MIDTERM EVALUATION OF THE 2022-2026 DGD-FUNDED PROGRAMME IMPLEMENTED BY RIKOLTO

Indonesia-Rice

Country/Regional Report

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AOI	Aliansi Organik Indonesia (Indonesian Organics Alliance)
APOB	Asosiasi Petani Organik Boyolali (The Association of Organic Farmer of Boyolali)
APPOLI	Asosiasi Petani Padi Organik Lestari Indonesia (The Association of Sustainable Organic Paddy Farmer of Indonesia)
BDS	Business Development Services
CSP	Cocoa Sustainability Partnership
CSLA	Community Savings and Loan Association
DGD	Directorate-General for Development Cooperation (Belgium)
EE	Enabling Environment
E4I	Evidence for Impact
FGD	Focus Group Discussion
FO	Farmer Organization
FFS	Farmer Field School
FOs	Farmer Organizations
GHG	Greenhouse Gas
GPD	Global Programme Director
GST	Global Support Team
IB	Inclusive Business
ICS	Internal Control System
IM	Inclusive Market
JSF	Joint Strategic Framework
JSG	Joint Strategic Goal
KII	Key Informant Interview
KRKP	Koalisi Rakyat untuk Kedaulatan Pangan
MEL	Monitoring, Evaluation & Learning
MI	Market Inclusion
MSP	Multi-Stakeholder Platform
MTE	Mid-Term Evaluation
NBMP	National Business Model Portfolio
NGO	Non-Governmental Organization
NWG	National Working Group
OECD-DAC	Organisation for Economic Co-operation and Development – Development Assistance Committee
PbN	Preferred by Nature
PERPADI	Perkumpulan Penggilingan Padi dan Pengusaha Beras Indonesia
PES	Payment for Ecosystem Services
SCOPI	Sustainable Coffee Platform of Indonesia
SDG	Sustainable Development Goal
SFS/IB	Sustainable Food Systems/Inclusive Business
SME	Small and Medium Enterprise
SOP	Standard Operating Procedure
SPB	Sustainable Production Base
SROI	Social Return on Investment
SRP	Sustainable Rice Platform
ToC	Theory of Change
VSLA	Village Savings and Loan Association

Locally Led, Collaboratively Designed: A Grounded Approach to Learning and Evaluation

The midterm Outcome Assessment are part of Rikolto's broader learning journey. They serve three objectives: to ensure accountability to donors, partners, and target groups; to foster internal learning and reflection; and to improve Rikolto's MEL system and reporting practices.

To implement the assessments, Rikolto partnered with ADE to co-design a practical and innovative methodology adapted to the available time and resources. A key feature of this approach was the engagement of local consultants in each of the 17 countries where Rikolto operates. These consultants worked closely with Rikolto's country teams to jointly carry out the assessments. ADE provided methodological guidance and remained available throughout the process for support and consultation.

This setup reflects a shared commitment to decolonizing evaluation practices and promoting local ownership. No international travel was involved, which not only reduced the environmental footprint but also aligned with our goal of building internal capacity through a learning-by-doing approach.

The assessments drew on three sources of information: existing Rikolto internal documentation and monitoring data; qualitative discussions with Rikolto's implementation staff; and conversations with few key external stakeholders during short field visits.

We recognize that this approach came with several limitations:

- **Time constraints:** The assessments were conducted within a very limited number of working days, restricting depth of inquiry and refinement of the reports beyond the consultants' initial work—at times further affected by unforeseen circumstances, such as regional conflict or personal setbacks.
- **Internal data dependency:** Most of the information came from Rikolto which may introduce bias.
- **Variability in MEL quality:** The availability, consistency, and quality of monitoring data varied across countries and programmes.
- **Limited stakeholder reach:** Consultations with external stakeholders were selective and brief, meaning some perspectives may not have been fully captured.
- **Diverse consultant experience:** The local consultants brought different levels of familiarity with evaluation methodologies, which influenced the depth of analysis and consistency across reports.

To address these challenges, several mitigation strategies were put in place:

- **Critical reflexivity:** ADE and Rikolto actively encouraged local consultants and teams to apply a critical lens—challenging assumptions, seeking diverse viewpoints, and acknowledging bias.
- **Capacity support:** ADE provided hands-on methodological support where needed, including templates, guidance materials, and feedback loops —to the extent allowed by available resources.
- **Strengthening MEL systems:** During the design and baseline phases, ADE offered targeted recommendations to enhance Rikolto's MEL framework and data collection processes.
- **Strategic stakeholder selection:** External stakeholders were carefully selected to represent diverse perspectives, using a mix of online and offline engagement to optimize time and resources.

These reports are the result of a collaborative effort between national consultants, supported by ADE and Rikolto's country teams, supported by Rikolto's Global Support Team (GST). They reflect our collective commitment to learning, improvement, and accountability.

Acknowledgements

The successful completion of this midterm evaluation would not have been possible without the unwavering dedication and invaluable contributions of the Rikolto Indonesia team—spearheaded by Nana Suhartana, Ratih, and Septy—whose tireless efforts in coordinating field activities, facilitating stakeholder engagements, and providing critical insights into programme implementation were instrumental in grounding this assessment in reality; our deepest gratitude extends to the visionary leaders and resilient members of our implementing partners—APOB, APPOLI, Koperasi Tani Pangan Lestari, and Amarta Padi—who generously shared their time, experiences, and challenges, demonstrating extraordinary commitment to advancing sustainable rice farming despite market uncertainties and climate pressures; we also extend sincere appreciation to the 4,516 smallholder farmers across Central and East Java who welcomed us into their fields and homes, openly discussing their livelihoods and innovations like the Jajar Legowo technique; to local government officials in Boyolali, Klaten, and Blitar Regencies for their policy perspectives; private sector partners who provided candid market insights; and the multi-stakeholder platforms (including the SRP National Working Group) that enriched our understanding of systemic enablers and constraints—each voice collectively wove a nuanced tapestry of evidence, reinforcing our shared mission to build resilient, inclusive, and sustainable rice value chains for Indonesia.

Executive summary

Introduction

This midterm evaluation assesses the progress of Rikolto's DGD-funded programme (2022–2026) in Indonesia's Rice sector, implemented across 4 Farmer Organizations (FOs) in the provinces of Central and East Java. The programme aims to build resilient, sustainable, and inclusive rice value chains by focusing on three interconnected domains: Sustainable Production Base (SPB), Inclusive Markets (MI), and Enabling Environment (EE). Aligned with SDG 2 (Zero Hunger) and national priorities, the initiative targets 30,000 smallholder farmers (including Coffee and Cocoa farmers) by 2026, with midterm results reflecting significant strides in farmer adoption of sustainable practices, market linkages, and policy influence.

Methodology

The evaluation employed a mixed-methods approach, combining quantitative analysis of Rikolto's indicator workbooks with qualitative insights from field visits, Key Informant Interviews (KIIs), and Focus Group Discussions (FGDs). Data collection occurred in March 2025 across project sites in Central and East Java). Stakeholders included FO leaders, private sector actors, women and youth entrepreneurs, and local officials. A participatory sensemaking workshop in Bali validated findings and refined recommendations.
The evaluation assessed the program's progress against its defined indicators and targets across the Sustainable Production Base, Inclusive Markets, and Enabling Environment domains. Data was collected and analyzed to determine the effectiveness of interventions, the sustainability of observed impacts, and the potential for scalability, drawing insights from quantitative performance metrics and qualitative assessments of program implementation, as detailed in the provided effectiveness analysis documents.

Key Findings

Sustainable Production Base (SPB)

The program has demonstrated effectiveness in transforming rice cultivation practices and significantly improving farmer livelihoods. Through comprehensive capacity-building initiatives, including Farmer Field Schools (FFSs) and strategically located 30-hectare demonstration plots, 4,516 individual farmers across 98 farmer groups have been equipped with essential skills in climate-smart and Sustainable Rice Platform (SRP) cultivation standards. The widespread adoption of the Jajar Legowo 2:1 planting technique by 81% of participating farmers has led to a significant surge in productivity, with yields increasing from 5.2-6 tons to 7-9 tons per hectare per season, directly translating into higher incomes for farmers. The "share of income derived from quality main crop sales to the total household income" exceeded its mid-term target at 106% (63% achieved), indicating a substantial positive shift towards primary crop sales contributing significantly to overall household income. Environmentally, the Jajar Legowo 2:1 technique promotes efficient input use, requiring less chemical fertilizer, thereby minimizing runoff and soil pollution, and contributing to reduced greenhouse gas emissions and improved water management.

