

# End-line impact assessment of the 2017-2021 DGD-funded programme implemented by Rikolto

## Vietnam

### Country Report

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## List of abbreviations

ADE	Aide à la Décision Economique
DGD	Directorate-general Development Cooperation and Humanitarian Aid
EQ	Evaluation Question
FFV	Fresh Fruit and Vegetables
FGD	Focus Group Discussion
FO	Farmer Organisation
FS	Farmer Survey
FSC	Food Smart City
FSWG	Food Safety Working Group
IF	Intervention Framework
KII	Key Informant Interview
MARD	Ministry of Agriculture & Rural Development
MSI	Multi-Stakeholder Initiative
MTR	Mid-Term Review (Report)
NGO	Non-Governmental Organization
PGS	Participatory Guarantee System
PPD	Plant Protection Department
PSM	Propensity Score Matching
RT	Rikolto Team
SCA	Structural Change Agendas
SI	ScopeInsight
TOC	Theory of Change
TOT	Training of Trainers

## 1. Executive summary

This report aims to provide an overall evaluation of two programmes (rice and vegetables) implemented by Rikolto Vietnam for the period 2017-2021. The evaluation was conducted mainly via desktop studies of available documents and data related to the programme, mid-term review (MTR) report, farmer survey reports, internal M&E data of the local Rikolto office, and some FGDs and individual interviews with some cooperative leaders and members.

The evaluation focused on a number of thematic areas, including: the roles of Rikolto in improving farmers livelihoods, strengthening capacity and business performance of local farmer organisations (FOs), enhancing business relations and enabling environment, as well as their the level of support to the FOs in reducing possible shocks due to the impact of Covid-19 pandemic.

**Key findings and lessons learned** from this evaluation are presented below:

### ***For the vegetable programme:***

Overall, within a relatively short period of project implementation (3.5 years due to the lengthy delay of approval process), Rikolto has contributed significantly to improving operational capacity of the FOs, strengthening and diversifying their services to members; improving business relations between the FOs and private sector buyers (off-taker companies); promoting inclusive value chains through engaging the disadvantaged rural households, ethnic groups and women farmers in formal supply chains. There have been **positive changes in gender equality**. The total targeted beneficiaries (smallholder farmers) that have been benefited from this project were 1,258 individuals (128.4% compared to the adjusted target of 980 in 2021). In which, female farmers (718) accounted for 73.3%. In addition, ratio of female leaders in the FOs reached 43% which was much higher than the formulated target of 35% by 2021. Also, the number of female production group leaders (49 people) was almost doubled the set target (25 people). However, only 51 young farmers (4.1%) benefitted from the project interventions. This is due to the reality that young people nowadays move to work in big cities and industrial zones. As such, the **number of new jobs for youth linked to the Participatory Guarantee System (PGS) was small** (12 vs. target of 21 in 2021). Moreover, there have been significant improvements in most of the **sustainability indices**, particularly in terms of sustainable water and resources management, biodiversity and sustainable landscape management. Although there was no significant increase of soil conservation index, the baseline value was rather high at 2.13 in 2017. Climate change and sustainable landscape management indices still remained rather low scores by 2021 at 1.01 and 1.08, respectively. However, interventions related to this index would require involvement of local authorities and other supporting organizations (e.g. DARD, Department of Natural Resources and Environment (DONRE), extension networks, farmers' association, etc.) at the strategic and regional levels rather than the smallholder farmers alone.

At the institutional level, the program produced some significant impact on the policy and strategy of the local governments of 4 provinces, namely, Da Nang, Hanoi, Vinh Phuc and Ha Nam. Particularly, the PGS and guidelines has been officially recognised and institutionalised in these provinces. Additionally, a strategy on FSC in Da Nang has also been approved. These have laid a strong foundation for future impact and sustainability of this project.

The PGS, with its mentioned competitive advantages compared to the costly third party certification system, have been well acknowledged by local governments, implementing partners and beneficiaries.

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This would have high potential for replication to other provinces across Vietnam and thus long-lasting impact. The requests of local partners for continuing support from Rikolto at the program wrap-up workshop would certainly reflect a strong need to replicate and up-scale the PGS initiatives.

The FSC model would be regarded a timely and innovative initiative for big cities like Da Nang, Hanoi and HCM. Results of this program can be seen as an initial step to formulate a vision and recommend key intervention areas to guide future planning and implementation in the targeted provinces.

This report has analysed a large number of fostering and hindering factors toward achieved the expected outcomes and impact. As such, the following recommendations have been identified:

- Ensure programme design and expected outcomes are shared and participatively validated and adjusted with local authorities and key stakeholders to ensure feasibility and avoid possible blockages during the program implementation.
- Careful selection of pilot FOs: reviewing and selecting right beneficiaries for the pilot model would be of crucial importance at the initial stage for producing successful showcases to replicate PGS. Selection of the so called “old style” cooperatives would undermine the policy advocacy efforts of Rikolto to the subnational and national levels. Besides, willingness and commitment of cooperative BOD would be an important criterion.
- Most of the supported FOs were at an initial stage of development with less than 2 years of operation. More efforts on improving institutional capacity would be required.
- Engagement of multiple stakeholders in the PGS inspection team is important to ensure transparency and trust building among market players and end users.
- Initial showcases of success from this program should be further promoted to influence policy at both subnational and national levels for possible joint efforts of both public and private sectors.
- Understanding of local contacts and selecting right implementing partners would be crucial toward the project success and sustainability.
- A systems approach would be required for understanding and building an ecosystem to support the targeted FOs. Private sector service providers should be engaged in capacity building for FOs (e.g. governance, financial management, marketing, business development, etc.) since the government agencies do not have such expertise.

Details of a SWOT analysis for the vegetable programme are presented below:



SWOT  
analysis\_VN\_v1.doc

### ***For the rice programme:***

The first phase of the rice programme was implemented in Dong Thap and Kien Giang during 2017-2021. The main intervention of the project was to strengthen the capacity of farmers and cooperatives in SRP production. At the farmer level, the impact of the project was rather positive. Although application of Sustainable Rice Platform (SRP) did not help farmers to achieve premium price for SPR rice, it assisted increasing the household income and share of income from rice production. At the cooperative level, the project has contributed to strengthening linkages between cooperatives and farmers. In the past, cooperatives have mainly provided irrigation service for its members, but now, cooperatives help

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disseminate, monitor, and support farmers in technical application and market access (though these activities have not been developed largely).

The main lesson learned for the rice programme was on its design of baseline, mid-term and end-line surveys. The mentioned inconsistencies in survey locations could be considered a major flaw for evaluation of program impact. As such, comparison between baseline and end-line stages became invalid.

Overall, the programme has produced positive impacts through promoting SRP application in the pilot provinces. However, SRP is a new standard, therefore, it is difficult to implement and change the behaviour of farmers. For the next phase of the project, some recommendations have been identified:

- Strengthening the capacity of cooperatives in internal and financial management, and provision of inputs.
- Increasing the number of training courses about SRP standards, expanding the number of farmers participating in the project.
- Continuing to provide financial support for farmers by providing inputs such as seeds, fertilizers, pesticides, or other production tools.
- Promoting linkages between cooperatives with companies to build the material areas, purchase SRP rice, and develop the SRP brand, contributing to increasing the rice price and income for farmers.
- M&E should support the debate around the benefits of the SRP system, enabling to compare data of the food safety and health benefits of SRP with those of conventional agriculture as well as provide data on its positive effects on climate change mitigation and the environment, in a context where rice constitutes 30-40% of Vietnam's Green House Gas (GHG) emissions.

To facilitate more farmers applying SRP rice, it is necessary to implement the following measures:

- Continuing to provide training courses for farmers about record keeping, safety instructions, pesticide disposal, etc.
- Encouraging farmers to reduce the number of rice crops. This is because 3-crop production cycles have some constraints to sustainable production.
- Improving the supply chain by enhancing the combination of planting, harvesting, transportation, drying and storing.
- Promoting the use of ICT tools for traceability and transparency of 1M5R (One Must Do, Five Reductions) integrated technology package/SRP rice.
- Supporting to develop the SRP brand with the support of ICT.

Details of a SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis for the rice programme are presented below:



SWOT  
analysis\_VN\_Rice\_v4

Cross cutting recommendations include:

- The M&E system should be improved. Beyond ensuring consistency of data collected, M&E should be more oriented towards evidence and demonstrating the interest of the various business models supported by Rikolto or documenting the mechanisms behind the pathways of change which are

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followed. Indicators need to be corresponding with the proposed interventions and expected outputs, outcomes and impact. The baseline situation must be clearly established. The added value of Rikolto's interventions must also be more clearly distinguished. In particular, more analysis and monitoring of profit margins and cash flow is needed so as to understand the way added value is created along a value chain. This is key to influencing its structuration, building sustainable business relations and promoting inclusiveness, as well as to empowering producers and FOs, in making choices in terms of products and cropping systems to implement, or in terms of negotiating commercial contracts.

- The PGS experience should be systematised and capitalised more formally so as to clarify its essential constitutive elements and the necessary steps to establish them. The advantages and disadvantages of a PGS with respect to third party certification system should be identified and quantified for various stakeholders (smallholders, exporters...).
- Rikolto should follow, capitalise and systematise the pathways of change and logics it follows to develop new business models and achieve change. In particular, so as to promote upscaling, it is important that Rikolto elaborates clear indicators to monitor progress in this area. Business models and pathways of change should be characterised and broken down sufficiently precisely so as to be able to identify clearly which of their elements are relevant and can be integrated within a given intervention. The advantages and disadvantages of each type of business model within a given context and for various types of producers (size of production unit, geographical location and associated agricultural calendar...) or food chain actor (producer, BDS provider, off taker...) should be clearly understood.
- Further support to developing BDS within partner FOs
- Developing financial services aimed at both supporting investments in improved technologies and equipment as well as providing working cashflow
- Work on Food Smart cities should develop a stronger waste management and circular economy dimension. In particular, this could integrate the use of agricultural bio-products to produce bio-fertilisers and thus further support agroecological production.



## 2. Introduction

**Rikolto** is an international NGO with more than 40 years of experience in partnering with farmer organisations (FOs) and food chain stakeholders. This end-line evaluation aims at measuring Rikolto's impact on i) the livelihoods of farmers, ii) the business and organizational capacities of FOs, and iii) the institutional environment.

**Rikolto's mission is to enable sustainable incomes for farmers and nutritious, affordable food for everyone.** Rikolto wants to reach this goal by building bridges between smallholder farmers, FOs, companies, authorities, and other actors across rural and urban areas. Building on their experience in creating **inclusive business relationships**, Rikolto works with diverse partners to strengthen selected commodity sectors and to address the broader food system challenges of cities. Rikolto puts **strong emphasis on gender and youth** and makes concerted efforts to reduce environmental damage, address **climate change** impacts, and enhance food system **sustainability and resilience** in the face of shocks and crises.

**Rikolto runs programmes in 17 countries worldwide through seven regional offices**, supported by a global support team. Out of these 17 countries, 13 are part of the 2017-2021 DGD-funded programme: Belgium, Burkina Faso, Congo, Ecuador, Honduras, Indonesia, Mali, Nicaragua, Peru, Senegal, Tanzania, Uganda, and Vietnam. Their global **Rice, Cocoa, Coffee and Food Smart City (FSC) programmes, seek change in three key food system domains: sustainable production, inclusive markets, and enabling environments.**

Rikolto's programme in Vietnam aims to foster sustainable food production and consumption, and to ensure **a fair share for all** by unlocking the sustainable farming potential of a critical mass of smallholder farmers. Reaching this critical mass can only be achieved through changes at the structural level through improvements of the institutional and business environment. In order to contribute to making sustainable production & consumption the new norm, Rikolto is applying a combination of three strategies:

- 1) Strengthening partner capacities for **collective actions** by improving farmer organisations' technical, organisational and business skills, and facilitating market linkages between chain actors;
- 2) Fostering **innovation** by investing in innovative methodologies to promote new inclusive & sustainable business models and using technology to link consumers with safe food markets;
- 3) Supporting an **enabling environment** for Vietnamese smallholders and creating/reinforcing sustainability alliances and platforms.

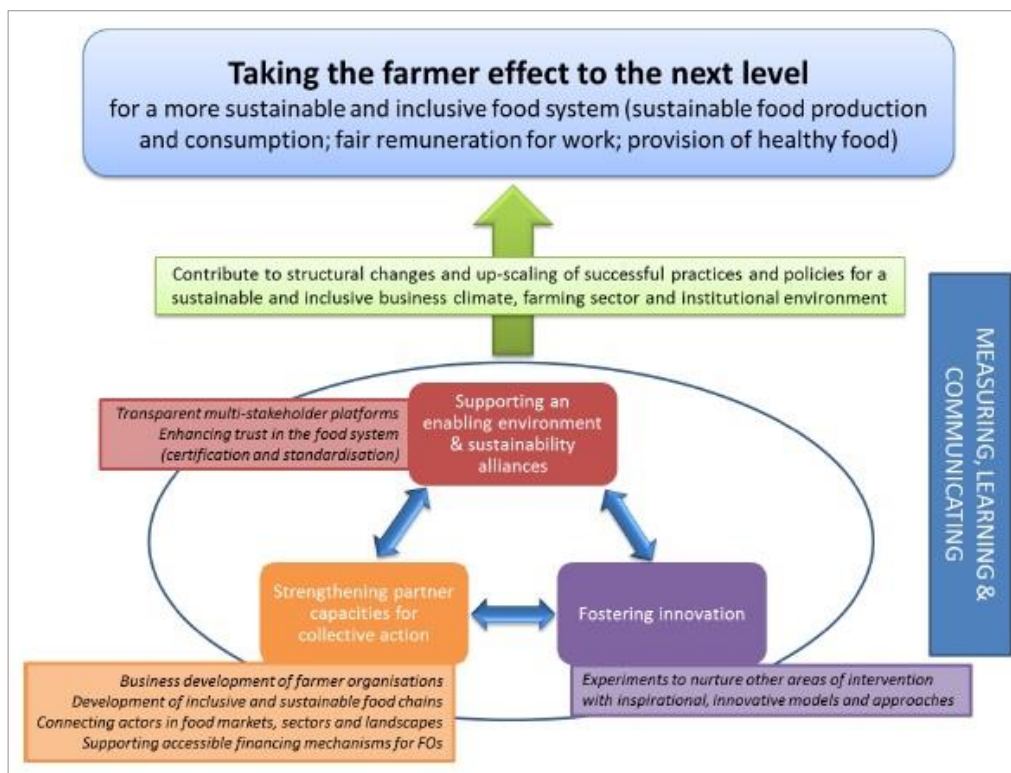


Figure 1: Rikolto's global Theory of Change: Vietnam

(Source: <https://vietnam.rikolto.org/en/about-us/strategies>).

Since 2017, Rikolto Vietnam has implemented two programmes, namely, (1) “Supporting Inclusive and Sustainable Agricultural Value Chain Development Benefitting Smallholder Farmers in Vietnam” with a focus on rice (short name: rice programme); and (2) “Inclusive & sustainable safe food policies tackling safe vegetables production, consumption and marketing are implemented in Vietnam, including support for Participatory Guarantee Systems by the national government” (short name: vegetable programme). Details of the two programmes are summarized in Section 4.

### 3. Evaluation methodology

To optimize the resources available, the evaluation was composed of an external assessment conducted by ADE with the support of a Local Team (LT), and an internal assessment conducted by the Institute of Policy and Strategy for Agriculture and Rural Development (IPSARD) and Rikolto Regional Team (RT), under the supervision of the LT. The external assessment focused on institutional and FO levels related to the Food Smart City (FSC) programme, while the internal assessment focused on farmers and FO of the rice programme.

Key evaluation questions (EQ) for each programme are presented in Table 1.

Table 1: The evaluation questions assessed in this report

#	Specific question	Programme
	<b>At farmer level</b>	
EQ1.	Have Rikolto’s interventions contributed to increased resilience and improved livelihoods of farming households?	Rice programme

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#	Specific question	Programme
EQ2.	What are the spillover effects of Rikolto's policy work beyond their direct beneficiaries?	
	<b>At FO level</b>	
EQ3a	What has been Rikolto's role in strengthening Farmer Organizations (FOs) and making them strong business organizations for their members?	Rice and vegetable programmes
EQ3b	What added value demonstrates the FO as a collective action mechanism for producers?	
EQ4a	Has Rikolto succeeded in facilitating business relations between FOs and Private Sector buyers?	
EQ4b	Are these business relations economically profitable, socially inclusive and environmentally sustainable?	
	<b>At institutional level</b>	
EQ5a	Has Rikolto succeeded in setting up and/or strengthening multi stakeholder initiatives (MSIs)?	Vegetable programme
EQ5b	Have these MSIs succeeded in promoting sustainable food systems?	
EQ6	How is the evidence generated by Rikolto's pilot interventions used to influence policy decisions at regional/national/local or sector level?	
	<b>COVID-19 Impact related EQs</b>	
	How agile is Rikolto in responding to an external shock?	Vegetable programme
	Which impact did COVID-19 responses have on the target groups?	
	To what extent has Rikolto's responses to the COVID-19 outbreak left a more resilient food system in place, able to respond more swiftly to a next systemic crisis?	

