/Symposium

The Project Director's office of SAC, SAARC and RDA (Rural Development Academy), the implementing partners of Bangladesh organized numbers of workshops on related issues of the livelihood enhancement project during the execution period. Immediately after launching the project SAC organized inception workshop in Dhaka involving national and international participants. At the middle of the implementing period of the project SAC also arranged progress review workshop involving all implementing agencies of member states in November 2023. The implementing agencies made power point presentations on the progress status of their respective project and field activities including success of the entrepreneurs- buildup due to project support. The implementing partner RDA organized their closing workshop in August 2022 with around 100 participants and reported/presented the major



activities executed in presence of the high officials of RAD & SAC and member of the producer groups. The details of the number of workshops arranged by the SAC/RDA with participant numbers and execution time are given in the following table 38.

Table 38. Workshop organized by the project during the tenure

Sl #	Theme of the Seminar/Symposium	Number of participants	Time of execution	Duration (Day)
1	Inception workshop	42	Oct 2018	2
2	Progress Review Workshop	35	Nov 2023	1
3	Project closing workshop	100	Aug 2022	1
4	Workshop on Market linkage	100	Mar 2022	1
5	TV Program (Independent)	NA	May 2021	Once
6	TV Program (Independent)	NA	Oct 2022	Once

25. Audiovisual/Publication

As observed the project performance was weak in producing and distributing publications on the project interventions or different success stories. So far, the project published brochure (project at a glance) during 2020 and printed 200 copies and distributed to all kinds of stakeholders. The project management also produced certain proceedings of the workshop organized during project implementation.

26. Overall Performance of the Project

By and large the project successfully implemented in the field and completed the targeted activities to achieve the development objectives. Originally the project was designed for a duration of three years (2019 to 2022) involving 8 SAARC countries but the project duration revised three times, one year in each revision that ultimately made the duration for six years (2019 to 2025). Out 8 SAARC countries three countries (Afghanistan, Pakistan and Nepal) were dropped and five countries actively participated and successfully completed the project. The project innovations included production high quality chips from different crops using vacuum frying machines and marketing the products through producer groups linking with the chain shops of large food and beverage companies operated in the countries. The major positive performance of the project is:

- The livelihood enhancement project successfully formed the planned numbers of producer groups (two in each center) with required numbers of members (50/group with both male and female) in each of the project sites of the member states
- It established two to three food processing centers for value addition activities of the targeted/interventional crops in each of the participating member states
- The system of savings collection from the enlisted members was introduced to maintain the integrity of the groups
- All processing centers were equipped with required numbers of machineries like vacuum frying machines, small machineries for packaging of chips and sauces, sealers etc. for producing the cassava or jackfruit chips and other products from moringa and coconut

- The processing centers in each of the implementing agencies recruited numbers of staff (employment generation) for operating the centers in addition of increased numbers of laborers used by the beneficiaries in their farms for higher production of targeted crops
- The project provided skill development training for large numbers of beneficiaries and staff on the value addition techniques and on new production technologies
- The project activities introduced new varieties of crops and modern crop production systems that enhanced production per family
- Vacuum fried jackfruit chips are becoming popular in Bangladesh and numbers of service providers started to produce the chips and doing marketing in the cities especially in front of schools and shopping centers

Instead of 2018 actually the project became operational/effective in 2019 due to addressing the tithing troubles of starting the multinational project, initially it suffered from non-compliance of Government procedures. Delayed start of the project forced to delay the establishment of processing centers and procurement of required machineries, so country like Sri Lanka faced difficulty in marketing of processed value-added products. The processing centers still need some supports from the project-participated implementing agencies to establish linkage with the large companies and use the centers as production hubs of the targeted products. The dilemma of marketing is to be improved to sustain introduced Income Generating Activities (IGAs) of the producer groups.

27. Assessment of Project Sustainability

The project has successfully implemented the designed activities (forming producer groups, skill development training courses, technology transfer activities etc.) to build up (upgrade) the capacity of staff of implementing agencies and members of producer groups. Field visit confirmed that an extended awareness has been developed among the beneficiaries regarding the implementing agencies (Government or private) and their technological innovation regarding value chain development of important crops. Certain percentages of group members have found in a way of achieving quality life (using modern household appliances etc.) too.

The discussion/interaction at different levels of project staff and stakeholders revealed that the SAC had faced hardship to make a system of continuation of fund mobilization to the beneficiaries during project operation using national financial organizations. The fate or mechanism of realization at post project period of fund delivery from the authority of processing centers was not clearly spelled out in the project document or project proposal. SAC informed that series of meetings and correspondence were done with member states and agencies on the issues to have positive effect. The failure of establishing any exit strategy of the project would make questionable the establishment of processing centers with high costs, however continuous financial support to the producer groups till certain period would be need at post project situation. So financial viability as well as technical viability became faded for the future. However as informed the technology flow (technical viability) would partially be continued using the professional in the agencies that has been developed between field staff at the processing centers and the beneficiaries due to project activities in last couple of years. SAC would need to have an MOU between local management of processing centers and with the authority of implementing agencies for joint technical support and capacity building of the beneficiaries in future.

28. Innovation and Up-Scaling

With the onset of SDF in 2010 it designed series of development projects by targeting poverty alleviation with member states in SAARC countries in association with Government and non-government organizations. The projects had similar target groups and strategy of implementation though slight modifications or additions were made with later designed ones than the earlier projects. Livelihood enhancement project was one of the projects of the series designed in 2018-2021 by SAC formulation team.

The project allocated fund for value chain development of popularly grown crops and established food processing centers in the project area of each of the participating member states. 'Establishing food processing centers in the remote villages' concept was adopted in the project for improvement livelihoods of rural people especially women through value chain development of certain selected crops as new innovation. In addition, the project developed the concept of formation of producer groups (mostly by women) for producing the value-added products and attempted to trained them to make linkage with the city market to facilitate higher income

The concept of developing value-added new crop products like jackfruit, banana and cassava chips, moringa tea, tomato sauce etc. was the innovation of livelihood enhancement project. Enhancement of self-live of crop products through agro-processing was integrated with the farming community to have sustainable poverty alleviation was the key strategy of livelihood enhancement project and SDF After successful implementation of the project SDF may also design projects with similar theme with SAC for the SAARC region. Considering the success of the project SAC may also hunt funding from other donors for extension of moringa cultivation with value added products in the SAARC countries. SDF may initiate to funding similar projects on livestock improvement in the region.

29. Lessons Learned

The implementation of the project does not always move with its designing; the project management has to adjust some of the issues with the field-reality. The livelihood enhancement project also faced tithing trouble during its implementation. With experience in the field execution, the following learnings are stated that might help in future project designing and management as a whole.

- The producer groups formed so far in participating members states can be used for other development activities like IPM, variety introduction etc.
- Duration of the training courses should be increased on the basis of nature of the course and depth of knowledge of the participants on the particular subject.
- More training on non-farm income generating activities could have been organized specially, for the marginal farmers.
- Technical training accelerates family income of the poor people
- Local leaders could have been invited in the workshops organized at the processing centers. This could help the field officials and marketing people to deliver their services to the group members most efficiently.
- Participation of beneficiaries could have been ensured during site selection of crop field and value addition activities.
- Clear guidelines could have been prepared for formation of producer groups, use of local social organization and village Government facilities.
- Partnership between producer groups and operation staff of processing centers in integrated way could have been very effective for successful implementation of project activities (food processing and marketing of products).
- Timely fund disbursement is the precondition for smooth implementation of project activities.
- Provision of sufficient staff training for all the implementing agencies and partner organizations could play important role in implementing project activities.
- Provision should be made for continuation of supervision and monitoring after the completion of the project period.
- Lack of technical supports to the farmers after project completion may reduce group cohesiveness
- Poor working environment, low salary package caused high drop out among the NGO field staff.

- During project implementation stage staff transfer should be avoided if not needed. This will maintain continuity of the project activities.
- Interest rate on savings of beneficiaries (members of the producer group) should not be less than the existing interest rate paid on the savings account by the local banks. This will encourage the group members to save more.
- Shortage of farm laborers is one of the main reasons for high production costs of crop and products, advocacy to be done into the farming community to use small available machineries for cultivation and harvesting
- The coconut growing farmers facing difficulty due to shortage of skilled laborers for harvesting of green/mature coconut from tall plants, dwarf variety with high production potentials is demanded from the field, research and extension workers are to be engaged
- Rural infrastructural development expedites growth of rural economy
- Entertaining political interference in project activities deprive poor community people
- Uneven distribution of benefits creates dissatisfaction among the proficient staffs and de-motivates them
- In some cases, lack of coordination among implementing partners hamper project activity and develop mistrust
- Gender sensitization for both male and female help women empowerment
- The linkage system in the processing centers is to be developed to accommodate more female member who will produce the value-added products in the center for some of the large food/beverage companies, from where the company representatives will collect it in regular weekly basis
- Linkage between producer groups with extension agencies to be made stronger through motivation and by arranging exchange visit
- Low price of crop products in the local market during harvesting season is a common phenomenon for agriculture commodities, producer groups can overcome the situation by producing value added non-perishable products



The Closing Workshop

The closing workshop of the livelihood enhancement project was held at the RDA (Rural Development Academy), Bogura during 17 to 18 October 2025 with the presence of representatives from all the Implementing Agencies (member states). Details of the closing workshop are:

The inaugural session was started at 9:30 am on 17 October 2025 at the conference room of the IWM bhabon of RDA. The session was presided over by the Director of SAC Dr. Harunur Rashid, the General Dr. AKM Wali Ullah of RDA presert as the chief guest, Mr. Tanvir Ahmed Torophder, Director (ARD and SDF) as special guest, Ms. Shabnam Shivakoti, Governing body member of SAC and Joint Secretary MoALD, Nepal as guest of



honor and Mr. Waseem Shazad, Officer in Charge (OIC), SDF, SAARC Secretariat, Thimphu, Bhutan, as guest of honor. Focal points from each of the implementing agencies, technical experts, entrepreneurs, farmers and representation from SAC, SDF and RDA were present in the workshop.