Inclusive Markets (IM)

The Market Inclusion (MI) interventions have shown mixed but generally positive effectiveness, particularly in fostering inclusive business practices and entrepreneurial development, yet facing critical bottlenecks in broader consumer access. The program has been highly effective in building the business and management capacity of FOs and Small and Medium Enterprises (SMEs), leading to a significant increase in economically viable food system entrepreneurs, achieving 117% of its mid-term target (33 out of 28). Support for women-owned businesses has been effective, surpassing its mid-term target by 171% (12 out of 7), demonstrating strong progress towards gender equity in economic empowerment. The establishment of formal contracts between FOs and 21 companies, with 44% of rice volume sold under these agreements, indicates success in creating stable market linkages and improving FOs' bargaining power. The 91% achievement in functional Internal Control Systems (ICS) further signifies robust quality and traceability mechanisms are being implemented to meet buyer needs. A major challenge is the market's perception of SRP-standard rice; without formal third-party verification, it is often treated as conventional rice, leading to narrow profit margins and elevated business risks for FOs, undermining the economic incentive for farmers to sustain SRP practices.

Enabling Environment (EE)

Rikolto's interventions within the Enabling Environment for the Indonesian rice sector have demonstrated a high degree of effectiveness in influencing policy frameworks and mobilizing financial resources, creating a more supportive ecosystem for sustainable practices. The program has shown a robust capacity for data-driven advocacy, generating 41 pieces of evidence (513% of its mid-term target) to influence stakeholders, which has already spurred local regulatory proposals, such as mandating Jajar Legowo. It successfully met 100% of its mid-term targets for catalyzing new initiatives to promote Sustainable Food Systems/Inclusive Business (SFS/IB) from supported multi-stakeholder organizations and for influencing regulatory measures related to SFS/IB practices.

Sustainability of Impact and Potential for Scale-up

The positive impacts generated by the Rikolto program in the Indonesian rice sector demonstrate a strong potential for long-term sustainability, indicating that the changes initiated are likely to endure and expand beyond the program's direct involvement. This longevity is rooted in a robust combination of economic, environmental, social, and governance factors that foster self-reliance and incentivize continued adoption by various stakeholders. Economically, the demonstrable financial viability achieved by participating farmers, through increased yields and improved income from quality main crop sales, creates a powerful intrinsic incentive for sustained adoption of improved practices. The strong financial performance of supported FOs, achieving net profit margins of 17%, enhances their operational independence and provides internal capital for continued service provision. Environmentally, the widespread adoption of SRP standards and climate-smart practices leads to more efficient input use, reduced chemical runoff, and improved water management, with these benefits integrated into daily farming routines. Socially, the program has significantly empowered smallholder farmers, particularly women and youth, through capacity building and inclusion in leadership roles and agri-SMEs, fostering self-sufficient agents of change. From a governance perspective, the institutional strengthening of FOs through SOPs and ICS, coupled with the program's significant influence in shaping a more conducive enabling environment through evidence-based advocacy and leveraged investments, builds a supportive institutional framework that will continue to favor sustainable practices independently. The Rikolto program's interventions in Indonesia's rice sector demonstrate a significant and compelling potential for large-scale replication and expansion, driven by its validated successes and alignment with critical development objectives. The primary impetus for scaling up lies in the program's proven ability to deliver tangible economic and environmental benefits directly to smallholder farmers, providing a powerful incentive for other farmers to adopt the program's sustainable practices. This proven model, combining economic profitability with environmental stewardship, provides a robust blueprint for why and how to scale up.

Conclusion

The Rikolto Rice Programme in Indonesia has achieved significant effectiveness at its mid-term, particularly in boosting farmer incomes, promoting widespread adoption of sustainable agricultural practices, and influencing a more conducive policy and investment environment. The program's strength lies in its integrated approach, which effectively links sustainable production with market access and supportive governance, while strategically embedding social inclusion, especially for women and youth, within commercially viable models. The ability to orchestrate multi-level coalitions and leverage commercial finance has been pivotal in driving these successes. However, critical challenges persist, notably the severe bottlenecks in rice commercialization due to the lack of market differentiation for SRP rice, which leads to thin margins and disincentivizes further investment in sustainable practices. Inclusivity gaps for youth, coupled with national policies that sometimes misalign with comprehensive sustainability goals and limited local government support, pose ongoing hurdles. To ensure the program's long-term sustainability and unlock its full scalability potential, these areas require targeted and adaptive interventions.

Recommendations

- Deepening Adoption and Mitigating Financial Barriers: Develop and implement innovative financial mechanisms (e.g., revolving funds, micro-credit schemes, targeted subsidies) to mitigate the initial

investment costs for farmers adopting sustainable practices like Jajar Legowo 2:1. Continue to invest in and expand Farmer Field Schools and demonstration plots, leveraging peer-to-peer learning and visible results to drive adoption.

- Enhancing Market Differentiation and Consumer Access: Aggressively pursue market differentiation for SRP-standard rice through formal third-party certification or strong local branding initiatives to secure premium prices. Foster direct linkages between FOs and consumers/institutional buyers, strengthening FOs' negotiation skills and market intelligence. Invest in targeted consumer awareness campaigns in urban centers to stimulate demand for sustainable rice.
- Strengthening Policy Alignment and Local Governance: Intensify evidence-based advocacy to align national and local government policies with comprehensive sustainability and fair growth practices for rice producers, moving beyond a sole focus on consumer availability. Advocate for policies that incentivize sustainable production and address value chain fragmentation. Invest in building the capacity of local governments to provide effective extension services and support for sustainable farming.
- Fostering Autonomy and Diversifying Risk: Implement a deliberate and phased exit strategy for Rikolto's direct technical assistance, focusing on robust capacity building within FOs for independent business development, advanced financial management, and strategic market negotiation. Support FOs in diversifying market channels beyond single buyers or niche exports, exploring domestic mid-tier markets, and developing diversified revenue streams (e.g., processing by-products).
- Integrated Financial and Infrastructural Solutions: Implement integrated financial and infrastructural solutions, such as blended finance models, to fund necessary investments in post-harvest infrastructure (drying facilities, storage, processing units). Explore carbon credit schemes linked to environmental benefits of SRP practices to provide additional revenue streams and sustainable financing for expansion. Foster a collaborative, multi-stakeholder effort led by empowered FOs, supported by private sector actors, and enabled by responsive government policies for widespread replication across Indonesia.

Lessons Learned

- Practical demonstration through FFSs and demonstration plots is paramount in driving adoption by visibly showcasing economic and environmental benefits, overcoming initial scepticism. Scaling requires continued investment in localized proof-of-concept sites and systematizing knowledge transfer through digital tools and "train-the-trainer" models, with early adopters and women champions as key change agents.
- A one-size-fits-all approach is insufficient for inclusion. Highly tailored interventions are essential to leverage the full potential of women and youth. Scaling requires replicating successful models (low-collateral loans, leadership training) and addressing specific barriers like land access for youth through targeted initiatives and policy advocacy.
- FO profitability is a cornerstone of sustainability, but scaling necessitates improved access to capital and effective cost management. Thin margins under existing price controls and the need for larger working capital hinder growth. Scaling requires diversified revenue streams (e.g., processing by-products) and blended finance instruments to fund infrastructure and stock management.
- Evidence-based advocacy is indispensable for amplifying policy wins and fostering a truly supportive enabling environment. The program's success in spurring local regulatory proposals through concrete evidence underscores the power of data-driven arguments. Scaling requires prioritizing systematic documentation of benefits to advocate for national subsidies, public investments, and supportive policies, aligning with national priorities and SDGs.
- Widespread scalability is significantly challenged by deeply embedded systemic production risks and market limitations. Lack of price premiums for SRP rice due to government fixed pricing undermines economic incentives for FOs to aggregate and market at scale. Overcoming this requires advocating for policy reforms that allow market-based pricing for certified sustainable rice or government procurement programs with premiums, alongside designing financial products for FOs to manage larger stock volumes and achieve economies of scale.

1 Introduction and background

1.1 Overview of Rikolto International

Rikolto, an international NGO with over 50 years of experience, is a key partner for farmer organizations (FOs) and food system stakeholders across Africa, Asia, Europe, and Latin America. Operating through five regional offices, Rikolto has been at the forefront of initiatives aimed at fostering sustainable incomes for farmers and ensuring nutritious, affordable food for all. By establishing connections between smallholder farmer organizations, companies, authorities, and various actors in both rural and urban settings, Rikolto has been implementing innovative approaches to accessing, distributing, and producing high-quality, nutritious food, with a commitment to leaving no one behind. Through their global network, they seek to inspire others to tackle with them the inter-related challenges of food insecurity, climate change, and economic inequality.

In 2021, Rikolto launched its 2022-2026 strategy. This strategic plan aims to empower consumers in at least 30 major and intermediate cities to access affordable and nutritious food, sustainably produced by more than 300,000 smallholders associated with over 250 FOs or related groups (e.g., VSLA, women groups). The global strategies for **Sustainable Rice, Cocoa and Coffee and Good Food for Cities (GF4C) programs** seek change in three key food system domains: **Sustainable production, Inclusive markets, and Enabling environments**. While building upon the successes of the 2017-2021 program, this strategy represents a deliberate shift towards a **holistic food system perspective**.