### 3.1 Quantitative evaluation

#### For the rice program:

The quantitative approach used the Rikolto Farmer Survey (FS) data to construct resilience index of rice farmer household, to compile summary statistics of their household characteristics and livelihood activities, and to determine the changes in outcome variables between baseline and endline. The data has been collected by Rikolto at baseline (2017), midterm (2019) and endline (2021) and analysed by ADE. An assessment of change in outcome variables was determined based on comparison of aggregate baseline, Mid Term Review (MTR) and end line values of various indicators.

The 2017 survey was implemented in An Giang and Phu Tho provinces with 78 farmers. The 2019 survey was implemented in An Giang and Dong Thap provinces with 55 farmers. And the 2021 survey was implemented in Dong Thap and Kien Giang province with 109 farmers. It is worth noting that the **inconsistencies in survey locations and sample sizes would have influenced results of the impact analysis**. This could be seen a major shortcoming in the design of the M&E system.

In addition, data from SCOPEinsight (SI) documents were analysed and compared between the baseline and the end-line stages.

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Internal annual monitoring data of key indicators, conducted by and M&E staff of Rikolto Vietnam, were also used for this report.

### For the vegetable program:

Quantitative data were collected from a number of sources, including Rikolto's Farmer Survey (FS) data, Scopelnsight Documents, and the internal M&E database of Rikolto Vietnam. The Farmer Surveys were conducted by Rikolto at baseline (2017), midterm (2019) and endline (2021) in 5 provinces, including Da Nang, Hanoi, Ha Nam, Phu Tho and Vinh Phuc. An assessment of change in outcome variables was determined based on comparison of aggregate baseline, Mid Term Review (MTR) and end line values of various indicators. These include: household income, production and productivity, sustainability indices, sales via Farmer Organisations (FO), and access to services.

Table 2 presents the sample sizes of the full sample and the subsample of Fresh Fruit & Vegetable (FFV) growers in Vietnam. There was an unbalanced dataset composed of 257 farmers in 2017, 170 in 2019, and 294 in 2021, for a total of 721 farmers surveyed in the different survey waves. The sample is composed of farmers producing two commodities as main crops: FFV and rice. For the treatment and control groups of FFV growers, while there was a balanced sample size between groups at baseline (86 and 93 farmers), it was rather unbalanced at endline (114 and 71 farmers). Moreover, some limitations have been spotted, including small sample size and high attrition rates might bias the results (FS, 2021). Therefore, additional qualitative assessments via document studies and Focus Group Discussions (FGD) with local Rikolto team, representative FOs and FO members were conducted to support impact evaluation.

**Table 2: Sample sizes of the Farmer surveys during 2017 – 2021 (vegetable programme)**

	2017			2019			2021			TOTAL
	T	C	Total	T	C	Total	T	C	Total	
<b>Full sample</b>	164	93	257	170	0	170	223	71	294	721
<b>FFV subsample</b>	86	93	182	115	0	115	114	71	229	526

The rest of this methodology section provides insights on the additional qualitative data collection conducted in Vietnam.

## 3.2 Qualitative evaluation

Primary and secondary qualitative information was collected through participatory approaches, notably Focus Group Discussions (FGDs), and review of project documents listed in Table 3. This allowed for triangulation of information gathered and ensured impartiality. The qualitative component facilitated concrete, contextual and in-depth understanding of the contribution of Rikolto's interventions to strengthening capacity of FOs, business relations, policy and/or institutional changes, and impact of Covid-19 on the FOs.

For the rice programme, a FGD has been conducted by IPSARD through a field trip to two pilot provinces. In each province, IPSARD discussed with two program-supported cooperatives. At each cooperative, IPSARD (i) discussed about benefits of cooperatives participated in the project; support from project; difficulties, advantages and challenges when applying SRP, and (ii) conducted FGDs with ten farmers to evaluate the compliance level of farmers in SRP rice production; benefits of farmers when applying SRP rice; difficulties, advantages and challenges when applying SRP.

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For the vegetable programme, data and information collected through reviewing evaluation reports of partner organisations at the final project evaluation workshops, and via FGDs and Key Informant Interviews (KIIs) with Rikolto team (RT), representatives of partner organisations, leaders of 4 farmer organizations (FOs), and a small group of FO members of one cooperative.

Table 3: Available documentation and data for synthesis and evaluation of the two programmes

<b>Intervention Framework – at country-cluster level</b>
<ul style="list-style-type: none"> <li>• The Intervention Framework describes Rikolto’s ToC and includes an overview of the interventions and related outcomes, as well as annual monitoring data for a country-cluster combination</li> <li>• Additionally, there are Annual Reports to DGD that are written based on the Intervention Framework. They include a “Performance Scoring Card” assessing Rikolto’s performance along seven criteria and a related Lessons Learnt document and can be used as additional data source where the Intervention Framework provides only scarce information<sup>1</sup></li> </ul>
<b>Midterm Review (MTR) – at country level</b>
<ul style="list-style-type: none"> <li>• The MTR assesses the 2017-2021 DGD-programme up to 2019 at country level based on available monitoring and FS data</li> </ul>
<b>Farmer Survey (FS) data – at farmer level</b>
<ul style="list-style-type: none"> <li>• The FS has been elaborated by Rikolto to collect data at farmer level at baseline (2017), mid-term (2019) and end-line (2021)</li> <li>• The data has been collected from a sample of beneficiaries and additionally from a control group (CG) for 8 country-cluster combinations (Rice-DRC, Rice-Mali, Rice-Indonesia, Coffee-DRC, Coffee-Peru, FSC-Vietnam, FSC-Tanzania, Cocoa-Honduras)</li> <li>• FS data descriptive results are provided to the LT by the CT when available<sup>2</sup></li> </ul>
<b>SCOPEInsight Assessments &amp; Methodology – at the FO level</b>
<ul style="list-style-type: none"> <li>• <i>SCOPEInsight</i> assessments are being carried out every 18-24 months to measure FOs’ business and organisational capacities</li> <li>• SCOPE Basic reports are designed for nascent and/or emerging organizations and the SCOPE Pro for more advanced and matured ones</li> <li>• The <i>SCOPEInsight Methodology</i> and <i>Score Interpretation Guideline</i> are provided to the LT for additional guidance</li> </ul>
<b>Rikolto’s general framework for BDS – at the global level</b>
<ul style="list-style-type: none"> <li>• This document provides Rikolto’s objectives, principles, and guidelines on how to facilitate change in food systems</li> <li>• It aims to prevent Rikolto’s interventions from undermining the local Business Development Services (BDS) sector and to ensure sustainable interventions with a scalable impact</li> </ul>
<b>COVID-19 documentation – at the country level</b>
<ul style="list-style-type: none"> <li>• The COVID-19 documentation comprises a summary of Rikolto’s COVID-19 response activities, as well as monitoring data that captures the implementation progress and results</li> </ul>

**Statistical analysis:** Some datasets from the internal M&E data system of the vegetable programme were synthesized and analysed using GraphPad Prism and Excel.

<sup>1</sup> The Annual Reports to DGD are especially relevant for Tanzania and Uganda.

<sup>2</sup> The CT is responsible for performing the FS data analysis for each country-cluster combination of interest, as well as providing the descriptive results and detailed guidance to the LT to facilitate interpretation.

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### 3.3 Limitations of this evaluation

This evaluation was essentially conducted via a document review. Nonetheless, data were missing, particularly in the Scopelnsight documents. Therefore, many aspects could not be analysed fully through project documents. In particular, Rikolto's M&E data did not allow distinguishing between results achieved through Rikolto's interventions or through the FOs themselves. As such, added value of Rikolto's interventions could not be always firmly established. Triangulation of information through FGDs and Key Informant Interviews (KII) with FO leaders and members were conducted by the local Rikolto team (RT) and it has been essential in order to complement the information available. Unfortunately, some required information could not be collected and answered in the field by RT.

For the rice programme, due to the stated inconsistencies of survey locations and sample sizes, comparison of data between baseline and end line stages might not reflect the changes resulted from the program interventions. Particularly, 86% of the survey respondents at the baseline stage in 2017 were from Phu Tho (northern Vietnam), whose farm size is much smaller than those in the South. The changes in rice yield and gross profits between baseline and end-line surveys might not necessary reflect the changes due to the programme interventions.

## 4. Programme Overview: Vietnam

### Rice programme:

In Vietnam, rice is one of the most important agricultural commodities. Rice production not only contributes significantly to the livelihood of millions of households in rural areas, but also plays an important role in social and economic development of Vietnam. Vietnam has 9.3 million ha of the agricultural land area, of which the rice cultivation area has taken 4.3 million ha, accounting for 46% of the agricultural land area. In the past years, although the rice cultivation area has declined gradually, but due to the high rice yield, the annual rice output in Vietnam has remained stable at 43-44 million tons, and therefore satisfying the demand for rice export. According to the Vietnam customs, in 2020, Vietnam exported about 6.25 million tons of rice to the international market with a value of 3.12 billion USD. Besides Thailand and India, Vietnam has remained one of the world's leading rice exporting countries for years.

However, the development of the Vietnam's rice sector still presents many potential risks in term of sustainability. Small-scale production is a barrier to apply advanced techniques into production. The capacity of cooperatives is still low in terms of labors, investment capital, and facilities. The linkages between cooperatives and enterprises are limited, reducing the efficiency of the rice supply chain. Rice farmers are vulnerable to negative impacts of climate change. Farmers mainly follow conventional practices.

In 2017, Rikolto in Vietnam started its 1<sup>st</sup> phase of rice programme "*Supporting Inclusive and Sustainable Agricultural Value Chain Development Benefitting Smallholder Farmers in Vietnam*". In the first phase of the program, Rikolto conducted training courses on Sustainable Rice Platform (SRP) standards for rice farmers in Dong Thap and Kien Giang provinces, aiming to mainstream inclusive business and sustainable rice practices across the Vietnamese rice subsector.

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Expected outcomes:

1. The sustainability, gender-sensitiveness and youth inclusiveness of rice value chains are improved;
2. A participatory guarantee system (PGS) is recognized as a suitable quality assurance mechanism for rice produced according to the SRP standard;
3. Inclusive business models are scaled out;
4. Inclusive and sustainable practices for rice value chains are scaled out and up.

Rikolto designed five main context-based interventions below in order to achieve the expected outcomes of the rice program in Vietnam.

- 1) Enable Rice FOs to engage in inclusive business relationships under structured sustainable and inclusive rice value chains
- 2) Improve the sustainability, gender-sensitiveness and youth inclusiveness of rice value chains
- 3) Test the feasibility of using Participatory Guarantee Systems (PGS) as a quality assurance mechanism for rice produced according to the SRP standard.
- 4) Develop win-win+ inclusive business relationship between companies and FOs
- 5) Inclusive and sustainable practices for rice value chains are scaled out and up

### Food Smart City (FSC) programme

Rikolto's programme in Vietnam aims to foster sustainable food production and consumption, and to ensure a fair share for all by unlocking the sustainable farming potential of a critical mass of smallholder farmers. Reaching this critical mass can only be achieved through changes at the structural level through improvements of the institutional and business environment. In order to contribute to making sustainable production & consumption the new norm, Rikolto applies a combination of **three strategies**: (i) strengthening partner capacities for collective actions by improving farmer organisations' technical, organisational and business skills, and facilitating market linkages between chain actors, (ii) fostering innovation by investing in innovative methodologies to promote new inclusive & sustainable business models and using technology to link consumers with safe food markets, (iii) supporting an enabling environment for Vietnamese smallholders and creating/reinforcing sustainability alliances and platforms. A **structural change agenda** (SCA) "Inclusive & sustainable safe food policies tackling safe vegetables production, consumption and marketing are implemented in Vietnam, including support for Participatory Guarantee Systems by the national government" directly contributes to **Rikolto's specific objective for Vietnam**: "Fruits & vegetables and rice in Vietnam are produced in safe and sustainable ways and marketed through viable, competitive and efficient chains benefitting smallholder producers."

### *Key partners/beneficiaries*

Rikolto's actions aim to contribute to a dynamic agricultural sector where fruits and vegetables are produced in a safe & sustainable way and marketed through viable, competitive and efficient chains benefitting smallholder producers, and contributing to economic, social and environmental development. In order to achieve this goal, Rikolto has been working towards the implementation of inclusive, sustainable and safe food policies that tackle safe vegetables production, consumption & marketing, including the adoption of Participatory Guarantee Systems by Vietnam's national government (SCA 1).

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Main implementing partners of this program were functional departments and organisations at the provincial levels of 5 provinces, including Ha Noi, Ha Nam, Da Nang, Vinh Phuc, and Phu Tho. Details of the stakeholders can be seen in the Intervention Framework document (pages 25-31).

Key **expected outcomes** of the FSC program in Vietnam include:

- 1) Evidence is built of the benefits of PGS as a tool to foster inclusive and sustainable value chains for safe & organic vegetables;
- 2) A more enabling environment for inclusive & safe vegetables value chains, including the adoption of PGS as a reliable and effective quality assurance instrument by the Vietnamese government and business actors
- 3) Da Nang and Hanoi municipality transitions towards food-smart cities where smallholder farmers are included in safe vegetables value chains and consumers have access to safe food.

The desired impact of Rikolto's programme in Vietnam is fivefold:

- i. To increase smallholder farmers' income;
- ii. To improve the quality of farmers' environment and health;
- iii. To ensure that consumers have access to safe and quality food that does not harm their health;
- iv. To create opportunities for youth in sustainable agriculture;
- v. To contribute to female farmers' empowerment.

For the FSC program, **specific interventions** include:

- 1) Promote the Participatory Guarantee System as an affordable, simple and effective participatory certification.
- 2) Foster a more enabling policy environment for inclusive and safe vegetables in Vietnam.
- 3) Support Da Nang & Hanoi to transition towards food-smart cities where smallholder farmers are included in safe vegetables value chains and consumers have easy access to safe food.

## 5. Farmer level

This section evaluates the overall impact of Rikolto's programme at the farmer level for the rice cluster. Specifically, efficiency and benefits of the project to rice farmers in the period of 2017 – 2021 were evaluated. The programme has provided training courses for rice farmers on SRP, climate change, and technical guides and measures to adapt with changes in production such as Integrated Pest Management (IPM), water management, pesticides and efficient use of fertilisers, etc.

**EQ1. Have Rikolto's interventions contributed to increased resilience and improved livelihoods of farming households?**

Farmer surveys were conducted every two years since 2017. The 2017 survey was implemented in An Giang and Phu Tho provinces with 78 farmers. The 2019 survey was implemented in An Giang and Dong Thap province with 55 farmers. And the 2021 survey was implemented in Dong Thap and Kien Giang province with 109 farmers.

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The majority of farmers interviewed are more than 35 years of age (87-96%) (Table 4). This might reflect the reality in rural areas of Vietnam where most of young people migrates to major cities and/or industrial zones for off-farm employment. In addition, the respondents have a rather limited education level, mainly at junior or senior high school levels. They are small producers with 1.59 – 4.27ha of paddy land (the large variation of land size is due to the fact that 86% of the respondents at the baseline survey was from Phu Tho province. Average paddy land size in the North is much smaller than that of farmers in the South). Their years of membership in the FOs range from 8.8 to 12.7 years.

Table 4: Summary statistics of the rice sample

	2017			2019			2021		
	Mean	Sd	N	Mean	Sd	N	Mean	Sd	N
Female	0.62	0.49	78	0.24	0.43	55	0.14	0.35	109
Younger than 35 years	0.06	0.25	78	0.13	0.34	55	0.09	0.29	109
Number of household members	4.49	1.87	78	4.18	1.38	55	4.31	1.50	109
Region==angiang	0.14	0.35	78	0.36	0.49	55	0.00	0.00	109
Region==danang	0.00	0.00	78	0.00	0.00	55	0.00	0.00	109
Region==dongthap	0.00	0.00	78	0.64	0.49	55	0.70	0.46	109
Region==hanam	0.00	0.00	78	0.00	0.00	55	0.00	0.00	109
Region==hanoi	0.00	0.00	78	0.00	0.00	55	0.00	0.00	109
Region==kiengiang	0.00	0.00	78	0.00	0.00	55	0.30	0.46	109
Region==plutho	0.86	0.35	78	0.00	0.00	55	0.00	0.00	109
Region==vinhphuc	0.00	0.00	78	0.00	0.00	55	0.00	0.00	109
Education==No certificate/diploma	0.00	0.00	78	0.09	0.29	55	0.01	0.10	109
Education==Primary school certificate	0.05	0.22	78	0.20	0.40	55	0.14	0.35	109
Education==Junior high school certificate	0.67	0.47	78	0.35	0.48	55	0.34	0.48	109
Education==Senior high school certificate	0.24	0.43	78	0.29	0.46	55	0.40	0.49	109
Education==Vocational/training college certificate/diploma	0.04	0.19	78	0.00	0.00	55	0.06	0.25	109
Education==University diploma (Bachelor)	0.00	0.00	78	0.07	0.26	55	0.05	0.21	109
Total farmland owned (in ha)	1.59	6.22	78	4.72	7.71	55	3.96	3.25	109
Member of an FO	0.96	0.19	78	1.00	0.00	55	1.00	0.00	109
Years of membership in the FO	8.77	3.06	78	11.35	9.47	55	12.68	6.74	109
Observations	242								

The definition of resilience used in this report is the one provided by the RM-TWG (2014) following which resilience is the “*Capacity that ensures stressors and shocks do not have long-lasting adverse development consequences*”. This definition considers resilience as a set of capacities at different scales (households, communities, and systems), that emerges as a reaction to specific disturbances (shocks and stressors) that undermine the stability of a system, increasing its vulnerability. It considers resilience not as an end, but rather as an instrument to achieve the ultimate goal of limiting vulnerability and promoting long-term sustainability and improved well-being.

