

VI.2 FOOD SMART CITIES

DGD Outcome Indicators - Result 1¹¹

Year	Year 1 - 2017	Year 2 - 2018	Year 3 - 2019	Year 4 - 2020	Year 5 - 2021
Indicator 1: Number of government policies to support the consumption and production of healthy food/policies that favour sustainable production and consumption					
Target	0	1	3	11	12
Achieved	0	7	10		

Pathway of Change: Intervention IV – Ultimate Outcome 1

INTERVENTION	OUTPUT	IMMEDIATE OUTCOME	INTERMEDIATE OUTCOME	ULTIMATE OUTCOME
Enabling environment for healthy food and lifestyles by advising the governments and policy makers at all relevant levels and the private sectors to acknowledge and add on to their healthy food policy/regulation agendas	Organising capacity building activities for Gita Pertiwi, YLKI and PIB on advocacy, campaign and media work	Gita Pertiwi, YLKI and PIB know how to carry out advocacy, campaign and media work	Gita Pertiwi, YLKI and PIB develop strategies and action plan on advocacy, campaign and media work	The City Government (Solo, Depok, and Bandung) and private sectors stipulate policies/regulations that favour sustainable production and healthy consumption
	Supporting Gita Pertiwi, YLKI and PIB to provide evidence and organise research on procurement policies, food waste management, canteen school management, consumption pattern on healthy food, and other healthy food issues	Quality documentation of evidence and research reports produced by professional researchers or research institutes are available.	Quality documentation of evidence and research reports are used by Gita Pertiwi as a basis for advocacy work on food policies at the city level.	

¹¹ The targets in year 5–2021 have been revised based on the achievement in 2019 and current condition of the programme.

INTERVENTION	OUTPUT	IMMEDIATE OUTCOME	INTERMEDIATE OUTCOME	ULTIMATE OUTCOME
	Supporting Gita Pertiwi, YLKI and PIB to advocate inclusive procurement policy, and promote healthy food consumption practices at modern urban markets to the governments	Advocacy and campaign materials are available	Advocacy messages are well received by the governments and other stakeholders	
	Supporting Gita Pertiwi, YLKI and PIB to influence public opinion on food smart cities.	Advocacy on food smart city messages are quoted and reported by mass media.	Advocacy on food smart city messages are widely received by public, including the city governments and parliaments	
	Supporting Gita Pertiwi, YLKI and PIB to engage and influence multi-stakeholder processes on food smart city policies	The stakeholders, such as food producers, food providers (restaurants, school canteens, hotels, etc.), members of the parliament, consumers, city governments, etc. are aware of the urgency of a policy change	Stakeholders develop and implement a joint action to promote policy change.	
	Supporting Gita Pertiwi, YLKI and PIB to advise the City Governments of Solo, Depok, and Bandung on food policy change	Advocacy on food policy change messages are well received by the City Governments	The City Governments consult the food smart city partners on food policies	

INTERVENTION	OUTPUT	IMMEDIATE OUTCOME	INTERMEDIATE OUTCOME	ULTIMATE OUTCOME
	Participating in the clusters' work and learning events in influencing the international agenda on rice and food smart cities	Rikolto in Indonesia and the partners know how to contribute to the clusters' work	Rikolto in Indonesia and the partners provide evidence to be used by the clusters to influence the international agenda	
	Supporting Gita Pertiwi, YLKI and PIB to build awareness on reducing food waste and develop distribution channel of food leftover to low income urban communities	Food providers are interested to reduce food waste and to distribute their leftover food to low income urban communities	Food providers reduce food waste and distribute their leftover food to low income urban communities	

EFFECTIVENESS

EVOLUTION OF THE RELEVANT OUTCOME INDICATORS

Year	2017	2018	2019	2020	2021
Indicator 4.1.1 (Indicator 1) : Number of government policies to support the consumption and production of healthy food (or that favour sustainable production and healthy consumption - cumulative)					
Target	0	1	3	11	12
Achieved	0	7	10		
Indicator 4.1.2: Presence of active multi-stakeholder food policy and planning ¹²					
Target	-	-	3	-	4
Achieved	-	3	3		
Indicator 4.1.8: Number of formal (bilateral or multilateral) learning exchanges on food smart cities in which Rikolto and its partners have participated					
Target	-	-	-	7	8
Achieved	-	10	6		

PROGRESS ANALYSIS: Rikolto in Indonesia works mainly with partners (Gita Pertiwi, YLKI, and PIB). The scope of Rikolto's work is supporting partners for advocacy and influencing public opinion and multi-stakeholder process. The goal is to influence the city governments and private

¹² A qualitative indicator : 1 = no multi-stakeholder meeting existed; 2 = multi-stakeholder meeting was arranged once but not regularly met; 3 = an organised group of core stakeholders meets regularly in a structured manner with the municipality with on-off participation of relevant stakeholders; 4 = multi-stakeholder meeting is conducted regularly and food-related policies have been adopted by the public & private programmes/policies

sector of Solo, Depok and Bandung to have policies or regulation that favour sustainable production and healthy consumption. So far, there have been movements on each of the output shown above.

In 2018, Rikolto organized a group of key stakeholders who met regularly with the city governments in a structured manner, though the participation of relevant stakeholders was still inconsistent. In 2019, an initiative to develop healthy canteen standards at schools with local government agencies in Solo (Agencies of Education, -Health, -Environment, and -Women Empowerment and Child Protection) started. Rikolto's partners also monitored the Pangan Jajan Anak Sekolah (School Canteen) programme of which our partners gained recognition from the National Agency of Drug and Food Control. In 2019, multi-stakeholder meetings were carried out in Solo and Depok regarding healthy food consumption, food waste management and healthy school canteen programmes. In Bandung, Rikolto worked together with Parahyangan University (Unpar) to conduct advocacy work. After finishing the study on food consumption habits and how Bandung's people address food waste in 2018, Unpar with the support of Rikolto conducted multi-stakeholder meeting in 2019 and public awareness as a follow-up of the study.

In 2018, Rikolto participated in 10 events of learning exchanges on Food Smart Cities at the national and international level. The three international events were FAO in Italy, UN Habitat in Malaysia, and Responsible Business Forum on Food and Agriculture in Jakarta. Meanwhile, the 6 national meetings were meetings on SDG #2 with Indonesian National Planning Agency on Jakarta Food Security Summit organized by KADIN, discussion on natural resources with World Resources Institute, Jakarta Food System Dialogues organized by National Planning Agency and EAT Foundation, workshop on urban farming for kindergarten students, and student internships. In 2019, Rikolto conducted learning exchange visits in Surabaya and Yogyakarta, attended annual Milan Pact meeting in Montpellier, France, involved in SDG#2 meetings in Jakarta and Bogor, and participated in the Food Smart Cities Workshop in Belgium. Participation in these events do not only raise the visibility of Rikolto amongst the Food System actors in Indonesia, but also allows Rikolto to take up the opportunities from these events and obtain new information/ strategy to be implemented in the pilot cities. Rikolto also uses these events to share the experience obtained from the pilot cities. Eventually, Rikolto contributed to the cluster's works by providing concrete evidences to influence the international agenda on food smart cities.

Additionally, our advocacy efforts so far have resulted in the adoption of healthy canteen standards in 10 schools in Solo and the integration of green circular economy with the Kampong Responsive Gender Programme of the Solo City Government. In Solo, we collaborated with city governments, local community (Solo Children Forum), and schools to conduct the healthy food consumption campaigns. In Depok, the city government has integrated healthy food consumption in their programmes and allocated budget for the implementation. It was essential to have local authorities in the campaigns as they play a key role in educating societies e.g., children and their parents when it comes to selecting healthy food to consume. Therefore, local governments' inclusion in the programme implementation will still be Rikolto's strategy in 2020.

TRIANGULATION: During multi-stakeholder meeting in Bandung, the stakeholders attending the event expressed their concern and appreciation regarding Rikolto's initiative in Food Smart Cities, especially to support sustainable food production and consumption in the rural area. The food waste management also becomes a challenge for the local agency i.e., Environment Agency being responsible for managing both organic and non-organic waste. During the meeting, the agency proposed joint-collaboration between Rikolto, Parahyangan University, Environment Agency, Agriculture Agency and other related actors to work on food waste management road map in order to support the government programme of Bandung Zero Waste City.

RELEVANCE

EVOLUTION OF THE RELEVANT IMPACT INDICATORS – 4c

Year	2017	2019		2021
Indicator	Baseline	Target	Observed	Target
Number of indirect end beneficiaries: consumers affected by change in public/private policies	24,618 DGD = 20,730 FDOV = 3,888 (Non DGD)	3,453,803	FSC: 5,400,867	FSC: 5,750,000

Source: Partner report.

PROGRESS ANALYSIS: In 2018, all partners were focusing on research, which was used for developing campaign material. Simultaneously, Rikolto and its partners approached the key stakeholders and brought up the issue of sustainable and healthy consumption. Later, in 2019, Surakarta and Depok Government showed their commitment to the involvement of multi-stakeholder in the decision-making process. The government acted as both organisers and guests in the activities with the following topics.

- Surakarta (3) – (i) The development of healthy canteen standards, (ii) food waste management through gender responsive village programme and (iii) the development of food sharing standard operating procedures. The contributing government stakeholders are Health Agency; Environment Agency; Education Agency; Women, Children, and Community Empowerment Protection Agency (P3APM); Agriculture and Food Security Agency; and Food and Drug Inspector Office of Surakarta. The non-government stakeholders were: Food Expert Association (IKABOGA); Carefood; Kala Canda, Kusuma Berbagi, Surakarta Child Forum; Legal Journal Managers Association; Surakarta Healthy Food Consumer Group; Research Institute and Community Service (LPPM) of Slamet Riyadi University; LPPM of Sebelas Maret University; LPPM of Islam Batik University; and KOMPAK.
- Bandung (1) – Awareness is raising on food waste. The contributing stakeholders were Bandung City Government (Agriculture and Food Security Agency, Environment and Hygiene Agency, Communication and Information Agency, and Education Agency), Santika Hotel, The Cipaku Garden Hotel, Sushi No Mori Restaurant and Parahyangan University (Social and Political Sciences).
- Depok (3) – (i) Food waste management, (ii) food sharing, and (iii) more inclusive city food council. The contributing stakeholders were Food Security, Agriculture, and Fisheries Agency, City Government Secretariat, Indonesian Food Service Association (APJI), D'Mall management office, Chef Association, Madame Elly Farida (the wife of Depok Mayor), and Pembangunan Jaya University.