Recognizing the importance to actively engage with stakeholders in areas linked to their core business, such as economic returns, nutrition, health, social inequality, and urban governance, Rikolto is fostering collaborations critical to delivering their mission of sustainable farmer incomes and accessible, nutritious food for all. Rikolto's programs will launch innovative initiatives in these domains, aimed at inducing structural changes to address the intricate challenges within food systems. Emphasizing on **gender and youth**, they are also committed to **reducing biodiversity loss, mitigating environmental damage, addressing the impacts of climate change**, and bolstering food system resilience in the face of shocks and crises.

The launch of this new strategy aligns with a substantial organizational transformation marked by Rikolto's decentralization. In 2022, a pivotal shift occurred in the main programme management structure as it transitioned from regional offices to global programs: Sustainable Rice, Cocoa & Coffee, and GF4C. These programs, spearheaded by representatives from each regional team and a Global Programme Director (GPD), have played a central role in designing the new strategy and will continue to lead programme management globally. This ensures strategic alignment across all countries of operation, incorporating local nuances, fostering internal learning, and leveraging evidence generated worldwide in influential global spaces. Moreover, the responsibility of MEL now falls under the role of the country and regional directors.

1.2 Overview of the Rice and Coffee – Cocoa Programme in Indonesia

Coffee, cocoa, and rice are strategic commodities for Indonesia, and major sources of livelihoods and jobs. Indonesia is currently the sixth largest global producer and a major exporter of cocoa and coffee. Meanwhile, rice is a staple food for about 80% of Indonesians, and almost all production is dedicated to serving domestic markets. Production, processing, and trading of the three commodities provides jobs and livelihoods for millions of households, particularly in rural areas where many live close to or below the poverty line.

However, many producers are trapped in poverty, unsustainable practices, and low productivity and incomes. Coffee and cocoa productivity is a fraction of that in other major producing nations; quality also suffers due to poor farming and processing practices. Rice farmers meanwhile face low margins and limited landholdings that provide poor returns. Smallholders lack access to quality inputs, extension services, and finance. Poor production practices, including overuse of agrochemicals, monocropping, and overuse of

water degrade the environment, contribute to climate change, and undermine resilience to risks like drought or extended heavy rainfall. With low prices for crops, and subsidies for agrochemicals, producers lack incentives to adopt sustainable practices.

Smallholders are marginal participants in the value chains, with limited access to markets or bargaining power. Although most smallholders are members of FOs such as farmer groups and cooperatives. FOs have limited business and management capacity to support access to services like training, finance, aggregation, or to facilitate access to markets. Value chains are disorganised and inefficient, with many intermediaries. Buyers find it hard to source products meeting their requirements, and producers lack bargaining power and market information. As a result, farmers receive the least benefits of additional value in the chain.

Women and youth have limited access to decision-making, training, finance, and economic opportunities. Key issues include women's marginalisation in decision making at household and FO levels, and limited access to trainings, finance, and economic opportunities; the same applies to youth. There is no equal playing ground for women and youth in the value chains, nor in access to and control over the benefits of participation.

Although national policies favour environmental sustainability and 'fair growth' there is little effective action. For rice, the government focuses almost exclusively on availability and access for consumers. Meanwhile, national policies and initiatives for coffee and cocoa (such as the Cocoa Roadmap) focus on productivity and exports. Support is not well targeted and does not meet the needs of farmers and FOs or address the environment and climate resilience. Local governments have limited capacity to provide extension or other support. There is a weak enabling environment and lack of 'push' for more sustainable food systems.

Despite the challenges, growing demand opens opportunities to promote more inclusive and sustainable value chains. Strong domestic demand for organic and 'healthy' rice suggests good market potential for rice produced using the new Sustainable Rice Platform (SRP) standard. Local and international demand for quality, sustainably produced coffee and cocoa also creates opportunities to explore new business models and is generating momentum for platforms such as the Sustainable Coffee Platform of Indonesia (SCOPI) and the Cocoa Sustainability Partnership (CSP), which promote public-private partnerships, innovation, learning, programmatic alignment, and policy dialogue.

This programme builds on Rikolto's work with the support of the DGD to promote sustainability and inclusion in the Indonesian rice, coffee, and cocoa sectors. Since 2017, Rikolto has supported 15,151 farmers in 12 FOs to adopt sustainable production practices and standards and gain improved access to markets, while promoting a supportive enabling environment with strong multistakeholder (MSH) platforms. In this programme (2022 – 2026), Rikolto is upscaling this work to 30,000 farmers in 19 FOs. The previous FOs were assessed in organisation's maturity by the end of 2021, and they will continue to expand the number of their members in the new programme. Rikolto also built on lessons from the 2017-2021 programme, adopting more focus on landscape approaches and scaling up PES (payment for ecosystem services), promoting the new SRP (Sustainable Rice Platform) standard, expanding our work across value chains to better connect producers to markets, and introducing a greater focus on youth and women entrepreneurship.

The programme contributes to JSG (Joint Strategic Goals) 3 in the JSF (Joint Strategic Framework) Indonesia 2022-2026: "CSOs contribute to a comprehensive agenda of economic justice towards promoting sustainable agriculture and entrepreneurship." The programme outcome is that the rice, coffee, and cocoa sectors in Indonesia are resilient, sustainable, and inclusive, contributing to living income for producers and agribusiness entrepreneurs, including women and youth, while increasing the availability of sustainably produced food products on the market. To reach this outcome, Rikolto promotes change in three inter-related domains, as outlined in the JSF:

1. **Sustainable Production Base** (SPB): Rice, coffee and cocoa production are more environmentally, socially, and economically sustainable. Smallholders will gain increased productivity, incomes, and (climate) resilience by adopting smart sustainable production models and practices that enable them to meet market standards for quality and sustainability. The use of sustainable production practices and standards will reduce negative environmental impacts including GHG emissions, excessive water use, and overuse of agrochemicals. FOs that can provide professional services and access to markets will strengthen the position of smallholder farmers.

2. **Market Inclusion** (MI): Resilient FOs/SMEs including marginalised groups i.e., women, youth and smallholders actively participate in inclusive markets. Smallholder farmers and SMEs, including women and youth, will access decent profits and jobs through inclusive business models and relationships with private chain actors. Private chain actors will gain improved access to reliable supplies of quality, sustainable products, according to the demanded/required quantity, quality, and continuity.

3. **Enabling environment** (EE): Better governance of the rice, coffee, and cocoa sectors. Inclusive MSPs will enable key stakeholders to play an effective role in sustainable and equitable sector development. Evidence for impact will be used to convince national and local governments and private chain actors to develop more conducive policies and targeted support such as financing schemes that enhance the overall sustainability of the sectors.

The underlying causal hypothesis is that (1) when smallholder production models and practices are more environmentally, socially and economically sustainable; (2) when FOs and SMEs, including women and youth, can participate more efficiently in markets based on inclusive business (IB) relationships with private chain actors, and; (3) when sustainability and inclusion are supported through better governance of the rice, coffee, and cocoa sectors, in which stakeholders at all levels can participate in developing common agendas, standards, and initiatives; then the sectors will be more sustainable, inclusive and resilient to provide living incomes from the farming system and improve the availability of sustainable food products for consumers.

The programme is operating at local and national levels, covering value chains for rice, cocoa and coffee in the eight provinces of North Sumatra (cocoa); Jambi (coffee); West Java (coffee); Central Java (rice); East Java (rice); South Sulawesi (cocoa, coffee, rice), West Sulawesi (cocoa), and East Nusa Tenggara (cocoa, coffee).

At the local level, it supports the piloting and upscaling of sustainable production practices by farmers, FOs and SMEs, and the establishment of IB relationships with private chain actors such as processors, traders and retailers. These interventions were carried out in association with local governments, research institutes and Business Development Services (BDSs) providers or Small and Medium Enterprises (SMEs). To promote a conducive enabling environment, Rikolto and its partners engaged in national multi-stakeholder initiatives and platforms that promote the development and adoption of sustainable production standards and practices and market inclusion principles, and advocate for policies and programmes that contribute to sector development. The programme will also contribute to sector-wide change by engaging at the global level through engagement in the specific commodity platforms such as the Sustainable Rice Platform (SRP), the Global coffee partnership platform and World Cocoa Foundation partnership meetings.

The principal contribution to SDGs is to SDG 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture. The programme contributes to target 2.3, to double productivity and incomes of small-scale food producers, including women and family farmers by 2030, through measures that include access to inputs, knowledge, financial services, markets and opportunities for value-addition and non-farm employment. It also contributes to target 2.4, to ensure sustainable food production systems and resilient agricultural practices that increase productivity and production, maintain

ecosystems, improve land and soil quality, and strengthen capacity for adaptation to climate change and disasters.

Promoting the inclusion and equality of vulnerable groups or individuals has been a starting point for the design of this programme, which identifies smallholder farmers, women and youth as key groups at risk of being left behind in existing commodity chains. Empowerment and inclusion are key considerations in the proposed interventions on capacity building, business development, advocacy, and learning. Rikolto will strive to promote meaningful participation. This will be reflected in indicators for participation, but also through efforts to ensure that women and youth are represented in decision-making in FOs and in enterprise activities. The programme will also support greater representation and attention to the needs of smallholders, women and youth through the development of IB relationships, and in MSH initiatives and platforms, while at the same time stressing the responsibilities of public authorities and businesses to address power imbalances.