In the operationalization of the definition, the resilience indicators are re-grouped into absorptive, adaptive and transformative capacities, following Bené et al. 2015 and the main resilience literature (RM-TWG 2014). Absorptive capacity is a household’s ability to absorb the impacts of shocks in the short-run. Adaptive capacity reflects the ability to respond to long-term social, economic, and environmental impacts of shocks through specific adaptation strategies. Transformative capacity refers to structural changes in the structure and function of the system caused when the adaptive capacities of the household, community, or ecosystem are overwhelmed by the magnitude of the shocks.

To estimate resilience, ADE first estimated each resilience latent (i.e. unobserved) capacity by following a latent variable approach (Alinovi et al., 2009) through factor analysis. Once the capacities have been estimated, ADE builds the resilience index as a simple averages of the estimated capacities. In general, the indicators considered into the absorptive capacity are all indicators related to mitigation and preparedness strategies.

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In this sense, ADE chooses indicators associated to good agricultural practices (soil and water management, and inputs use) as proxies for the degree of preparedness; and indicators such as access to safety nets and coping abilities for mitigation capacities. For the adaptive capacity, ADE considers indicators associated with ability to use technology and innovation skills to overcome the shock as long-term responses once the absorptive tools are exceeded by the shock. In this sense, we consider indicators, such as education and training together with diversification of livelihood, access to credit and land size as proxies of farmers' ability to adapt to a multi-hazard environment. For the transformative capacity, ADE considers all indicators that enhance governance and enable conditions for resilience and transformation, as access to services, infrastructures and social inclusion. Unfortunately, since only one indicator was available the transformative resilience capacities was not computed in this assessment.

### **Improved production and product quality**

Results from Table 5 show a significant difference in production of rice between 2017 and 2021 ( $P < 0.01$ ). Similarly, rice yield in 2021 was significantly higher than that of 2017. This implies that if other conditions are unchanged, applying SRP contributes to increased rice yield. Due to the stated shortcoming of baseline and end-line survey design in different locations that could not assist establishing a valid conclusion of the impact of the programme interventions to improving rice yield, a different design of pre- and post-program interventions (i.e. SRP application) should have been conducted on the same group of farmers. A recent study across six Asian rice producing countries confirmed the result of increased yield and profit for SRP-compliant rice producers, including farmers in the Mekong delta of Vietnam (Devkota et al. 2019)<sup>3</sup>.

Table 5: Production and commercialization of rice

	2017					2019					2021				
	Mean	Min	Max	Sd	N	Mean	Min	Max	Sd	N	Mean	Min	Max	Sd	N
Production of focus crop (in tons)	14.08	0.70	303.00	43.48	78	85.51	12.00	450.00	89.47	55	69.12	10.50	336.00	59.68	109
Productivity of focus crop (in tons/ha)	10.76	5.08	25.26	3.55	78	18.07	6.64	24.00	3.77	55	16.92	10.73	22.00	3.31	109
Commercialisation of focus crops (in tons)	14.16	0.00	304.00	43.70	78	85.51	12.00	450.00	89.47	55	69.12	10.50	336.00	59.68	109
Average sales price of the focus crop (in USD/ton)	419.72	176.13	1585.16	158.55	78	227.33	189.67	323.30	30.28	55	236.50	194.51	286.05	27.76	109

As the common trend of rice prices in recent years, selling price of rice in 2021 was significantly lower than that in 2017. Due to the price volatility, comparison of this indicator between 2017 and 2021 would not be rational. Results of the FGD with representative farmers showed that despite the reduced price in recent years, 100% farmers said that they were satisfied with the selling price in 2021, and their sales were not affected by the Covid-19 pandemic. The same study of Devkota et al. (2019) showed that the improved profits are mainly derived from the reduction of production inputs and increased yield.

#### **Some relevant findings from FGDs with farmers in Dong Thap and Kien Giang provinces:**

100% farmers said that intervention activities of the programme were useful for them in rice production. Especially, by applying SRP standards, farmers have gradually changed their conventional practices towards sustainable rice production.

“A farmer in Dong Thap province said that by applying SRP standards, the quality of rice has improved, while production costs have reduced significantly compared with the conventional practices.”

<sup>3</sup> Devkota, K.P., Pasuquin, E., Elmido-Mabilangan, A., Dikitanan, R., Singleton, G.R., Stuart, A.M., Vithoonjit, D., Vidiyangkura, L., Pustika, A.B., Afriani, R. and Listyowati, C.L., 2019. Economic and environmental indicators of sustainable rice cultivation: A comparison across intensive irrigated rice cropping systems in six Asian countries. *Ecological Indicators*, 105, pp.199-214. End-line impact assessment of the 2017-2021 DGD-funded programme implemented by Rikolto

Applying SRP standards contributed to increasing use efficiency of nutrients and energy, improving productivity and net income compared with the conventional practice. In addition, by following SRP standards, the amount of inputs (fertilizers and pesticides) has reduced by 30 – 50%.

### ***Enhanced sustainable production practices***

Table 6 presents the components of the sustainability index. Except for the reduced scores of biodiversity and landscape management indexes between 2017 and 2019, soil conservation, water management, resource management and climate change indexes have increased over time. This could be due to the increased adoption of SRP practices among the programme supported farmers, but it was not conclusive due to insufficient information. By 2021, climate change gained the highest score of 2.65, followed by resource management (2.37), water management (2.23), and soil conservation (1.99). However, comparing those with the 2021 targets, only the climate change index (2.65) has exceeded its formulated target (2.2), other indexes were below expectations.

Table 6: Sustainability indexes

<b>Indexes</b>	<b>2017</b>	<b>2019</b>	<b>2021</b>	<b>2021 target</b>
Soil conservation	1.60	1.76	1.99	2.2
Water management	2.07	2.14	2.23	2.6
Resource management	1.40	1.53	2.37	2.5
Climate change	1.27	1.65	2.65	2.2
Biodiversity	1.17	0.79	-	1.6
Landscape management	0.21	0.04	-	1.5

Source: Farmer surveys in 2017, 2019, and 2021

The low scores of biodiversity and landscape management could be due to the nature of rice mono-cropping. Additionally, landscape management would require joint efforts of local governments and other supporting departments and organisations in addition to the individual farmers.

### ***Increased productivity and total profit***

Table 7 shows how rice yield and total profit increased significantly in 2021 compared to 2017. Particularly, the average rice yield increased by 57.25% in 2021 compared with 2017; whereas, total profit of rice production increased by 257.9% in the same period. As stated, due to the inconsistency of survey locations, the differences in productivity and profit might not necessarily attribute to the impact of the programme interventions. This is because most of respondents in the baseline survey were in a northern province (Phu Tho) with a relatively small farm size.

Table 7: Rice yield and profit

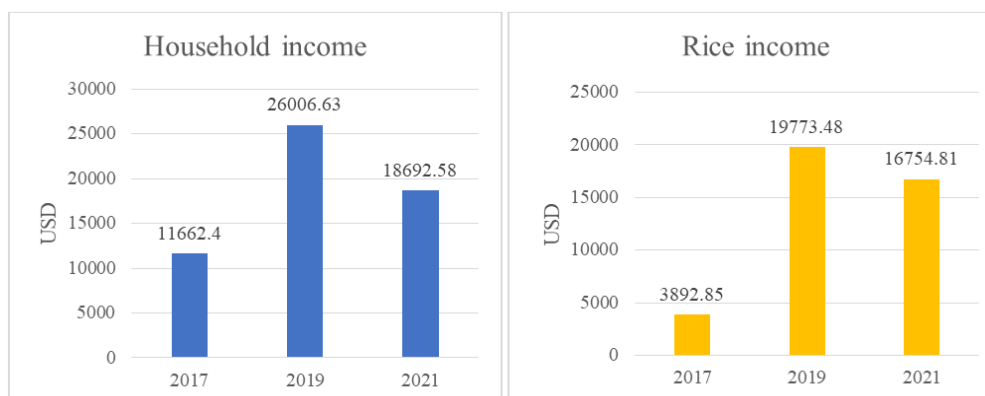
<b>Indicator</b>	<b>2017</b>	<b>2019</b>	<b>2021</b>
Productivity (tons/ha/year)	10.76	18.07	16.92
Total profit (USD)	2,069.69	9,317.28	7,406.92
Profit margin (USD/ton/ha of farmland owned)	253.89	110.62	99.99

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Source: Farmer surveys in 2017, 2019, and 2021

### Sustainable income for farmers

Household income of the rice farmers increased significantly between 2017 and 2021. Results of a t-test show that there was a significant difference in the total income between the baseline 2017 and the endline 2021 at the significant level of 10%. A similar result was found for the income derived from rice production (Figure 2).



**Figure 2: Average household income and share of income from rice**

Source: Farmer surveys in 2017, 2019, and 2021

Rice production has increasingly played an important role in the total income of households as the share of income derived from rice has increased over time, from 39.93% in 2017 to 77.85% in 2019 and 88.12% in 2021. Moreover, in 2021, the average household income by sales through cooperatives/companies is 562 USD, increased by 453.1% compared with 2017. This would be due to the increased number of client companies of the FOs.

**Table 8: Household income and income sources**

	2017			2019			2021		
	Mean	Sd	N	Mean	Sd	N	Mean	Sd	N
Total income (in USD)	11662.40	35678.14	75	26006.63	32355.22	55	18692.58	15960.18	109
Total income per household member (in USD)	2621.74	6543.20	75	6647.29	8199.42	55	4869.32	4856.94	109
Focus crop income (in USD)	3892.85	11104.38	78	19773.48	23321.28	55	16754.81	15479.44	109
Income by sales through FO/company (in USD)	101.61	897.42	78	0.00	0.00	55	562.00	2275.68	109
Share of income derived from other crops	.	.	0	.	.	0	3.12	8.75	109
Share of income derived from keeping livestock	.	.	0	.	.	0	0.18	1.92	109
Share of income derived from other wage labour	.	.	0	.	.	0	1.49	5.19	109
Share of income derived from small business	.	.	0	.	.	0	1.27	4.51	109
Share of income derived from salaried job	.	.	0	.	.	0	5.08	10.99	109
Share of income derived from the focus crop	39.93	27.93	75	77.85	24.37	55	88.12	15.28	109
Observations	242								

Table 9 shows that households have been improved on sufficiency of the basic needs of households, increasing from 14.55% in 2019 to 51.38% in 2021. It might be that by participating in the programme, the livelihood of farmers has been improved significantly.

**Table 9: Does the income suffice to fulfil the basic needs of your household?**

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	2019 Percent	2021 Percent
Somewhat insufficient	0.00	6.42
Just right	14.55	51.38
Somewhat sufficient	85.45	42.20

Table 10 shows that households met their expenses through their income. In 2021, 99% respondents said that their income has adequately covered basic household consumption. About 96% households could adequately cover agricultural production expenses. The proportion of households with savings from rice production increased from 5% to 73%.

Table 10: Which expenses of the household does the income manage to adequately cover?

	2019			2021		
	Mean	Sd	N	Mean	Sd	N
Basic household consumption (food, soap, etc.)	1.00	0.00	55	0.99	0.10	109
Maintain/improve the housing (roof, walls, sanitary installations etc.)	0.76	0.43	55	0.18	0.39	109
Other materialistic belongings of the household (car, machineries, electronics)	0.67	0.47	55	0.14	0.35	109
Agricultural production	0.96	0.19	55	0.96	0.19	109
Other income-generating activities (small shop, craft work, etc.)	0.07	0.26	55	0.16	0.36	109
Healthcare	0.38	0.49	55	0.61	0.49	109
Education	0.60	0.49	55	0.55	0.50	109
Savings	0.05	0.23	55	0.73	0.44	109
Other essential needs of the household members (transportation, clothing)	.	.	0	0.97	0.16	109
Observations	164					

Table 11 shows that in 2021, none of households interviewed have experienced food insecurity because of lacking cash or other resources. Compared to 2016 (before project interventions), 63% farmers said that their situation is better now. Compared to 2019 (pre-Covid-19 pandemic), only 28% famers said that their situation is better now, while 62% stated no impact due to the Covid-19 pandemic.

Table 11: Food Insecurity Experience Scale: During the last 12 months, was there a time when, because of lack of money or other resources

	2021		
	Mean	Sd	N
You were worried you would not have enough food to eat?	0.00	0.00	109
You were unable to eat healthy and nutritious food?	0.00	0.00	109
You ate only a few kinds of foods?	0.00	0.00	109
You had to skip a meal?	0.00	0.00	109
You ate less than you thought you should?	0.00	0.00	109
Your household ran out of food?	0.00	0.00	109
You were hungry but did not eat?	0.00	0.00	109
You went without eating for a whole day?	0.00	0.00	109
None of the above	1.00	0.00	109
The situation is better now compared to 2016 (previous to the programme)	0.63	0.48	109
The situation is roughly the same compared to 2016 (previous to the programme)	0.33	0.47	109
The situation is worse now compared to 2016 (previous to the programme)	0.04	0.19	109
The situation is better now compared to 2019 (pre-Covid)	0.28	0.45	109
The situation is roughly the same compared to 2019 (pre-Covid)	0.62	0.49	109
The situation is worse now compared to 2019 (pre-Covid)	0.10	0.30	109
Observations	109		

Over the period 2017-2021, the **rate of households suffering from social, economic and environmental shocks decreased by 26% concerning social shocks, and by 60% concerning economic and environmental shocks** ( $P < 0.001$ ). In 2021, the rate of respondents suffered from social shocks was 24%, 14% from economic shocks, and 33% from environmental shocks.

Table 12: Exposure to shocks

Shocks	2017	2019	2021	ttest p-value		
	Mean (0.50)	Mean (0.31)	Mean (0.43)	2017 2021	2017 2019	2019 2021
Social	0.50 (0.50)	0.10 (0.31)	0.24 (0.43)	0.00	0.00	0.03
Economic	0.74 (0.43)	0.60 (0.49)	0.14 (0.35)	0.00	0.08	0.00
Environmental	0.93 (0.24)	0.50 (0.50)	0.33 (0.47)	0.00	0.00	0.02
N	78	55	109			

Note: Standard deviations in parentheses

**Resilience recovery ability of the households was relatively remarkable.** About 82.46% households recovered from shocks and 84.42% household recovered from COVID-19, and they reached the same level of well being as before the shock. Only 8.77% households have not recovered yet from shocks and 9.09% not recovered yet from COVID-19 (Figure 13).

Table 13: Resilience recovery ability

	Shocks	COVID-19
Recovery ability	Percent	Percent

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Recovered and worse off	5.26	6.49
Recovered and same level	82.46	84.42
Recovered and better off	3.51	-
Not recovered yet	8.77	9.09
N	57	77

On average, farmers' **absorptive capacity** increased significantly ( $P < 0.001$ ), between baseline (0.18 in 2017) and end line (0.79 in 2021). The increase in absorptive capacity can be attributed to the activities in which farmers engaged during Rikolto's intervention. These activities include: Training in GAP (soil and water conservation, use of certified seeds, manuring, fertiliser and agro-chemical application; Sustainable Rice Production (SRP) techniques; safe spraying of crops; training in Climate Smart Agriculture (CSA); etc.

Table 14: Capacities and resilience indices

	2017	2021	T-test p-value
	Mean	Mean	2017-2021
Absorptive capacity	0.18 (0.23)	0.79 (0.28)	0.00
Adaptive capacity	0.90 (0.16)	0.53 (0.25)	0.00
Resilience Index	0.54 (0.15)	0.66 (0.18)	0.00
N	78	109	

Note: Capacity Indices computed with factor analysis. Scores rescaled with min-max. Values of the index range from 0 to 1. Resilience index simple average of the two capacities indices. Standard deviation in parenthesis. Resilience index was not computed for year 2019 due to low variance in the variables related to absorptive capacity.