TRIANGULATION: By 2019, nine cities in Indonesia have committed to a pathway towards zero waste, namely Denpasar, Gresik, Surabaya, Medan, Kepulauan Seribu, Cimahi, Bandung City, Depok and Bandung District. The Zero Waste Cities programme aims to develop environmentally friendly, sustainable and decentralized waste management models in urban areas. Also, it will reduce the city government's financial burden on waste management and assist the government in achieving the waste reduction target. Presidential Regulation No. 97 of 2017 concerning National Policy and Strategy (Jakstranas) on the Management of Household Waste and Trash of Similar Household Waste mandates the involvement of all stakeholders to carry out integrated waste management from the source to the final processing. The main waste of municipal solid

waste includes, i.e., organic waste, plastics, paper, metal, rubber and glass. Half of the total waste is organic waste while food waste significantly contributes to organic waste that has become a global public concern. However, currently, food waste management has not yet a priority for the Indonesia City government.

Bandung City Government involved in the multi-stakeholder discussion on food waste management held by Rikolto and Parahyangan University in December 2019. They welcomed the idea of participatory (food) waste management raised by Rikolto and its partner. They are eager to collaborate in the Bandung Food Smart City initiative to address food waste issue. The government has an interest in signing the Milan Urban Food Policy Pact-an international pact on urban food policies- in 2020. This action will contribute to achieving the target of the Bandung Regional Development Strategic Plan to reduce the waste by 35% in 2025.

Pathway of Change: Intervention V – Ultimate Outcome 1

INTERVENTION	OUTPUT	IMMEDIATE OUTCOME	INTERMEDIATE OUTCOME	ULTIMATE OUTCOME
Enlarging the demand for healthy food by raising consumer awareness on healthy food and lifestyle	Supporting Gita Pertiwi, YLKI and PIB to develop healthy food promotion materials	Gita Pertiwi produce and disseminate the materials	Consumers know about and are aware of healthy food	Consumers have access to and consume healthy food.
	Supporting Gita Pertiwi, YLKI and PIB to strengthen producer networks and improve market linkages of food producers both in rural and urban areas to the modern markets.	The value chain actors are aware of the need for such a network	Supports are given to Gita Pertiwi by food producers, traders, and providers	
	Supporting Gita Pertiwi, YLKI and PIB to organise education and awareness-raising activities on health and food consumption for food producers	Food providers are interested to use and process healthy agricultural products for their consumers	Food providers implement healthy processing techniques	
	Supporting the partners to encourage the households to produce healthy food at their gardens in the	Households have capacity to practice urban agriculture	Household produce healthy food in their house	

INTERVENTION	OUTPUT	IMMEDIATE OUTCOME	INTERMEDIATE OUTCOME	ULTIMATE OUTCOME
	framework of urban agriculture			

EFFECTIVENESS

EVOLUTION OF THE RELEVANT OUTCOME INDICATORS

Year	2017	2018	2019	2020	2021
Indicator 5.1.5: Number of demonstration plot (demplot) of urban farming (cumulative)					
Target			15	18	20
Achieved		10	14		
Indicator 5.1.12: Number of media hits (advocacy and campaigning messages broadcasted or delivered by mass media) that support production and consumption (cumulative)					
Target	10	20	25	35	40
Achieved	5	13	29		

PROGRESS ANALYSIS: Awareness raising to food producers and consumers on the importance of healthy food is a first step to achieve the ultimate outcome. This step is required to gain interest from actors in the food system. Rikolto and partners have been focusing on developing demonstration plots at household/community level in Solo and Depok. In 2018, Rikolto and partner developed 10 demplots in 5 locations i.e., RCI, Rinjani, SMK Marsudirini, Pondok Pesantren Budi Utomo, Kampung Baru, Joyosuran, Kerten, Kemlayan, Pajang, and Danukusuman. In 2019, we added 4 more demplots in Depok i.e., Kelompok Tani Togahorti Bibase Beji, SMPN 2 Depok, Kelompok Wanita Tani (KWT) Wortel Pondok Cina, and Panti Asuhan Wisma Karya Bakti.

Regarding media outreach, there were five media hits on the Food Smart City programme (2 radio hits, 2 newspaper hits, and 1 television hit) in 2017. Gita Pertiwi also conducted lifestyle campaigns during Car Free Days in Solo. In 2018, Gita Pertiwi expanded digital campaigns by utilizing the internet and social media platforms, which resulted in 8 newspaper articles. In 2019, there were 16 new articles published about this programme. The programme in Depok, which began in 2018, started to gain recognition from the media in 2019. Therefore, there are in total 29 media hits published as a result of public campaigns until 2019.

Rikolto learn that the involvement of societies in building evidence is essential and will promote local ownership of the programme. Thus, Rikolto will continue the same approach to engage societies with the support of Rikolto's local partners.

TRIANGULATION: The Solo Community Development Agency has shown their interest in the intervention and has started working with Gita Pertiwi to design the activity and estimate the budget. The Solo Community Development Agency targets 100 urban farms in 2020, financed by their Gender Responsive Village Programme. This activity will employ the circular economy approach through collaboration with a retailer as the donor of vegetable and fruit waste to be processed by into compost.

The City's Agricultural Agency and Environmental Agency have committed to support through technical extension services and providing transportation for collecting waste from the retailer, respectively. Meanwhile in Depok, several activities in the FSC programme are aligned with the

agenda of the Secretariat of Depok City and the Agency of Food Security, Agriculture and Fisheries (DKP3). As a result, the city governments subsidize multi-stakeholder events concerning Food Smart City such as the campaigns of healthy eating campaign (to eat more fruits and vegetables).

RELEVANCE

EVOLUTION OF THE RELEVANT IMPACT INDICATORS – 1b

Year	2017	2019		2021
Indicator	Baseline	Target	Observed	Target
Number of direct end beneficiaries: consumers accessing quality food ^{*)}	0	0	8,934	10,000
*) disaggregated by sex and age				

PROGRESS ANALYSIS: Rikolto and its partners has conducted three kinds of food-waste-management related activities, namely urban farming, food sharing, and food distribution. Rikolto’s work in food waste reduction was relevance with the needs of stakeholders regarding access to quality food and contributed to the achievement of this indicator. For instance, urban farming was designed to transform the organic kitchen waste such as fruit and vegetables into organic fertiliser/compost that can be used for growing food in the home yard. Urban farming is one of the sustainable strategies to help low income-residents save money on food purchases by growing and harvesting fresh vegetables and fruits from their gardens. Throughout 2018, the Solo City Government, Rikolto, and Gita Pertiwi have helped established ten demonstration plots in Solo, hence inspiring 50 households to start vegetable gardens, growing in total around 80 types of herbs, vegetables and fruits.

Furthermore, the action of food sharing and food distribution involved all food stakeholders to create and foster more sustainable practices. The idea is to collect excess food from suppliers and individuals and redistribute them to low-income residents, care homes, and orphanage. Also, food producers can prevent food waste by donating unused food products which are still edible and nutritious.

For example, Gita Pertiwi received some chickens whose weight did not meet sales requirements, so the breeders donated them. Gita Pertiwi also got broken rice that actually still has equally good nutritional value and can be processed into nutritious meals.

TRIANGULATION: Survey carried out by Rikolto’s partner, the Indonesian Consumers Foundation/YLKI- in 2018 found that people in Solo spent around 50% of their expenditure on food. Around 11% of the population live below the poverty line, earning less than IDR 1 million per month, which means that low-income households only have around IDR 16,700 (less than 1 Euro)¹³ to buy food. As food security is dependent on household purchasing power, it is fair to say that low-income residents are food insecure and they struggle to meet basic food needs.

Food insecurity is also associated with undernutrition. Households with low food security are more likely to consume food with reduced quality, variety, and desirability of diets that can cause undernutrition. On the other hands, more Indonesians experience obesity that leads to the

¹³ Exchange rate IDR 1 = EUR 17,641.86 per 26/03/2020

development of non-communicable diseases (NCD) such as diabetes and heart diseases. Based on a report by World Health Organisation (2018), NCDs are estimated to account for 71% of total deaths in Indonesia.

The survey by YLKI further discovered that Solo residents' understanding of a balanced diet stood at below 60%. Consequently, people consumed food high in carbohydrates and sugar, yet low in protein and fibre. Vegetable consumption was also reported low with less than 43% of observed households serving vegetables with their meals every day. It is in agreement with a study conducted by WHO mentioning that Indonesia's fruit and vegetable consumption is 180 gram per capita per day, below the WHO's standard of 400 gram. With these figures and findings, urban farming can offer a sustainable solution to these pressing problems.

Regarding food sharing, Titik Eka Sasanti, the Director of Gita Pertiwi Foundation said that food sharing offers a solution to tackle the two-fold issue of food waste and food access. Solo is a culinary city that does not produce and grow its own food. The city is dependent on other neighbouring districts for food supplies. Around 500,000 people live in Solo and 11 per cent of them live below poverty line, earning less than one million Rupiah (64 Euro) per month. This low-income group has a limited access to food, especially nutritious food. Therefore, Rikolto's initiative is supporting Solo City Government to set up mechanism to fulfil its people's right to food.

SUSTAINABILITY – FOOD SMART CITIES

TECHNICAL: The strategy to strengthen the capacity and collaborate and develop initiatives together with public and private institutions such as community-based initiatives and organisations, schools, relevant city government agencies and local food businesses help to institutionalize the changes. Complemented by several studies at the city level, the program has developed their awareness, concept, mechanisms, tools and networks on sustainable food system topics. The collaboration with local NGOs/universities that have strong engagement with the civil society, city government and businesses have been instrumental in bringing those actors together. Better awareness of the citizen and the key stakeholders will hopefully be reflected in the change in behaviour for more responsible food production and consumption.

SOCIAL: The changes in local government/city policy are a crucial point to sustain Food Smart City programme through the involvement of multi-stakeholders. Government regulation will strengthen this mechanism. Participation in Milan Urban Pact Policy also benefits the programme sustainability. The city of Bandung has expressed its interest to join Milan Urban Food Policy Pact. The city government wants to collaborate with Rikolto to realise the city's vision to be Bandung (Food) Smart City.

FINANCIAL: Potentials for sustainability have been shown where city stakeholders in Surakarta, Depok and Bandung have realised the scale of the challenges to improve the urban food system in their respective city. They have been aware that the problems are theirs to solve and have been actively engaged. That includes linking it to their policies and mobilise their resources to organise the activities. The programme needs to continue the approach to make them embrace the initiatives as their own. Sustainability food production and consumption will eventually contribute to reduce costs to produce for the food producers and to buy food for consumers.

ENVIRONMENTAL: When policies on sustainable food production and consumption at the city level are implemented, and the food industry and consumers follow, it will contribute to environmental sustainability. The reduction of food loss and production of a sufficient amount of

food will reduce the use of natural resources and GHG emission. Processing food that maintains nutrition and reduces food waste contributes to the healthier citizen and reduce GHG emission. The more efficient distribution channel will reduce the costs and fossil fuel consumption. More responsible use will reduce food waste and eventually environmental footprints caused by it.