In addition to contributing to SDG 2, the programme has multiple co-benefits relating to other SDGs. These include SDG 1 on ending poverty, which is addressed through promotion of decent work and living incomes as well as efforts to build resilience. It is relevant to SDG 5, especially target 5.5: Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life and to SDG 8, especially target 8.5 on productive employment and decent work for all women and men, including young people and people with disabilities. Sustainable production practices and standards also have co-benefits relating to SDG 12 on ensuring sustainable consumption and production patterns, including 12.2 on sustainable management and efficient use of natural resources; 12.3 on food waste and food losses; 12.4 on sound and safe management of chemicals and wastes; and 12.5 on GHG reduction. Support for multi-stakeholder partnerships at local, national and international levels is also highly relevant to SDG target 17.16.

1.3 Scope and Objectives of the Outcome Level Evaluation

In 2024-2025, ADE has conducted the mid-term evaluation of the DGD programme per outcome (Outcome Assessment report) in close collaboration with Rikolto. Two of the OECD-DAC evaluation criteria were assessed through these Outcomes Assessment: Effectiveness and Sustainability.

- Effectiveness wase assessed for all outcomes and in all countries.
- Sustainability was assessed only for one selected country per outcome.

Each of the two OECD criteria has been assessed by ADE local consultants using available Rikolto documentation and data, complemented by field visits to collect additional qualitative data through Key Informant Interviews (KIIs) and Focus Group Discussions (FGD) with relevant stakeholders.

The local consultant's work also entailed capacity building for Rikolto's local teams, including understanding of the evaluation methodology, data interpretation and analysis, and sensemaking.

2 Evaluation Methodology

Rice and Coffee-Cocoa Programme is one of the outcomes in Indonesia, but due to the operational reasons, commodity business process and the nature of the outcome harvesting, rice assessment and report is separated from coffee-Cocoa report.

2.1 General approach

The methodological approach for the Outcome Assessments was based on the information available in the indicator workbooks and available key documentation, complemented by KIIs and FGDs with Rikolto's local teams, regional directors, GPD and the GST, as well as relevant external stakeholders such as FOs, partners, multistakeholder platform members, and other external partners the local consultant sees as relevant. The indicator workbook was populated based on the data collected by Rikolto's local teams. Rikolto's GST ensured that they follow the guidelines and recommendations provided by ADE at the design and baseline phases regarding i) indicator definition and computation, ii) data collection, iii) data analysis, and iv) reporting and learning. ADE was available for discussions with Rikolto GST and local teams if further guidance is needed.

2.2 Documentation review

The methodological approach for outcome assessments is a structured process that leverages completed Indicator Workbooks (revised versions) and relevant documentation, including strategic documents, such as the ToC, programme outlines, progress reports, annual donor reports i.e., DGD, E4I products, MSP assessments, and NBMP assessments. A folder with selected documents to include in the review was shared with the local expert by Rikolto's GST. Rikolto's local teams were available to answer any question raised by the local consultant during his review (e.g., why some targets have not been reached, why some indicators have not yet been completed, etc.).

Based on the Indicator Workbooks and available documentation, the local evaluation team conducted the midterm Outcome Assessments following a Word template structured around the two OECD-DAC criteria: effectiveness and sustainability.

2.2.1 Effectiveness

The Outcome Assessment report first presented the programme ToC, the country target groups, and main stakeholders, before diving into the evolution of the common indicators and the programme-specific indicators per pillar compared to baseline and target values.

To analyse the effectiveness of the Outcome, the local consultant critically reviewed the values and targets of each indicator, identify discrepancies, and analyse trends. More specifically, the local consultant carefully analyzed:

- the evolution of the indicators compared to their baseline values,
- the midterm values compared to their target values,
- the midterm values vis-à-vis endline target values set by Rikolto teams.

Qualitative information and narrative descriptions of change compiled by Rikolto teams in the Indicator Workbooks were used to contextualize the quantitative results and understand the evolution of the indicators.

Table 1: Documents Consulted in the Mid-Term Review

No	Documents
Priority Document	
1	DGD programme documents

2	Co-funding project documents
3	Indicator workbook
4	Baseline data and Reports
5	Summary of innovations (E4I cases)
6a	Donor reports for DGD project
6b	Donor reports of co-funding projects
7	SROI Assessment reports and data (not relevant for Indonesia Rice report)
Supplementary Document	
8	Farmer survey report and dataset
9	SCOPEinsight report
10	MSP Assessment report
11	NBMP summary report
12	Annual Progress reports
13	Annual workplans_DGD
14	Annual Workplans_co-funding projects
15	2021 endline evaluation for DGD Programme
16	Evaluation of co-funding projects
17	Any other documents

2.2.2 Sustainability

The local consultant engaged in collaborative reflection with Rikolto's staff to assess the sustainability of Rikolto's interventions, with a specific focus on two critical components:

- **Longevity of Impact**: The consultant evaluated whether the positive impacts of Rikolto's interventions are poised to endure beyond the conclusion of Rikolto's direct involvement. This involves probing whether the communities or beneficiaries served will continue to benefit and thrive after Rikolto's direct interventions cease.
- **Potential for Scaling Up**: Additionally, the consultant analyzed the likelihood of external stakeholders adopting and expanding upon Rikolto's interventions. This assessment explored the readiness and receptiveness of external actors to integrate and replicate successful strategies implemented by Rikolto.

To address these inquiries comprehensively, the consultant primarily draw insights from various sources, including:

- DGD Annual Progress Reports (section Sustainability):
- Direct Discussions with Rikolto's teams
- Additional Data Collection from programme partners and external actors.

By synthesizing information from these diverse sources, the consultant generated a comprehensive understanding of the sustainability landscape surrounding Rikolto's interventions, thereby facilitating informed decision-making and strategic planning for the second half of the programme.

2.3 Additional qualitative data collection

Based on the careful review of the Indicator Workbooks and Rikolto's documentation, the local consultant reflected, in close collaboration with Rikolto's local team, on additional qualitative data to be collected through a field visit to complement available information, mainly for the effectiveness and sustainability OECD-DAC criteria.

The local consultants used the FGD and KII guides prepared by ADE and GST. These guides was reviewed and adapted by the local consultant to match their needs and contexts.

Stakeholders included in the analysis were farmers, FOs, other partners, multistakeholder platform members, and other external partners the local consultant sees as relevant. Meetings with these stakeholders was set up by Rikolto's local team according to the availability of the stakeholders and team. There are 4 FOs in Rice Program, 3 of them were visited, 1 was interviewed by online meeting.

Table 2: Itinerary

Date	Activities
Sunday - March 16	Traveling to Surakarta, Central Java
Monday - March 17	Field visit and discussion with farmers group and FO Tani Pangan Lestasi in Klaten, Central Java
Tuesday - March 18	Field visit and discussion with farmers group, FO APOB and FO APPOLI in Boyolali, Central Java
Wednesday - March 19	Discussion with Rice Program Team; online FGD with FO Amarta Padi, Blitar, East Java
Thursday - March 20	Travel back to Jakarta

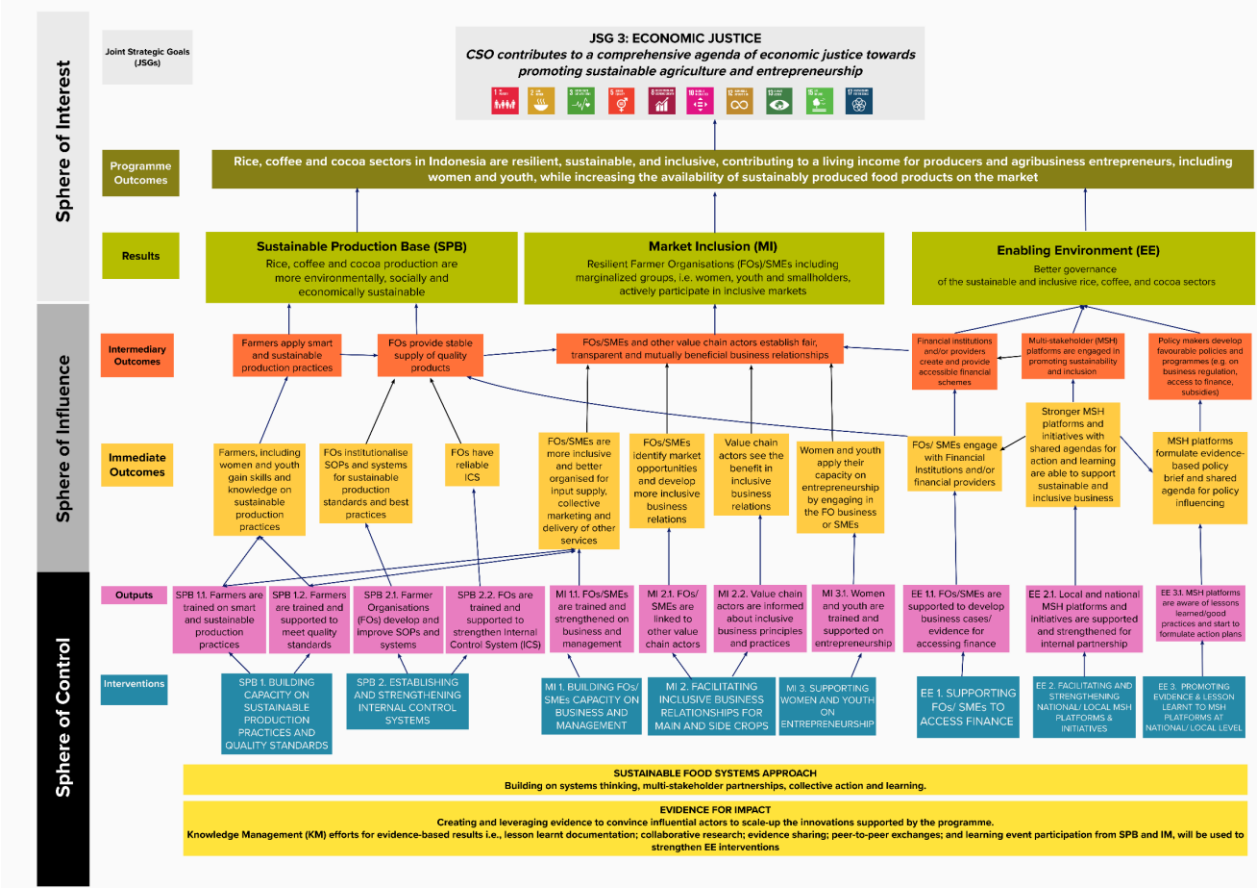
2.4 Participatory approach and sensemaking workshop