The welcome address was given by the Director RDA while Dr. Md. Younus Ali, SPS of SAC addressed the opening remarks.



Following the opening remarks, Dr. Nowsher Ali Sarder, SAC consultant as a key presenter started presentation on the Project Completion Report (PCR). His presentation detailed out the physical and financial achievement of the project, output/outcome, achievement against the development objectives, lesson learned, recommendations etc. The Director, ARD and SDF suggest the consultant to include the output of the closing workshop including photos in the PCR.

After the presentation Ms. Shabnam Shivakoti given her inaugural speech and appreciated the SAC for arranging such a session in RDA Bogura instead of the capital city. She said during project design we should have been more careful on fixing the target and considered the issues marketing opportunities for rural women against the large food and beverage companies.



The special guest Mr. Tanvir Ahmed Torophder in his special guest address thanked the SAC management for organizing workshop on the livelihood enhancement project and stressed on the sustainability of the project outcome and to design new project considering the lesson learned like delayed start, lingering the duration of the project and complexity of marketing. He asked the consultant to suggest some of the solutions of marketing issues of the project.



The chief guest Dr. AKM Wali Ullah, DG, RDA expressed his gratitude to become hosting of this important international occasion and thanked the key presenter for his detailed presentation covering all

sides of the project implementation including the issues need to be addressed for sustainability of the project outcomes. He stated that in our system it is not unlikely that the very positive output of the development projects become faded after the project closing due to lack of follow up from the implementing agencies of the project.

The chairman of the session Dr. Harunur Rashid, Director, SAC thanked the chief guest, special guests and guest of honor for the kind presence in the closing workshop. He expressed his pleasure to be a chair of the session and formally opened the project completion workshop. In continuation of the address of the chief guest he requested the project partners to maintain regular follow up to the project beneficiaries so that they can solve their on-going problems and needs. He assured the dignitaries for come up with new needful projects from the SAC in collaboration with the member states of SAARC.

The presentation from member states started after lunch at 2:30 pm with the session chair by the Director SAC. From Bangladesh part Dr. Monirul Islam, focal point of the `project presented the project success stories, results, challenges and lesson learned with way forward` and showed the videos on the preparation and marketing of vacuum fried jackfruit and banana chips.

Mr. Kuenga Tenzin, Post Production Supervisor, National Post harvest center, Paro, Bhutan was the presenter from Bhutan. He shared the experiences on `project presented the project success stories, results, challenges and lesson learned with way forward`.

The next country presenter was the focal point from India Mr. Jibin Thomas and Mr. Seenivassan, MSSRF on `project presented the project success stories, results, challenges and lesson learned with way forward`. Mr. Jibin shared his experiences on the coconut products and marketing in the southern India.

After India the presentation was made by the focal point Ms. Mariyam Simla, Director, Moa and AW of Maldives on `project presented the project success stories, results, challenges and lesson learned with way forward`. She assured that the equipment for the processing centers are to be available in the site within a week and desired extension of the project till another six months to SDF.



The Sri Lankan focal point Ms. V A C Kumuduni, AD, Agriculture, Dept. of Agriculture was the last presenter from the implementing agencies and as of others she made presentation on 'project presented the project success stories, results, challenges and lesson learned with way forward'.

One of the senior scientists from BAR Dr. Ferdous Chowdhury was share his presentation in the closing workshop on 'small scale processing of crops for income generation'. He showed videos and pictures of some entrepreneurship.

Key Recommendations and Observations

Entrepreneurship and Participatory Implementation:

Future projects should adopt an entrepreneurship-driven and participatory approach to implementation. This ensures local ownership, sustainability and effective engagement of beneficiaries at all levels.

Beneficiary List and Documentation:

All Implementing Agencies are advised to upload the final list of project participants/beneficiaries on their respective websites. A documentary video capturing the project processes and impacts should be produced and made available online for reference, learning and transparency.

Database Development and Scientific Dissemination:

A central database containing relevant project data should be created for future reference and policy use. A scientific article should be developed and published in coordination with SAC and SDF, using the draft report to be provided by SDF.

Video Documentation: All video materials and visual documentation related to project activities should be uploaded to official project websites or digital platforms for public access.

Booklet on Project Outcomes: Each Implementing Agency should compile a booklet summarizing the project outcomes, success stories, challenges and recommendations. These will serve as key learning tools for future replication and policy advocacy.

Photographic Evidence in PCR: In the final Project Completion Report (PCR), it is essential to include photographic evidence of field activities in the annexure to substantiate the progress and results achieved.

Midterm Corrections Opportunity: Projects should be designed with flexibility to allow for midterm corrections based on field-level feedback and emerging challenges, ensuring course correction and improved impact.



Cost Minimization through Customized Technology: The machinery and technologies provided under the project were reported to be expensive. It is recommended to explore locally available alternatives and customize technology solutions to reduce costs and increase accessibility for smallholder farmers.

New Project Pipeline Development: Stakeholders are encouraged to begin preparations for the development of new projects building on the learning of the current initiative. SAC and SDF will provide guidance in proposal development.

Farmer-to-Farmer Knowledge Exchange: A communication platform should be developed to connect farmer groups across the region, facilitating knowledge sharing, peer learning and innovation dissemination.

Enhancing Market Access: Strategic pathways should be developed to improve market access for rural entrepreneurs. This includes capacity building in market linkage, branding, quality standards and digital marketing.

Quarterly Reporting Deadline: All IAs are reminded to submit the final quarterly report by 25 October 2025. Timely submission is essential for final project evaluation and reporting.

Audit Preparedness: Implementing Agencies should be prepared for financial and performance audits. All financial records, procurement documents and activity reports must be well-organized and accessible.

Project Extension for Maldives: A seven-month no-cost extension is approved specifically for the Maldives to complete pending project activities, considering delays caused by logistical and contextual challenges.

Conclusion and Way Forward

The closing workshop marked a significant milestone in the regional initiative to enhance rural livelihoods through value chain-oriented agri-business development. The recommendations outlined above aim to consolidate the gains made, promote sustainability and inform future programmatic interventions. The active participation of all stakeholders underscores the collective commitment towards inclusive agricultural development in the SAARC region.

Closing

The workshop was ended with the formal deliberation from the Director, ARD and SDF Mr. Tanvir Ahmed Torophder and Director SAC Dr. Harunur Rashid.

30. Success Stories

Using the project facilities like receiving skill development training for food processing and adoption of modern production technologies many of the project beneficiaries were succeeded to change their livelihoods (the prime objectives of the project). For instance, the PCR highlighted few stories captured by the implementing agencies of the member states.

30.1 Bangladesh

The following two success stories prepared by the RDA (Rural Development Academy), one from Gazipur and another from Bogura site. The success stories are self-explanatory and stated the changes of the livelihoods of the trained beneficiaries using the technical knowledge disseminated by the livelihood enhancement project implemented by SAC and funded by SDF.

Gazipur Women become Agro-processor

Tania Sultana (32) and Rebeya Begum (42) are leading the SDF supported livelihood enhancement project in Gazipur, Bangladesh. Gazipur is known for huge tomato seasonal tomato production, especially by its small holder farmers. Tania and Rebeya are members of the farmers group, who have now turned it into an opportunity to launch their local tomato sauce. Tomatoes are difficult to handle. Once harvested, tomatoes cannot be kept for long as they ripen and decay easily so have to be sold immediately. Tania says that tomatoes fetched only BDT 1 or 2 per kilo during the peak season. Sometimes, they did not even harvest the tomatoes and just left them to decay in the farm because of low prices. But this process of innovation and value addition to their tomatoes has not only given them profit (BDT 5 per sachet of 8 gm) but has generated interests among other farmers in the agri-business. These Gazipur women farmers have a niche market at the moment.



Farmers to Chips Producers-SDF Contribution

A 29-year-old farmer Mr. Mehedi Hasan cultivates banana and jackfruit since his boyhood in Bogura, Bangladesh. He spends two days in nearby food processing center built with the support of SDF to produce banana and jackfruit chips through a vacuum frying technology.

Young farmers like Hasan say this value addition to their agriculture produce has ensured increased income for himself, his family and other members of the producer groups in Bogura. It has also encouraged young people to learn food processing marketing packaging techniques to increase the value of their products.

Hasan is one of the young people in Bogura who are now trained in agro-processing, operating the vacuum frying technology, food safety standards, packaging, marketing and the overall concept of value addition to agricultural produce.



30.2 Bhutan

Success Stories (Collected from SDF website)

Empowering women and families through value addition to agricultural produce

Chhukha, Bhutan, 2022-Every day, smallholder women farmers around the world contribute to the wellbeing of their communities.

Meet 32-year-old Chimi Pem from Bjabchhog village in Chhukha, Bhutan. Chimi is the chairperson of the Bjabchhog Women’s Group, which received an SDF-funded training on value addition and enterprise development.

Chimi says that their agricultural products were not fetching the right price. The markets are far, resulting in higher transportation loss. This is why the value addition and agri-enterprise development training was much needed especially for these rural women groups as they can increase their income by processing their seasonal fruits and vegetables such as pickling, making noodles and etc.