EXIT STRATEGIES - Structural Change Agenda I/ Result 1

SECTOR	EXIT STRATEGIES	ENABLING FACTORS	ACTIONS (SPEED-UP/MAINTAIN)
FSC	<ol style="list-style-type: none"> 1. The exit strategy focuses on ensuring the continuity of community, civil organisation, including their financial securities, are obtained before the end of the programme in 2021. 2. The program approach has been from the beginning designed to allow a smooth exit strategy. Involving various city stakeholders, public and non-public, and promoting the use of their resources or by generating federal funding, will enable them to drive the movement. The role of Rikolto and partners are connecting them and putting their initiatives in the frame to create a sustainable urban food system. Using topics, which are dear to the policymakers such as food waste in Depok and healthy school canteen in Surakarta, is a useful entry strategy. Further, it is built up to the more central approach of FSC on food policies and procedures that include the food environment. 3. We are setting-up food council at the city level consisting of multi-stakeholder. 	<ol style="list-style-type: none"> A. Public Private Partnership with donors or private sectors 	<ul style="list-style-type: none"> o To maintain the work by facilitating the business plan development of Civil Social Organisations and providing CSOs access to technical assistance.

VII. STRUCTURAL CHANGE AGENDA II

SPECIFIC OBJECTIVE

A new generation of profitable farmers is enabled via innovative practices to meet the growing demand of urban consumers for sustainably produced agricultural commodities in a healthy environment.

STRUCTURAL CHANGE AGENDA II

Innovative agribusiness models based on inclusive business practices to help a new generation of profitable farmers to grow in a healthy environment.

OUTCOMES

More youth and women are involved in the sustainable value chain.

FOs enhance their inclusive business that comply with sustainability standards and meet new market demands.

Payment Models for Ecosystem Services (PES) set up and are adopted by the private sectors and governments.

Commodity platforms ensure that smallholder farmers earn regional wage in the respective

OUTPUTS

- Organise popular events to introduce sustainable agriculture and inclusive business practices to youth and women.
- Document and share the learning and evidences on youth and women inclusiveness.
- Organise skill development for youth and women.
- Develop business models for youth and women.
- Support FOs to make inclusive policies toward women and youth at the FO level.

- Capacity building on IMS/ ICS to ensure traceability and sustainability compliance.
- Capacity building on Good Agriculture Practices (GAP) and Good Processing Practices (GPP).
- Capacity building on business plan, market intelligence, bookkeeping systems and digitalized database.
- Support FOs to access capital from their members and financial and government institutions.
- Capacity building on marketing and business communication.
- Support FOs to diversify their business unit innovatively.

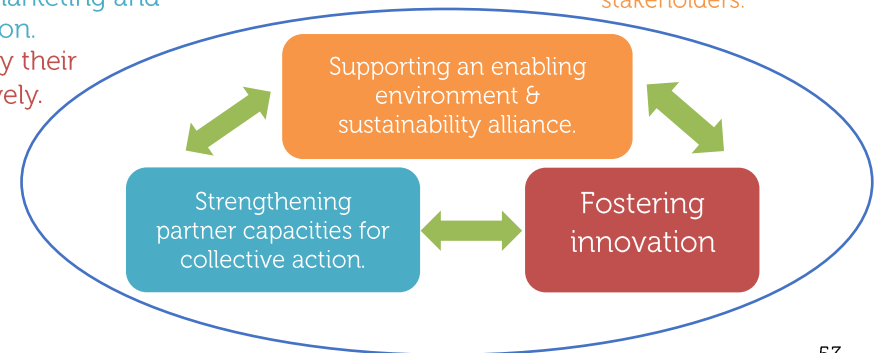
- Support partners to assess and document the existing models of PES.
- Facilitate FOs to improve the knowledge of practices that maintain and enhance ecosystem protection.
- Introduce PES Models to the government and private sectors.

- Support partners (commodity platforms) in the study to identify and assess innovative business models that are suitable and profitable for FOs.
- Influence international agenda on coffee and cocoa.
- Documenting and sharing learning and evidence to other stakeholders.

PLANNING, LEARNING, ACCOUNTABILITY

MEASURE, LEARN, COMMUNICATE

STRATEGIES



VII.1 COCOA

DGD Outcome Indicators - Result 2¹⁴

Year	Year 1 - 2017	Year 2 - 2018	Year 3 - 2019	Year 4 - 2020	Year 5 - 2021
Indicator 1a: Volume of quality food sold through collective marketing by farmers of partners in Sulawesi, NTT and Jambi (in tons , per year)					
Target	Cocoa: 1300 (Sulawesi : 1,200; NTT: 100)	Cocoa: 1850 (Sulawesi : 1800, NTT: 50)	Cocoa: 2200 (Sulawesi : 2000 ; NTT: 200)	Cocoa: 2900	Cocoa: 3,200 (Sulawesi: 3,000; NTT: 200)
Achieved	Cocoa : 1622.6 (Sulawesi: 1,605 NTT: 17.6)	Cocoa: 1606.94	Cocoa: 2907.34		
Indicator 1b: Number of farmers of FOs selling through collective marketing					
Target	Cocoa: 4800 (Sulawesi : 3700; NTT: 1100)	Cocoa: 4300 (Sulawesi: 3800; NTT: 500)	Cocoa: 5366 (Sulawesi: 3951 ; NTT: 1415)	Cocoa: 5300	Cocoa: 5500 (Sulawesi: 4,900, NTT: 600)
Achieved	Cocoa: 4581 (Sulawesi: 4043; NTT: 538)	Cocoa: 5636	Cocoa: 5216 (Sulawesi: 4,662, NTT: 554)		
Indicator 1c: Average volume of quality food per farmer of partners sold through collective marketing action mechanisms (in tons)					
Target	Cocoa Sulawesi: 0.29 NTT: 0.06	-	Cocoa: 0.6 ton		Cocoa: 0.7 ton
Achieved	Cocoa: 0.48 ton	-	Cocoa: 0.40 ton		
Indicator 2: Average income of farmers of partners from quality food sales (in USD, per ha, per year)					
Target			Cocoa: IDR 13,100,000 (USD 950)		Cocoa: 1,200 (USD)
Achieved	Cocoa: IDR 11,925,109 (USD 835)		Cocoa: 1,139.39 (USD)		
Indicator 4a: Number of FO partners having fully functioning ICS/IMS					
Target	2	3	4		4
Achieved	3	3	4		
Indicator 4b: Number of FO partners having transparent premium distribution and profit sharing					
Target	2	4	4		4
Achieved	3	3	3		

¹⁴The targets in year 5–2021 have been revised based on the achievement in 2019 and current condition of the programme.

Pathway of Change: Intervention I – Ultimate Outcome 1

INTERVENTION	OUTPUT	IMMEDIATE OUTCOME	INTERMEDIATE OUTCOME	ULTIMATE OUTCOME
Enabling environment for gender sensitiveness and youth inclusiveness of the value chain.	Organise popular events to introduce sustainable agriculture and inclusive business practices to youth and women.	Youth and women have better knowledge on sustainable agriculture and inclusive business practices.	Participation of women and youth on sustainable agriculture production and business increases.	More youth and women are involved in a sustainable value chain.
	Document, knowledge and evidence sharing, on youth and women inclusiveness.	A compilation of women and youth participation and innovation on sustainable value chain is documented and shared.		
	Organise skill development for youth and women.	Youth and women are able to take an active role in sustainable agriculture practices and FO business.	Youth and women become a driver of FO business.	
	Develop business models for youth and women.	New business models are developed.	The income of the youth and women from agriculture business increases.	
	Support FOs to create inclusive policies toward women and youth at the FO level.	FOs stipulate more inclusive policies towards women farmers, youth, and broader access for young and women farmers to involve in FO business.	Even more young and women farmers are involved at FO managerial team.	

EFFECTIVENESS

EVOLUTION OF THE RELEVANT OUTCOME INDICATORS

Year	2017	2018	2019	2020	2021
Indicator 1.1.2: Percentage of youth who are involved in FO daily practices, becoming staff and governing members of FOs					
Target	-	30%	35%	55%	60%
Achieved	-	38.25%	53.80%		
Indicator 1.1.4: Percentage of women who are involved in FO daily practices, becoming staff and governing members of FOs					
Target	-	-	30%	35%	40%
Achieved	-	29.52%	32.18%		

PROGRESS ANALYSIS: FOs encourage participation of youth and women by carrying out various attractive activities. In Sulawesi, the integration of livestock and cocoa gardens enticed young people to involve in cocoa agriculture value chain. In addition, the participation of private sector in providing capacity building, i.e., Cacao Doctor, convinced the local young farmers that cocoa business is promising. Meanwhile, East Nusa Tenggara, Rikolto engaged millennials in agriculture through Youth Entrepreneurship Lab (YEL), which was collaboratively organised by Rikolto and millennial organiser, Remaja Mandiri Community (RMC) Detusoko. YEL is an open platform for millennials who are young and passionate about the agricultural value chain and are willing to contribute to improving the cocoa sector. The participation of women in value chain is also crucial. Rikolto and partners support women participation in FOs daily operation and decision-making. Mostly, women contributed to managerial and production tasks in the value chain.

TRIANGULATION: Youth in Sulawesi have benefited from the training and the introduction of integrated livestock and cocoa garden business. Asrul, a data coordinator of Cahaya Sehati Cooperative, joined Cocoa Doctor Programme and becomes one young cadre to share the knowledge to the fellow farmers. He admitted that cocoa business is promising for young people if they are fully committed.

In Flores, Rikolto invited youth from universities to learn cocoa cultivation and the business development, of which caught their attention. The role of universities in encouraging students to learn cocoa is important to support the development of cocoa business in Flores. One of YEL participants, who is a student of University of Flores mentioned that she got insights on how young people can start a business, particularly by developing the local-based product such as cocoa. At the national cocoa platform level, a measurable roadmap is set to encourage women's involvement in cocoa. All platform members have synergized their efforts to achieve the desired result.

Gender mainstreaming issue in cocoa value chain attracted one master student of Wageningen University and Research, the Netherlands, to conduct thesis research in Masagena Cooperative¹⁵. Findings showed that women and men successfully exercise their power to take advantage of the opportunities to arrange the situation in line with their capabilities. The research mentioned that Rikolto's intervention in facilitating access to key stakeholders, e.g., buyers affected the gender roles and relations in the field. Rikolto created new situations and opportunities for women inclusion in the value chain. For instance, Masagena Cooperative gives an opportunity for women and men to challenge their capabilities and join the management as staff. The decision made by

¹⁵ Aryani, A.R. (2019). *Beyond Cocoa Production: Transformation of Gender Roles and Relations in Luwu Utara, Indonesia*. Wageningen University & Research: The Netherlands.

Masagena to obtain cocoa certification from the Rainforest Alliance also opened up the opportunity for women and men involved in the value chain through, i.e. nursery business.