On average, farmers' **adaptive capacity** decreased significantly ( $P < 0.001$ ) between baseline (0.90 in 2017) and end-line (0.53 in 2021). This result might signal that COVID-19 has undermined the enhancements in the capacity of those households to adapt to a multi-hazards environment. Nonetheless, the overall **resilience index** increased in a significant way between baseline (0.54) and end line (0.66) with P-value  $< 0.001$ .

Unfortunately, due to the small sample size, the analysis did not allow to investigate heterogeneous effect in terms of age groups and gender.

## EQ2. What are the spillover effects of Rikolto's policy work beyond their direct beneficiaries?

Potential spillover effects were not found in the program documents.

According to the internal M&E data, in addition to the direct beneficiaries, a large number of indirect beneficiaries have been benefited from the program support:

- **Number of direct end beneficiaries:** farmers affected by changes in public/private policies through commodity platforms: 1,514 direct farmers.
- **Number of indirect end beneficiaries:** members of household farmers affected by changes in public/private policies: 10,893 household members.

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Results of a FGD with some representative of FOs showed that many non-supported households in the neighbourhood wanted to participate in the program, but due to the limited financial resources of the project they could not be engaged. However, when observing SRP application of their neighbours, they also followed the SRP.

Also, according to Mr. Tuan Le, a staff member of the local Rikolto office, “rice is very much a political product of Vietnam, things Rikolto can do with policies is very limited. Currently, Rikolto is trying to upscale the SRP application area and work together with other actors from government bodies, NGOs, research institutes to demonstrate the effectiveness of SRP. In Rikolto’s cooperatives, due to limited resources, Rikolto could only support a small number of farmers, but some other nearby can see the benefit of SRP, so they tried to apply it with the help of other intervened farmers and technicians”.

## 6. FO Level

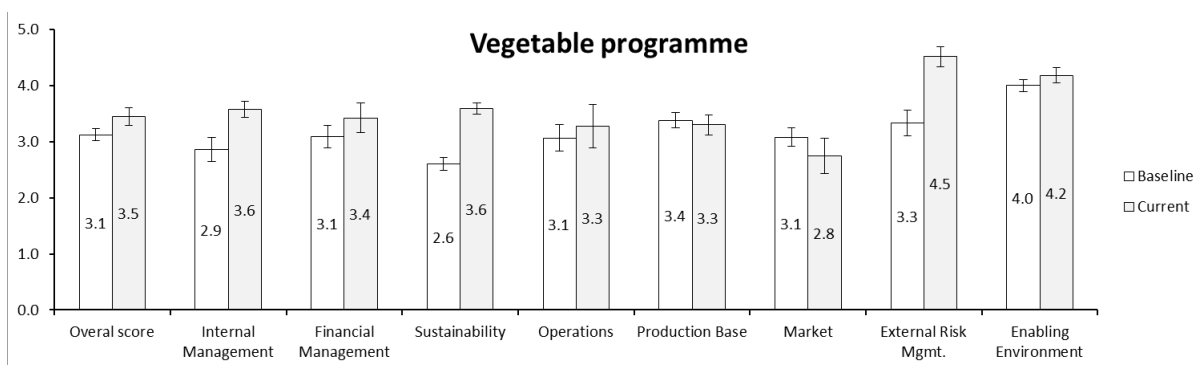
This section evaluates the overall impact of Rikolto’s program at FO level.

EQ3a. What has been Rikolto’s role in strengthening FOs and making them strong business organizations for their members?

There are several aspects to be analysed in answering this question through desktop studies, discussions with Rikolto team (RT) and a focus group discussion (FGD) with representative farmer organizations (FOs). The aspects include business performance of the FOs, changes in the local Business Development Service (BDS) sector, and alignment of the changes with Rikolto’s BDS policy.

### For the vegetable programme:

Results from the Scopelnsight (SI) documents of 12 FOs have revealed **statistically significant improvements in terms of internal management, sustainability, external risk management, and the overall score of the FOs** ( $P < 0.05$ ). However, there was no significant difference with regard to **financial management, operations, production base, market and enabling environment** (Figure 4). This could be due to the fact that most of the supported FOs had been newly established within less than one year (3 cooperatives, 25%) to more than a year (3 cooperatives), and three cooperatives (25%) were established during the project implementation period. Therefore, impact has not been evident within a relatively short period. Besides, enabling environment has been evaluated rather high at both baseline and endline.



**Figure 3: Scopelnsight Scoring Results of 12 vegetable FOs in Vietnam between 2017 – 2021**

(Note: Vertical bars represent Standard Errors of means (SE); Score 1: very immature organisation; Score 2: immature organisation; Score 3: maturing organisation; Score 4: professional organisation; Score 5: very professional organisation).

End-line impact assessment of the 2017-2021 DGD-funded programme implemented by Rikolto

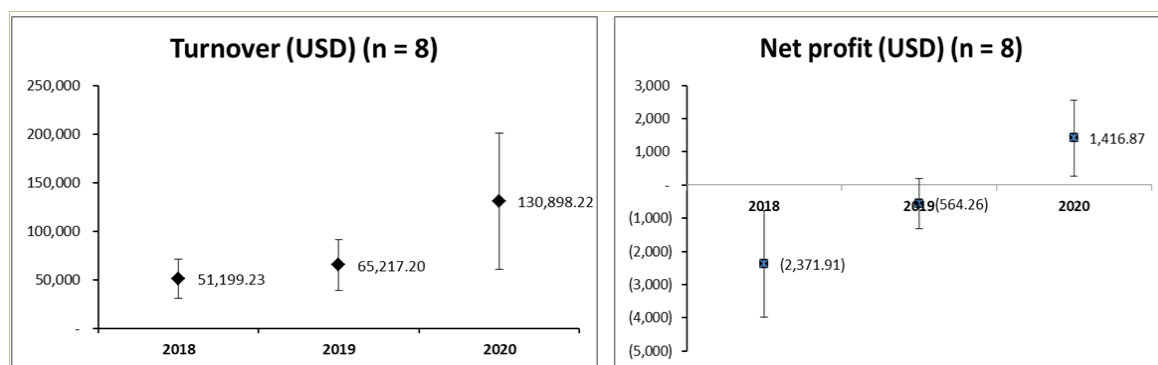


A FGD with some partner organizations of Ha Nam, Tuyen Quang and Ha Noi disclosed an interesting issue. According to them, cooperatives that operate like professional agribusinesses account for a small proportion among all cooperatives in their provinces (e.g. 20% in Tuyen Quang, 30% in Hanoi and 50% in Ha Nam provinces). The remaining coops are established mainly due to a “political task” of each commune. In which, one leader of the commune is assigned to be the leader of the cooperative. As such, those coops have a collection of coop members (commune production group members) rather than a professional business. Thus, there would be limited motivation and commitment of coop leaders to improve their business performance. This could be another contributing factor to limited impact of the project on the business performance of the local FOs. For example, Rikolto had to stop supporting some FOs during the programme implementation due to such reason (i.e. no actual business activities and/or restructuring).

According to the local Rikolto team (RT), the level of development varies among the FOs and there should be different measures of support. Particularly, financial management capacity (e.g. a standardized accounting system) needs to be improved for the newly established FOs. Quality control training is also necessary for many other FOs. Training on new strategic business unit management is recommended for the special cases of La Huong and Tuy Loan cooperatives. This is because the two cooperatives (established in 2011 and 2012, respectively) are at a mature stage of business development.

Generally speaking, the overall scores show maturing and professional organisations in all the ScopeInsight themes. Although some of the increases were not statistically significant increases, due to the short time span of the intervention to reach transformative changes, the overall score significantly increased FOs (from 3.1 to 3.5) clearly indicating that **Rikolto has created a significant foundation for the FOs to become self-sustaining businesses.**

In terms of **business performance**, data varied among the FOs due to their mentioned different stages of business development with the majority of them were at their start-up stage. There was no significant difference in terms of turnover. However, **their net profits were in an increasing trend, starting to gain profit in 2020** with a significant increase of mean value ( $P < 0.05$ ) compared to 2018 and 2019 (Figure 5). The sample size was small and there were missing data. This is because three FOs did not provide financial data. Additionally, most of the FOs did not provide any information related to balance and loan history, and grant history.



**Figure 4: Business performance of the FOs during 2018-2020**

(Note: Vertical bars represent Standard Errors of means (SE)).

Some successful case studies can be found in three cooperatives, including An Hoa (Vinh Phuc province), Tu Xa (Phu Tho province) and Tuy Loan (Da Nang city), which registered a remarkable **increases in their turnover** over the three year period (Table 15). Furthermore, a lot of **successful stories of other**

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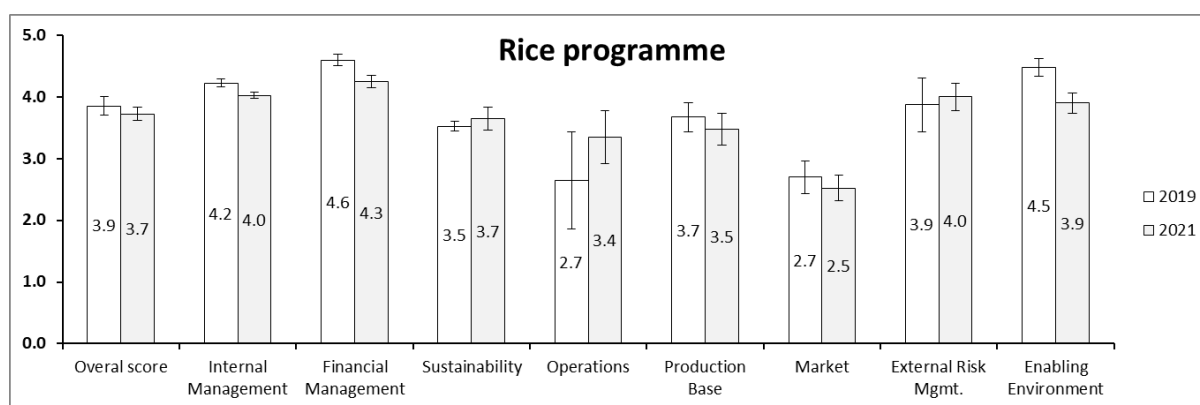
cooperatives and impacts of this project have been published on the [website of Rikolto](#) and broadcasted on local televisions.

**Table 15: Examples of success stories of three cooperatives**

Cooperative	Turnover (USD)		
	2018	2019	2020
An Hoa	152,174	217,391	352,174
Tu Xa	20,435	141,261	532,217
Tuy Loan	24,245	33,801	48,448

**For the rice programme:**

Overall, the four FOs (Binh Hoa, Binh Thanh, Tan Binh, and Thang Loi) had already been professional organisations with high ScopeInsight (SI) scores in most dimensions. The total score remained unchanged between 2019 and 2021. There were slightly reduced scores in internal management, financial management and enabling environment ( $P < 0.05$ , Figure 5). This might be due to the impact of Covid-19 pandemic.



**Figure 5: ScopeInsight results of 4 rice cooperatives between 2019 – 2021**

(Note: Vertical bars represent Standard Errors of means (SE); Score 1: very immature organisation; Score 2: immature organisation; Score 3: maturing organisation; Score 4: professional organisation; Score 5: very professional organisation).

Between 2018 and 2020, the turnover of all cooperatives increased, ranging from 6.0% for Thang Loi cooperative to 29.9% for Tan Binh cooperative. Nonetheless, there were mixed results in net profit with 50% FOs gained increased profit, while the remaining had reduced profit (Table 16).

**Table 16: Key financial data of the FOs**

Cooperative	Turnover (million VND)			Net profit (million VND)		
	2018	2020	% Change	2018	2020	% Change
Binh Hoa	3,343.4	3,745.5	12.0%	667.7	536.9	-19.6%
Binh Thanh	19,587.0	24,475.1	25.0%	1,582.0	433.4	-72.6%
Tan Binh	5,015.9	6,514.0	29.9%	584.4	684.0	17.0%
Thang Loi	2,575.8	2,730.5	6.0%	450.5	463.9	3.0%

Source: SCOPEinsight reports in 2019 and 2021

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In Vietnam, **BDS activities were not designed for the FOs** and thus there was no M&E indicator in this regard. Therefore, evaluation of impact regarding this aspect would not be relevant.

**For the rice programme**, according to Mr. Tuan Le of Rikolto Vietnam, “due to the context of the Vietnam rice sector, Rikolto did not do anything with any BDS providers. All the BDSs have been operating for quite a long time and do not need any support or improvement”.

**For the vegetable programme:**

**Need based approach:** According to RT, a need based approach was adopted for designing tailored interventions, which mainly focused on (1) improving margin via employing an affordable tool (i.e. Participatory Guarantee System – PGS) for reducing production costs, and (2) enhancing market actor linkages via connecting FOs with formal market outlets for improved prices and reduced risks. In addition, RT opined that the local BDS sector had been well developed and easily accessible. Accordingly, there was no need for interventions in improving the BDS. Nonetheless, it may be rational for the cooperatives located in and/or near big cities like Hanoi and Da Nang. Other cooperatives in rural districts might still need such services.

**Need for BDS:** A discussion between the local consultant with representatives of government organizations at the project wrap-up workshop on 17 December 2021 showed that management capacity of cooperative leaders still require further improvements, particularly for the newly established cooperatives. Also, an ecosystem to support FOs (including BDS) shall be strengthened for long-term sustainability. Furthermore, similar studies conducted by the local consultant in two provinces (Tra Vinh and Soc Trang) of Vietnam in 2018 revealed similar challenges of agricultural cooperatives, particularly in terms of cooperative governance and business planning capacity. This is due to a number of reasons, including limited educational level of cooperative leaders, and no formal and informal business training.

Moreover, it was observed during the discussions with RT that understanding of BDS varied among team members. Some were not aware of the core BDS principles of Rikolto (Table 5 below). This would be because of the high staff turnover rate of Rikolto Vietnam.

A thorough review of the Scopelnsight (SI) document also found that **100% of the BDS providers of the Rikolto supported FOs belong to the public sector** (government agencies). The FOs have had established relationships with these service providers before this project. Some cooperatives have significant large number of services providers (4-6) (e.g. Cat Lai, Dang Xa, La Huong, Tien Le and Tuy Loan coops), while some FOs only had 1-2 service providers (e.g. An Hoa, Thanh Ha, and Van Hoi coops).

Service providers and Supporting organizations	
<b>Name</b>	Department of Rural Development
<b>Organizational type</b>	Govt. body
<b>Type of service</b>	Other
<b>Number of years in relation</b>	6.0
<b>Contract in place</b>	No
<b>Contract start year</b>	-
<b>Contract end year</b>	-
<b>Description of agreement/relation</b>	The Department provided PO with bio-fertilizer and pesticide and training on GAP and marketing (for free); also product labelling.

Figure 6: Example of number of service providers of Thanh Ha cooperative in 2021

Although BDS was not a focus of this particular project in Vietnam, some principles of Rikolto’s BDS has been mainstreamed in the activities of Rikolto Vietnam (through a FGD with RT and document studies). Details are summarized below **for the vegetable programme**:

Table 17: Alignment of the FSC project to the core BDS principles of Rikolto

#	Key BDS principles of Rikolto	Remarks/How the principles have been mainstreamed into the project interventions by Rikolto Vietnam?
1	Principle 1: Demand-Driven Services	Interventions were designed based on the immediate needs of the FOs, particularly in improving profit through connecting with key buyers, and reducing production costs via adopting the PGS tool instead paying for the costly third party certification.
2	Principle 2: Sustainable Services	Although not stated by the RT, their designed Training of Trainers (TOT) on PGS for 111 members of supporting organisations would certainly contribute to sustainable BDS services for improved capacity to embrace and replicate the low-cost PGS. Their engagement of other partners (pages 25-31, Intervention Framework document), including government agencies, universities, local authorities would also contribute to sustainable BDS services from the public sector (e.g. capacity building, technology transfer, business advice, marketing assistance, mentoring and information, etc.). Nonetheless, private sector service providers were not identified and engaged in supporting the FOs.
3	Principle 3: Bundle where possible	Several services have been bundled, including training and market actor linkages although conducted by RT.
4	Principle 4: Vibrant and Competitive sector	As stated by RT, BDS was not a main focus. This principle was not well integrated into their project activities. The engaged BDS service providers were mainly public sector agencies. For example, the extension networks, provincial department of agriculture and rural development (DARD) and farmer union, etc. Other private partners, who provide services on capacity building, mentoring and advisory services, marketing and business development services, etc., were not mapped and engaged in supporting the cooperatives. Therefore, there should have been limited choices of BDS services of the FOs. For example, a relevance analysis in the 2019 annual assessment report of RT mentioned that business field is not part of the government agencies’ expertise. However, no private BDS provider was engaged to address the shortcoming during the project implementation.
5	Principle 5: Flexible, adaptable and participatory	Although a participatory approach was employed from the beginning of the project to address the immediate needs of the targeted beneficiaries, on-going assessment of their emerging needs for revised interventions during the project implementation was not stated in the progress M&E reports of RT. Their participation in redefining BDS services was not mentioned in the progress reports. For example, a relevance analysis in the annual report of RT stated that Phu Tho People’s Committee did not approve the program’s expected outcomes since they no longer support capacity building projects. However, further details on their actual needs and thus tailored support was not analysed.
6	Principle 6: Sector governance is key to sustainable service delivery	In spite of the stated involvement of local governments in the project as local partners in different provinces, their role in governing the market system to ensure sustainable service delivery was not stated in the M&E reports of RT.