Chimi, who is leading 14 women farmers, says that value-added agriculture provides a unique opportunity for women’s empowerment. The 14 young women farmers provide a platform for themselves to interact and share information on innovation, production, value addition and sustainable farming methods and markets.

“The training on value addition, food hygiene, book-keeping, pricing, packaging and branding has helped enhance our family and group income. We now provide value addition to our farm produce and then sell them. It has increased the value and prices of our products by many folds, decreased the losses and generated employment opportunities for similar women farmers,” she said.



This training was conducted under the SDF-funded project-“Livelihood enhancement of small farmers in SAARC region through small scale agro-business focusing on value chain development”.

They add value to their fruits and vegetables through processing and packaging them into pickles and noodles respectively and promote them at the nearest markets.

Production and value addition equipment, bought with SDF support, will soon be installed inside the recently built processing shed to enhance production.

Assessing the benefits SDF’s Livelihood Project in Bhutan

May-June 2022: The SAARC Development Fund team undertook a field mission in Bhutan to monitor the progress of the SDF-funded livelihood enhancement project.

The team interacted with the implementing partners at the National Post Harvest Centre, Ministry of Agriculture and Forests and farmers and residents of the rural community in Chhukha district to assess the contributions SDF project is making.

SDF’s livelihood project-Livelihood enhancement of the small farmers in the SAARC Region through small-scale agribusiness focusing on value chain development-provides farmers in the SAARC Member States opportunities to improve their livelihoods and increase income through small scale agro-business focusing on value chain development.

In Bhutan, the project is implemented in Bjachho *gewog* (administrative division composing a group of villages) in Chhukha and Yoedseltse *gewog* in Samtse. SDF has committed a grant of over US\$ 191,334 to Bhutan for this project, of which US\$ 150,191 has been disbursed so far.

SDF team monitored the recently constructed processing shed, held fruitful discussions with partners in the Ministry of Agriculture and Forests and community members. Beneficiaries also shared their experience upon receiving the training on improved technologies, value addition and post-harvest practices.

The team was also made aware of the benefits of the Refrigerator Truck, which was bought with SDF support to transport perishable agriculture produce from the farms to either the cold storage or the market. The trucks are equipped with temperature control and monitoring mechanisms to keep agriculture contents safe and consumable.

30.3 India

Success Stories

Mr. Suresh (an organic farmer)

Background

Mr. Suresh Babu is a small farmer residing in a small town namely Kannivadi of Reddiarchatram block of Dindigul district, TamilNadu state of India. He completed his higher secondary schooling at Kannivadi, his father is a retired army man. After his father's retirement, his father purchased 3 acres of land in a village nearby Kannivadi namely Alathuranpatti in the year 1995. After his schooling he entered the agriculture profession. He got married and his wife is a home maker. He has two boy children, elder son studying 3rd year B.Sc (Computer Science) standard and younger one studying 11th standard.

Problem Statement

10 years back his well has abundant water and they were cultivated all type of cash crops such as Sugarcane, banana and paddy and make profit fairly due to higher yields. Normally this area received rainfall through south west monsoon from June to September and North East monsoon from October to January with the rainfall of 850 mm to 1100mm per year (through both the monsoon). Due to global warming effects, 5 years back monsoon season has changed and the average rain fall was reduced year by year from 1100mm to 700mm. Due to which, the water level of his well came down. Because of which he was shifted his cropping pattern from cash crops cultivation to vegetables cultivation such as annual moringa, tomato, bhendi, brinjal, chillies and fruit trees such as guava, lemon, banana and coconut in his land. In the year 2020 he was joined in Vanavil Farmers Interest Group (FIG) and also joined in Reddiarchatram Sustainable Agriculture Producer Company Limited (RESAPCOL) as a shareholder. He purchased a smart phone in the year 2021 and he joined in the WhatsApp group of RSGA's network program. He accessed seeds and bio inputs on quality and at an affordable cost, field-based agriculture advisories, weather-based information, voice mail etc. from RESAPCOL. Also, he participated in the training programmes organized by MSSRF on moringa cultivation as well as value addition held at Horticultural College and Research Institute, Periyakulam. Through this training programme he obtained in depth knowledge on organic moringa cultivation practices and value addition products production process. He learnt the organic inputs production process through MSSRF and RESAPCOL and over a period of time he engaged in the production of organic inputs with the technical support of MSSRF and RESAPCOL under the SDF funded LEAB project. Then he expanded his farmer's network through RESAPCOL's WhatsApp group and supplied good quality organic inputs at an affordable cost. Through this service he has converted around 5500 acres of land under Good Agricultural Practices (GAP).



Intervention/Role of Organic Cultivation training in livelihood enhancement:

He has expanded his farmers' network with fellow farmers through RESAPCOL's WhatsApp group. He has obtained skill and knowledge on organic inputs production through the training and capacity building program organized by MSSRF under LEAB project and he is a pioneer in the adoption of new organic

agricultural technologies and also became self-learner from other sources like different agri web portals and YouTube etc: use and production of organic inputs such as *panchakavya*, *thasakavya*, fish amino acid, organic enzyme, EM solution, virus control enzyme and drought tolerant enzyme etc. By mastering the production process of the above-mentioned inputs, he evolved in to entrepreneur and equipped his knowledge to use digital tools like social media such as Whats App, Facebook, YouTube and agri web portals. He has two milch animals, which gives additional income. In his moringa field, he applied all the organic inputs produced by him through which he reduced his inputs cost by 25% i.e. around Rs. 4000/acre of moringa crop and he obtained around 30% yield enhancement. He also reduced around 18% of the post-harvest loss achieved through the adoption of technologies learnt and organic inputs application. He noticed that, in the Whats App group most of the farmers are enquiring about the organic virus control solution for most of the vegetable crops. Then he was trying to found out the solution for the virus control, for which he discussed with Professors of Tamil Nadu Agricultural University (TNAU), Coimbatore. Initially they were tested in different vegetable crops such as creeper vegetables, climbing vegetables, tomato, bhendi and chillies in various villages around Kannivadi. The enzyme solution gave excellent solution for controlling the virus attack in all the tested crops. Through the WhatsApp group contacts he got orders for the organic inputs such as *Pnachakavya*, *thasakavya*, *meenamino amilam*, EM solution and virus control enzyme. Now he is producing and marketing of 300 to 500 litres of each of the aforesaid organic inputs in a month and earning a net profit of around INR 25000 to 30000 per month.

Moringa Farmer (Women entrepreneur)

Ms. Vasantha Mary, 50 years old is a women moringa small holder farmer, hails from Vadakku Mettupatti Village of Reddiarchatram Block of Dindigul district of Tamilnadu state. She has completed a Diploma in Teacher Education (DTE). Her family own two and half an acre of land and she has been involved in agriculture for the past 10 years. She employs five laborers on a regular basis for various agricultural practices. She has an interest in agriculture even though she has been facing a lot of difficulties while carrying out agricultural operations. She enjoys working on the land and also has a terrace garden in her house in Dindigul town with a wide variety of flower crops and vegetables. On her farm, there are two open wells with pump sets and installed drip irrigation.



Her husband undertakes civil engineering contract work. He is the major source of support and helped her to do farming. She has two daughters; the elder one is doing medicine and younger daughter studying B. Sc-Biotechnology. She is cultivating moringa, groundnut, tomato, bhendi (okra), coconut, guava, water apple, bitter gourd (small) and Jasmine in the field for the market. In addition, she has other crops such as lemon, sapota, orange, pomegranate, turkey berry five varieties of banana, several species of green leafy vegetables and Champak (*Shenbagam*) tree along with 100 native poultry birds.

She has participated in the moringa cultivation technologies and moringa value addition products production technologies organized by MSSRF under SDF funded LEAB project at Moringa Excellence Centre, Kanyakumari and Horticultural College and Research Institute, Periyakulam. She has learnt the organic/plant extract-based inputs production process of *panchakavya*, *Amirtha karaisal* and *Themoor karaisal* in the training. She has tested these inputs in her field and found them very effective in crop growth. Although she is not having livestock, she buys cow-based bio inputs from other farmers. Apart from these inputs, she piloted the use of microbial inputs such as Trichoderma, Pseudomonas and bio-fertilizers, yellow stick cards in the jasmine and other fields to manage sucking pests. She has planted trap crops such as Hibiscus and Vettiver to manage some of the pests. She tested her soil and understood the soil fertility, she regularly applied farm yard manure and managed the soil health.

After the training on organic farming and her personal experiences in using integrated agronomic practices and the use of microbial bio inputs and other organic inputs, she is convinced that these methods are effective in maintaining productivity and at the same time improving the ecology. According to her natural farming means avoiding the use of chemicals in any form in the fields (either as weedicide/pesticide/fertilizers). The diverse vegetables and chicken from her farm are regularly consumed in her house. She also shares the surplus vegetables with her neighbors and relatives. They all appreciated the taste and quality of the produce. She very rarely buys vegetables from the market. The multiple crops in her farm including plants that support pollinators, apiary and trap crops around the edges of the field are unique and she uses the crop residues effectively. The transition to organic/natural farming was staggered, initially, she adopted sustainable agricultural practices and built the soil health, learnt the measures for pest management and diversified the cropping system with different vegetables. With this approach, she could make the transition without many challenges.

However, she is facing issues with labor availability. Since the process of transition was spread over time and prepared the fields for the shifting she didn't face difficulty in convincing her family. During this process, she underwent several training and capacity-building programs, joined as one of the shareholders in RESAPCOL FPO promoted by MSSRF, visited several research and development organizations and learnt technologies necessary for her farm.