RELEVANCE

EVOLUTION OF THE RELEVANT IMPACT INDICATORS – 1a

Year	2017	2019	2021	
Indicator	Baseline	Target	Observed	Target
Number of direct end beneficiaries: farmers producing quality/sustainable food/agricultural commodities ^{*)}	12,362	15,157	9,874	10,000
^{*)} disaggregated by sex and age			DGD – 5,248 M: 4,455 F: 793 Y: 721 MCAI Project: 4,626	

Source: Partner Report.

PROGRESS ANALYSIS: Rikolto has empowered farmers with knowledge of sustainable cocoa production and postharvest handling to produce quality agricultural commodity, which was, in turn, attracting the non-cocoa farmer members to join the FOs. At the organisational level, Rikolto enabled FOs perform business planning, marketing and financial management, as well as networking. Capacity building provided by Rikolto enabled them to meet the standards of sustainability certification and became certificate holders. They are also able to engage in strategic partnerships with other players in the value chain such as Mars, Mason, and Olam who have an interest in securing the supply of quality input.

FOs face the challenge of high dependency to one or few people and do not invest in nurturing younger people to take up the leadership position. Rikolto's intervention in youth inclusion as such also a strategy to prepare for regeneration.

TRIANGULATION: Private actor, such as MARS through Cocoa Doctor Programme, was interested in providing capacity-building activities for Rikolto's partner–Cahaya Sehati Cooperative (KCS), to empower young farmers to produce cocoa sustainably in East Luwu District, South Sulawesi. Besides, the local institution like BUMDes (village-owned enterprise) in Polewali Mandar District worked together with AMANAH Cooperative to involve young people in developing cocoa-based business to drive the village transformation. Rikolto's intervention is relevant to the need of stakeholders to sustain the cocoa value chain by attracting and retaining youth in agriculture business.

Pathway of Change: Intervention II – Ultimate Outcome 1

INTERVENTION	OUTPUT	IMMEDIATE INCOME	INTERMEDIATE INCOME	ULTIMATE INCOME
Enabling FOs to enhance their business capacities that comply with	Organise capacity building activities on IMS/ICS to ensure product traceability and	FOs have ICS/IMS teams with adequate knowledge on traceability and	Members of ICS/IMS teams ensure that farmers meet sustainability	FOs meet sustainability standards and market demands.

INTERVENTION	OUTPUT	IMMEDIATE INCOME	INTERMEDIATE INCOME	ULTIMATE INCOME
sustainability standards and market demands for the welfare of FOs' members.	sustainability compliance to increase productivity and add value to the products.	sustainability standards.	verification criteria and produce required supporting documents.	
	Support FOs to organize capacity building activities for their members on Good Production Practices (GAP) and Good Processing Practices (GPP) that meet sustainability standards	Members of FOs know about practices to be applied to improve the quality and quantity of the product according to the sustainability standards.	Members of FOs apply GAP and GPP in their farm.	
	Facilitating partners (commodity platforms) to assess common criteria of sustainability standards adopted by various certification bodies and buyers.	Partners (commodity platforms) document the common criteria of sustainability standards seek approval from their members and share the results to FOs.	Partners assist FOs in establishing IMS/ICS model(s) that meet these criteria.	

EFFECTIVENESS

EVOLUTION OF THE RELEVANT OUTCOME INDICATORS

Year	2017	2018	2019	2020	2021
Indicator 2.1.1: Number of FOs whose members increase the productivity					
Target	3	-	5	-	4
Achieved	3		3		
Indicator 2.1.2 (1a): Volume of quality food sold through collective marketing by farmers of partners in Sulawesi, NTT and Jambi (in tons , per year)					
Target	Cocoa: 1300 (Sulawesi : 1,200; NTT: 100)	Cocoa: 1850 (Sulawesi : 1800, NTT: 50)	Cocoa: 2200 (Sulawesi : 2000; NTT: 200)	Cocoa: 3,000	Cocoa: 3,200 (Sulawesi: 3,000; NTT: 200)

Achieved	Cocoa : 1622.6 (Sulawesi: 1,605 NTT: 17.6)	Cocoa: 1606.94	Cocoa: 2907.34		
Indicator 2.1.3 (1c): Average volume of quality food per farmer sold through collective action mechanisms (FO or company) (per commodity)					
Target	Cocoa Sulawesi: 0.29 NTT: 0.06	-	Cocoa: 0.6 ton		Cocoa: 0.7 ton
Achieved	Cocoa: 0.48 ton	-	Cocoa: 0.40 ton		
Indicator 2.1.4 (4a): Number of FOs having fully functioning ICS/IMS					
Target	-	3	3	-	4
Achieved	3	3	4		

PROGRESS ANALYSIS: Most of the FOs comply with sustainability standards, especially the FOs in Sulawesi and Flores proved by sustainable certificates they hold. It implies that the cultivation system has fulfilled environmental requirements. In Flores, farmers stopped using chemicals to control pests, diseases, and weeds, and applied biological agents instead. They used decomposer to make compost. Decomposer also contains *Trichoderma* mushroom, which is able to kill the growth of *Phthoptora phalmivora fungus*, which is a cause of fruit rot, which is very detrimental to farmers. On the other hands, farmers adopted terraces technology to hold groundwater. This practice aims to prevent erosion and help to preserve groundwater and maintain soil fertility. Furthermore, adopting agroforestry and using superior clones is a way for farmers to deal with climate change. Even though not all FOs improved their productivity (3 out of 5), an increase in volume of cocoa beans sold collectively through the FOs was observed in 2019. Masagena and Romeo doubled the volume of cocoa beans collected from the farmer members. It indicates that the Internal Control/Management System (ICS/IMS) of the FOs functioned.

Empowering the ICS/IMS of the FOs is a part of Rikolto's strategies to help FOs to meet sustainable standards and market demands. For the ICS/IMS to be fully functioning, the ICS/IMS teams must have adequate knowledge on traceability and sustainability standards. Every year, Rikolto facilitates training and refreshment to the ICS/IMS Teams of the FOs. Also, members of ICS/IMS teams have to be able to ensure farmers meet sustainability criteria. However, the teams are lacking capacity to produce required supporting documents for certification. They still used a modest Microsoft Excel sheet to document the farmer members' data; while farmer traceability is critical for sustainability-based certification. Since 2019, Rikolto has developed a farmer database system, which is supposed to be used at FO level to keep track of their member farmers' data. Data have been collected but work still need to be done to verify the data to be valid and ready to be used. This application will be disseminated and internalised to the FOs and their ICS/IMS Teams. Furthermore, another challenge in strengthening the ICS/IMS is the poor leadership of the FOs and the weak commitment among farmer members. Rikolto has been mediated a meeting between Cahaya Sehati's board, members and local government agencies acting as advisors to solve internal managerial problems. In Flores, after mediation process done by Rikolto and the local government agencies for almost a year, the management members of JANTAN could not come to an agreement on the way forward. Rikolto decided to put an end to the cooperation.

TRIANGULATION: Some farmers benefit from a better garden management model. The good practices of using superior-clones, pruning, sanitation, and frequent harvest have increased cocoa production. The local government appreciates the development of cocoa as a means of increasing farmers' income. Furthermore, other organisations trusted the ICS team of Rikolto's partner to facilitate training in good agriculture practices and product quality control. For instance, Masagena

Cocoa Cooperative in Sulawesi was invited to deliver these services by one local institution in Kalimantan in 2018.

Farmer Survey Result showed the increase in average cocoa productivity (ton per ha) of Rikolto’s partners in 2019 as compared to the result of 2017 (Figure 4). Even the result is higher than the national productivity of 0.3 tons - 0.4 tons per hectare every year¹⁶. On the other hands, a negative growth in SIKAP was the result of aging cocoa trees and extreme weather. Members of KCS experienced the same that caused decreased productivity.

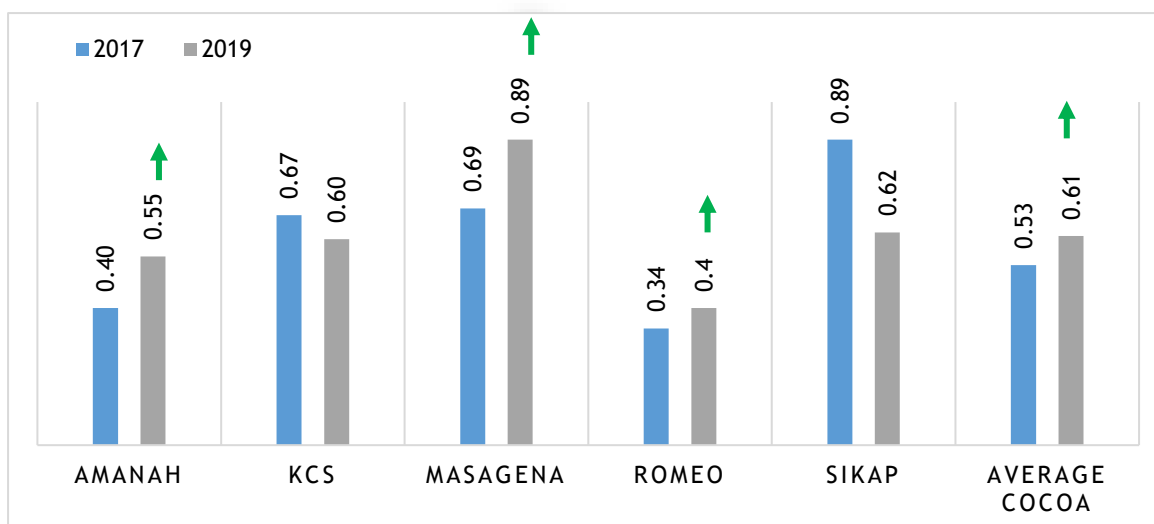


Figure 4. Average Crop Productivity in one year (ton, per-ha).

RELEVANCE

EVOLUTION OF THE RELEVANT IMPACT INDICATORS - 3

Year	2017	2019		2021
Indicator	Baseline	Target	Observed	Target
Increase in sustainable production index soil conservation	2.08 (Amanah: 2.84; KCS: 1.53; Masagena: 1.33; Romeo: 2.85; Sikap: 2.05)	2.3	1.41 (Amanah: 1.86; KCS: 2.39; Masagena: 0.71; Romeo: 0.77; Sikap: 1.33)	2.2
Water management	2.07 (Amanah: 1.94; KCS: 1.42; Masagena: 0.71; Romeo: 0.71)	2.3	2.05 (Amanah: 1.51; KCS: 2.60; Masagena: 0.71; Romeo: 0.71)	2.5

¹⁶ Retrieved from <https://news.majalahortus.com/industri-kakao-nasional-memasuki-masa-suram/>, on March 6, 2020.