The local consultant conducted a participatory workshop with Rikolto's local team to review and validate the findings and develop key recommendations using a participatory approach. The participatory workshop for rice was held two times: one time during the field visit and the second time during the sense-making meeting in Rikolto's office in Bali. During the sense making meeting local evaluator and Rikolto Rice Team worked together in clarifying the field findings, the result of the analysis and recommendation development.

The draft of the Outcome Assessment report was sent to the country team before the workshop so that Rikolto's staff can take time to reflect on it and provide feedback before and/or during the workshop. The local evaluator incorporated workshop feedback into the report, including concluding remarks and recommendations.

3 Findings of the Evaluation

Figure 1: Rice ToC



The Rice Programme Outcome: "The rice sectors in Indonesia are resilient, sustainable, and inclusive, contributing to living income for producers and agribusiness entrepreneurs, including women and youth, while increasing the availability of sustainably produced food products on the market".

To reach the program outcome Rikolto structured the 8 interventions as follows:

Table 3: Rice Program Interventions, Outputs, Immediate and Intermediate Outcomes

Interventions	Outputs	Immediate outcomes	Intermediate outcomes	Key assumptions
Result 1: Sustainable Production Base (SPB). Rice production is more environmentally, socially and economically sustainable				
SPB 1: Building capacity on sustainable production practices and quality standards	SPB 1.1. Farmers trained on climate smart and sustainable production practices	Farmers, including women and youth gain skills and knowledge on sustainable production practices	Farmers apply climate smart and sustainable production practices	- Production/ markets are not affected by major natural, financial or other disasters - Inputs will be available and accessible
	SPB 1.2. Farmers trained and supported to meet quality standards			- With support, producers can access finance - FOs will 13rganized the importance of

				including women and youth
SPB 2. Establishing And Strengthening Internal Control Systems	SPB 2.1. Fos develop and improve Standard Operating Procedures (SOPs) and systems	Farmer Organisations (Fos) institutionalise SOPs and systems for sustainable production standards and best practices	Fos provide a stable supply of quality products	- Economic, social and environmental benefits will persuade farmers to adopt sustainable production practices and quality standards - Access to markets will 14rganized14e producers to adopt standards
	SPB 2.2. Fos are trained and supported to strengthen Internal Control System (ICS)	Fos have reliable ICS		- Continued/ growing demand for quality sustainable rice/coffee/cocoa - Consumers and market actors 14rganized and trust sustainability standards and assurance mechanisms
Result 2: Market Inclusion. Resilient Farmer Organisations (Fos)/SMEs including marginalized groups i.e., women, youth and smallholders actively participate in inclusive markets				
MI 1. Building Fos/ SMEs capacity on business and management	MI 2.1. Fos/SMEs are trained and strengthened on business and management	Fos/SMEs are more inclusive and better 14rganized for input supply, collective marketing and delivery of other services	Fos/SMEs and other value chain actors establish fair, transparent and mutually beneficial business relationships	- FO leaderships will commit to better services for their members - Fos will commit to measures to ensure inclusion of women and youth - Private companies, buyers are willing to form long term relations with farmers - Farmers will honour supply contracts.
MI 2. Facilitating inclusive business relationships for main and side crops	MI 2.1. Fos/SMEs are linked to other value chain actors	Fos/SMEs identify market opportunities, and develop new business relations	Fos/SMEs and other value chain actors establish fair, transparent and mutually beneficial business relationships	- Inclusive business models will create incentives (win-win scenarios) for all actors in the chain and can be replicated by others
	MI 2.2. Value chain actors are informed about inclusive business principles and practices	Value chain actors see the benefit in inclusive business relations		
MI 3. Supporting women and youth on entrepreneurship	MI 3.1. Women and youth are trained and supported on entrepreneurship	Women and youth demonstrate their capacity on entrepreneurship by engaging in the FO business or SMEs		- Youth and women will want to develop new business opportunities
Result 3. Enabling Environment. Better governance of the rice, coffee, and cocoa sectors				

EE 1. Supporting Fos/ SMEs to access finance	EE 1.1. Fos/SMEs are supported to develop business cases/ evidence for accessing finance	Fos/ SMEs engage with Financial Institutions and/ or finance providers	Financial Institutions and/or providers create and provide accessible financial schemes	- Financial institutions will be willing to adjust financial practices to accommodate specific producer business processes
EE 2. Facilitating and strengthening national/ local MSH platforms and initiatives	EE 2.1. Local and national MSH platforms and initiatives are supported and strengthened for internal partnership	Stronger MSH platforms and initiatives with shared agendas for action and learning are able to support sustainable and inclusive business	Multi-stakeholder (MSH) platforms are engaged in promoting sustainability and inclusion	- There will be continued and new public and private sector interest in working together to promote inclusion and sustainability standards and practices
EE 3. Promoting Evidence & Lesson Learnt to MSH Platforms at National/ Local Level	EE 3.1. MSH platforms are aware of lessons learned/good practices and start to formulate action plans	MSH platforms formulate evidence-based policy brief and shared agenda for policy influencing	Policy makers develop favourable policies and programmes (e.g. on business regulation, access to finance, subsidies, sustainable rice)	- National and local governments continue to prioritise coffee/ cocoa/ rice sectors - Climate change adaptation and mitigation will motivate policies and programmes to support sustainable production practices

During the 2022-2026 programme, Rikolto works with 4 FOs, 98 farmer's groups, and 4516 farmers to implement the interventions above.

Table 4: FOs and Numbers of Farmer's Group and Members

FO	Number of Farmer's Group	Number of Farmers	Location
APOB	31	1842	Boyolali, Central Java
APPOLI	34	1507	Boyolali, Central Java
Koperasi Tani Pangan Lestari	19	603	Klaten, Central Java
Amarta Padi	14	564	Blitar, East Java

For APOB and APPOLI, two rice farmer cooperatives in Boyolali Regency, Central Java, the 2022-2026 phase is the fourth phase. This phase introduces, for the first time in a formal capacity, the Sustainable Rice Platform (SRP) standard to farmers—promoting environmentally friendly rice cultivation practices. In the previous phase, both cooperatives focused on the cultivation and marketing of organic rice. Having operated for many years, APOB and APPOLI have established a strong presence and a degree of comfort within the organic rice market.

Together with APOB and APPOLI in Boyolali, the programme has also involved Koperasi Tani Pangan Lestari in Klaten Regency - Central Java, and the Koperasi Amarta Padi in Blitar Regency - East Java. The two cooperatives are involved in the programme with Rikolto Indonesia for the first time. However, for APOB and APPOLI, SRP standard is something completely new. It may even feel more difficult because they are used to the cultivation and market of organic rice. While the Koperasi Tani Pangan Lestari and the Koperasi Amarta Padi have been accustomed to conventional rice cultivation and rice markets. In principle,

these four cooperatives are really facing something new in the programme that promotes the SRP standard.