This background supported her to make bold decisions and convince her family. At the community level, during training and exposure visits she networked with other women and men farmers and started interacting with them. Also, she is part of the Whats App group in which more than 500 farmers are members. She is keen to read the posts and understand the programs going around. Now her institutional linkages have expanded and connected with different line departments. Over a period of years, she learnt suitable strategies for pest management and was confident to move forward with natural/organic farming.

Based on the skill and knowledge received from the training and capacity building programs on moringa leaf powder production, moringa soup powder production, moringa rice mix production and moringa soap production organized by MSSRF under LEAB project she has obtained in-depth knowledge on the production of these products. After the training programs she slowly started to produce these products with the technical support of MSSRF by availing the Moringa Value Addition Products Production Centre established at RESAPCOL FPO by MSSRF under SDF funded LEAB project. She produced the aforementioned moringa value added products and shared it with her relatives, neighbors and nearby farmers. They all gave positive feedback on the product quality, flavor, color, aroma and taste. After this she standardized the product quality standards for each product. Now she produced and marketed the moringa based value added products through which she reached the turnover of around Rs. 5.75 lakhs.

31. The Annexes

Annexures included:

- i) The brochure of the livelihood enhancement project
- ii) The proceedings of one of the workshops
- iii) The presentation on PCR in the closing workshop

Annex 1: Brochure of the livelihood enhancement project



South Asian Association for Regional Cooperation

Livelihood Enhancement of the Farmers in SAARC Region through Small-scale Agro-business focusing on Value Chain Development



Project Coordinating Agency
SAARC Agriculture Centre (SAC)

Implemented by
SAARC Member Countries

Funded by
SAARC Development Fund

Background and Rationale

South Asian Region is comprises one of the higher populace Regions in the World with 1.6 billion people which represents 24.2 % of the World population. Agriculture sector provides employment to 70% of population and contributes to 24-50% GDP. Average across the region, almost 60% of the regional population depends on agriculture for their livelihood. Operating with average land holding of less than 1 hectare more than 25% fall below poverty and face acute shortage of food. This regional population is also vulnerable to malnutrition.

Fruits and vegetables have been contributing significantly in the agricultural economy of the SAARC Member Countries. The SAARC Member Countries produces significant quantities of indigenous and exotic varieties of fruits and vegetables. Most Member Countries of SAARC in the past several years have been maintaining positive growth in production of fruits and vegetables indicating the increasing role that they are playing in enhancing farmers' incomes, alleviating poverty and improving quality of nutritious diet. In most of the SAARC Member Countries vegetables are obvious priorities as they are less risky to grow as compared to fruits. The agricultural sector in the region encounters some challenges which include high post harvest loss, inadequate processing facilities and skills, poor linkages of value chain and supply chain to the specialized markets, lack of modern production and processing technologies, high price of necessary inputs.

On the basis of the findings, this project "Livelihood enhancement of the small farmers in SAARC Region through small-scale agri-businesses focusing on value chain development" is proposed to test the model in 2 pilot sites in each participating countries.

Goal of the Project

Promoting modern agri-businesses model in selected sites with a major focus on promoting small agro-processing equipments for quick value addition to fruits and vegetables.

Objectives of the Project

- To identify and replicate successful food processing technologies and models for fruits and vegetables in South and South-East Asia Region
- To increase skill and capacity of smallholder farm families on value addition to the locally produces fruits and vegetables
- To increase income and improve livelihoods of the small holders
- To promote empowerment of rural women and create employment through promotion of agri-businesses
- To develop value chain of the agricultural produces and products and mainstreaming the locally produced commodities

Outputs

- Promoted the culture of Entrepreneurship
- Incremental sales received by farmers and others
- Increased access to improved technologies and good post-harvest practices (GPP)
- Infrastructure facilities established and upgraded as a result of SDF support
- Enhanced Capacity of farmers and others regarding improved technologies and good post-harvest practices (GPP)

Outcomes

By 2020, at least 75% of the farmers using the new practices are earning at least 15% more income than under the conventional methods (none will be left behind earning less)

Post-harvest losses for selected vegetables and fruits reduced by 10 % as a result of new practices

Project Information

- Project starting date: 08 October 2018 (As per PFA signed)
- Project cost: 2.15 Million USD including IAs contribution (1.71 million USD from SDF and 0.43 million in kind contribution from IAs)
- Project duration: 02 Years
- Participating Member Countries : 06 (Except Afghanistan and Nepal)

Implementing Partners:

- Rural Development Academy (RDA), Bangladesh
- Department of Agriculture, Bhutan
- M.S. Swaminathan Research Foundation(MSSRF), Chennai, India
- Ministry of Fisheries and Agriculture, Maldives
- Pakistan Agricultural Research Council (PARC), Pakistan
- Extension and Training Centre(ETC), Department of Agriculture, Sri Lanka

Sl. No.	Country	SDF Funding (USD)	IA Contribution (USD)	Total (USD)
1	Afghanistan	194,621	29,193	223,814
2	Bangladesh	184,314	27,740	212,054
3	Bhutan	191,334	28,234	219,568
4	India	192,742	27,802	220,544
5	Maldives	189,933	112,500	302,433
6	Nepal	209,000	28,000	237,000
7	Pakistan	191,942	28,791	220,733
8	Sri Lanka	184,715	27,611	212,326
9	SAC (Regional Prog)	180,000	25,851	205,851
10	CIRDAP		100,000	100,000
11	Total	1718601	435722	2,154,323

Countries	Site-1	Site-2	Proposed Fruits and Vegetables	Final Products
Bangladesh	Bogura	Gazipur	Banana, Jackfruit and Tomato	Chips and Tomato Ketchup
Bhutan	Chukha	Samtse	Mustard, Potato, Carrot, Radish and Ginger	Mustard (oil), Potato (Chips and Pickle), Carrot and Radish (Pickle), Ginger (Powder)
India	Dindigul Region of Tamil Nadu	Dindigul Region of Tamil Nadu	Coconut, Moringa	Coconut (virgin coconut oil, edible coconut), Moringa (Moringa leaf powder, soup powder, biscuit)
Maldives	Three Islands of Sh. Atoll	Three Islands of Sh. Atoll	Breadfruit, Cassava, Sweet potato, and Coconut	Breadfruit (chips), cassava (chips/powder), sweet potato (chips), coconut (chips with sugar coating)
Pakistan	Kalar Kahar (Punjab)	Skardu (Baltistan)	Onion seed and Apricot Fruit	Onion seed, Dried Apricot
Sri Lanka	Anuradhapura-	Monaragala	Banana, Cassava, Okra, Brinjal (Eggplant), Bitter gourd, Jackfruits, and Mango	Chips

Description of

- a) Participatory appraisal of Value Chain (VC) of target commodity
- b) Social mobilization and organizing the community into groups and institution building
- c) Inception meetings
- d) Identification and supply of equipments and inputs
- e) Training need assessment
- f) Installation of equipments
- g) Supply of seeds and farm inputs
- h) Training on agri-businesses
- i) Training on commercial production and post-harvest handling
- j) Training on processing and product handling
- k) Exposure visit to agro-processing /business facilities
- l) Development of small agri-businesses
- m) Production and Marketing
- n) Monitoring and Evaluation

Photo Documentation



Project beneficiaries participated in the training organized by the M.S. Swaminathan Research Foundation (MSSRF), Chennai, India



Distribution of saplings (Moringa) among the project beneficiaries by the M.S. Swaminathan Research Foundation (MSSRF), Chennai, India

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Vacuum frying machine for banana and Jackfruit chips-RDA, Bangladesh



Training participation for tomota ketchup Preparation –RDA, Bangladesh

Annex II: Workshop Proceedings of the livelihood enhancement project



SAARC Development Fund (SDF)



SAARC Agriculture Centre (SAC)

Workshop Proceedings

On

Small Scale Agro-business- Value Chain

Development Date: 26 September 2023

Venue: SAC Conference room (Hybrid mood)

A Stakeholder Workshop on “**Small Scale Agro-business- Value Chain Development**” under SDF (SAARC Development Fund) funded Project of Livelihood Enhancement of the Small Farmers in SAARC Region through Small Scale Agro-business focusing on Value Chain Development was held on 26th September, 2023 organized by the SAARC Agriculture Centre (SAC) at SAC Conference Room, BARC Complex, Farmgate, Dhaka, Bangladesh. The Workshop was organized in Hybrid mode.

The Workshop was commenced in a pleasant mode of exchanging heartiest greeting between all the participants being participated through virtually and physically. Dr. Md. Younus Ali, Project Coordinator, Livelihood Enhancement Project and Senior Program Specialist (Livestock) SAC delivered his warm wishes and heartfelt thanks in his welcome speech to the respected guests and other participants for joining the Workshop on Small Scale Agro- business- Value Chain. After the inaugural session, the technical session was conducted under the chairmanship of Dr. Nasreen Sultana, Senior Program Specialist (Horticulture), SAARC Agriculture Centre. Around 40 participants were participated in the workshop form DAE, BRRI, BARI, Hortex Foundation, Universities, private sector stakeholders, NGO, INGO, private and Focal Points of the IA (Implementing agency) of the project. After introduction of the participants, the session chair requested Professor Dr. Gulzarul Aziz, Department of Food Technology and Rural Industries, BAU, (Bangladesh Agricultural University), Mymensingh for his presentation.



Different stakeholders participated in the workshop Key Note presenter

Professor Dr. Gulzarul Aziz presented on “Role of Agro-processing sector for Livelihood Improvement of the Small-scale Farmers in South Asia” as Key Note speaker. Dr. Aziz emphasized to agro-processing in different vegetables in his presentation. He highlighted about the agro processing materials, manpower, machineries, technologies, packaging, marketing and branding appropriately necessary for agro-processing products. It was also observed that the agro processing centre’s growth is increasing day by day resulting the post- harvest loses are being reduced especially for fruits and vegetable.