Year	2017	2019	2021	
	3.16; Sikap: 2.22)		2.53; Sikap: 2.91)	
Resource management	1.91 (Amanah: 1.89; KCS: 1.20; Masagena: 1.19; Romeo: 2.20; Sikap: 2.91)	2.4	2.00 (Amanah: 1.69; KCS: 2.34; Masagena: 1.57; Romeo: 2.02; Sikap: 2.37)	2.3
Climate change	1.76 (Amanah: 2.07; KCS: 1.85; Masagena: 0.71; Romeo: 0.77; Sikap: 1.33)	1.9	0.78 (Amanah: 0.87; KCS: 1.43; Masagena: 0.50; Romeo: 0.50; Sikap: 0.59)	2
Biodiversity	1.94 (Amanah: 1.93; KCS: 1.70; Masagena: 1.87; Romeo: 2.37; Sikap: 2.65)	2.3	1.57 (Amanah: 1.90; KCS: 2.25; Masagena: 1.09; Romeo: 1.11; Sikap: 1.50)	2.2
Landscape management	2.06 (Amanah: 1.89; KCS: 1.70; Masagena: 2.07; Romeo: 2.06; Sikap: 2.97)	2.2	2.04 (Amanah: 2.20; KCS: 2.33; Masagena: 1.67; Romeo: 1.66; Sikap: 2.33)	2.4

Source: Farmer Survey.

PROGRESS ANALYSIS: The cocoa farmers in North Luwu and East Luwu complied sustainability standards, proven by receiving sustainability certificate from Rainforest Alliance/UTZ. Thus, cocoa products from those three regions met market demand on which only used minimal chemical pesticides, and paid attention to environmental sustainability aspects. Meanwhile in Flores, especially in Sikka District, even though cocoa farmers do not use chemical pesticides, it cannot be categorized as sustainable cocoa farming since the guarantee system does not yet exist.

A significant decrease in climate change indicator is related to a low score in the aspect of the carbon-emitting process. The survey questions for this aspect are about renewable fuel utilisation, the efficiency of engine fuel and electricity, and product distribution method to see to what extent the farmers have implemented good practices in carbon emission reduction during processing and distribution. Most of Rikolto's farmers live in a remote area and highly dependent on motor vehicles, i.e., motorcycles, cars, and pickups that consumes a lot of fuel that are non-renewable. The use of renewable fuel and electricity is still uncommon in Indonesia, even more in rural areas. Yet, sometimes they do not have other options but using a diesel machine to generate power and

very often-old vehicles with limited maintenance. Nevertheless, the farmer organisations managed to facilitate collective marketing practice through collecting points to reduce the travel distance need to be taken by individual farmer to sell their cocoa beans.

TRIANGULATION: There is a demand for sustainably produced cocoa at the global level since cocoa is described as being sensitive to extreme weather change, leading to a threatened condition of cocoa availability. At the same time, a subsidised fertiliser policy being issued resulted in the increased use of chemical fertiliser to escalate cocoa production in Indonesia. As holders of sustainability certificate, FOs play a crucial role in supplying sustainable product to the market; however, the organisations still lacked a mitigation strategy in environmental sustainability, particularly climate change. The results of the SCOPE Insight Assessment reflected the lack of readiness of the internal organisational management to address the climate-change issue (Figure 5). Therefore, Rikolto will continue promoting climate-smart agriculture practices and building the capacity of farmers so they can be more climate resilient.

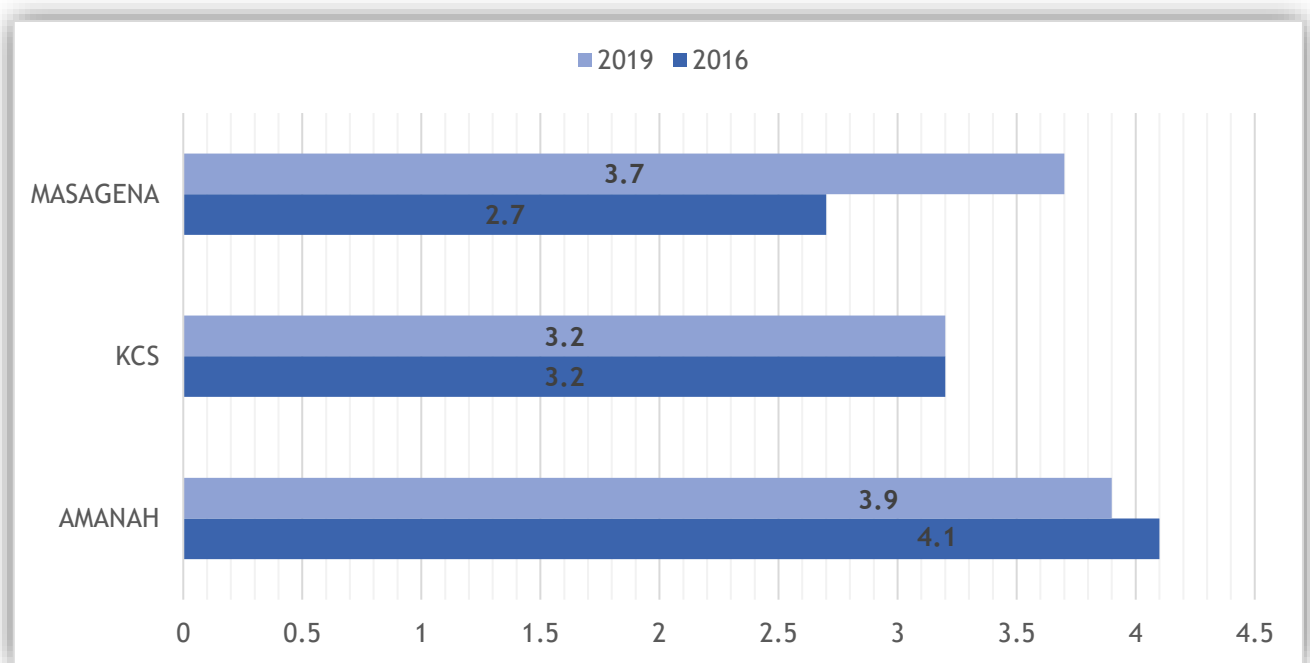


Figure 5. SCOPE Insight's score of sustainability dimension for cocoa cooperatives.

Pathway of Change: Intervention II – Ultimate Outcome 2 and 3

INTERVENTION	OUTPUT	IMMEDIATE INCOME	INTERMEDIATE INCOME	ULTIMATE INCOME
Enabling FOs to enhance their business capacities that comply with sustainability standards and market demands for the welfare of FOs' members.	Organising capacity building activities for FOs on a business plan, accounting, and bookkeeping.	FOs produce a business plan and apply good financial and bookkeeping system to increase the business profit.	FOs have documents as a business analyst tools for monitoring, evaluation, and lobbying with key stakeholders.	FOs enhance their business growth and they are able to access capital from member, institutional (financial institutions and governments) and outside commercial sources of funding to finance their businesses
	Supporting FOs to develop financial self – sufficiency model.	FOs have strategy to increase the contribution of the members to finance FO business.	The capital of FO from their members increases.	
	Obtaining information on existing financing facilitating and schemes from financial institutions.	Rikolto and FOs knows the facts and data related to the impact/effects of the lending schemes on FO's businesses	FOs present bankable credit requests to financial institutions and financial institutions modify their credit offers to meet FOs' needs	
	Facilitating business meetings between financial and government institutions and FOs.	FOs understand requirements to access available credit schemes and financial institutions know the scale of business, business potential and financial needs of FOs	FOs present bankable credit requests to financial institutions and financial institutions modify their credit offers to meet FOs' needs	
	Supporting FOs to collaborate with Village-Owned Enterprises (BUMDES)	Models of partnership between FOs and BUMDES are established.	The sustainability and synergy of the partnership between FOs and BUMDES are achieved.	
	Supporting partners to receive additional services	FOs receives additional services from	The quality and the quantity of	

INTERVENTION	OUTPUT	IMMEDIATE INCOME	INTERMEDIATE INCOME	ULTIMATE INCOME
	(capacity building, tools, capital, etc) from private sectors (buyers).	private sectors (buyers)	the FO's products improve.	
	Organise capacity building on market intelligence for each commodity.	FOs have market information and know how to read FO's position in the domestic and global markets.	FOs are able to develop collaboration with and gain business commitment from value chain stakeholders.	FOs have wider market and more assorted income sources
	Organise capacity building on business communication (leadership, language, contract negotiation, networking, etc) for FO's management team.	FOs' management teams improve their business communication and have better knowledge of negotiation techniques and strategies.	FOs' management teams demonstrate more professionalism and are able to negotiate with buyers.	
	Organise capacity building on innovative marketing	FO are able to implement an innovative marketing to sell their product attractively.	The sales of FOs' products increase.	
	Supporting FO to participate in local and international events to promote their products.	FOs participate in local and international events.	FOs' products are acknowledged as high-quality product.	
	Organise capacity building activities on integrated business models related to agriculture (diversification)	FOs know how to diversify their business unit and they diversify their business units innovatively.	FOs' receive additional income from their integrated business.	

EFFECTIVENESS

EVOLUTION OF THE RELEVANT OUTCOME INDICATORS

Year	2017	2018	2019	2020	2021
Indicator 2.3.1: Number of FOs' members participating in collective marketing					
Target	4800	4300	5366	5300	5500

	(Sulawesi: 3700; NTT: 1100)	(Sulawesi: 3800; NTT: 500)	(Sulawesi: 3951; NTT: 1415)		
Achieved	4581 (Sulawesi: 4043; NTT: 538)	5636	5216 (Sulawesi: 4662; NTT: 554)		
Indicator 2.3.2. Numbers of long-term business contracts/MoUs FOs have with the buyers					
Target	2	4	5		6
Achieved	2	4	4		
Indicator 2.3.4: Average income of farmers from quality food sales (in USD/per ha)					
Target			IDR13,100,000 (USD950)		USD1,200
Achieved	IDR11,925,109 (USD835)		USD1,139.39		

PROGRESS ANALYSIS: In 2019, changes in extreme weather resulted in reduced production, causing smaller sales volume. Despite this, FOs were able to meet the quality standards without major quality issues. At the same time, the number of cocoa farmers selling through FOs collectively also went down primarily due to changes in prices set by leading cocoa processors or buyers. This situation makes farmers often suddenly switch to traders even though the price difference is not very significant. The stiff competition normally happens at village level where FO's competitors offered rewards and down payments. FOs could not provide these due to the lack of capital. Nevertheless, until 2019, four private actors signed contracts with the FOs, namely MARS, CV Bumi Hijau, Vania 88, and Mason.

An increase in the average income of farmers selling quality cocoa beans was observed in 2019. By selling a certified product, the farmers received a premium fee from buyers. Furthermore, Rikolto introduced agroforestry in which the farmers have to grow various plants inside the farms (so-called intercropping). In an agroforestry system, a combination of woody plants, fruit species, and shade trees are planted to create a forest-like environment, which is the natural habitat of cocoa. The farmers benefit from non-cocoa products such as spices, fruits, and vegetables in the farms to improve their income.