APOB needs to adjust, because it is used to being involved in the organic rice business with high economic value and margins. The output of cultivation using the SRP standard without any third-party verification, on the other hand, produces "regular rice" which is responded to by the market as conventional rice: thin margins with high business risks. APPOLI appears to be adapting more quickly by successfully selling more than 200 tons of SRP rice in 2024. The Tani Pangan Lestari Cooperative in principle experiences the same problems as APOB and APPOLI because it faces a relatively similar rice market. This is different from the Amarta Padi Cooperative which can market SRP rice with a fairly good margin and quantity according to target because it has a competitive advantage geographically. Rice from Amarta Padi is marketed locally, both directly to the consumers and to the institutional markets (Islamic boarding school, local government office, women groups).

The main activities in the implementation of the programme to produce intermediary outcomes in the Sustainable Production Base are by organizing field schools for farmers who are members of farmer groups and implementing 30-hectare demonstration plots for each FO. When this mid-term review was carried out, the 30-hectare demonstration plots were not in one area but were spread across the locations of the farmer groups. The field schools and demonstration plots are under the coordination of the FO and their operationalization involves farmer groups. Demonstration plots are usually located in strategic locations so that farmers who have not been involved in this program can witness the SRP rice cultivation practices and attract their interest in practicing the same things as those in the demonstration plots.

For each FO, farmer field schools (FFSs) are organised once per season, each consists of 4-6 learning sessions throughout the season, the material of which is mainly SRP rice cultivation standard. FFSs are held in turns in various locations where the demonstration plots are located. In the FFS, various theories of SRP rice cultivation are presented and continued with observations of their implementation in the demonstration plots. Thus, the FFS provides practical experience that can convince farmers that SRP rice cultivation will provide better harvests and income for farmers.

The planting practice promoted in demonstration plots and FFS is Jajar Legowo 2:1. The use of the jajar legowo 2:1 planting technique has been proven to have produced better yields, which is 7-9 tons per hectare. This figure is far higher than the average national rice productivity figure of 2018 (5.2 tons per hectare). The jajar legowo system allows more efficient use of inputs because it uses fewer fertilizers, facilitates crop maintenance, controls pests and diseases, and maximizes the photosynthesis process. In several observations in various places in Indonesia, rice grain produced using jajar legowo 2:1 technique has the same quality as rice grain with seed quality. When processed, there are fewer fractions, making it possible to obtain a better selling price.

Jajar legowo practice has been recommended since the mid-1990s, and now more and more farmers in various regions in Indonesia are doing it. Cooperatives and farmer groups can specifically promote jajar legowo 2:1 to other farmers outside their members so that local land productivity and harvest quality can be improved. This situation in turn will increase opportunities for cooperatives to have a more secure rice supply. However, it should be noted that the involvement of farmers who have been documented in planting rice will ensure the availability of rice following market needs. Farmers who adopt Jajar Legowo 2:1 feel a surge in productivity on their land and at the same market price automatically provide higher income than before practicing Jajar legowo 2:1.

The only challenge faced by these four cooperatives in SRP is that farmers have to invest in higher costs at the beginning of the production stage because of the use of "Jajar Legowo" technique which uses more seeds and higher planting costs. In average it costed them an extra of IDR 300,000 per 2,000 square meter rice field. However, this is compensated by savings in fertilizer costs and higher farm productivity.

The demonstration plots showed significant increase in yield from 5.2 - 6 tons paddy to 7 - 9 tons per hectare per season.

3.1 Effectiveness of the Interventions

3.1.1 Sustainable Production Base

Table 5: SPB Indicators Analysis

Indicator name	Progress towards Mid-term Target			Progress towards End-line Target	
	Midterm Target	Cumulative Life of project results	Percentage of Mid-term Target	End-line Target	Percentage of End-line Target
SPB 1					
No. of farmers getting a better deal as a result of Rikolto's interventions	5.381	4.336	81%	7.312	59%
Average annual net income from the agricultural system per hectare (EUR/ha)	2.835	1.851	65%	3.405	54%
Share of income derived from quality main crop sales to the total household income (%)	60%	63%	106%	70%	91%
No. of farmers supported on sustainable production and inclusive business relationships	5.381	4.336	81%	7.312	59%
No. of farmers improving their resilience as a result of Rikolto's interventions	5.381	4.336	81%	7.312	
SPB 2					
Volume of environmentally sustainable produce sold to the market via Rikolto-supported farmer aggregation initiatives	4.842	1.995	41%	5.165	38%
Net profit margin (%) of Rikolto-supported agri-businesses (FOs, BDS providers)	10%	17%	170%	12%	142%
Amount of commercial finance leveraged (EUR) via Rikolto-supported agri-businesses (FOs, SMEs, CSLAs, or the like)	45.161	58.470	129%	50.600	116%

3.1.1.1 SPB 1

1. **Farmers Benefiting from Interventions**
   - **Mid-term Target:** 5,381 farmers
   - **Progress:** 4,336 farmers (81% of mid-term target, 59% of end-line target)

- **Analysis:** The project is on track to meet the mid-term target but needs accelerated efforts to achieve the end-line goal of 7,311 farmers.

2. **Average Annual Net Income (EUR/ha)**
   - **Mid-term Target:** €2,835
   - **Progress:** €1,844 (65% of mid-term target, 54% of end-line target)
   - **Analysis:** Income growth lags behind targets, suggesting challenges in scaling agricultural productivity or market access of verified rice.
3. **Share of Income from Quality Main Crop Sales**
   - **Mid-term Target:** 60%
   - **Progress:** 63.5% (106% of mid-term target, 91% of end-line target)
   - **Analysis:** Strong performance, exceeding mid-term expectations and nearing the end-line target (70%).
4. **Farmers Supported on Sustainable Practices**
   - **Progress:** 4,336 farmers (81% of mid-term target)
   - **Analysis:** Aligns with the broader trend of farmer engagement, indicating consistent outreach.
5. **Farmers Improving Resilience**
   - **Progress:** 4,336 farmers (81% of mid-term target)
   - **Analysis:** Matches other farmer-focused metrics, but lacks an end-line target for comparison.

SPB 1 shows strong progress in income diversification and farmer engagement but needs focus on boosting net income per hectare to meet end-line goals.

3.1.1.2 SPB 2

1. **Volume of Sustainable Produce Sold**
   - **Mid-term Target:** 4,842 tonnes
   - **Progress:** 2,193 tonnes (45% of mid-term target, 42% of end-line target)
   - **Analysis:** Significant shortfall; may reflect challenges in market linkages or production scalability.
2. **Net Profit Margin of Agri-Businesses**
   - **Mid-term Target:** 10%
   - **Progress:** 17% (170% of mid-term target, 142% of end-line target)
   - **Analysis:** Outstanding performance, surpassing both targets—indicating strong financial viability of supported businesses.
3. **Commercial Finance Leveraged (EUR)**
   - **Mid-term Target:** €45,161
   - **Progress:** €58,470 (129% of mid-term target, 116% of end-line target)
   - **Analysis:** Exceeds expectations, demonstrating success in attracting investment.

SPB 2 excels in financial metrics (profit margins, finance leveraged) but struggles with volume of sustainable produce sold, which may require supply chain or logistical interventions.

The Rikolto program's interventions within the Sustainable Production Base (SPB) for rice in Indonesia have demonstrated a significant degree of effectiveness at mid-term, particularly in enhancing farmer productivity and fostering the adoption of sustainable agricultural practices. Key indicators from the SPB domain reveal a positive trajectory for smallholder farmers. For instance, 81% of participating farmers (4,336 out of a mid-term target of 5,381) are reported to be "getting a better deal" as a direct result of Rikolto's interventions, indicating improved economic conditions. Furthermore, the "share of income derived from quality main crop sales to the total household income" impressively exceeded its mid-term target, reaching 63% against a 60% target, signifying a positive and substantial shift towards primary crop sales contributing significantly to overall household income. While the average annual net income from the agricultural system per hectare reached €1,851/ha, representing 65% progress towards its mid-term

target (€2,835/ha), this still indicates a substantial improvement in farmer livelihoods. These achievements underscore the program's success in empowering smallholders to enhance their economic standing and resilience through the adoption of smart, sustainable production models and practices.

A series of integrated and mutually reinforcing enabling factors have been instrumental in driving the effectiveness of the Rice Sustainable Production Base. Central to these is the comprehensive capacity-building framework, which includes the organization of Farmer Field Schools (FFSs). These FFSs are conducted once per season, comprising 4-6 intensive learning sessions focused on imparting knowledge of the Sustainable Rice Platform (SRP) cultivation standard and critical climate-smart practices to farmers, including women and youth. Complementing this theoretical and practical instruction, the program strategically establishes 30-hectare demonstration plots for each participating Farmer Organization (FO), such as APOB, APPOLI, Koperasi Tani Pangan Lestari, and Amarta Padi. These plots, thoughtfully distributed across various farmer group locations, serve as tangible, real-world showcases of SRP rice cultivation, providing visual evidence of improved yields and enhanced quality that persuades farmers to adopt these innovative practices. A core technical intervention is the extensive promotion of the Jajar Legowo 2:1 planting technique, which has consistently demonstrated its capacity to significantly increase yields to 7-9 tons per hectare, notably higher than the national average of 5.2 tons per hectare in 2018. This technique also facilitates more efficient utilization of inputs, requiring less fertilizer, and improves crop maintenance and pest control. Beyond individual farmer training, the institutional strengthening of FOs through the development of Standard Operating Procedures (SOPs) and Internal Control Systems (ICS) for sustainable production standards is paramount, enabling FOs to deliver professional services and ensure a consistent supply of high-quality products. The program currently engages with 4 FOs, encompassing 98 farmer groups and directly benefiting 4,516 individual farmers, demonstrating its broad operational reach.