The main recommendations from his presentation were as follows;

- Use of domestically available raw materials
- Crop specific industry should be established
- Capacity and capability development for stakeholders
- Established backward and forward market linkages
- There is a huge range of cottage or traditional food products.
- Many such technologies have indeed potentials for transferring to intermediate/industrial level productions.
- Scope for interventions for skill development for improving safety and quality.

Presenter:

Dr. Md. Golam Ferdous Chowdhury, Senior Scientific Officer, PHT (Post Harvest Technology) Division, BARI (Bangladesh Agricultural Research Institute), Gazipur presented on “Introduction of Vacuum Frying Technology for Value Addition of Agricultural Produce.” Dr. Ferdous expressed his views and high-lighted in his presentation about the advantage of adopting vacuum frying for agro- processing, which is carried out under pressure facilitate frying at low temperature. It also benefited for conventional/deep fat frying, slow down lipid oxidation and enzymatic browning, reduction of toxic compounds, consumption of healthier and low-fat food products, retain bioactive compounds and exhibit

unique flavor and texture. In addition, VF (Vacuum Frying) is used for quality fried chips products and fabrication cost of the machine is much cheaper and affordable for SMEs (Small and Medium Enterprises). The few limitations of this machine are also observed like water and electrical lines should be monitored before starting and should be cleaned immediately after use. For widely use, there are some challenges/ opportunities which may overcome through the following measures:

- Awareness creation to the stakeholders for consumption of quality fried products.
- Products are little costly and consumers are not habituated.
- Smart packaging materials and packages should be available for agro-processors to export product in foreign market.
- Encouragement of participation in National and International Expo to promote vacuum fried products.
- More emphasis should be given to involve the private sector for producing value added VF products.



View of the Stakeholder workshop

Presenter

Dr. Monirul Islam, Deputy Director, RDA (Rural Development Academy) and Focal Point of IA Bangladesh presented on “Livelihood enhancement project- achievements, challenges and way-forward.” He presented overall the project work and concluding report. The objectives of the project were to promote agro-business model in selected sites with major focus on promoting small agro-processing equipments’ for quick value addition of fruits and vegetables. The project outcomes are as follows: Reduction in proportion of population living below national poverty line

- By 2022, at least 75% of the farmers using the new practices are earning at least 15% more income than under the conventional methods post-harvest losses for selected vegetables and fruits reduced by 10 % as a result of new practices
- Total Number of Beneficiaries Supported-100 direct and 1000 indirect.
- Socio-economic and value chain analysis for selected vegetables and fruits completed and study reports available for planning.
- MoU signed with Stakeholders to initiate value addition activities.
- 100 farmers mobilized and organized into 4 Joint liability/activity groups of 25 members each.
- Exposure visit organized to the processing centres for 50 farmers
- Capacity of 100 farmers on agri-business improved to develop value added products
- 100 farmers aware of post-harvest handling and value addition.
- 100 farmers from the FPO (Farmer Producer Group) involved in skilled job (value addition and processing) and emerge as entrepreneurs.
- National Electronic media coverage was covered for Vacuum frying Technology. All the primary beneficiaries and more than 1000 secondary beneficiaries are inspired to establish agro-processing businesses and they are willing to start their own businesses to learn from this project activities.

Recommendations are given below:

- Farmer groups are producing chips from Banana, Jackfruits, Tomato sauce, ketchup. For Bogura project site farmers groups are also producing chips from Mango, Sweet potato, Carrot, Sweet pumpkin and Papaya. The project supported vacuum fryer its capacity of production is only 5kg but the market demand of those products is found higher. The farmer groups are expecting large capacity commercial production line for establishment of good market channel.
- The success of the selected technology can be used as model for replication to other areas of the SAARC Member States.

Sustainability Plan of the Project

- Farmers producer group is formed
- Legal Trade license, Trade mark, BSTI (Bangladesh Standards and Testing Institution) approval is being processed for sustainable agro-processing business model;
- For secondary stockholder, RDA will provide technical support to establish agro- processing factory and market channel development;
- RDA will follow-up farmers group activities for 5 years after project ending
- Follow-up project will be taken to sustain the project outcome in future;
- The project findings will be shared with government policy maker, Bangladesh Bank and other financial organizations for further funding;
- linked with more Public-Private Stakeholders (PPS) to initiate such type of project work and funding

Open Discussions was conducted by the technical session chair:

Sonam Lhamo, Bhutan IA asked a question to Dr. Monirul Islam, RDA; On the Endline survey what kind of data the consultant is looking for?

Individual IA will not conduct the endline survey. This is the responsibility of Coordinating Agency (SAARC Agriculture Centre). In this regard, IA Bhutan requested Project Coordinator for sharing the prior information like endline questionnaire for survey.

Dr. Baktear Hossain, Director, SAC requested all IA of this project to follow the Bangladesh experiences for completion of the project in stipulated time.

Ms. Varuni, IA Sri Lanka asked a question to Dr. Monirul Islam, RDA that in which stage they will add flavor for making cassava chips by using frying machine, it means that it will be before frying or after frying?

Dr. Monirul Islam critically apprised the meeting, they are not using any flavour, preservative and colour etc. Just they are using salt, sugar, cornflower for keeping the quality of products.

Ms. Disna Rathnasingh, IA Sri Lanka asked a question to Dr. Md. Golam Ferdous Chowdhury of BARI adding sugar and cornflower, is it affect the quality of oil?

Dr. Ferdous told the meeting that mainly sugar and cornflower are used to maintain the quality and texture of the products. It may not affect the oil quality.

Dr. Mehedi Masud, PD (Year- round production), DAE (Department of Agricultural Extension), suggested Director, SAC to take a project on vacuum freezing drying technology.

Mr. Alim, Assistant Professor, Mawlana Bhashani Science and Technology University suggested that in terms of food safety issues, storage condition should be improved for reducing contamination and spoilage.

Mr. Mamunur Rashid, WHH, Bangladesh, asked a question that under the continuation of this project what are the agribusiness model has developed and which model can be scaling up from this project and 2nd question was women empowerment is one of the main indicators from this project, but he did not see any indicator for empowerment of women entrepreneurs, so did you measure it or not?

Dr. Younus answered the question that we have some indicators for women empowerment in the project that will be analyzed during endline survey. Vacuum frying model is introducing among the SAARC Member States except India.

Mr. Md. Shahjahan Ali, Seed Technologist and Seed Regulation Specialist expressed his opinion that there are two terminologies that agrobusiness- America and agribusiness-British. Agri culture business, what is value chain in this regards he high-lighted this issue emphasizing that this has link food safety and nutrition safety. What is difference produce and products? Capacity building, there should be capacity and capability building not only capacity building. Livelihood enhancement of farmers, it should be appropriate words for increasing capability and capacity of farmers.

Dr. Harunur Rashid, Director, NATP-II, BARC appreciated Dr. Ferdous, for his entire work of increasing income capacity to the women farmers and livelihood enhancement programme for their families. He also mentioned that BARI raised the issue for certification for the quality of products. He also raised one question to Dr. Monirul mentioning that is there any conflict between small holder farmers and with big companies? Because it is very true that if there is a project, work is there, no project, no work. So we make a linkage with these small holder farmers with the big company, then sustainability would come through the project.

Dr. Md. Baktear Hossain, Director, SAC welcomed and expressed his gratitude to all including virtually attended participants. He told the meeting that the workshop Workshop on “Small Scale Agro-business- Value Chain Development” is successful through active participation. The presentation from the learned resource persons was informative and appreciated.

Dr. Baktear made special thanks to Dr. Nasreen Sultana, SPS (Horticulture) for moderating the full workshop and also thanks to Dr. Younus Ali, PC (Livelihood project) and SPS (Livestock) to organize such an important workshop with different stakeholders. Learning is a continuous and ongoing process, so we need to keep learning, acquire new skills and knowledge in order to be more productively and effectively in our work, he added. In this regards he believed this workshop is very successful by active participation which will be helpful to achieve the goal of the workshop as well as will create a new business for the entrepreneurs focusing on value chain development.

Annex III: Power Point Presentation on the PCR

Date: 17 Oct 2025, Venue: RDA, Bogura

Project Completion Report

**Livelihood Enhancement of the Small Farmers in SAARC
Region through Small Scale Agro-Business Focusing on Value
Chain Development**

Presented by

**Dr. Nowsher Ali Sarder
PCR Consultant**

17 October 2025

Project Background (Formulation)

- The livelihood enhancement project was designed based on findings and recommendation of SAARC Regional consultation meeting on 'Value chain analysis and market studies on fruits and vegetable in SAARC Member Countries' during 13-14 Aug 2012 at In-service Training Institute, Gannoruwa, Sri Lanka.