TRIANGULATION: During focus group discussions, it was widely recognised and confirmed that besides improving farm production in terms of quality and quantity, sustainability certification programme brought a positive impact on improved farmer livelihood. The result inevitably encouraged all parties such as farmers, local traders, NGOs, and governments at different levels, to support farmers in preparing the products that meet market demand.

RELEVANCE

EVOLUTION OF THE RELEVANT IMPACT INDICATORS – 2

Year	2017	2019		2021
Indicator	Baseline	Target	Observed	Target
Share of income derived from quality food sales to the total household income	Sulawesi: 77.46% NTT: 48.53%	Sulawesi: 75% NTT: 40%	Sulawesi: 78.10%; NTT: 43.15%	Sulawesi: 80% NTT: 50%

Source: Farmer Survey.

PROGRESS ANALYSIS: Cocoa farmers in Sulawesi experienced an increased share of income derived from quality food sales, of which 78.10 % of the total revenue was obtained from selling cocoa product. Meanwhile, in Flores, cocoa business only contributed to 43.15% of the total household income, meaning farmers must rely on other sources of income to fulfil their household necessity.

Certification brought a positive impact to the farmers in Sulawesi, whereby market expansion is enabled when there is improved quality and production. Buyers gave a premium price leading to a better income for farmers. Furthermore, the farmers in Sulawesi also benefited from the presence of the key and major buyers such as MARS, Cargill, and Barry Callebaut with whom FOs can sell to. On the other hands, the situation was rather difficult for farmers in East Nusa Tenggara (NTT) to rely mainly on cocoa farms for their livelihood. In addition to decreased production led by extreme weather, the absence of big buyers in the region make the trade dependent on local traders.

TRIANGULATION: Rikolto’s intervention in enabling FOs to enhance their business capacities to comply with sustainability standards and to meet market demands for the welfare of FOs’ members is relevant with the stakeholder’s need. Many efforts can be made to improve the bargaining position of cocoa farmers. Certification is one of them. Rikolto worked with FOs to set up effective Internal Management System (IMS). In 2018, Rikolto assigned Bridgewater to conduct study concerning the impact of certification on farmer income¹⁷. The research highlighted that indeed certification is an advantage and one of the ways to improve the business of FOs. It is boldly noted that strong organisational management and marketing capacity are crucial. Ideally, the certified farmers must have their confidence to market the value-added commodity to the different buyers as a part of creating sustainable business for them while improving the environmental and social awareness within their organization. Moreover, the study recommended that FOs should work continuously to improve the bargaining position either by certification or by carrying out the value-added activities for instance fermentation and integrated crop-livestock farming.

Pathway of Change: Intervention IV – Ultimate Outcome 1

INTERVENTION	OUTPUT	IMMEDIATE INCOME	INTERMEDIATE INCOME	ULTIMATE INCOME
Supporting national commodity platforms and international clusters to facilitate/mediate all commodity stakeholders to develop innovative, inclusive and profitable	Supporting partners (commodity platforms) in the study to identify and assess innovative business models and good agriculture practices that are suitable and profitable for FOs	Partners (commodity platforms) have common strategies on business models for FOs that bring about better income for farmers	Partners (commodity platforms) encourage their members to support FOs in applying innovative and profitable business models	Members of commodity platforms practice/adopt business values that ensure smallholder farmers earn a regional minimum wage in the

¹⁷ Bridgewater. (2018). Cocoa and Coffee Certification: A Study on Impact and Internal Management Systems.

business models and sustainable agriculture practices.	Participating in the commodity platform and clusters' work in influencing the international agenda on value chain	Rikolto in Indonesia and the partners know how to improve the program design and implementation and to contribute to the national and clusters' work	Rikolto in Indonesia provides evidence to be used by the government and clusters to influence the national and international agenda	respective chains
--	---	--	---	-------------------

EFFECTIVENESS

EVOLUTION OF THE RELEVANT OUTCOME INDICATORS

Year	2017	2018	2019	2020	2021
Indicator 4.2.1: Numbers of evidence shared (cumulative)					
Target	1	2	3	7	8
Achieved	1	5	6		
Indicator 4.2.2: Number of innovations generated, adopted and shared (cumulative)					
Target	1	2	3	6	7
Achieved	1	2	5		

PROGRESS ANALYSIS: Rikolto has supported Cocoa Sustainability Partnership (CSP), a national commodity platform whose members consist of multi actors: government, private sectors, research institutions, and NGOs. As a supervisory board member, Rikolto participates in the board's quarterly meetings to give direction of CSP programme to improve cocoa sector through sector alignment and bring together the key stakeholders. In the last 3 years, CSP also launched three standards of recommended cocoa fertiliser formula, National Cocoa Competency Standard, and National Cocoa Curriculum.

The results of the study on the impact of certification and internal management system on the farmer's livelihood were presented to CSP and during the National Plantation Workshop. In 2019, Cahaya Sehati Cooperative in East Luwu had developed a demo plot of organic cocoa farms with the support La Galigo, a Dutch-based NGO. Also, a joint business between Amanah Cooperative and BUMDES (village-owned enterprise) Inaya provides evidence of a partnership between Rikolto's partner and local village institution. Besides, acknowledgement from another institution came when Rikolto was asked to provide training services in East Kalimantan as a part of the World Wildlife Fund (WWF) programme. At the end of 2019, the national government implemented the recommendations from CSP on the formula of fertiliser subsidy and distribution channel to make it more effective.

TRIANGULATION: Many parties acknowledged Rikolto because of the strong model established at the grassroots level. Rikolto has played a vital role as a representative of farmer organisations. Being part of these commodity platforms has clearly shown the potential to leverage the interests of Rikolto to a higher level, by working together with stakeholders from different backgrounds (i.e., private sector actors, knowledge institutes, government, FOs) in this environment.

RELEVANCE

EVOLUTION OF THE RELEVANT IMPACT INDICATORS – 4A

Year	2017	2019		2021
Indicator	Baseline	Target	Observed	Target
Number of indirect end beneficiaries: farmer affected by the change in government policy*)	CSP: 136,547	CSP: 150,000	CSP: 160,732	CSP: 162,000
*) disaggregated by sex and age				

Source: Commodity Platform Report.

PROGRESS ANALYSIS: Thanks to lobby and advocacy work of CSP, the government has improved the cocoa rejuvenation policy and allocated funds to provide cocoa fertiliser and seedling subsidy to increase national cocoa productivity. Recommendation from CSP on the formula of the cocoa fertilizer has been accepted and the government is open to accept inputs on the cocoa clones for further subsidy on seedling. The target in 2020 is cocoa farm rejuvenation with new 9,832,024 seedlings.

TRIANGULATION: CSP membership is composed mostly by private sector without any representative from farmer organisations. It has the drawback of slowing down the process of policy implementation at the grassroots level. As most members are major companies based in Sulawesi and Sumatra, the interest of cocoa sector from other areas are not well represented. Rikolto plays the role in bringing in the perspective of FOs in Sulawesi and Flores.

EVOLUTION OF THE RELEVANT IMPACT INDICATORS – 4b

Year	2017	2019		2021
Indicator	Baseline	Target	Observed	Target
Number of indirect end beneficiaries: members of household farmers affected by changes in public/private policies	446,727	495,471	511,818	520,000

Source: Partner Report.

PROGRESS ANALYSIS: Other stakeholders in Indonesia who are not CSP's members have adopted CSP's Cocoa Road Map, resulting in the addition of indirect beneficiaries. Government policies have also led to an increase in national cocoa production that leads to the implementation of other supporting policy such as the fertiliser policy for subsidised cocoa in Sulawesi, which is a major cocoa-producing region.

TRIANGULATION: The increase in CSP membership indicates that member and non-member have implemented and adopted the programme. Also, CSP took part in influencing the stipulation of Regulation of the Minister of Agriculture of the Republic of Indonesia Number 01/2020 concerning the policy of subsidised fertiliser, including inorganic and organic fertiliser. CSP members will involve in a trial of the application of the specific cocoa fertiliser called NPK Special

Formula. The testing will be carried out in four districts in South Sulawesi Province (i.e., The Districts of Pinrang, Luwu, North Luwu, and East Luwu) in which Rikolto's partners operate.

SUSTAINABILITY – COCOA

TECHNICAL: The cocoa business unit at the FO level is mainly on the collective marketing of dry beans to major cocoa companies and a limited amount of fermented beans to chocolate gourmet makers. The farmers can add values by fermentation. Youth and women will be more comfortable to get involved in agriculture value chain when they see the benefit derived from the cocoa business. Capacity building for youth and women is necessary to be developed. In addition to the topic related to cultivation, the issue of cocoa business management will be more interesting for them.

Partners have young people who have been trained as Cocoa Doctors. Cocoa Doctors are youth who are intensively trained by Mars on agronomy, processing and business. The Cocoa Doctors will continue Rikolto's work related to cultivation and improving the quality of cocoa. Some partners in Sulawesi achieve results faster, while some in Flores grow slower. This is to a large degree influenced by the different dynamics of cocoa sector in the respective island. Major cocoa buyers are operating in Sulawesi and some of them run sustainability programmes that provide information to farmers and local traders on how to cultivate, harvest and handle cocoa beans. Infrastructure in Sulawesi is good so that it is relatively easy to sell and transport the beans to the buying stations of the companies to be immediately inspected and processed. Farmers in Flores do not have these luxury. Their beans are sold at lower price because it has to go through local/district traders and then transported to the cocoa processing companies in Sulawesi or Java.

SOCIAL: Various stakeholders have recognised the Rikolto's programme that facilitate individual farmers to do business collectively to improve their livelihood and bargaining power towards cocoa chain actors particularly buyers. When the business is running well and the social connection has been created, the likelihood for FOs to sustain is strong.

The functioning of Internal Control System (ICS) in FOs will help them to support farmers improving their cocoa production and maintaining quality. The functioning ICS helps to increase the willingness and trust of buyers to FOs. They need to continue nurturing the good business relations that so far have been facilitated by Rikolto. Currently, one cocoa partner in Sulawesi has collaborated with their buyer to develop organic cocoa farms.

FINANCIAL: Partners working in Sulawesi have been able to create direct transactions with big buyers and are certainly better prepared in financial administration. In Flores, no major cocoa actors are present yet. Rikolto still needs to facilitate and support the intermediary actors, including FOs. Government's cocoa programme could be tapped as a potential source of funding for FOs, while Agreement or purchase order from buyers can be additionally used to guarantee loans from financial institutions.

ENVIRONMENTAL: The decreasing carrying capacity of the environment needs to be anticipated with adequate cultivation practices. Climate change, extended drought, decreased water availability, land slope and deforestation make conservation efforts even more important. In the programme areas, these are reflected in the GAP and GEP training and adoption of agroforestry concept and landscape approach. The programme also conducts advocacy to local governments to support the conservation efforts. The availability of appropriate technology, such as drip

irrigation can contribute to solving the problem of water availability. The implementation of the cocoa plantation agroforestry concept might be a solution to this environmental problems.