Economic Challenges and Transition Costs: A major challenge hindering faster and more uniform progress, particularly reflected in the lagging volume of sustainable produce sold (45% of mid-term target) and the slower growth in average net income per hectare (65% of target), is the significant upfront investment cost for farmers transitioning to SRP practices, primarily due to Jajar Legowo. The technique requires more seeds and higher planting labor costs, adding approximately IDR 300,000 per 0.2 hectares. While the long-term economic benefits through higher yields (compensating for input costs) and potential premium prices are demonstrable, this initial financial barrier poses a substantial hurdle, especially for smaller or more risk-averse farmers. Furthermore, the lack of verified market differentiation for SRP rice (without third-party verification) meant it was often treated as conventional rice, offering thin margins and failing to provide the immediate price incentive needed to fully offset the transition costs and risks perceived by farmers, particularly impacting FOs like APOB used to organic premiums.

Market Linkages and FO Adaptability as Critical Factors: Effectiveness was heavily influenced by the FOs' capacity to adapt and establish viable market linkages for SRP rice. APPOLI's relative success (selling over 200 tons in 2024) highlights the importance of market access, while APOB's struggle underscores the difficulty of shifting from a high-margin organic niche to a potentially lower-margin but higher-volume SRP model without clear market recognition. The geographical advantage and direct market access (consumers, institutional buyers like Islamic boarding schools) enjoyed by Amarta Padi in East Java proved to be a significant enabling factor, allowing them to achieve better margins and meet volume targets. This contrasts sharply with the experience of FOs in Central Java (APOB, APPOLI, Tani Pangan Lestari) facing more competitive "regular rice" markets. The indicator on the share of income from quality main crop sales exceeding its target (106%) suggests that for participating farmers who can sell their SRP produce effectively, rice remains a crucial income source, but the lagging volume sold indicator reveals this success isn't yet widespread across all FOs and their members.

Environmental Effectiveness and Resource Efficiency: The environmental effectiveness of the Rice Sustainable Production Base is deeply embedded in the formal integration and widespread promotion of the Sustainable Rice Platform (SRP) standard, which guides the adoption of environmentally friendly cultivation practices. The widespread adoption of the Jajar Legowo 2:1 planting technique yields significant environmental benefits by optimizing agricultural input use, notably requiring less chemical fertilizer. This

reduction directly minimizes chemical runoff into water bodies and decreases soil pollution, thereby safeguarding local ecosystems. The program's overarching objective to promote sustainable practices also aims to curtail excessive water usage, contributing to more responsible and efficient water management in rice cultivation, a historically water-intensive activity. Furthermore, the transition towards sustainable production practices, including reduced reliance on synthetic fertilizers and enhanced soil health management, inherently contributes to the mitigation of greenhouse gas (GHG) emissions from rice paddies. By actively promoting practices that move away from monocropping and the indiscriminate use of agrochemicals, the program directly supports the crucial objective of reducing biodiversity loss, fostering healthier soil and more balanced ecosystems. The comprehensive training on "climate-smart production practices" represents a proactive measure to augment the rice sector's adaptive capacity, empowering farmers to cope with increasing climate risks like droughts or unpredictable heavy rainfall.

Social Inclusion and Variability: The program demonstrates effectiveness in broad-based farmer inclusion through its FFS and demo plot approach, reaching 4,336 farmers across 98 farmer groups in 4 FOs by mid-term. This wide reach is a significant social achievement. However, the analysis of social inclusion depth, particularly concerning women and youth empowerment within the SPB pillar, is less prominent in the provided SPB effectiveness data. While the program design emphasizes gender and youth, the SPB indicators reported focus primarily on aggregate farmer numbers, income, yield, and volume sold. The success in training large numbers (the 81% achievement) includes women and youth participants, but the specific impact on their decision-making power, access to resources within the FOs, or differentiated benefits from the SPB practices requires deeper qualitative analysis beyond the presented quantitative SPB table. The varying adaptability and institutional strength of the FOs also presents a social dimension. Long-standing FOs (APOB, APPOLI) faced cultural and market adjustment challenges with the new SRP model, while newer entrants like Amarta Padi leveraged local connections. This highlights the need for tailored support strategies recognizing the diverse capacities and contexts of partner organizations to ensure equitable benefits and sustained inclusion.

Despite these commendable achievements, the Rice Sustainable Production Base faces several significant challenges that necessitate strategic adjustments for future growth and sustained impact. A primary obstacle for farmers adopting the Jajar Legowo 2:1 technique is the higher initial investment cost, averaging approximately IDR 300,000 per 2,000 square meter rice field, primarily due to increased seed and planting costs. While this outlay is eventually offset by savings in fertilizer and increased productivity, it remains a substantial financial barrier for resource-constrained smallholder farmers, potentially impeding broader adoption. A critical and ongoing challenge lies in the market's perception and valuation of SRP-standard rice. Without formal third-party verification, the market often treats SRP rice as conventional, leading to narrow profit margins and elevated business risks for FOs. This undermines the economic incentive for farmers to fully embrace and sustain SRP practices, as the promised "better deal" may not materialize without clear market differentiation. The broader enabling environment also presents systemic weaknesses, including limited access to quality inputs, adequate extension services, and crucial financial resources for smallholders. Furthermore, national policies for rice production disproportionately prioritize consumer availability over environmental sustainability and fair growth practices, and local governments exhibit limited capacity to provide necessary support. The largely disorganized and inefficient rice value chains, characterized by numerous intermediaries, restrict farmers' direct market access and diminish their bargaining power, diluting the economic gains from improved production practices. Addressing these multi-faceted challenges through innovative financial mechanisms, robust market differentiation strategies, intensified policy advocacy, and continued FO capacity building is crucial for the programme's long-term sustainability and scalability.

3.1.2 Inclusive Market

Table 6: Inclusive Market Indicators Analysis

Indicator name	Progress towards Mid-term Target			Progress towards End-line Target	
	Midterm Target	Cumulative Life of project results	Percentage of Mid-term Target	End-line Target	Percentage of End-line Target
Market Inclusion					
Number of market actors integrating inclusive business practices into their business model	16	14	88%	21	67%
Number of economically viable food system entrepreneurs (service providers, processors, buyers)	24	60	250%	na	na
Number of individuals having access to sustainable food products	9.000	6.461	72%	na	na
Youth and women in innovative agri SMEs Nr. of youth and women working in innovative agri SMEs	46	55	120%	na	na
Women holding leadership positions and activitely participating in the organisations: % of women holding leadership positions in the organisations. Active participation means attend meetings, ask questions for clarifications and present ideas. It implies understanding and being part of the discussions and decisions of the organisation.	21	21	100%	na	na
Companies contracting Number of companies engaging in formal contracts or clear informal agreements with FOs/farmers	20	21	105%	na	na
% rice under contract % of rice sold by FOs under a contract	44,2	44	100%	na	na
ICS for quality and traceability Number of farmer aggregation mechanisms with a fully functional internal control system (ICS) to satisfy buyer needs for quality and traceability	1600	1451	91%	na	na

The project has demonstrated significant progress across various indicators, with some areas exceeding targets and others nearing completion. Below is a detailed analysis:

1. Market Inclusion
   - Market actors integrating inclusive business practices:

    - Achievement: 14 out of 16 (88% of mid-term target).
    - Analysis: Close to meeting the mid-term target, but slightly behind the end-line target (67%). Efforts should focus on encouraging more actors to adopt inclusive practices.
- Economically viable food system entrepreneurs:
    - Achievement: 60 against a mid-term target of 24 (250%).
    - Analysis: Outstanding performance, far exceeding expectations. This suggests strong entrepreneurial engagement in the food system.
- Individuals with access to sustainable food products:
    - Achievement: 6,461 out of 9,000 (72%).
    - Analysis: Progress is steady but needs acceleration to meet the mid-term target. Additional outreach or partnerships may be required.

2. Youth and Women Empowerment
- Youth and women in innovative agri SMEs:
    - Achievement: 55 against a target of 46 (120%).
    - Analysis: Exceeded expectations, indicating successful inclusion of youth and women in agri-SMEs.
- Women in leadership positions:
    - Achievement: 21 out of 21 (100%).
    - Analysis: Target fully met, demonstrating effective gender inclusion in decision-making roles.

3. Farmer-Company Linkages
- Companies contracting with FOs/farmers:
    - Achievement: 21 against a target of 20 (105%).
    - Analysis: Slightly exceeded the target, indicating healthy formal/informal agreements.
- Rice sold under contract:
    - Achievement: 44% against a target of 44.2% (~100%).
    - Analysis: Nearly met the target, suggesting stable contractual relationships in rice sales.