Other Important Considerations

- Agriculture sector significantly contributing to economic development of SAARC member countries
- The region produces large quantities of local and exotic vegetables and fruits
- South Asia maintaining a good positive growth in production of fruit and vegetables since last decade
- But still agriculture sectors of SAARC region encountered challenges:
 - High post-harvest loss (10 - 40%)
 - Inadequate processing facilities, poor skills, poor linkage of value chain and supply chain resulted poor market price for the producers

Goal of SDF livelihood Enhancement project

- To develop socio-economic status of the poor and extreme poor in view of poverty reduction and livelihood development through systemic management of resources with the emphasis of women empowerment

Project Output

- Increased access to improved technologies and good post-harvest practices (GPP)
- Enhanced Capacity of farmers and others regarding improved technologies and good post-harvest practices (GPP)
- Infrastructure facilities established and upgraded as a result of SDF support
- Incremental sales received by farmers and others
- Promotion of Entrepreneurship

Objective

- To identify and replicate successful food processing technologies and models for fruits and vegetables in South and South-East Asia Region
- To increase skill and capacity of smallholder farm families on value addition to the locally produces fruits and vegetables
- To increase income and improve livelihoods of the small holders

Project funding and Implementing partners

- The project funded by SDF (SAARC Development Fund)
- Rural Development Academy (RDA), Bangladesh
- Department of Agricultural Marketing and Cooperatives, Bhutan
- M.S. Swaminathan Research Foundation (MSSRF), Chennai, India
- Ministry of Agriculture and Animal Welfare, Maldives
- Extension and Training Center (ETC) , Department of Agriculture, Sri Lanka

The Project Completion Report

- The PCR is a comprehensive final reported product highlights achievements and major interventions of the project
- The closing report states the opportunities of scale out of the products
- It includes lesson learned as one of the important components, to helps readers to consider the issues during designing new project

Purposes of PCR

- The project completion report is prepared to document the important interventions made under the project
- To highlight the results, outcomes and extract valuable lessons for future endeavors
- It provides a comprehensive summary of the project's goals, execution, and results, ensuring clear communication to stakeholders and informing future project planning
- Essentially, it's a tool for accountability, learning, and improvement

Approach and Methodology

- Used secondary information available in the project office as well as in the office of the collaborative countries (Implementing agencies)
- Information collected through reviewing the quarterly and annual reports
- Data gathered from the concerned regional offices of collaborative countries
- During information collection following project events were considered:
 - training, seminar, workshops and important visits of local and foreign delegates
- The project's outcomes were aligned with the development objectives

Strategy of the Project

The overall strategy of the project was:

- Poverty reduction and livelihood development of the poor especially rural women
- Combine value addition of fruits and vegetable through food processing and market development in SAARC Member States
- Processing of raw crop products to value added marketable products in processing centers/hubs in each of the members states (implementing agencies)
- Use of Autonomous and Government officials to organize women producer groups in the vicinity of established processing centers according to agreed criteria

- A central Project office was established at SAC, Dhaka and appointed a Project Coordinator (PC)
- The financial authority of the project exercised by the Director, SAC stationed at Dhaka
- The SDF directly released the required fund to the partner states as per requisition of the implementing agencies
- The overall field operation of the project was implemented by the respective agencies of the member states using their own manpower and operational strategy
- The project activities (processing centers, skill development training of producer group members and producing value added products of the interventional crops) were coordinated by the implemented agencies

Inception Workshop (IW)

The inception workshop of the livelihood enhancement project was held in two tires:

- One held in November 2018 at the SDF secretariat in Thimphu, Bhutan with all IAs
- Another at the national level in each of the participating countries
 - In Bangladesh IW organized at the Rural Development Academy (RDA) Bogura
 - Bhutan organized inception meeting at Chukha
 - India in Chennai and
 - Sri Lanka in Kandy

Project Log Frame

Narrative summary	Indicator	Means of verification	Assumption
Goal	<ul style="list-style-type: none"> Value addition to fruits and vegetables through up-scaling small agro-processing Development of modern agri-businesses model 	<ul style="list-style-type: none"> Baseline survey Endline Impact Survey and report Project closing workshop 	<ul style="list-style-type: none"> Establish strong collaboration between SAC and IAs Regular fund flow as per plan
Purpose (Outcome)	<ul style="list-style-type: none"> At least 75% farmers using new practices At least 15% more income than earlier At least 10% post-harvest loss-reduction for interventional vegetables and fruits 	<ul style="list-style-type: none"> Mid-term Report Case studies Endline Impact Survey and report Annual project meeting 	<ul style="list-style-type: none"> Establish strong collaboration between SAC and IAs Regular fund flow as per plan No political or other natural hazards during implementation
Output	<ul style="list-style-type: none"> Promote culture of Entrepreneurship Incremental sales received by farmers and others Increased access to improved technologies and good post-harvest practices (GPP) Infrastructure facilities established and upgraded Enhanced capacity of farmers and others on improved technologies and good post-harvest practices (GPP) 	<ul style="list-style-type: none"> Annual report Case studies Annual project meeting Annual workshop/ seminar 	<ul style="list-style-type: none"> Establish strong collaboration between SAC and IAs Regular fund flow as per plan No political or other natural hazards during implementation

Input/ Activity	<ul style="list-style-type: none"> Establish 2-3 small agro-processing units per pilot site Small agro-business established in all pilot sites Farmer producer group established (or strengthened) for agribusiness Promotion of modern production technologies in each of the producer group Skill and capacity development training of participating farmers on commercial production, processing and marketing Establish trade linkage between community and Supermarket in each pilot site Functional saving account in operation Value chain development using agro-processing equipment and technologies Effective participation of small holders to value chain activities Institutionalization of Farmer Producer Organizations for agribusiness Establish model pilot area for agro-processing Replication of agro-processing model to nearby communities/areas and other countries 	<ul style="list-style-type: none"> Quarterly report Project monitoring report Field visit report 	<ul style="list-style-type: none"> Establish strong collaboration between SAC and IAs Regular fund flow as per plan No political or other natural hazards during implementation
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Basic Information with Actual Cost and Financing

Project Name	Livelihood Enhancement of the Small Farmers in SAARC Region through Small Scale Agro-business focusing on Value Chain Development			
SAARC Secretariat Approval	Signing	Effectiveness	Completion	
	08-Oct-18	08-Oct-19	Original 07-Oct-21	Actual 31-Oct-25
Actual Cost and Financing (USD)				
Member State	SDF	Member state	Total	
Rural Development Academy (RDA), Bangladesh	184,314	27,740	212,054	
Department of Agricultural Marketing and Cooperatives, Bhutan	191334	28234	219,568	
M.S. Swaminathan Research Foundation (MSSRF), Chennai, India	192742	27802	220,544	
Ministry of Agriculture and Animal welfare, Maldives	189933	112500	302,433	
Department of Agriculture, Sri Lanka	184715	27611	212,326	
SAARC Agriculture Center (SAC)	180000	25851	205,851	
Total	1,123,038	249,738	1,372,776	
Number of beneficiaries				
Total	Direct	Indirect	Women	Other
	550	5500	1356	
Project Objective				
To identify and replicate successful food processing technologies and models for fruits and vegetables in South and South-East Asia Region				
To increase skill and capacity of smallholder farm families on value addition to the locally produces fruits and vegetables				
To promote empowerment of rural women and create employment through promotion of agri-businesses				

Infrastructures Developed by the Project

Sl #	Name of country	Name of site	# Processing Center Developed with Producer Group	# Project Beneficiary	
				Primary/Direct	Secondary/Indirect
1	Bangladesh	Bogura	1	50	500
2		Gazipur	1	50	500
	Sub-total		2	100	1000
3	India	Dindigul, Tamil Nadu	1	50	500
4		Kuttanad, Chennai	1	50	500
	Sub-total		2	100	1000
5	Sri Lanka	Anuradhapura	1	50	500
6		Monaragala	1	50	500
	Sub-total		2	100	1000
7	Bhutan	Chukha	1	50	500
8		Samtse	2	100	1000
	Sub-total		3	150	1500
9	Maldives	3 island of Sh. Atoll	1	50	500
10		3 island of Sh. Atoll	1	50	500
	Sub-total		2	100	1000
	Total		11	550	5500

Assessment of Project Implementation

The project was jointly implemented by the SAARC member states: Bangladesh, Bhutan, India, Maldives and Sri Lanka through utilizing their national agencies like RAD Bogura (Bangladesh), Department of Agricultural Marketing and Cooperatives, (Bhutan), MSSRF, (India), Ministry of Agriculture and Animal Welfare (Maldives) and Department of Agriculture, (Sri Lanka) under the coordination of SAC, Dhaka

Assessment of Project Effectiveness

- The project fairly achieved the physical targets of income generation, through developing producer groups and produced value added products (chips of jackfruit, cassava; tomato sauce; moringa tea, powder, paste; virgin coconut oil, etc.) as well as established food processing centers at the remotest corners of the participated member states
- The project specially assisted in introducing dwarf coconut variety and worked for popularizing virgin coconut oil, coconut milk, grated coconut in addition of edible coconut oil

Overall Achievement of the Project

- The project successfully implemented in the field
- Completed the targeted activities against the set objectives
- Originally the project was designed for a duration of two years (2019 to 2021) involving 8 SAARC countries
- Project duration revised four times, one year in each revision
- Actual duration ranged from 2019 to 2025 (six years)
- Out of 8 SAARC countries 03 countries (Afghanistan, Pakistan and Nepal) were dropped due to their administrative process
- Five countries finally continued and successfully completed the project
- The project innovations:
 - Production of high quality chips from different crops using vacuum frying machines and marketing the products through producer groups linking with the chain shops of large food and beverage companies operated in the cities

- The project successfully formed planned numbers of producer groups (two in each centers) with required numbers of members (50/group with both male and female) in each of the sites
- Established 2 to 3 food processing centers in each of the participating member states
- The system of savings collection from the enlisted members was introduced to maintain the integrity of the groups
- Processing centers were equipped with required machineries like:
 - vacuum frying machines
 - small machineries for packaging of chips and sauces
 - sealers etc. for producing the cassava or jackfruit chips and other products from moringa and coconut

- Required numbers of staff employed in each of the processing centers
- Increased numbers of laborers used by the beneficiaries in their farms for higher production of targeted crops
- Provided skill development training for large numbers of beneficiaries and staff on the value addition techniques and on new production technologies
- Introduced new varieties of crops and modern crop production systems to enhance production
- Made popular use of vacuum fried jackfruit chips in member states
- Developed certain linkage with schools, religious gathering and shopping centers for marketing of value added products

Project Achievement by RRF

- The Results and Resources Framework (RRF) is a tool used by different International organizations to translate their strategic plans into concrete actions and track progress towards achieving development and organizational goals
- The project achievement by the participating countries against the pre-set target is elaborated in the following section

Bangladesh

Outcome indicator	Target	Baseline/ control	Impact study	Increase over control (%)
Enhancement of annual family income (USD)	15%	3157.01	4431.45	40.4
Post-harvest loss reduction (%)	10%	14.10	10.40	-26.2
Employment generation/family/season (#)	25%	9.30	12.90	38.7
Incremental sale by farmers (USD)		0.50	0.67	35.1
Access to improved technology (%)		3.00	12.00	300.0
Capacity building of farmers (%)			400.00	100.0

Source: Endline survey.