#	Key BDS principles of Rikolto	Remarks/How the principles have been mainstreamed into the project interventions by Rikolto Vietnam?
7	Principle 7: Based on understanding of the existing opportunities in the market system and building on it	According to RT, Rikolto built on existing system and therefore focused its support to promote market linkages rather than other BDS in terms of input supplies. Regarding specific business/management skills, Rikolto also mobilized local service providers (in Da Nang for example) to provide training when the need arose (2019-2020 activities). Yet, analysis of the system weaknesses (including availability and quality of the existing BDS services from both public and private sectors) for improvement, and promoting demand of the targeted beneficiaries were not paid with sufficient attention.
8	Principle 8: Within the operational context and with a clear exit strategy	According to RT, there was a clear exist strategy through building capacity of local partner organizations and beneficiaries in the form of ToT to ensure local ownership and sustainability.

For the vegetable program, results of a FGD with some representative of FOs showed that Rikolto has contributed to sustainable service delivery (Principle 2) through the TOT training for both extension network and cooperative staff on PGS operation and monitoring. However, the role of local authorities in governing the market system (Principle 6) was not quite strong. Cooperatives have to find private BDS providers by themselves. The local governments mainly supported the FOs with VietGAP certification on a pilot basis for some cooperatives.

### EQ3b. What added value demonstrates the FO as a collective action mechanism for producers?

#### For the vegetable programme:

Given that the suggested indicators in the Evaluation Matrix (i.e. value of services to member, changes in number of services offered to members) were not found in SI document and Intervention Framework (IF), information used to analyse this dimension was collected from beneficiaries' reports at the final project evaluation workshop, a FGD with representative partner organisations and farmers, and the farmer survey report (2021).

According to the Farmer Survey report (2021), **a large share of the coop members (FFV farmers) in the treatment group (89%) reported that their level of access to services is better today compared to 2016.** In comparison, around 75% of coop members in the control group said so, but 17% and 8% of them indicated that their accessibility was the same and worse than in 2016, respectively. The services that most farmers in the treatment group had sufficient access to in 2021 were: seeds (95%), fertilizer/pesticides (87%), and irrigation (83%). And among those with the least reported access were marketing services (1%), certification (4%), manual labour (12%), and storage facilities (12%) (Table 18).

**Table 18: To which services do you have good access when needed? – Multiple answers possible**

	Treatment			Control		
	2021			2021		
	Mean	Sd	N	Mean	Sd	N
Seeds	0.95	0.22	114	0.94	0.23	71
Fertilizer/pesticides	0.87	0.34	114	0.83	0.38	71
Irrigation	0.83	0.37	114	0.87	0.34	71
Production materials (tools)	0.55	0.50	114	0.68	0.47	71
Training/extension services	0.54	0.50	114	0.61	0.49	71
Manual labour	0.12	0.33	114	0.03	0.17	71
Storage facilities	0.12	0.33	114	0.00	0.00	71
Processing facilities	0.25	0.43	114	0.00	0.00	71
Transportation	0.29	0.46	114	0.10	0.30	71
Market information (demand, prices etc.)	0.34	0.48	114	0.32	0.47	71
Marketing services	0.01	0.09	114	0.03	0.17	71
Certification (Fair Trade, organic, etc.)	0.04	0.18	114	0.01	0.12	71
Weather information	0.39	0.49	114	0.54	0.50	71
Credit or loan	0.41	0.49	114	0.37	0.49	71
None of the above	0.00	0.00	114	0.01	0.12	71
The access to services is better than in 2016	0.89	0.32	114	0.75	0.44	71
The access to services is the same than in 2016	0.09	0.28	114	0.17	0.38	71
The access to services is worse than in 2016	0.03	0.16	114	0.08	0.28	71
Observations	114			71		

Although most farmers in both control (non-supported FOs) and treatment (supported FOs) groups were satisfied with the services received from their FOs, a larger share of non-beneficiaries was unsatisfied (49% vs. 24% of beneficiaries) (Table 19).

**Table 19: With which of these services are you unsatisfied (bad quality or too expensive)? – Multiple answers possible – FFV Growers**

	Treatment			Control		
	2021			2021		
	Mean	Sd	N	Mean	Sd	N
Seeds	0.05	0.22	114	0.10	0.30	71
Fertilizer/pesticides	0.12	0.33	114	0.23	0.42	71
Irrigation	0.00	0.00	114	0.07	0.26	71
Production materials (tools)	0.00	0.00	114	0.06	0.23	71
Training/extension services	0.00	0.00	114	0.06	0.23	71
Manual labour	0.00	0.00	114	0.03	0.17	71
Storage facilities	0.00	0.00	114	0.01	0.12	71
Processing facilities	0.03	0.16	114	0.01	0.12	71
Transportation	0.07	0.26	114	0.08	0.28	71
Market information (demand, prices etc.)	0.07	0.26	114	0.28	0.45	71
Marketing services	0.04	0.18	114	0.01	0.12	71
Certification (Fair Trade, organic, etc.)	0.00	0.00	114	0.00	0.00	71
Weather information	0.01	0.09	114	0.04	0.20	71
Credit or loan	0.00	0.00	114	0.03	0.17	71
None of the above	0.76	0.43	114	0.51	0.50	71
Observations	114			71		

**A large share of treatment farmers (70%) stated no shortage of services compared to 54% of the control farmers.** The most common services, which are in need but not available for the treatment farmers, were market information (14%) and marketing services (11%) (Table 8). However, the proportion of respondents stating such shortage is rather small.



Table 20: To which of these services do you have no access but would actually need them? – Multiple answers possible – FFV Growers

	Treatment			Control		
	2021 Mean	Sd	N	2021 Mean	Sd	N
Seeds	0.00	0.00	114	0.00	0.00	71
Fertilizer/pesticides	0.00	0.00	114	0.00	0.00	71
Irrigation	0.00	0.00	114	0.00	0.00	71
Production materials (tools)	0.04	0.18	114	0.01	0.12	71
Training/extension services	0.00	0.00	114	0.00	0.00	71
Manual labour	0.00	0.00	114	0.00	0.00	71
Storage facilities	0.02	0.13	114	0.11	0.32	71
Processing facilities	0.01	0.09	114	0.14	0.35	71
Transportation	0.02	0.13	114	0.11	0.32	71
Market information (demand, prices etc.)	0.14	0.35	114	0.23	0.42	71
Marketing services	0.11	0.32	114	0.08	0.28	71
Certification (Fair Trade, organic, etc.)	0.01	0.09	114	0.03	0.17	71
Weather information	0.00	0.00	114	0.00	0.00	71
Credit or loan	0.00	0.00	114	0.00	0.00	71
None of the above	0.70	0.46	114	0.54	0.50	71
Observations	114			71		

Results of the FGD with 4 cooperatives reveal significant improvements of services offered to coop members.

**BOX 1: Improvements of FOs' services offered to members:**

***An Hoa cooperative:***

Services on input provision, technical advice, and product quality management have been substantially improved. In the past, the FO did not provide inputs to members. Currently, it provides all kinds of inputs, including seeds, fertilisers; and control quality of products every season.

Technical service is now better and more organized. There is one technical staff at the head office and 3 staff in charge in production areas. Information related to production, prices, and time of purchase, etc. is announced on the Zalo mobile app (similar to Whatsapp and Viber). Team leaders and all members using smart phones are updated daily on such information and other technical issues.

***Cat Lai cooperative:***

Improved product packaging and labelling services, and technical support. Technical staff members now conduct monthly monitoring to ensure compliance and provide timeline support to coop members.

***Dang Xa cooperative:***

Key improvements in terms of connections to more secure and lucrative market outlets (e.g. BigC supermarket and food & foodstuff companies), technical guidance on packaging and labelling, transportation, quality assurance and PGS certification.

***Tuy Loan cooperative:***

Significant improvements in service provision, e.g. technical support to members, quality control. Product volume sold via the cooperative is now much higher than that in 2019.

New services created: provision of inputs (including seeds and seedlings, fertilisers and bio-pesticides). By 2021, the coop enhanced its business ecosystem, creating a new agricultural tour service for school students in the city.

### For the rice programme:

The SI scoring results show that there was reduction of some services offered to FO members in terms of provision of inputs and extension services by the FOs. This might be due to the stated impact of Covid-19 pandemic (i.e. social distancing, and disruption of transportation services). However, the storage service showed increased score during this period.

Table 21: Assessment of the services offered by the FOs

	Binh Hoa cooperative		Binh Thanh cooperative		Tan Binh cooperative		Thang Loi cooperative		Average score	
	2019	2021	2019	2021	2019	2021	2019	2021	2019	2021
Provision of inputs	-	-	4.6	3.7	4.9	4.4	-	-	4.8	4.1
Storage	-	-	3.9	3.8	4.9	4.7	1.0	4.6	3.3	4.4
Extension	4.1	3.2	4.7	4.1	4.1	3.2	3.0	3.2	4.0	3.4

Source: SCOPEinsight reports in 2019 and 2021

### For the vegetable programme:

In this section, information and data were collected and summarized from a Farmer Survey report (2021) and internal M&E data of Rikolto Vietnam.

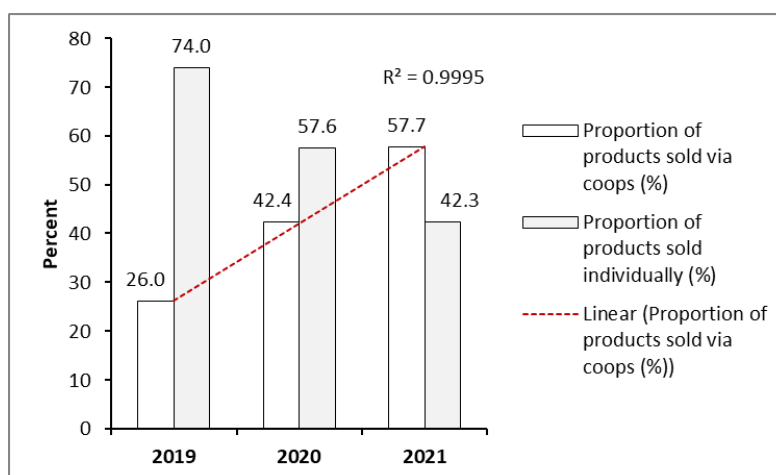


Figure 7: Share of PGS-compliant product volume sold via cooperatives between 2019 and 2021

(Source: Internal M&E data of Rikolto Vietnam).

Based on the internal M&E data of Rikolto Vietnam over the period 2019-2021, **there was a steady increase of production volume** of the supported FOs from 4,420.4 to 16,677 tons/year. In which, volume of products sold via FOs increased from 1,150.9 to 9,615 tons/annum. There was a **significant improvement in the share of product volume sold collectively via FOs** from 26% in 2019 to 57.7% by 2021 (Figure 7).

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The Farmer survey (FS) report (2021) also shows positive results. **Significant changes in nearly all indicators** were found between 2017 – 2021, except for product sale prices and profit margins (Tables 9 & 10).

**Production of the focus crop increased by 6 tons**, from 9 tons in 2017 to 15 tons in 2021 ( $P < 0.001$ ). Additionally, **commercialization of the focus crop increased by 5.4 tons** across the period, from 9.57 tons in 2017 to 15.00 tons in 2021 ( $P < 0.001$ ). **Productivity also increased by 35 tons/ha/year** across the five-year period, from 52 tons/ha in 2017 to 87 tons/ha in 2021 ( $P < 0.001$ ). The high productivity per hectare could be explained by a number of reasons. These include: (1) short production cycles of vegetable crops (ranging from 30 days to several months, depending on types of crops grown); (2) increased number of cropping seasons (including winter crops) due to higher market demand of PGS-compliant produce through their secure contractual agreements with buyers; and due to growing newly introduced vegetable varieties that are more tolerant to heat stress and cold spells; and (3) technical support of both Rikolto Vietnam and local governments on new technologies (i.e. growing under plastic domes and/or simple plastic houses to avoid heavy rain during summer season) (see more information in the box below).

#### BOX 2:

**According to Ms. Den Nguyen**, a field staff of Rikolto Vietnam, The average productivity of 87 tons/ha is not an abnormal value. This is because farmers can grow up to 10 vegetable crops per year. In some intensive vegetable production regions, productivity can reach 100 tons per annum.

After having secure contracts with new buyers, they started growing more crops per year. Farmers in Tuyen Quang, Vinh Phuc and Ha Nam, for example, increased 2-3 additional crops per year, including off-season crops and winter crops.

In addition, in the past, farmers did not usually grow vegetable during summer time (during July – August) because of heavy rain and thus high risks. However, thanks to the recent technical guidance and support of Rikolto staff and the local extension networks, farmers can grow another crop during the rainy and winter seasons, using protective plastic domes and/or under the simple plastic houses. The technique helps protect the crops from heavy rain, pests and disease development, and avoid frost during winter.



Using plastic domes to grow vegetables in rainy and winter seasons.

**Average sales prices** of the focus crop remained quite stable over the entire period, at around 330 USD/ton. On the other hand, **total profit derived from the focus crop increased by 1,316.5 USD** over the

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entire period, from 1,944 USD in 2017 to 3,261 in 2021 ( $P < 0.001$ ). Yet, **profit margin did not change significantly between 2017 and 2021**. Results from the total profit and profit margin would imply that the increased profit is mainly derived from higher volume of vegetables produced and sold.

Table 22: Production, productivity, sales, and profit of the focus crop – FFV Growers – Treatment group

	2017					2019				
	Mean	Min	Max	Sd	N	Mean	Min	Max	Sd	N
Production of focus crop (in tons)	9.05	0.50	30.00	6.32	86	13.32	0.70	166.20	16.22	115
Productivity of focus crop (in tons/ha)	51.69	7.30	200.00	28.81	86	68.98	9.72	159.26	28.90	115
Commercialisation of focus crops (in tons)	9.57	0.50	54.75	8.02	86	13.31	0.70	166.20	16.23	115
Average sales price of the focus crop (in USD/ton)	329.26	74.85	880.65	148.28	86	321.70	43.11	862.13	144.61	115
Total profit (in USD)	1944.12	173.93	6516.79	1388.19	86	3533.00	120.70	93036.44	8612.01	115
Profit margin (in USD/ton)	235.67	57.24	536.52	111.12	86	259.05	30.17	779.54	125.11	115
Observations	315									

2021					
Mean	Min	Max	Sd	N	
15.00	2.30	60.00	10.52	114	
86.77	24.00	144.44	31.51	114	
15.00	2.30	60.00	10.52	114	
313.40	176.03	660.11	102.39	114	
3260.64	455.48	11010.63	2236.12	114	
235.72	102.10	594.10	90.43	114	

Table 23: Production productivity of focus crop, T-Test – FFV Growers – Treatment group

	2017-2021		2017-2019		2019-2021	
	difference	t-value	difference	t-value	difference	t-value
Production of focus crop (in tons)	5.947***	(4.64)	4.263*	(2.31)	1.685	(0.93)
Productivity of focus crop (in tons/ha)	35.08***	(8.08)	17.29***	(4.20)	17.80***	(4.45)
Commercialisation of focus crops (in tons)	5.430***	(3.99)	3.737	(1.96)	1.693	(0.94)
Average sales price of the focus crop (in USD/ton)	-15.86	(-0.89)	-7.556	(-0.36)	-8.305	(-0.50)
Total profit (in USD)	1316.5***	(4.80)	1588.9	(1.69)	-272.4	(-0.33)
Profit margin (in USD/ton)	0.0475	(0.00)	23.38	(1.37)	-23.33	(-1.62)
Observations	200		201		229	

t statistics in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Figure 7 shows the productivity of focus crop trends of both the treatment and control groups over the 2017-2021 period. **While farmers of the control group did not experience any increase in productivity of the focus crop, treatment farmers saw a dramatic increase in their productivity** from 51.69 to 86.77 tons/ha. This was due to three reasons explained above. A deeper analysis using a DID method (Figure 8) indicated a significant contribution of Rikolto to the increase of productivity among the treatment farmers by 34.79 tons/ha (Farmer Survey Report, 2021).