EXIT STRATEGIES - Structural Change Agenda II/ Result 2

SECTOR	EXIT STRATEGIES	ENABLING FACTORS	ACTIONS (SPEED-UP/MAINTAIN)
COCOA	<p>1. Integration of cocoa business with livestock is an initial model in developing cocoa business for youth and women. The company will be able to increase farmers' income as they transform manure from herd into fertiliser. After the training, the FOs need to provide opportunities for youth and women to get involved in cooperative businesses.</p> <p>2. Rikolto has been able to train 300 young people professionally in cocoa cultivation and its derivative business. It gives them a sense of entrepreneurship. After the end of Rikolto programme, the trainees will be young farmers and continue business development at the FOs' level. The capacity building given is expected to fill the skills gap in the cocoa industry in the public and private sectors.</p> <p>3. Rikolto will assist FOs in the certification process and internal management issues reconciliation until the end of the Rikolto program. Rikolto has conducted an assessment using Scope Insight to identify FOS' capacity development needs based on their organisational and business performance. This assessment helps FOs to become professional FOs; thus, they can realise their vision and accomplish the mission. Also, some FOs</p>	<p>A. There are government regulations at the local and national level (mainly to support young people performance).</p> <p>B. There is a Cocoa Doctor association that accommodates young people expertise who have been trained.</p> <p>C. There is an agroforestry plantation that will be a pilot for a sustainable cocoa farm.</p> <p>D. There are sustainability indicators which are adopted and stated in government regulations or policies such as prohibited from planting in protected forest areas, prohibited hunting, must do tree planting under the buffer zone, and others.</p> <p>E. There is a business forum in the village (BUMDES) that adopts a pattern and strategy to strengthen institutional business partners or partner business with FOs within the framework of a sustainable cocoa industry.</p> <p>F. There is a market demand for sustainable cocoa production.</p>	<ul style="list-style-type: none"> o Arrange the stages or timeline for advocacy and lobbying the government for the preparation of related policies. o Those government policies will be internalised into local government policies through regional cocoa forums and other CSP members to accelerate programme implementation. o Form a young farmer organisation through the Cocoa Doctor programme. The cadres of the programme will continue upscaling to other regions outside their district, as done by Amanah Cooperative and Cartagena in The District of Mamuju and Mahakam Ulu. o We are upscaling the learning methods from thriving villages, especially concerning soil and water conservation, resource management, climate change, and biodiversity. o Prepare agroforestry demonstration gardens in collaboration with local government. o We are facilitating business linkage between BUMDES-FOs and the Private sector.

SECTOR	EXIT STRATEGIES	ENABLING FACTORS	ACTIONS (SPEED-UP/MAINTAIN)
	<p>holding business certificates are acknowledged by other organisations.</p> <p>4. Rikolto involves partners in collaborative work with other parties to make them accustomed to dealing with them. This approach is documented for replication and scaling-up purpose.</p> <p>5. We are strengthening the agroforestry concept acceptance in all level of stakeholders to ensure the sustainability of environmental carrying capacity.</p>	<p>G. Farmer organisations can make new deals and maintain existing agreements while continuing to maintain the quality and quantity of products.</p>	<ul style="list-style-type: none"> ○ We are increasing the capacity of farmer organisations in terms of business dealing. ○ We increased their stock management capacity. ○ To speed up the work by creating innovative products that increase market demand and expand the implementation of agroforestry.

VII.2 COFFEE

DGD Outcome Indicators - Result 2¹⁸

Year	Year 1 - 2017	Year 2 - 2018	Year 3 - 2019	Year 4 - 2020	Year 5 - 2021
Indicator 1a: Volume of quality food sold through collective marketing by farmers of partners in Sulawesi, NTT and Jambi (in tons , per year)					
Target	Coffee : 420 (Sulawesi: 160; NTT: 260; Jambi: 0)	Coffee: 150 (Sulawesi: 40, NTT: 90, Jambi: 20)	Coffee: 640 (Sulawesi: 240 ; NTT: 350 ; Jambi: 50)	Coffee: 250 (Sulawesi: 50; NTT: 100 ; Jambi: 100)	Coffee : 420 (Sulawesi: 160; NTT: 260; Jambi: 0)
Achieved	Coffee: 85.19 (Sulawesi: 15.31 NTT: 69.88 Jambi: 0)	Coffee: 121.95	Coffee: 129.30		Coffee: 85.19 (Sulawesi: 15.31 NTT: 69.88 Jambi: 0)
Indicator 1b: Number of farmers of FOs selling through collective marketing					
Target	Coffee: 3380 (Sulawesi: 850 ; NTT: 2500 ; Jambi: 30)	Coffee: 3600 (Sulawesi: 850; NTT: 2500; Jambi: 250)	Coffee: 4320 (Sulawesi: 1020 ; NTT: 3000 ; Jambi: 300)	Coffee: 1000	Coffee: 1150 (Sulawesi: 500, NTT: 300, Jambi: 350)
Achieved	Coffee: 1673 (Sulawesi: 1071; Flores: 442 ; Jambi: 160)	Coffee: 1779	Coffee: 977 (Sulawesi: 450, NTT: 225, Jambi: 302)		
Indicator 1c: Average volume of quality food per farmer of partners sold through collective marketing action mechanisms (in tons)					
Target	Coffee Sulawesi: 0.15 NTT: 0.1, Jambi: 0	-	Coffee: 0.9 ton (cherry)		Coffee: 1.25 ton (cherry)
Achieved	Coffee: 0.79 ton	-	Coffee: 0.94 ton (cherry)		
Indicator 2: Average income of farmers of partners from quality food sales (in USD, per ha, per year)					
Target			Coffee: IDR 15,200,000 (USD 1,100)		Coffee: 1,200 (USD)
Achieved	Coffee: IDR 14,369,102 (USD 1,006)		Coffee: 1,124.52 (USD)		
Indicator 4a: Number of FO partners having fully functioning ICS/IMS					
Target	2	3	5		6
Achieved	2	4	5		
Indicator 4b: Number of FO partners having transparent premium distribution and profit sharing					
Target	1	2	3		6
Achieved	0	2	2		

¹⁸ The targets in year 5–2021 have been revised based on the achievement in 2019 and current condition of the programme.

Pathway of Change: Intervention I – Ultimate Outcome 1

INTERVENTION	OUTPUT	IMMEDIATE OUTCOME	INTERMEDIATE OUTCOME	ULTIMATE OUTCOME
Enabling environment for gender sensitiveness and youth inclusiveness of the value chain.	Organise popular events to introduce sustainable agriculture and inclusive business practices to youth and women	Youth and women have better knowledge on sustainable agriculture and inclusive business practices.	Participation of women and youth on sustainable agriculture production and business increases.	More youth and women are involved in a sustainable value chain.
	Document and share learning and evidences on youth and women inclusiveness.	A compilation of women and youth participation and innovation on sustainable value chain is documented and shared.		
	Organise skill development for youth and women.	Youth and women are able to take an active role in sustainable agriculture practices and FO business.	Youth and women become a driver of FO business	
	Develop business models for youth and women.*)	New business models are developed.*)	The income of the youth and women from agriculture business increases.*)	
	Support FOs to make inclusive policies toward women and youth at the FO level.	FOs stipulate more inclusive policies towards women farmers and youth and broader access for young and women farmers to	Younger and women farmers are involved at FO managerial team.	

INTERVENTION	OUTPUT	IMMEDIATE OUTCOME	INTERMEDIATE OUTCOME	ULTIMATE OUTCOME
		involve in FO business.		

EFFECTIVENESS

EVOLUTION OF THE RELEVANT OUTCOME INDICATORS

Year	2017	2018	2019	2020	2021
Indicator 1.1.2: Percentage of youth who are involved in FO daily practices, becoming staff and governing members of FOs					
Target		30%	45%	42%	45%
Achieved		42.5%	39.87%		
Indicator 1.1.4: Percentage of women who are involved in FO daily practices, becoming staff and governing members of FOs					
Target		30%	40%	40%	45%
Achieved		34.78%	39.10%		

PROGRESS ANALYSIS: Coffee partners have taken the step to promote the participation of youth and women in the organisation by stipulating it in the organisational Statutes. In practice, FOs always make sure there is the participation of women and youth in all activities and encourage them to be involved in the organisational operations. Youth participation, in general, is vibrant in Sulawesi and Sumatra while remains low in Flores. The coffee business is booming in Indonesia, and it attracts youth's interest, especially in off-farm activities such as processing, quality control and marketing. Rikolto encouraged partners to involve youth in more appealing activities such as training on coffee cupping, coffee brewing, barista, quality grading and business.

Percentage of women's participation is slightly lower than the target, except in PPKT (Toraja) whereby many of the staff in the processing unit are women. Patriarchy remains a challenge in some project areas such as Manggarai (Flores) while we can benefit from Matriarchy in Ngada (Flores). Also, the location of especially Arabica coffee garden that grows in the highland and hilly terrain creates additional transportation challenge for women.

There are few young and female trainers, but they have shown strong resilience and commitment to training other farmers. Some prominent examples of positive results of female inclusiveness are: (1) in PPKT, a female group is developing a new business to make natural colour for fabric using coffee waste. Some tests and training have been conducted. The next step is to find the market and make a business calculation. (2) Quality Grader: Mama Lina (MPIG) became Q Grader, Sherly almost passed the Q Grader test (failed on general knowledge), and there are several female local trainers. (3) Representing FOs: 3 female members represented 3 FOs in several coffee expos (Barokah, MPIG, Merangin). The strategies of positive discrimination, continuous encouragement, and exposing their success to other women seem effective to promote more women to take more roles that are prominent.

TRIANGULATION: The management team of Koerintji Barokah Bersama Cooperative (Barokah) much appreciated Rikolto because they had never received training in coffee before. Cooperation with Rikolto aroused the enthusiasm of youth to develop Arabica specialty coffee and its business. Rikolto has facilitated Barokah to take part in exhibitions and cupping tests and connected with buyers. Benefits are very much added to the commitment of the management to be more advanced in production and marketing.

Sherly, a young woman, member of the PPKT management team, thanked Rikolto coffee programme for facilitating her to attend the Q-Grader class. By becoming a Q Grader, Sherly could be a professional cupper trainer, have a network of fellow Q-Graders in Indonesia. By having a Q-Grader who is capable of testing coffee flavours, which determine the quality of coffee, PPKT, is trusted by buyers and other coffee players or actors. Farmers convinced that the quality of their coffee could be guaranteed by the FOs so that buyers do not trick them.

Female workers at PPKT feel very grateful to have the opportunity to work with the coffee programme supported by Rikolto. Thus, they have an additional source of income. Besides, they get knowledge about speciality coffee and understand how to sort the coffee beans and its benefits.