Bhutan

Outcome indicator	Target	Baseline/ control	Impact study	Increase over control (%)
Enhancement of annual family income (USD)	15%	1928.57	2983.33	54.7
Post-harvest loss reduction (%)	10%	51.20	16.90	-67.0
Employment generation/family/season (#)	25%	7.40	14.40	94.6
Incremental sale by farmers (USD)		0.42	0.48	13.6
Access to improved technology (%)		4.00	11.00	175.0
Capacity building of farmers (%)			64.00	100.0

Source: Endline survey

India

Outcome indicator	Target	Baseline/ control	Impact study	Increase over control (%)
Enhancement of annual family income (USD)	15%	5426.76	5582.92	2.8
Post-harvest loss reduction (%)	10%	24.60	15.40	-37.4
Employment generation/family/season (#)	25%	4.30	6.10	41.9
Incremental sale by farmers (USD)		0.28	0.35	22.6
Access to improved technology (%)		3.00	11.00	266.7
Capacity building of farmers (%)		0.00	536.00	100.0

Source: Endline survey

Sri Lanka

Outcome indicator	Target	Baseline/ control	Impact study	Increase over control (%)
Enhancement of annual family income (USD)	15%	2191.00	3194.40	45.8
Post-harvest loss reduction (%)	10%	23.70	15.90	-32.9
Employment generation/family/season (#)	25%	3.60	4.60	27.8
Incremental sale by farmers (USD)		0.68	1.26	85.3
Access to improved technology (%)		3.00	7.00	133.3
Capacity building of farmers (%)		0.00	161.00	100.0

Source: Endline survey

All

Outcome indicator	Target	Baseline/ control	Endline survey/ Impact study	Increase over control (%)
Enhancement of annual family income (USD)	15%	3215	4009	25
Post-harvest loss reduction (%)	10%	28	15	48
Employment generation/family/season (#)	25%	6	10	54
Incremental sale by farmers (USD)		0.4715	0.6911	47
Access to improved technology (%)		3	10	215
Capacity building of farmers (%)			290	100

Source: Endline survey

Project Key Impact

- Due to technical the producer group members were learned how to produce value added products from their harvested crops and to be marketed in the local markets and to establish linkage with super markets of the nearby cities
- Use of vacuum frying systems encouraged the group members to take over the chips (jackfruit, banana and cassava) making as one of their income generating activities (IGA) and by this time in Bangladesh one of the staff at RDA started the chips making as his own business
- Recently some other people have already taken over the jackfruit chips making as their business and started marketing their products in the school gates and other popular places
- In Bhutan moringa tea and radish prickle are becoming popular and the trained members of the producer groups started it as small business
- The processing centers in India making varieties of moringa products (moringa tea, powder, capsule) and supplies to the nearby shops
- Moringa leaf powders and paste are also marketed by the Indian centers
- In Sri Lanka cassava & jackfruit chips and spicy peanut (processed packs) are being popularly marketed by the processing centers

Key Lesson Learned

- Multi-state project to be designed with limited number of member countries not all in single project
- Members states should get official approval of the project before-hand from their respective Ministries
- For this current project Nepal, Afghanistan and Pakistan found difficulty to continue the field implementation due to lack of pre-approval from respective Ministries
- Direct funding from SDF to IAs limits coordination among implementing agencies, to be coordinated by the SAC/Project Director
- Before-hand discussion with the community is needed for purchasing best needed machineries for community people
- In current project machineries like vacuum fried one was reported as not user friendly
- Marketing of value added products like chips from different crops demanded approval from STI but in current producer group's products faced difficulty to get the approval and suffered
- Procurement process of the member states should be more easier/updated to have earlier purchase of machineries
- Fund release procedure of SDF should be more user friendly

Case Studies on Key Project Impacts

Details provided in the report

- Two stories of Bangladesh
 - **Farmers to Chips Producers – SDF Contribution** (PCR of RDA)
 - **Gazipur Women become Agro-processor** (PCR of RDA)

Organic Farming



Organic Farming



- **Success story of Bhutan**
 - Empowering women through value addition to agricultural produce
 - Collected from the SDF Website



- **Two stories of India**
 - **Organic Cultivation training in livelihood enhancement**
 - **Moringa Farmer (Women entrepreneur)**



Physical and Financial Progress of the Project

Bangladesh

Physical Progress

Project intervention (Item)	P-1 (2020)	P-2 (2021)	P-3 (2022)	P-4 (2023)	P-5 2024	P-6 (2025)	Cum progress
Development of infrastructure facilities	2	5	8	9			24
Access of Farmer to Improved Technology and Good Post-harvest Practices	25	25	50				100
Capacity Development of farmers		25	75				100
Promotion of Entrepreneurship			50	50			100
Total	27	55	183	59			324

Financial Progress

Project intervention (Item)	Approved budget	P-1 (2020)	P-2 (2021)	P-3 (2022)	P-4 (2023)	P-5 2024	P-6 (2025)	Cum progress
Development of infrastructure facilities	30000	29050	450	300	200			30000
Access of Farmer to Improved Technology and Good Post-harvest Practices	23331	4331	15000	4000				23331
Capacity Development of farmers	91409	5000	20465	70446				91409
Promotion of Entrepreneurship	39573				39572			39573
Total	184314	34332	39464	70946	39572			184314

Bhutan

Physical Progress

Project intervention (Item)	P-1 (2020)	P-2 (2021)	P-3 (2022)	P-4 (2023)	P-5 (2024)	P-6 (2025)	Total
Development of infrastructure facilities	0	45	2	2	33	1	83
Access of Farmer to Improved Technology and Good Post-harvest Practices (8)	0	14	42	68	53	60	237
Capacity Development of farmers (6&7)	81	14	42	68	53	60	318
Promotion of Entrepreneurship (pickle, Radish perilla, paste, ginger candy, ginger pickle, cassava cracker/cookies/flour, Moringa tea, powder)		16	47	73	53	61	250
Baseline survey, Inception meeting (12); group formation	95	1	4				100
Total	176	90	137	211	92	182	988

Financial Progress

Project intervention (Item)	Approved Budget	2020	2021	2022	2023	2024	2025	Cumulative
Development of infrastructure facilities	159890	1389	44244	49200	9755	45345	9957	159890
Access of Farmer to Improved Technology and Good Post-harvest Practices	3609	2932	1	0	0	644	32	3609
Capacity Development of farmers	15092	777	1396	4886	4922	2115	998	15092
Promotion of Entrepreneurship	4435	478	188	203	146	2420	1000	4435
Others	5181	5181	0	0	0	0	0	5181
Office supplies	3127	677	0	356	795	409	890	3127
Total	191334	11434	45829	54645	15618	50933	12877	191334

India

Physical Progress

Project intervention (Item)	P-1 (2020)	P-2 (2021)	P-3 (2022)	P-4 (2023)	P-5 (2024)	P-6 (2025)	Total
Development of infrastructure facilities	0	2	2	0	0	0	4
Access of Farmer to Improved Technology and Good Post-harvest Practices	100	100	100	0	0	0	300
Capacity Development of farmers	30	70	50	50	0	0	200
Promotion of Entrepreneurship	50	50	50	50	0	0	200
Baseline survey, Inception meeting; group formation	100	100	0	0	0	0	200
Others							
Total	280	322	202	100	0	0	904

Financial Progress

Project intervention (Item)	Approved budget	2020	2021	2022	2023	Total
Development of infrastructure facilities	71969	12500	39674	15250	4545	71969
Access of Farmer to Improved Technology and Good Post-harvest Practices	28030	3851	8271	11501	4408	28030
Capacity Development of farmers	14015	2026	7550	3280	1160	14015
Promotion of Entrepreneurship	38561	3550	5671	18961	10379	38561
Project Inception meeting, group formation and organization in to Producer Organization	1761	6651	8500	1159	750	1761
Others (IA Contribution & Programme Support Cost)	50908	13901	13901	12318	10788	50908
Total	205245	42479	83567	62469	32031	205245

Sri Lanka

Physical

Project intervention (Item)	2020 (P1)	2021 (P2)	2022 (P3)	2023 (P4)	2024 (P5)	Total
Development of infrastructure facilities	2	47	9	7		65
Access of Farmer to Improved Technology and Good Post-harvest Practices	1			1		2
Capacity Development of farmers			2	3		3
Promotion of Entrepreneurship	2	2		5		9
Others	3	1	7	2		13
Total	7	49	17	16	3	92