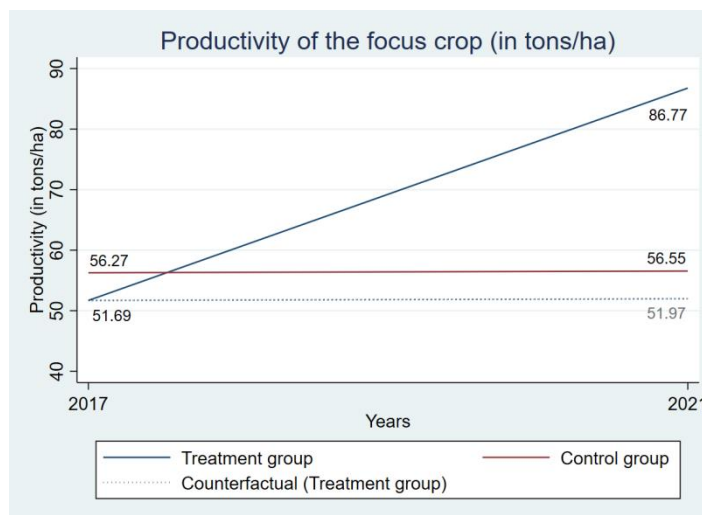


Figure 8: Difference-in-differences on the productivity of the focus crop – FFV Growers

Figure 8 shows the trends in total profit from the focus crop in the treatment and control groups over the 2017-2021 period. At baseline, treatment and control groups were already disparate in terms of total profit (1,944.12 USD and 931.07 USD, respectively). In 2021, total profit of both groups diverged even more (3,260.64 USD and 637.30 USD, respectively). Between 2017 and 2021, while the control group experienced a small decline in total profit, the treatment group experienced a large increase. Additionally, the DID analysis shows **significant contribution of Rikolto’s interventions to the increase of total profit by to 1,610.29 USD** in the treatment group ( $P < 0.001$ ).

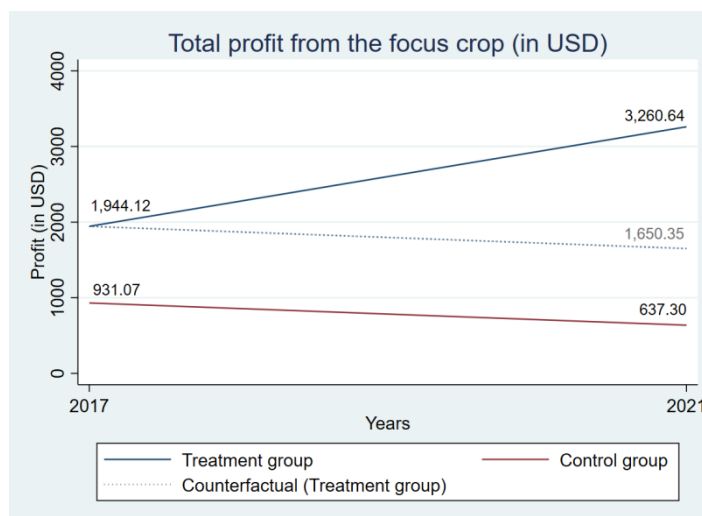


Figure 9: Difference-in-differences on total profit derived from the focus crop – FFV Growers

The above results would be explained by the increased production volume, reduced risks in production and sales, and raised total profit of the treatment farmers. Nonetheless, the profit margin did not change significantly over the five-year period due to the possible reasons mentioned above (i.e. large proportion of Rikolto supported FOs was at an early stage of development; and small sample size and high attrition rates which might limit data liability).

A FGD with representatives of 4 cooperatives further proved the role of Rikolto in enhancing collective mechanism of the supported FOs for producers. Since the support of this project, the FOs could be able to

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purchase **higher volume** their members with **higher prices** of 500 – 1000 VND/kg in An Hoa, Cat Lai and Dang Xa coops, and even higher at 2000 – 2500 VND/kg in the case of Tuy Loan coop.

**BOX 3: Examples of evident impact on FO members:**

***An Hoa cooperative (Tam Duong district, Vinh Phuc province):***

According to the summary report of this cooperative at the final project wrap-up workshop on 17 December 2021, the coop could be able to purchase much higher volume of products for its members, from 4-5 tons/day in 2018 to 10-20 tons/day in 2021 (depending on crop seasons). Besides, it has diversified more products from only cucumber in 2018 to other products such as kohlrabi, cabbage, French bean, gourd, luffa, cabbage, and corn.

The coop has also **gained more contracts with larger number of buyers**, including supermarkets, public kitchens, works canteens (collective kitchens), processing companies, and primary traders in nearby provinces (*This can serve as evidence for justifying EQ4a below in terms of enhanced business relations with buyers*).

***Dang Xa cooperative (Gia Lam district, Hanoi):***

Before 2018, the cooperatives faced a lot of difficulties due to insecure markets although the produced safe vegetables. Their products were mainly sold with low prices to collective kitchens, traditional (wet) markets, and other traders but under the brand names of their buyers.

Since 2018, under the support of Rikolto Vietnam through their adoption of the Participatory Guarantee System (PGS), the coops have **expanded its business relationships with big buyers** such as Central Retail Group and Big C. Accordingly, the coop members could be able to diversify their vegetable crops and increase production scale. Purchase order increased from 2.5 tons/day to 6 tons/day. On average, their product prices increased by 20% (Source: [Dev. News, 2020](#)).



**For the rice programme:**

Regarding economic value to members, only the score of Thang Loi cooperative went down, the scores of other cooperatives increased between 2019 and 2021, indicating that participation in cooperatives has increased the economic value for their members.

Table 24: Assessment of economic value of FO members

Cooperative	Binh Hoa cooperative		Binh Thanh cooperative		Tan Binh cooperative		Thang Loi cooperative		Average score	
	2019	2021	2019	2021	2019	2021	2019	2021	2019	2021

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Economic value to members	4.1	4.4	4.7	4.7	3.9	4.1	3.3	2.1	4.0	3.8
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Source: SCOPEinsight reports in 2019 and 2021

In terms of commercialization of the FOs, between 2019 and 2021, the criterion on outbound logistics has been improved significantly, from the average score of 3.5 in 2019 up to 4.7 in 2021, especially for Thang Loi cooperative.

In terms of production of the FOs, quality procedures for inputs, side selling, and awareness of climate and weather risks are the criteria that have the average scores unchanged between 2019 and 2021. Besides, awareness of FOs on biological risks improved from the score of 4.6 in 2019 to 4.8 in 2021. And the average score about mitigation strategies for weather and natural risks increased from 2.6 in 2019 to 3.3 in 2021. Only the score about mitigation strategies for biological risks decreased between 2019 and 2021, from 4.7 down to 4.3 (Table 25).

Table 25: Assessment of commercialization and production of the FOs

	Binh Hoa cooperative		Binh Thanh cooperative		Tan Binh cooperative		Thang Loi cooperative		Average score	
	2019	2021	2019	2021	2019	2021	2019	2021	2019	2021
<b>Commercialization</b>										
Outbound logistics	-	-	4.5	4.2	5.0	5.0	1.0	5.0	3.5	4.7
<b>Production</b>										
Quality procedures for inputs	-	-	3.0	2.8	4.3	4.6	-	-	3.7	3.7
Side selling	5.0	5.0	3.0	3.0	3.0	3.0	-	-	3.7	3.7
Awareness of climate and weather risks	3.7	3.7	5.0	5.0	3.7	3.7	4.3	4.3	4.2	4.2
Awareness of biological risks	3.4	4.2	5.0	5.0	5.0	5.0	5.0	5.0	4.6	4.8
Mitigation strategies for weather and natural risks	1.0	3.3	5.0	3.9	1.0	2.1	3.4	3.9	2.6	3.3
Mitigation strategies for biological risks	4.3	3.9	5.0	5.0	5.0	4.4	4.3	3.9	4.7	4.3

Source: SCOPEinsight reports in 2019 and 2021

### For the vegetable programme:

In addition to the opinions of FO members on the value of services analysed in Step 1, a FGD was organised to collect further information regarding their satisfaction with FOs since Rikolto's interventions.

Due to limited time travel, only a small group of 4 farmers of a cooperative in Vinh Phuc province was gathered for a FGD. Key guiding questions focused on their satisfaction with their FO since Rikolto's intervention; aspects that they appreciated; and aspects that require improvements. Results are summarized below:

- The cooperative is **highly committed in purchasing their produce** even at the middle season when the market is saturated due to surplus supplies of vegetables from different regions. While vegetables are perishable products, they easily become degraded and decayed during the market stagnancy. But the coop still buys their deteriorated products to cover the loss for its members.

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- Regarding **technical support and services**, the cooperative has technical staff to conduct regular monitoring and give advice on the field. In addition, the cooperative also provides high quality inputs, with transparent origins and prices before each crop season. Thus, coop members are more confident in producing and supplying vegetables to the coop.
- The coop has guided us to **diversify more vegetable crops to meet requirements of buyers**. Cooperative leaders have been very active in seeking new buyers to guarantee secure market outlets for all members.
- **Timely payment** for members at the time of purchase. Sometimes, coop members can ask for an advance of their payments when they need cash.
- The cooperative is also committed to regular sanitation and environment protection activities through its **monthly waste collection and treatment**.
- To date, the main product (cucumber) of the cooperative has been registered with a traceability stamp. The coop has also **expanded its production regions** to other communes such as Hoang Hoa and Duy Phien in Vinh Phuc and other areas in Tuyen Quang province.
- **Aspects that were highly appreciated**: guaranteed purchase; transportation; input provision for all members; advance payment for members when needed; and strict compliance to the signed contracts with cooperative members.
- Aspects that require improvements: None.

#### EQ4a. Has Rikolto succeeded in facilitating business relations between FOs and private sector buyers?

Since there is no information for the rice programme, this section only discusses the vegetable programme. For the rice programme, it was explained by the RT that business relations between FOs and private buyers had been well developed. This intervention was therefore not designed for the rice commodity.

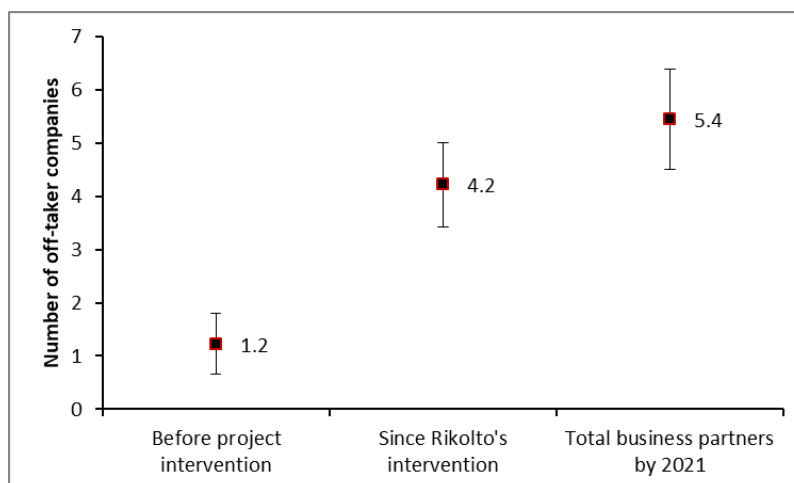
In the project design document (Intervention Framework, 2021), improving market linkage was one of the key interventions from Rikolto through its active support to connect with off-taker companies in the market. Their assistance in strengthening technical and management capacity of the FOs could also be seen as a necessary condition for strengthening business relations with buyers. Rikolto has acted as a match-maker between local FOs (who could not find secure market outlets for their safe produce) and agribusiness companies/retailers who had been struggling to find reliable and sustainable sources of safe vegetables that meet their quality, quantity and variety requirements (IF, 2021, page 10).

According to the local RT, **Rikolto engaged both public and private sectors for joint efforts in supporting the targeted FOs and strengthening business relations**. For the public sector, Rikolto introduced FOs to functional departments and organisations (e.g. Department of Agriculture and Rural Development, Sub-Department of quality management, Sub-Department of crop production and plant protection, district authorities and cooperative alliances, etc.) for their assistance in product quality management, certification. Additionally, Rikolto promoted market actor linkages through a range of activities, including: trade fairs, seeking and engaging new buyers, organizing match-making events, consumer workshops. Other support included helping coops to prepare business profiles; printing leaflets; broadcasting on television, Facebook, Zalo; labelling and branding, etc. These activities were confirmed and acknowledged by local implementing partners and beneficiaries at the final project evaluation workshop.

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However, the internal M&E system did not include indicators related to number of “new business partners” of the cooperatives thanks to Rikolto’s intervention. LINK data were missing due to the unwillingness of project partners to share their data. Moreover, the MTR report did not explore this aspect as well. Therefore, SI document was used to analyse the changes in number of new business buyers since the start of Rikolto’s intervention in each FO. Available data from 9 FOs were collected and analysed.

Results in Figure 10 show a **remarkable increase of new formal business partners (off-takers)** of the FOs since the start of Rikolto’s support to them. On average, there was an increase of 4.2 new partners per FO, adding to the total number of 5.4 formal partners with regular annual contracts (n = 9).



[Figure 10: Number of formal business partners \(off-takers\) before and after the project intervention](#)

The afore-mentioned increased production and sale volume via FOs would be explained by the increased number of business partners through its secure contracts. Some case studies of An Hoa and Dang Xa cooperatives on gaining new contracts with buyers thanks to the support of Rikolto would somehow reflect evident contribution of Rikolto in strengthening business relations between FOs and market players.

**Limitations of the analysis:** given that this evaluation was conducted mainly through document studies and no field survey was conducted with all the Rikolto supported FOs, it was therefore not possible to distinguish whether the new business partners of all the supported cooperatives were connected via the support of Rikolto or were sought by the FOs themselves. However, some case studies confirmed Rikolto’s support in engaging new buyers (e.g. Hoa An, Dang Xa coops) and strengthening capacity of the FOs in production, management and marketing would serve as evidence of Rikolto’s contributions to strengthening the business relations.

As mentioned, there was no indicators for measuring business relations between FOs and private sector buyers in the IF and M&E system. Thus, **comparison with the hoped-for state was not possible** in this regard.

According to RT, **key fostering factors** in facilitating the business relations include: (1) alignment of this project objectives with the strategy of local governments, and thus there has been active participation and collaboration of local partners in supporting the FOs in general and in seeking market outlets for their products in particular; (2) Most of the FO leaders are very committed, responsible with cooperative members, and proactive in seeking new business partners (Results of FGD with RT).

In addition, the project initiative is also in a high alignment with the central government’s [Food Safety Law](#) and the [National Program on Consumer Protection](#) for the period 2016-2020.

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Other fostering factors acknowledged by the local partners of Ha Nam and Ha Noi include: professional and committed staff of Rikolto; clear work plans and guidance for implementation; strong willingness to improve business performance of most of the targeted cooperatives; PGS is very suitable for small-scale farmers with low certification costs; PGS can be applied for different types of crops; active participation of local government agencies (source: presentations of local partners at the project wrap-up workshop on 17 December 2021).

Nevertheless, there were **several barriers** during the project implementation. First, in the first few years, customers still requested for VietGAP certified products. Not many cooperatives could be able to gain the VietGAP certification. The PGS certified produce took gradual time to gain trust from buyers. Second, many cooperatives lack capital for timely payment to members at the time of product purchase. This would have, to some certain extent, influenced motivation of smallholder farmers, who very often need cash to satisfy their daily needs. Thus, side-selling of cooperative members in the first few years could be explained by this reason. Third, most of the cooperative staff and members are middle-aged and older. As such, there was a low adaptability to new technologies, e.g. e-commerce, online sales via social media, and product registration, etc. (Results of FGD with RT).

Besides, due to the nature of farmer organisations, their production & business management capacity, and contract negotiation would require a lot of support, particularly for the newly established FOs. Another contribution factor would be the high proportion of coops, as mentioned above, which was established due to a political task of commune authorities and operated in a “formality” manner (a collection of individual farmers growing vegetables within a commune) rather than a formal business entity. A few coops dropped during the project implementation could be part of this reason.

Other challenges and barriers stated by partner organizations in Hanoi, Ha Nam, Vinh Phuc at the final project evaluation workshop include: difficulties in management of a large number of smallholder farmers with small and fragmented land plots; diversified and increasing pesticide products (1,800 active ingredients and more than 4,000 product brands) inducing difficulties for farmers to choose the right ones; poor management and inspection mechanism of pesticide sales and use, especially at the commune level; poor management capacity of some coops, leading to ineffective implementation of PGS; daily journaling and logbook keeping are not yet strictly complied by a significant percentage of coop members; slow progress of replication due to non-synchronized policies and institutions; rather small ratio of FOs operating as a professional agribusinesses; loose linkages between cooperatives and members, leading to side selling and/or breach of contracts; kinship relationships between the inspection team and coop members did influence inspection results; and spillover effect between non-PGS and PGS-compliant farm plots; etc.

#### EQ4b. Are these business relations economically profitable, socially inclusive, and environmentally sustainable?

For the vegetable program, it was found that most of relevant data in SI documents are missing due to no response of FOs, especially with regard to financial information. Furthermore, the internal M&E data did not distinguish the sale volume and profit margins gained between the existing and new buyers. Thus, information used for this section was mainly derived from the Farmer survey report (2021), FGD results with some key cooperative leaders, and some publications of RT.

For the rice program, there was almost no information for answering this question.



See the detailed results and discussions in Step 2 of EQ3b above for the vegetable programme. No information was found for the rice programme.