RELEVANCE

EVOLUTION OF THE RELEVANT IMPACT INDICATORS – 1a

Year	2017	2019	2021
Indicator	Baseline	Target	Observed
Number of direct end beneficiaries: farmers producing quality/ sustainable food/agricultural commodities*)	7,801	11,657	Total: 6392 M: 3715 F: 2,677 Y: 874
*) disaggregated by sex and age			Target

Source: Partner Report.

PROGRESS ANALYSIS:

Rikolto coffee programme encourages the involvement of youth and women in every program activity. Some activities are specifically for youth and women to increase their participation in coffee value chains and organizational management. Increasing the involvement of youth and women can also increase the number of direct end beneficiaries.

The decline in the number of end beneficiaries, one of which is due to lack of recruits for young farmers. In contrast, elderly farmers have died, besides the redefinition of the members of the FOs, for example, non-active members are no longer listed as a cooperative's member. One of the challenges is many young people leave the area because they think that being a farmer is an inferior job, other than because of limited land.

TRIANGULATION: With Rikolto's intervention, awareness emerged that in the coffee value chain, the roles of women and young people are crucial. Seeing the success of women farmer group in Sungai Tenang Village by LTB assistance, women's farmer groups in Renah Pelaan Village, Pulau Tengah Village and Merangin, requested for assistance from LTB. This intervention shows that women have enormous potential in coffee cultivation and business.

Barokah held a brewing and barista training attended by 30 young farmers. This activity has become one of the most successful operations, which have increased the interest of young people to play a role in the coffee value chain. Before Rikolto's intervention, such engagement has never been done. Several factors affected the impact both positively and negatively, namely:

1. Positive:

- Coffee trends attract young people involvement
 - Activities have been designed for youth and women
2. Negative:
- Young people think that being a farmer is a lowly work
 - Patriarchy makes women unable to actualise themselves in public space

Pathway of Change: Intervention II – Ultimate Outcome 1

INTERVENTION	OUTPUT	IMMEDIATE OUTCOME	INTERMEDIATE OUTCOME	ULTIMATE OUTCOME
Enabling FOs to enhance their business capacities that comply with sustainability standards and market demands for the welfare of FOs' members.	Organise capacity building activities on IMS/ICS to ensure product traceability and sustainability compliance to increase productivity and add value to the products.	FOs have ICS/IMS teams with adequate knowledge on traceability and sustainability standards.	Members of ICS/IMS teams ensure that farmers meet sustainability verification criteria and produce required supporting documents.	FOs meet sustainability standards and market demands.
	Support FOs to organize capacity building activities for their members on Good Production Practices (GAP) and Good Processing Practices (GPP) that meet sustainability standards	Members of FOs know about practices to be applied to improve the quality and quantity of the product according to the sustainability standards.	Members of FOs apply GAP and GPP in their farm.	
	Facilitating partners (commodity platforms) to assess common criteria of sustainability standards adopted by various certification bodies and buyers.	Partners (commodity platforms) document the common criteria of sustainability standards seek approval from their members and share the results to FOs.	Partners assist FOs in establishing IMS/ICS model(s) that meet these criteria.	

EVOLUTION OF THE RELEVANT OUTCOME INDICATORS

Year	2017	2018	2019	2020	2021
Indicator 2.1.2 (1a): Volume of quality product sold collectively by FO in ton (GBE)					
Target		150	640		250
Achieved	85.18	121.88	129.30		
Indicator 2.1.3 (1c): Average volume of quality food per farmer sold through collective action mechanisms (in tons per commodity)					
Target	0.25		0.90 (cherry)		1.25 (cherry)
Achieved	0.79		0.94 (cherry)		
Indicator 2.1.4 (4a): Number of FOs having fully functioning ICS/IMS					
Target	2	3	5		6
Achieved	2	4	5		

PROGRESS ANALYSIS: In general, there is an increase in the volume of quality product collected by FOs and the number of internal control system (ICS) of FOs. They have been able to meet market demands in terms of quality and quantity. However, the volume of sale does not reach the target. FOs continue to improve their processing infrastructure, but the pace sometimes cannot meet the high demands. Limited working capital also prohibits them from expanding in sales volume. Rikolto's approach to various actors has resulted in FOs obtaining supports of processing infrastructures this year, expecting them to be fully operational next year when higher productivity is predicted.

A challenge in expanding the sale of domestic specialty market is the demand is relatively low compared to volume produced although the price is high. To enlarge the sales volume, FOs should consider export market and/or non-specialty coffee.

Repeat orders from buyers show the trust and capacity of FOs to maintain the quality standards. The involvement of FOs in national and international level coffee competitions and exhibitions and their engagement in the Specialty Coffee Association Indonesia (SCAI) and Sustainable Coffee Platform Indonesia (SCOPI) have been necessary to directly deal with coffee players and understand issues and trends in the coffee sector. Complemented by improvement in FOs' capacity in quality control both through setting up of ICS, following Standard Operational Procedures in processing, and having internal and trained quality graders, FOs can understand and meet market demands of quality coffee. FOs also have the experience of meeting standards for several certifications such as Fairtrade, Organic, CAFE Practice (by Starbucks). 5 out of 6 coffee programme areas got Geographical Indications Certificates. Continuous training of good agricultural practices and coffee farm rehabilitation contribute to increasing productivity.

TRIANGULATION: Barokah scored high (4.5 out of 5) in the Enabler Dimension of the SCOPE assessment as it has benefitted from supports from several government agencies and the Indonesian Central Bank. PPKT scores a bit lower (3.7). PPKT's primary support comes from TRDS through Rikolto. There is a fear that they cannot obtain capacity-building support when the funding ends.

Both PPKT and Barokah scored below 3 in the Sustainability Dimension and External Risks. Despite some improvements on the farm, the extreme weather change affect badly on the production as well as processing. A long rainy season like in 2019 made the drying process much longer and risks of reduced quality high. Both have not formulated risk mitigation actions.

Meanwhile, the Farmer Survey result (Figure 6) showed increased average coffee productivity from 1.76 ton of red cherry/ha (0.29 ton Green Bean Equivalent/ha) to 2.49 ton of cherry/ha (0.42 ton Green Bean Equivalent/ha)¹⁹, meaning Rikolto’s intervention in enabling farmers to meet the sustainability standards bring the positive effect of farm productivity. On the other hands, farmers in Flores, which were represented by Asnikom and MPIG AFB, experienced a significant rise in coffee productivity. It was due to the extreme weather in 2017 that led to crop failure for most of the coffee farmers in Flores. Improvement in agricultural practices helped the farmer to increase the productivity as recorded in 2019.

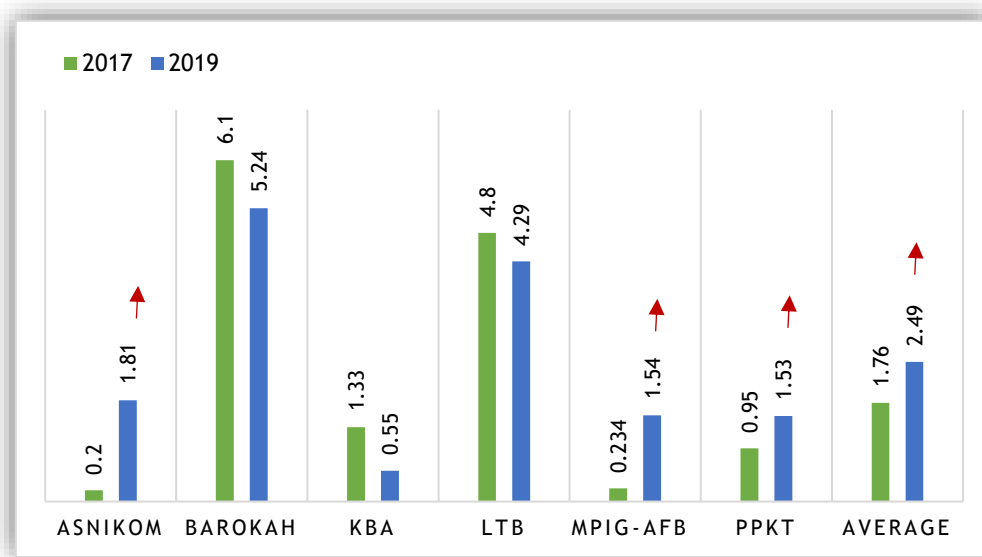


Figure 6. Average Crop Productivity in one year (ton of red cherry, per-ha).

RELEVANCE

EVOLUTION OF THE RELEVANT IMPACT INDICATORS - 3

Year	2017	2019	2021
Indicator	Baseline	Target	Observed
Increase in sustainable production index (Source: Farmer Survey)	2.24	2.3	1.16
<ul style="list-style-type: none"> Soil conservation 	<ul style="list-style-type: none"> Asnikom: 2.75 MPIG AFB: 3.23 KBA: 2.61 PPKT: 0.67 Barokah: 1.94 LTB/KCP Merangin: 1.01 		<ul style="list-style-type: none"> Asnikom: 1.40 MPIG AFB: 0.73 KBA: 1.30 PPKT: 0.95 Barokah: 1.31 LTB/KCP Merangin: 1.23
<ul style="list-style-type: none"> Water management 	2.01	2.3	1.76
			Asnikom: 2.67
			2.2

¹⁹ We need 6 kg of red cherry to get 1 kg of Arabica green beans (Green Bean Equivalent –GBE). Conversion ratio = 1:6.

Year	2017	2019		2021
	Asnikom: 2.51 MPIG AFB: 3.33 KBA: 2.31 PPKT: 1.63 Barokah: 0.26 LTB/KCP Merangin: 0.17		MPIG AFB: 2.66 KBA: 0.93 PPKT: 1.49 Barokah: 0.84 LTB/KCP Merangin: 1.93	
▪ Resource management	2.19 Asnikom: 2.86 MPIG AFB: 3.25 KBA: 2.39 PPKT: 1.86 Barokah: 0.57 LTB/KCP Merangin: 0.49	2.4	1.74 Asnikom: 2.18 MPIG AFB: 2.03 KBA: 1.65 PPKT: 1.73 Barokah: 1.01 LTB/KCP Merangin: 1.83	2.2
▪ Climate change	1.72 Asnikom: 2.11 MPIG AFB: 2.64 KBA: 2.78 PPKT: 1 Barokah: 0.08 LTB/KCP Merangin: 1.52	1.9	0.92 Asnikom: 0.50 MPIG AFB: 0.51 KBA: 0.91 PPKT: 0.50 Barokah: 0.88 LTB/KCP Merangin: 2.21	2
▪ Biodiversity	2.09 Asnikom: 2.8 MPIG AFB: 2.97 KBA: 1.75 PPKT: 1.33 Barokah: 1.93 LTB/KCP Merangin: 1.64	2.3	1.36 Asnikom: 1.27 MPIG AFB: 1.04 KBA: 1.11 PPKT: 0.66 Barokah: 1.99 LTB/KCP Merangin: 2.07	2
▪ Landscape management	1.80 Asnikom: 2.76	2.2	2.25 Asnikom: 2.39	2.5