Financial

Project intervention (Item)	Approved Budget	2020	2021	2022	2023	2024	Total
Development of infrastructure facilities	142603	18131	21617	74959	27896	-	142603
Access of Farmer to Improved Technology and Good Post-harvest Practices	1059	554	-	-	505	-	1059
Capacity Development of farmers	2629	-	-	508	2121	-	2629
Promotion of Entrepreneurship	4193	561	141	-	3492	-	4193
Others	8543	2598	403	4226	1317	-	8543
Total	159027	21844	22161	79693	35331	-	159027

All Implementing Agencies

Physical

Project intervention (Item)	P-1 (2020)	P-2 (2021)	P-3 (2022)	P-4 (2023)	P-5 (2024)	P-6 (2025)	Total
Development of infrastructure facilities (building and machineries)	17	79	45	26	33	10	210
Access of Farmer to Improved Technology and Good Post-harvest Practices	126	149	192	129	53	50	699
Capacity Development of farmers (Training and refresher training)	51	129	169	121	53	60	583
Promotion of Entrepreneurship	52	68	147	178	53	61	559
Others	198	102	11	2	0	0	313
Total	444	527	564	456	192	181	2364

Financial

Project intervention (Item)	Approved Budget	2020	2021	2022	2023	2024	2025	Total
Development of infrastructure facilities	404462	61070	105985	139709	42396	45345	9957	404463
Access of Farmer to Improved Technology and Good Post-harvest Practices	56029	8736	24301	16395	5922	644	32	56029
Capacity Development of farmers	123145	2801	30111	78918	8203	2115	998	123145
Promotion of Entrepreneurship	90635	9969	5812	39667	33887	2408	1200	92942
Others	69520	22709	20804	15059	9651	409	890	69521
Total	743791	105284	187012	289748	100059	50921	13077	746100

Physical Achievement (USD) of SAC during the project period

Project intervention (Item)	2020	2021	2022	2023	2024	2025	Total
Workshop and group formation	2.00	2.00	2.00	2.00	2.00	2.00	12.00
Monitoring and Evaluation (travel and participation)	4.00	3.00	2.00	13.00	6.00	3.00	31.00
Program support costs	15.00	30.00	16.00	14.00	12.00		87.00
Procurement of machineries (spot visit etc.)	6.00	3.00	4.00	0.00	0.00	0.00	13.00
Regional agri-business training	48.00	15.00	16.00	16.00	16.00	14.00	125.00
Support to national program	0.00	3.00	3.00	2.00	1.00	0.00	9.00
Hiring Consultant	0.00	0.00	0.00	0.00	1.00	1.00	2.00
Project closure	0.00	0.00	0.00	0.00	0.00	1.00	1.00
SAC Coordinating agency fee						6.00	6.00
SAC contribution (in kind)							0.00
CIRDAP contribution (in kind)							0.00
Total							286.00

Financial Achievement (USD) of SAC during the Project period

Project intervention (Item)	Approved Budget	2019+2020	2021	2022	2023	2024	2025	Total
Workshop & group formation	19000	5067	1805	990	713	1390	0	9964
Monitoring and Evaluation (travel and participation)	28000	823	646	246	4638	1524	608	8483
Program support costs	19000	3609	7723	3792	3061	2535	-47	20672
Procurement of machineries (spot visit etc.)	4000	2310	1137	1500	0	0	0	4948
Regional agri-business training	46000	10972	3089	8816	7592	8515	7202	46186
Support to national program	28000	0	3084	2999	1380	620	0	8083
Hiring Consultant	22000	0	0	0	53	13446	0	13499
Project closure	14000						1438	1438
SAC Coordinating agency fee	45371						5202	5202
SAC contribution (in kind)	25851							0
CIRDAP contribution (in kind)	100000							0
Total	351222	22781	17483	18343	17438	28028	14403	118476

Review of Project Output/livelihood change

Family income

Country	Before		After		Change (%)
	Local currency	USD	Local currency	USD	
Bangladesh	334680	2789.00	518480	4320.67	55
Bhutan	225725	2672.25	275600	3262.70	22
India	385500	4558.89	450421	5326.64	17
Sri Lanka	746150	2565.85	958320	3295.46	28
All		3146.50		4051.37	30

*Income showed in local currency of each of the countries (1 USD = BDT 120, Btn 84.47, INR 84.56 and LKR 290.80)

Source: Endline survey

Post-harvest loss reduction

Country	Before	After	Change (%)
Bangladesh	14.1	10.4	-26
Bhutan	51.2	16.9	-67
India	25.6	20.8	-19
Sri Lanka	23.7	15.9	-33
All	29	16	-44

Source: Endline survey

Employment enhancement

Country	Before (#/family)	After (#/family)	Change (%)
Bangladesh	9.3	12.9	39
Bhutan	7.4	14.4	95
India	4.3	6.1	42
Sri Lanka	3.6	4.6	28
All	6	10	54

Source: Endline survey

Incremental sale

Country	Before (Kg/family)	After (Kg/family)	Change (%)
Bangladesh	58.4	78.9	35
Bhutan	35.4	40.2	14
India	23.5	28.8	23
Sri Lanka	204.7	379.3	85
All	81	132	64

Source: Endline survey

External Visitor

SI #	Identification of Visit	Time of visit	Duration (Day)	Activities/Observations
1	Secretary General, SAARC Secretariat, Nepal	Apr 2023	One day	Met with beneficiaries and observed the products (chips)
2	Director, ARD and SDF, SAARC Secretariat, Nepal	Oct 2023	One day (Sri Lanka)	Visited project field activities
3	Foreign Secretary, Bangladesh	Jan 2022	One day, RDA, Bogura, BD	Products, machineries, beneficiaries
4	Program manager, Welthungerhilfe, Dhaka	Jun 2023	One day, Kapasia, Gazipur, BD	Visited agro-products and machineries
5	Executive Chairman, BARC, BD	Oct 2022	One day, SAC	Assess the progress of livelihood enhancement project
6	Member Director, NRM, BARC, BD	May 2024	One day, SAC	Products observation
7	PSO, Post-harvest Technology Divn. BARI, BD	Jun 2023	One day, Bogura	Observed and assessed skill development training

Source: SAC

Technical Training by SAC

Sl #	Name of the courses	Venue	Number of participant	Time of execution	Duration (Day)
1	Contemporary and strategic issues in agri-business management focusing value chain development	Chennai, India	8	27-29 Nov 2023	3
2	Regional agri-business product development and marketing	ICIMOD, Katmandu, Nepal	15	25-28 Feb 2025,	5
3	Agri-business focusing on agro-food processing	IIHR, Bangalore, India	10	11-15 Sep 2022,	5
4	Regional Training on Agri-business and management	RDA, Bogura	10	19-24 Mar 2020,	5
5	Value chain development on fruits and vegetables	on-line (virtual)	25	2022 (Aug)	3
6	Contemporary and strategic issues in food and agri-business	on-line (virtual)	22	3-4 Mar 2021	2

Source: SAC

Workshop/Seminar Organized

Sl #	Theme of the Seminar/Symposium	Number of participant	Time of execution	Duration (Day)
1	Inception workshop	42	Oct 2018	2
2	Progress Review Workshop	35	Nov 2023	1
3	Project closing workshop (RDA)	100	Aug 2022	1
4	Workshop on Market linkage	100	Mar 2022	1
5	TV Program (Independent)			1
6	TV Program (Independent)			
7				

Source: SAC

Publication

Sl #	Name of audiovisual/publication	Number of copy printed	Time of printing	Use (distribution)
1	Brochure	200	2020	Implementing agencies
2				
3				
4				
5				
6				
7				

Assessment of Project Sustainability

- Marketing of value added products (jackfruit, banana and cassava chips, moringa products and dried spicy nuts as well) was mentioned as major problems by producer groups
- The continuation of production of value added products of the interventional crops would largely be depended upon developing the market linkage to the large national companies
- A system is to be designed and developed, so that these established processing centers with its producer groups would act as a production hubs, where representatives of large companies will place their production order and collect the finished products as per weekly schedule

Innovation Replication and Up-Scaling

- The concept of developing value added new crop products (jackfruit, banana and cassava chips, moringa tea, tomato sauce, virgin coconut oil etc.) were the innovations of livelihood enhancement project
- Enhancement of self-life of crop products through agro-processing was integrated with the farming community to have sustainable poverty alleviation was the key strategy of livelihood enhancement project and SDF
- After successful implementation of the project, SDF may also design new projects with similar concepts with SAC for the SAARC region
- Considering the success of the project, SAC may design a new project on 'Extension of Moringa Cultivation with Value Added Products' with funding support of SDF
- SDF may initiate to funding similar projects on livestock improvement in the region

Recommendation

- More extension works are to be done to popularize the moringa-value added products (leaf powder, paste, tea etc.) in the country like Bhutan, Bangladesh, Maldives and Sri Lanka
 - The staff of processing centers are to be present in the weekly/fortnightly meetings of the producer groups to stabilize group integrity
 - The producer group members are to be brought under regular training activities of the implementing agencies
 - Steps (training) are to be taken to improve the product quality through constant supervision to maintain sustainable market linkage/bonding with the food and beverage companies in the nearby cities
 - Dwarf varieties of moringa crops are needed to be developed to reduce production cost and sustain profitable business
-
- Moringa to be cultivated as field crop with appropriate inter or mixed cropping to enhance land-productivity and income
 - Marketing concept through contractual vendors (under profit share manner) to be introduced to popularize value added vacuum fried chips of jackfruit, banana and cassava
 - Attractive packaging materials would help to enhance market demand by ensuring higher prices
 - Credit flow for the producer groups from commercial institutions (Bank, NGOs etc.) to be ensured to sustain the value addition process as profitable business model



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