For the vegetable program: as discussed above, the **enhanced business relations with private sector buyers led to increased sale volume and total profits** for coop members. A few case studies presented has elucidated its evident impact that enabled the FOs to **pay higher prices** for its members at around 500 – 1000 VND/kg (22 – 43.5 USD/ton) in An Hoa, Cat Lai and Dang Xa coops, and even higher at 2000 – 2500 VND/kg (87 – 109 USD/ton) in the case of Tuy Loan coop.

The results have included a significant scaling up effect: Rikolto has developed its FSC programme in Hanoi with 3 FO that produce a limited proportion of Hanoi's vegetables; however, on the basis of the PGS scheme thus implemented Hanoi city government has expanded the experience to 43 FO which represent 14% of its vegetable consumption.

#### *For the rice programme:*

There was no data on price of rice sold via FOs at baseline and mid-line. In 2021, price sold via FO was set at 264.04 USD/ton which was higher than the average sales prices. This implies that FOs could be able to pay higher price to members.

Table 26: Selling price via FO

	2017	2019	2021
Price via FO in USD	n/a	n/a	264.04
Average sales prices in USD per ton	419.72	227.33	236.50

#### *For the vegetable programme:*

According to the Farmer survey report (2021), **farmers' production sold via FOs increased by 2.8 tons over the 2017-2021 period**, from 2.92 tons in 2017 to 5.75 tons in 2021 ( $P < 0.01$ ). Significant increase is found between 2019 and 2021 (Tables 9, 10). This could be explained by the remarkable increase of new private sector buyers during this period, especially in 2021 with an average of 4.3 ( $\pm 0.81$ ) new buyers/FO among the nine FOs that provided data (synthesized from SI documents). On the other hand, **the share of production commercialized through the FO, as well as the price of the focus crop sold via the FO, remained stable**. Respondents sold about 34-38% of the production through the FO at an approximate price of 300-336 USD/ton.

Table 27: Sales via the FO of the focus crop – FFV Growers – Treatment group

	2017					2019				
	Mean	Min	Max	Sd	N	Mean	Min	Max	Sd	N
Production sold via FO/company (in tons)	2.92	0.00	18.00	3.94	86	3.03	0.00	23.82	4.68	115
Share of production commercialised through FO/company	37.82	0.00	100.00	41.77	86	24.28	0.00	99.33	32.32	115
Price via FO/company (in USD/ton)	.	.	.	.	0	299.13	172.43	732.81	100.80	56
Observations	315									

2021				
Mean	Min	Max	Sd	N
5.75	0.00	35.00	9.24	114
33.59	0.00	100.00	38.82	114
336.34	198.03	660.11	128.27	63

Table 28: Sales via the FO of the focus crop, T-Test – FFV Growers – Treatment group

	2017-2021		2017-2019		2019-2021	
	difference	t-value	difference	t-value	difference	t-value
Production sold via FO/company (in tons)	2.835**	(2.67)	0.116	(0.19)	2.718**	(2.81)
Share of production commercialised through FO/company	-4.231	(-0.74)	-13.54*	(-2.59)	9.308*	(1.97)
Price via FO/company (in USD/ton)					37.21	(1.74)
Observations	200		201		229	

*t* statistics in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

It could be seen that there was a **different result regarding the share of production commercialised via FOs in the internal M&E data of the local Rikolto team** (Figure 7 above). While the FS (2021) shows no significant change in the figures between 2017 (37.82%) and 2021 (33.59%), the internal M&E data indicate a steady increase in the share from 26% to 57.7% through the same period. This could be due to different sample size, and respondents. Another possibility is that RT only calculated the “PGS-compliant vegetable volume”, while data in the Farmer survey’s report were considered all types of vegetables produced by the households. In addition, **comparing prices via FOs between different periods might not reflect the reality** because prices fluctuate unexpectedly depending on the balance between supplies and demand over time, whereas, and the supported FOs were not the only safe and organic vegetable providers on the market.

Similarly, the Farmer Survey’s report (2021) shows **mixed results concerning the impact of FOs on the members’ income**. According to this report, *“In general, treated farmers’ opinions towards the contributions of the FOs to their income were quite mixed in 2019 and somehow negative in 2021 (Table 13). In 2019, 36% respondents indicated that the FO considerably contributed to their income, but 29% and 19% of the respondents indicated that the FO had no contribution and little contribution, respectively. In 2021, the responses were even less positive: 44% and 32% answered that the FO had no contribution and little contribution, respectively”*. The conclusion is that there is no clear evidence that FOs contributed to their member’s income. Nevertheless, a deeper analysis about farmer’s annual income from different sources and the share of income from the production sold via FOs would be beneficial to produce more accurate results between before and after project interventions instead of a surface-deep level of assessment through a multiple choice question (Table 13, FS - 2021). Besides, the report also indicated that one third of the respondents received lower prices during the Covid-19 pandemic (Table 15, FS – 2021).

#### For the rice programme:

According to the farmer survey report (2021), farmers’ production sold via FOs increased by 1.78 tons over the 2017-2021 period, from 0.38 tons in 2017 to 2.13 tons in 2021. However, the share of production commercialized through the FO decreased over the period, from 74.49% in 2017 to 7.34% in 2021.

Table 29: Sales via the FO

	2017					2019				
	Mean	Min	Max	Sd	N	Mean	Min	Max	Sd	N
Production sold via FO/company (in tons)	0.38	0.00	30.00	3.40	78	0.00	0.00	0.00	0.00	55
Share of production commercialised through FO/company	74.49	35.00	75.00	4.53	78	75.00	75.00	75.00	0.00	55
Price via FO/company (in USD/ton)	.	.	.	.	0	.	.	.	.	0
Observations	242									

2021				
Mean	Min	Max	Sd	N
2.13	0.00	65.00	8.62	109
7.34	0.00	100.00	26.20	109
264.04	264.04	264.04	0.00	8

According to Mr. Tuan Le of the local RT, “linkage between cooperatives/farmers and companies is uncommon in the Vietnam rice sector. Some cooperatives only act as representatives for their members to collect and sell rice directly to companies, even in this case, the quantity is quite small. Both sides do not want to work directly with each other. Main reasons are: the traders system has been developed for a very long time to be suitable for the situation of Vietnam (they can pay farmers in cash, they can easily reach fields and transport rice on their small boats... If companies have to do all of this, their costs will be very high). From farmers’ side, they only sell wet paddy right after harvest and receive immediate payment in cash, while rice companies require them to bring paddy to the mills and pay by bank transfer....”.

### Promotion of social inclusiveness:

Results in the M&E data showed **positive changes in gender equality** over the 5-year period. The total targeted beneficiaries (smallholder farmers) that have been benefited from this project were 2,198 individuals (224.3% compared to the adjusted target of 980 in 2021). In which, female farmers (1,337) accounted for 60.8%. However, only 63 young farmers (2.9%) benefitted from the project interventions. This is due to the reality that young people nowadays move to work in big cities and industrial zones. As such, the **number of new jobs for youth linked to PGS was small** (12 vs. target of 21 in 2021). In addition, ratio of female leaders in the FOs reached 43% which was much higher than the formulated target of 35% by 2021. Also, the number of female production group leaders (49 people) was almost doubled the set target (25 people).

Although other indicators regarding ethnicity, people with disability and distance to markets, etc. were not included in the M&E data, most of the smallholder farmers reside in rural and remote areas of the provinces. Their inclusion in the value chains, receiving technical support and having more secured market outlets could serve as strong evidence of social inclusiveness.

Thanks to the new business relationships, **a number of cooperatives have expanded their supply areas within and outside their provinces, benefiting larger number of smallholder farmers**. For example, An Hoa coop has expanded its production region to Tuyen Quang province with 170ha and 1,235 households participated. Total volume in Tuyen Quang sold to the cooperative reached 8,600 tons in 2021 (source: Presentation of Tuyen Quang extension centre at the final project evaluation workshop, 2021). Four rural districts of Tuyen Quang (Son Duong, Ham Yen, Yen Son and Chiem Hoa) are locations with high proportion of ethnic minority groups. For example, in Chiem Hoa district, 79% of its population belongs to ethnic minorities. Ten communes had more than 50% of poor and marginally poor household ([Tuyen Quang Online Portal, 2020](#)).

### Enhanced environment sustainability

The PGS was used aiming to promote eco-friendly practices. In addition, the contractual commitments of FOs and producers with the private sectors buyers require their strict compliance to such improved practices to ensure product quality. As such, improved environment and sustainability of the production systems are expected.

Results of the Farmer Survey (2021) show **significant increase of most of the sustainability indices** of FO members between 2017 and 2021 regarding sustainable water and resources management, biodiversity

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and sustainable landscape management ( $P < 0.001$ , Table 13). Although there was no significant increase of soil conservation index, the baseline value was rather high at 2.13 in 2017 (Table 14). **Climate change and sustainable landscape management indices still remained rather low scores** by 2021 at 1.01 and 1.08, respectively. This would be because of their limited knowledge and vision regarding reduced carbon emission in their production and sales (climate change index), while their main focus was on improving household income (immediate needs of smallholder farmers). This is supported by the study of Huong et al. (2017)<sup>4</sup> who found close relationships between farmers' awareness of climate change and many other factors, including educational level, financial capacity, climate information, agricultural extension services, etc. Whereas, the farmer survey report shows a rather limited level of education. Their motivation to adopt climate resilient practices would also be influenced by various factors, considering their short-term and/or immediate needs. In addition, most of the questions related to sustainable landscape management index seem to be "too abstract" to the smallholder farmers. Interventions related to this index would require involvement of local authorities and other supporting organizations (e.g. DARD, Department of Natural Resources and Environment (DONRE), extension networks, farmers' association, etc.) at the strategic and regional levels rather than the smallholder farmers alone.

In addition, RT acknowledged in their 2019 annual assessment report that **"Sustainability aspects did not receive enough attention"**.

**BOX 4: Observations of RT in the annual assessment report (2019) (Section 3.2, page 2).**

**"Sustainability aspects did not receive enough attention.** Sustainability-related aspects shared a prominence in the technical standards Rikolto introduced (17/26 criteria VietGAP, 4/7 themes SRP). Both rice and vegetable chains received low scores, mainly in the areas of landscape management and biodiversity. Part of the reasons observed included some criteria that were hard to apply (for example, maintain the connectivity: the farm setting of Vietnam condition did not allow to establish this because the land plots are too small (vegetable) and the paddy field bundles are too small); the environmental aspects was embedded in other contents (GAP) without being emphasised to the farmers; and, the sustainability knowledge of the partners was not in place, plus the function of boosting it within the Government system is limited. Therefore, building capacity on sustainability for partners is an important task. Rikolto's in-house knowledge also needs to be built up so that we can together with partners support farmers better".

Table 30: Sustainability indices – FFV Growers – Treatment group

	2017					2019					2021				
	Mean	Min	Max	Sd	N	Mean	Min	Max	Sd	N	Mean	Min	Max	Sd	N
Sustainable soil conservation index	2.13	1.25	3.00	0.39	73	1.23	0.67	2.33	0.31	115	2.24	1.00	3.25	0.40	114
Sustainable water management index	1.13	0.20	3.00	0.58	73	0.54	0.00	3.33	0.62	115	1.90	1.00	2.67	0.32	114
Sustainable resource management index	1.72	0.57	3.43	0.58	73	1.65	0.86	3.00	0.40	115	2.12	1.50	3.43	0.35	114
Climate change index	0.90	0.00	2.50	0.52	73	1.21	0.50	2.50	0.54	115	1.01	0.50	2.00	0.38	114
Biodiversity index	1.58	1.00	3.00	0.41	73	1.67	0.67	2.67	0.29	115	2.26	2.00	3.00	0.22	114
Sustainable landscape management index	0.65	0.00	2.00	0.50	73	0.71	0.33	1.67	0.20	115	1.08	0.33	2.33	0.34	114
Observations	302														

<sup>4</sup> Huong, N.T.L., Bo, Y.S. and Fahad, S., 2017. Farmers' perception, awareness and adaptation to climate change: evidence from northwest Vietnam. *International Journal of Climate Change Strategies and Management*, 9(4): 555-576.

Table 31: Sustainability indexes, T-Test – FFV Growers – Treatment group

	2017-2021		2017-2019		2019-2021	
	difference	t-value	difference	t-value	difference	t-value
Sustainable soil conservation index	0.105	(1.76)	-0.903***	(-17.54)	1.009***	(21.24)
Sustainable water management index	0.769***	(11.57)	-0.584***	(-6.44)	1.353***	(20.71)
Sustainable resource management index	0.405***	(5.92)	-0.0668	(-0.93)	0.472***	(9.45)
Climate change index	0.105	(1.60)	0.305***	(3.84)	-0.200**	(-3.26)
Biodiversity index	0.680***	(14.75)	0.0926	(1.80)	0.588***	(17.27)
Sustainable landscape management index	0.429***	(6.95)	0.0572	(1.09)	0.372***	(10.05)
Observations	187		188		229	

*t* statistics in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

(Source: Farmer survey report (2021)).

### For the rice programme:

In terms of environmental issues, there were almost no change in the average scores between 2019 and 2021. It is worth noting that the scores had already been very high and at the professional level in 2019.

Table 32: Assessment of environmental issues

	Binh Hoa cooperative		Binh Thanh cooperative		Tan Binh cooperative		Thang Loi cooperative		Average score	
	2019	2021	2019	2021	2019	2021	2019	2021	2019	2021
<b>Environmental Issues</b>	4.1	4.4	3.9	3	4.6	4.3	3.8	4.2	4.1	4.0
Water source protection	4.2	4.1	3.4	2.3	5	5	2.6	4.1	3.8	3.9
Waste management	4.3	4.6	4.3	3.2	3.7	3.7	5	4.6	4.3	4.0
Agrochemicals	3.9	4.6	3.9	3.5	5	4.3	5	4.6	4.5	4.3

Results of the discussion with RT reveal the following drivers and barriers **for the vegetable programme**:

#### Fostering factors:

- Strong willingness and commitment of the majority of FO leaders;
- Active participation and support of local partner organisations in the targeted provinces;
- Increasing demand on safe and organic foods among the consumers.

#### Hindering factors:

- Most of cooperatives were at early stage of development. Thus, their capacity in production management, business planning, financial management and market development were still limited.
- There were still a significant proportion of cooperative members that had limited long-term vision and thus low level of compliance of production guidelines and logbook journaling.
- Young people are not interested in farming.

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## 7. At institutional level

This section evaluates the overall impact of Rikolto's program at the institutional level. **Given that the Multi-stakeholder Initiative (MSI) (described below) was removed from the project design document, there was no information and data to answer EQ5a and EQ5b.**

According to the RT, in their original proposal submitted to the donor in 2016, establishment of a national Participatory Guarantee Systems (PGS) network was included as one of the interventions and/or **Multi-stakeholder initiatives (MSI)**, which intended to engage relevant public and private sectors in adopting and embracing the PGS toolbox in safe & organic vegetable production, to promote policy change at the national level. However, through consultation with local partners, it turned out that such **MSI intervention would NOT be feasible given a short project timeframe and in the context of Vietnam**. This was also commented by the external consultant during the Mid-term Review (MTR). Accordingly, this intervention was removed from its revised IF document. Therefore, a more workable structure through establishing a PGS coordination board at the provincial level was proposed and implemented. Successful showcases of PGS institutionalisation at the provincial level would serve as evidence to conduct policy advocacy at the national level, but this would require time beyond this project life cycle.

Moreover, Rikolto sees PGS as a tool that has larger impact, not only limited within the value chain, but it has important role in larger food systems to improve food safety in the market.

Although the MSI was not implemented, Rikolto has shared the PGS to other organisations in the region through networking and experience sharing activities such as SANRM (sustainable agriculture and natural resource management); FSWG (Food Safety Working Group.); ANDE, ECHO Asia (based in Thailand); and other organisations in the Joint Strategic Framework of Belgium NGOs in Vietnam. This has resulted in a new cooperation with Quy Nhon University through an ARES funded project, in which Rikolto was invited to provide technical assistance on applying PGS in fruit production, and reducing risks in market access for farmers.

**EQ6. How is the evidence generated by Rikolto's pilot interventions used to influence policy decisions?**

In order to achieve the expected outcomes of the FSC program, three **specific interventions** were designed:

- 1) Promote the PGS as an affordable, simple and effective participatory certification.
- 2) Foster a more enabling policy environment for inclusive and safe vegetables in Vietnam.
- 3) Support Da Nang & Hanoi to transition towards food-smart cities where smallholder farmers are included in safe vegetables value chains and consumers have easy access to safe food.

Detailed description of the key interventions is presented in the IF document (pages 11-14). Below a summary of key results achieved:

**Intervention 1:** Rikolto has worked in 13 cooperatives in 5 provinces during 2018 – 2021. The start date of support to each cooperative varied from 2018 to 2021. Rikolto engaged key local partner organisations (including DARD, extension center, and farmers associations and their networks from the provincial to commune levels) to provide technical support to the FOs. Main activities included capacity building for FO

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leaders and members on PGS and business management, marketing; and connecting the FOs with potential buyers. Key results are presented in Table 15 below:

Table 33: Key results of Intervention #1

Indicator	Results					
	2017 (baseline)	2019 (observed)	2020 (observed)	2020 target	2021 (observed)	2021 target
Number of active PGSs		12	11	16	27	25
Total area used for growing PGS-compliant fresh fruits & vegetables in the selected provinces	4.7	52.77	113.7	64.8	303.83	70
Number of PGS structures that meet all 11 criteria of the PGS organisational development scale	0	1	2	1	10	8

(Source: Internal M&E data)

Overall, the program has achieved **encouraging results** within a relatively short period (about 3.5 years due to delay of approval process). Especially, the total used for growing PGS-compliant fresh fruits & vegetables in the selected provinces increased remarkably from 4.7ha to 303.8ha. Hanoi started to replicate the initiative from 3 to 43 cooperatives, expecting to reach 1,901ha (14% of the total safe vegetable production area of Hanoi).

#### **Intervention 2:**

Improving an **enabling environment** has been paid attention in the vegetable program, with higher effectiveness in Hanoi, where PGS toolbox was initially adopted by Hanoi DARD's Plant Protection Department (PPD) and has been being applied widely with its local government budget. With the earlier momentum of Hanoi PPD in piloting PGS with focus on logbook keeping and chemical control, since 2018, Hanoi DARD started to pilot PGS among vegetable smallholders in three districts of Hanoi in a more systematic way with strong support from Rikolto.

By 2021, **PGS has been officially recognised and institutionalised in 4 provinces**. This serves as strong evidence of policy advocacy efforts of Rikolto in leveraging local government's policy to further embrace and replicate adoption of the PGS on a larger scale. Besides, 111 staff members of local partner organisations have been trained in the form of ToT training to build local capacity to embrace the PGS.





Figure 11: Temporary PGS manual

(Note: the manual is considered as an official document when it is reviewed and approved by MARD).

### Intervention 3:

Food Smart City (FSC) cluster is a setting amongst Rikolto regions. It promotes learning and sharing of the best food related initiatives/pilots. In June 2018, Da Nang government approved a study titled “Analysing Food Value Chain and Developing Food Smart City by 2025 with vision to 2030” funded by the Belgian Study and Consultancy Fund (SCF). The research was conducted by Rikolto in cooperation with the Vietnam University of Agriculture (VNUA). In early 2019, based on the results, a strategy that included objectives and corresponding action plans was formulated in a multi-stakeholder workshop organized by Rikolto and Da Nang Food Safety Management Authority. Together with intervention on safe vegetable production under PGS scheme and inclusive business facilitation in Da Nang, the PGS application is expected to expand when market linkages are strengthened. The idea of developing sustainable food systems for urban areas using the FSC concept inspired other development partners. World Bank partnered with Rikolto, VNUA, CIAT and the Asian Foundation to carry out a rapid diagnostic assessment of the food system and food safety hazards in the cities of Hanoi and Ho Chi Minh city. At the international level, the formulation of food smart city strategy in Da Nang has inspired other cities which shared similar concerns regarding its food system, namely highly dependent on external supplies and food safety issues (MTR, 2019).

In Hanoi, in addition to the continuing efforts in promoting PGS for further expansion by the government, three dimensions of food systems, including availability, accessibility and affordability, are studied in wet markets to understand how food system impacts nutrition and health of consumers, especially in poor districts of Hanoi regarding their consumption in fruits and vegetables. Based on the study, innovations to improve fruits and vegetables consumption would be proposed and tested in wet markets. This work was co-funded by the Bill and Melinda Gates Foundation. Rikolto Vietnam had been working in partnership with CIAT, NIN, IFPRI and HMU to find solutions for improving nutrition and health of the urban poor in Hanoi. The applied research would contribute to identifying suitable interventions to improve sustainable food systems and ensure that livelihoods of the urban poor will be properly addressed.

Key results by 2021:

- In Da Nang, a comprehensive evaluation of the food systems has resulted in a proposal on strategy to develop a smart food city. This strategy has been approved by the local government. Further details can be seen in [a publication of Rikolto](#).

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- In Hanoi and HCM city, a similar study was conducted to provide evidence and inputs for designing a program on improving safe food systems in some major cities in Vietnam.

A Food Smart City strategy is built on 7 intervention pillars (Figure 12).



[Figure 12: A Food Smart City strategy built on 7 intervention pillars](#)

To realise this vision, the strategy will focus on 7 intervention areas:

- Completing the organizational structure of the food safety management system and improving capacity for food safety management
- Developing and promoting innovation and technology for food management
- Fostering a sustainable production and business culture and increasing the competitiveness of food system actors
- Promoting sustainable value chain links through a focus on safe short food chains and organized supply from external provinces
- Promoting the development of a safe food environment in traditional food outlets through the upgrading of traditional markets and street food stalls to ensure food safety while ensuring the livelihoods of small actors in the food system
- Developing school education programmes on food safety and nutrition
- Promoting information sharing and communication on food safety and food systems through improved data management and behaviour change communication.

Despite the achievements gained so far, concrete measures to achieve sustainable food systems remain a long journey with lots of challenges for both government and its partners. It also requires long-term commitments of local governments and lead partners to realise such transformation.

There are some **drivers and barriers** in using the pilot interventions to influence policy.

According to RT, main drivers include: (1) evident benefits of the PGS (reduced certification costs, increased product quality and income) and thus high willingness and commitment of cooperatives in adopting the PGS tool; (2) some successful showcases were used for outreach and policy advocacy.

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Some barriers include: (1) hesitation in adopting new approaches and tool of provincial governments, particularly in provinces that are far away from major cities; (2) some “old style” coops did not operate as a professional business and had to dropped from the project. This would somehow influence the efforts in providing evidence to promote policy change.

## 8. Covid-19 Evaluation Questions

Due to limited information and data available, this section only analyses some aspects of the impact of COVID-19. The main information is based on Rikolto’s intervention in one cooperative in Vinh Phuc province. Some dimensions discussed in this section include: impact of the Covid-19 pandemic, responses of Rikolto and impact on the supported FO, and judgements of their flexibility in providing both immediate and long-term support.

### Impact of the Covid-19 pandemic:

The FS report (2021) shows a significant difference in the impact of Covid-19 on the cooperative members between the treatment and control groups. Smaller proportion of treatment farmers (62%) faced negative impact of the pandemic compared to the control farmers (85%). For both groups, the main reasons for how the pandemic worsened their production were **lack of workforce** and **disruption of transportation services** (Table 34).

Table 34 – Did the Covid-19 pandemic affect your possibility to produce? If so, how? – FFV Growers

	Treatment			Control		
	2021 Mean	Sd	N	2021 Mean	Sd	N
Covid affected possibility to produce negatively (less quality or quantity)	0.62	0.49	114	0.85	0.36	71
Problem related to: Limited technical assistance	0.11	0.32	71	0.05	0.22	60
Problem related to: Limited market access: demand	0.00	0.00	71	0.00	0.00	60
Problem related to: Not enough workforce	0.51	0.50	71	0.75	0.44	60
Problem related to: Lack of necessary input	0.01	0.12	71	0.02	0.13	60
Problem related to: Disruption in transportation services	0.73	0.45	71	0.38	0.49	60
Problem related to: Other	0.03	0.17	71	0.00	0.00	60
Observations	114			71		

(Source: farmer survey report, 2021)

The difference in the impact between treatment and control might be linked to the access to more secure supply contracts with off-taker companies through FOs. Additionally, both direct and indirect assistance from Rikolto (e.g. direct support to An Hoa cooperative (described below), and business management training) somehow contributed to the Covid-19 resilience of the benefited FOs.

### Responses of Rikolto to the Pandemic shocks

Document review together with a FGD with RT reveal that **Rikolto was responsive in providing timely support to the FOs during the pandemic**. Yet, it is not clear whether only one cooperative was supported in 2020, and why the support has been given in 2020 while the pandemic started in early 2019 and became widespread over the country to date.

An action plan with a clear rationale, expected results and M&E indicators were carefully developed and tracked. Details are presented below (double click to view the file, 2 sheets).

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Covid respons\_plan &  
M&E\_Vietnam.xlsx

In short, Rikolto provided timely support to An Hoa cooperative during the pandemic in 2020. Activities focused on immediate and direct support to avoid its disruption of supply chain through provision of seeds, fertilizers and transportation, hired labour for primary processing. As a result, the cooperative could still remain its sufficient supply for off-takers in Hanoi. Forty farmers were supported with 5ha of vegetable production, resulting in a stable supply of 172.4 tons.

**In addition to the “quick fixes” and/or immediate support**, staff of Rikolto also supported the cooperative to prepare and submit request letters to relevant government agencies at both provincial (DARD) and central levels (Ministry of Industry & Trade; Cooperative Alliance) for **more comprehensive and long-term support to cooperatives** during the pandemic. Accordingly, local governments acted immediately, providing guiding actions to functional departments and organisations to support local cooperatives in seeking market outlets. Besides, all people and organisations in the province were encouraged to buy products of the cooperatives during the market stagnant period.

## 9. Conclusion and recommendations

### For the vegetable programme:

In short, within a relatively short period of project implementation (3.5 years due to the lengthy delay of approval process), Rikolto has contributed significantly to improving **operational capacity** of the FOs, strengthening and diversifying their services to members; improving **business relations** between the FOs and private sector buyers (off-taker companies); promoting **inclusive value chains** through engaging the disadvantaged rural households, ethnic groups and women farmers in formal supply chains. There have been **positive changes in gender equality**. The total targeted beneficiaries (smallholder farmers) that have benefited from this project were 1,258 individuals (128.4% compared to the adjusted target of 980 in 2021). In which, female farmers (718) accounted for 73.3%. In addition, ratio of female leaders in the FOs reached 43% which was much higher than the formulated target of 35% by 2021. Also, the number of female production group leaders (49 people) was almost double the set target (25 people). However, only 51 young farmers (4.1%) benefitted from the project interventions. This is due to the reality that young people nowadays move to work in big cities and industrial zones. As such, the **number of new jobs for youth linked to PGS was small** (12 vs. target of 21 in 2021). Moreover, there have been significant improvements in most of the **sustainability indices**, particularly in terms of sustainable water and resources management, biodiversity and sustainable landscape management. Although there was no significant increase of soil conservation index, the baseline value was rather high at 2.13 in 2017. Climate change and sustainable landscape management indices still remained rather low scores by 2021 at 1.01 and 1.08, respectively. However, interventions related to this index would require involvement of local authorities and other supporting organizations (e.g. DARD, Department of Natural Resources and Environment (DONRE), extension networks, farmers’ association, etc.) at the strategic and regional levels rather than the smallholder farmers alone.

At the institutional level, the program produced some significant **impact on the policy and strategy of the local governments of 4 provinces**, namely, Da Nang, Hanoi, Vinh Phuc and Ha Nam. Particularly, the PGS and guidelines has been officially recognised and institutionalised in these provinces. Additionally, a

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strategy on FSC in Da Nang has also been approved. These have laid a strong foundation for future impact and sustainability of this project.

The PGS, with its mentioned competitive advantages compared to the costly third party certification system, have been well acknowledged by local governments, implementing partners and beneficiaries. This would have high potential for replication to other provinces across Vietnam and thus long-lasting impact. The requests of local partners for continuing support from Rikolto at the program wrap-up workshop would certainly reflect a strong need to replicate and up-scale the PGS initiatives.

The FSC model would be regarded a timely and innovative initiative for big cities like Da Nang, Hanoi and HCM. Results of this program can be seen an initial step to formulate a vision and recommended key intervention areas to guide future planning and implementation in the targeted provinces.

This report has analysed a large number of fostering and hindering factors toward achieved the expected outcomes and impact. As such, the following recommendations are made:

- Careful selection of pilot FOs: reviewing and selecting right beneficiaries for the pilot model would be of crucial importance at the initial stage for producing successful showcases to replicate PGS. Selection of the so called “old style” cooperatives would undermine the policy advocacy efforts of Rikolto to the subnational and national levels. Besides, willingness and commitment of cooperative BOD would be an important criterion.
- Most of the supported FOs were at an initial stage of development with less than 2 years of operation. More efforts on improving institutional capacity would be required.
- Engagement of multiple stakeholders in the PGS inspection team is important to ensure transparency and trust building among market players and end users.
- Initial showcases of success from this program should be further promoted to influence policy at both subnational and national levels for possible joint efforts of both public and private sectors.
- Understanding of local contacts and selecting right implementing partners would be crucial toward the project success and sustainability.
- A systems approach would be required for understanding and building an ecosystem to support the targeted FOs. Private sector service providers should be engaged in capacity building for FOs (e.g. governance, financial management, marketing, business development, etc.) since the government agencies do not have such expertise.

#### For the rice programme:

The first phase of the rice programme was implemented in Dong Thap and Kien Giang during 2017-2021. The main intervention of the project was to strengthen the capacity of farmers and cooperatives in SRP production. At the farmer level, the impact of the project was rather positive. Although application of SRP did not help farmers to achieve premium price for SPR rice, it assisted increasing the household income and share of income from rice production. At the cooperative level, the project has contributed to strengthening linkages between cooperatives and farmers. In the past, cooperatives have mainly provided irrigation service for its members, but now, cooperatives help disseminate, monitor, and support farmers in technical application and market access (though these activities have not been developed largely).

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The main lesson learned for the rice programme was on its design of baseline, mid-term and end-line surveys. The mentioned inconsistencies in survey locations could be considered a major flaw for evaluation of program impact. As such, comparison between baseline and end-line stages became invalid.

Overall, the programme has produced positive impacts through promoting SRP application in the pilot provinces. However, SRP is a new standard, therefore, it is difficult to implement and change the behaviour of farmers. In the next phase of the project, there are some recommendations as follows:

- Strengthening the capacity of cooperatives in internal and financial management, and provision of inputs.
- Increasing the number of training courses about SRP standards, expanding the number of farmers participating in the project.
- Continuing to provide financial support for farmers by providing inputs such as seeds, fertilizers, pesticides, or other production tools.
- Promoting linkages between cooperatives with companies to build the material areas, purchase SRP rice, and develop the SRP brand, contributing to increasing the rice price and income for farmers.
- M&E should support the debate around the benefits of the SRP system, enabling to compare data of the food safety and health benefits of SRP with those of conventional agriculture as well as provide data on its positive effects on climate change mitigation and the environment, in a context where rice constitutes 30-40% of Vietnam's Green House Gas (GHG) emissions.

To facilitate more farmers applying SRP rice, it is necessary to implement the following measures:

- Continuing to provide training courses for farmers about record keeping, safety instructions, pesticide disposal, etc.
- Encouraging farmers to reduce the number of rice crops. This is because 3-crop production cycles have some constraints to sustainable production.
- Improving the supply chain by enhancing the combination of planting, harvesting, transportation, drying and storing.
- Promoting the use of ICT tools for traceability and transparency of 1M5R (One Must Do, Five Reductions) integrated technology package/SRP rice.
- Supporting to develop the SRP brand with the support of ICT.

Cross cutting recommendations include:

- Ensure programme design and expected outcomes are shared and participatively validated and adjusted with local authorities and key stakeholders to ensure feasibility and avoid possible blockages during the program implementation.
- The M&E system should be improved. Beyond ensuring consistency of data collected, M&E should be more oriented towards evidence and demonstrating the interest of the various business models supported by Rikolto or documenting the mechanisms behind the pathways of change which are followed. Indicators need to be corresponding with the proposed interventions and expected outputs, outcomes and impact. The baseline situation must be clearly established. The added value of Rikolto's interventions must also be more clearly distinguished. In particular, more analysis and monitoring of profit margins and cash flow is needed so as to understand the way added value is created along a value chain. This is key to influencing its structuration, building sustainable business relations and promoting inclusiveness, as well as to empowering producers

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and FOs, in making choices in terms of products and cropping systems to implement, or in terms of negotiating commercial contracts.

- The PGS experience should be systematised and capitalised more formally so as to clarify its essential constitutive elements and the necessary steps to establish them. The advantages and disadvantages of a PGS with respect to third party certification system should be identified and quantified for various stakeholders (smallholders, exporters...).
- Rikolto should follow, capitalise and systematise the pathways of change and logics it follows to develop new business models and achieve change. In particular, so as to promote upscaling, it is important that Rikolto elaborates clear indicators to monitor progress in this area. Business models and pathways of change should be characterised and broken down sufficiently precisely so as to be able to identify clearly which of their elements are relevant and can be integrated within a given intervention. The advantages and disadvantages of each type of business model within a given context and for various types of producers (size of production unit, geographical location and associated agricultural calendar...) or food chain actor (producer, BDS provider, off taker...) should be clearly understood.
- Further support to developing BDS within partner FOs
- Developing financial services aimed at both supporting investments in improved technologies and equipment as well as providing working cashflow
- Work on Food Smart cities should develop a stronger waste management and circular economy dimension. In particular, this could integrate the use of agricultural bio-products to produce bio-fertilisers and thus further support agroecological production.