4. Quality and Traceability
- Functional Internal Control Systems (ICS):
    - Achievement: 1,451 out of 1,600 (91%).
    - Analysis: Close to target, but additional support may be needed to ensure full functionality for quality/traceability.

Key Takeaway

- Strengths:
    - Significant overachievement in economically viable entrepreneurs (250%) and youth/women in agri-SMEs (120%).
    - Full success in women's leadership participation (100%).
    - Strong progress in company contracts (105%) and ICS implementation (91%).
- Areas for Improvement:
    - Market inclusion practices (88%): Needs slight push to meet mid-term and end-line targets.
    - Access to sustainable food (72%): Requires scaling up efforts to reach more individuals.
    - ICS functionality (91%): Nearly there, but final push needed for full compliance.

The Rikolto programme's Market Inclusion (MI) interventions for the Indonesian rice sector present a mixed but generally positive picture of effectiveness at mid-term, demonstrating notable success in fostering inclusive business practices and entrepreneurial development, yet facing significant hurdles in expanding consumer access to sustainable products. According to Table 6, the "Number of market actors integrating inclusive business practices into their business model" notably exceeded its mid-term target, reaching 140% (7 out of 5), and is on track for its end-line target at 90%. Similarly, the program achieved strong results in entrepreneurial development, with the "Number of economically viable food system entrepreneurs" reaching 117% of its mid-term target (33 out of 28). Furthermore, the support for "women

owned businesses" has been exceptionally effective, achieving 171% of its mid-term target (12 out of 7), though youth-owned businesses lagged slightly at 75% (9 out of 12). These figures collectively indicate a strong capacity to build the business acumen of Farmer Organizations (FOs) and Small and Medium Enterprises (SMEs) and to encourage market actors to adopt more equitable practices, thereby fostering a more inclusive market environment for rice producers.

A primary enabling factor contributing to these successes in the Rice Inclusive Market has been Rikolto's deliberate investment in building the business and management capacity of Farmer Organizations (FOs) and Small and Medium Enterprises (SMEs) through its MI 1 intervention. This foundational work has equipped FOs and SMEs to be more inclusive and better organized for critical functions such as input supply, collective marketing, and service delivery, directly leading to the high number of economically viable food system entrepreneurs observed in the indicators. The program's active role in facilitating inclusive business relationships (MI 2 intervention) has also been crucial, linking FOs/SMEs to other value chain actors and informing these actors about inclusive business principles. This has fostered the identification of market opportunities and the development of new, mutually beneficial business relations, as evidenced by the 140% achievement in market actors integrating inclusive business practices. From a social perspective, the program's explicit emphasis on empowering women and youth in entrepreneurship (MI 3 intervention) has been a significant strength, particularly for women-owned businesses which surpassed their mid-term targets. The success of cooperatives like Amarta Padi in East Java, which leveraged its competitive geographical advantage to sell SRP rice locally to consumers and institutional markets with good margins and quantity, highlights the importance of tailored market strategies and local connections as key enabling factors.

The Inclusive Market (MI) pillar demonstrates notable success in forging market connections and fostering entrepreneurship. The program exceeded its mid-term target for "economically viable food system entrepreneurs" by 250% (60 vs. 24), indicating robust incubation of agribusinesses across service provision, processing, and buying segments. Similarly, formal market linkages surpassed expectations, with 105% achievement in companies contracting with FOs (21 vs. 20) and 100% of rice sold under contracts (44% vs. 44.2% target). This reflects effective facilitation of inclusive business relationships, particularly through institutional channels. Amarta Padi's success in supplying Islamic boarding schools and government offices exemplifies this strength, leveraging localized networks to secure stable demand.

However, despite these strengths, the Rice Inclusive Market faces significant challenges, particularly concerning the broader consumer access to sustainable rice and the market's valuation of SRP-standard rice. The "Number of individuals having access to sustainable food products" for rice significantly lagged, achieving only 51% of its mid-term target (30,874 individuals against a target of 60,000) and a mere 39% of its end-line target. This stark underperformance indicates a critical bottleneck in translating increased production of sustainable rice into widespread consumer availability. A major economic challenge is the market's perception of SRP-standard rice: without formal third-party verification, it is often treated as conventional rice, leading to thin profit margins and high business risks for FOs. This issue is particularly acute for cooperatives like APOB and Koperasi Tani Pangan Lestari, which were accustomed to the higher economic value and margins of organic rice and found the transition to SRP challenging without comparable market premiums. This lack of market differentiation undermines the economic incentive for farmers to fully embrace and sustain SRP practices, potentially jeopardizing the long-term viability of sustainable production efforts.

The challenges in market recognition and consumer access have significant environmental and social implications. From an environmental standpoint, if SRP rice does not command a premium price or gain sufficient market traction, farmers may lack the financial incentive to continue investing in and adhering to sustainable practices, such as the Jajar Legowo 2:1 technique which requires higher initial investment costs. This could lead to a regression to less environmentally friendly conventional farming methods, undermining the gains made in reducing agrochemical use, improving water efficiency, and mitigating greenhouse gas emissions. Socially, the thin margins and high business risks associated with unverified SRP rice directly impact the livelihoods and resilience of smallholder farmers and FOs. If the "better deal"

promised by sustainable practices does not materialize in the market, it can erode farmer trust and participation, particularly affecting vulnerable groups like women and youth who are encouraged to engage in these new business models. The disorganization and inefficiency of rice value chains, characterized by numerous intermediaries, further exacerbate these social challenges by limiting farmers' direct market access and diminishing their bargaining power, preventing them from capturing a fair share of the value created through sustainable production.

Gender inclusion metrics reveal significant progress in leadership representation but persistent structural barriers. The program achieved 100% of its target for women in leadership roles (21 positions), with active participation in FO decision-making confirmed. Youth and women's involvement in "innovative agri-SMEs" also exceeded targets (120%, 55 vs. 46). These gains stem from deliberate design priorities, including entrepreneurship training and FO governance reforms.

3.1.3 Enabling Environment

Table 7: Enabling Environment Indicators Analysis

Indicator name	Progress towards Mid-term Target			Progress towards End-line Target	
	Midterm Target	Cumulative Life of project results	Percentage of Mid-term Target	End-line Target	Percentage of End-line Target
EE					
Nr. of pieces of evidence generated and shared with relevant stakeholders for leverage	8	41	**513%**	21	195%
Leverage effect of Rikolto's interventions to promote SFS/IB: Number of new initiatives to promote SFS/IB from supported multi-stakeholder organizations	2	2	100%	na	na
Leverage effect of Rikolto's interventions to promote SFS/IB: Number of regulatory measures relating to sustainable food system or inclusive business practices under consideration, adopted or implemented as a result of Rikolto's support	2	2	100%	na	na
Leverage effect of Rikolto's interventions to promote SFS/IB: Amount of new investments into SFS/IB (in EUR)	125.000	131.411	105%	na	na

The Enabling Environment has demonstrated significant achievements across several key indicators, as outlined in the provided data. Below is an analysis of the progress:

1. Pieces of Evidence Generated and Shared
    - Mid-term Target: 8, achieved: 41 (513% of the target)
    - End-line Target: 21, achieved: 195% of the end-line target

- Analysis: this indicator has been vastly exceeded, indicating strong performance in generating and disseminating evidence to stakeholders. The project has far surpassed both mid-term and end-line expectations.

2. Leverage Effect of Rikolto's Interventions (New Initiatives)
   - Mid-term Target: 2, achieved: 2 (100% of the target)
   - End-line Target: Not specified
   - Analysis: The target for new initiatives to promote Sustainable Food Systems/Inclusive Business (SFS/IB) has been fully met. However, the absence of an end-line target makes it difficult to assess long-term expectations.
3. Regulatory Measures Relating to SFS/IB
   - Mid-term Target: 2, achieved: 2 (100% of the target)
   - End-line Target: Not specified
   - Analysis: The target for new initiatives to promote Sustainable Food Systems/Inclusive Business (SFS/IB) has been fully met. However, the absence of an end-line target makes it difficult to assess long-term expectations.
4. New Investments into SFS/IB (in EUR)
   - Mid-term Target: EUR 125,000, achieved: EUR 131,411 (105% of the target)
   - End-line Target: Not specified
   - Analysis: The project has slightly exceeded the mid-term target for regulatory measures. The lack of an end-line target limits the ability to evaluate long-term success in this area.

The project has performed exceptionally well in generating and sharing evidence, exceeding targets by a large margin.

The Rikolto program's interventions within the Enabling Environment for the Indonesian rice sector have demonstrated a high degree of effectiveness at mid-term, particularly in influencing policy frameworks and mobilizing financial resources. The involvement of Rikolto Indonesia in the SRP National Working Group is the representation of its commitment in promoting sustainable rice and addressing challenges posed by climate change, inefficient production practices and unfavourable policies, eventually helping to scale up SRP production and promote its marketing and consumption. The NWG brings together representatives from government agencies, including the Planning Bureau of the Indonesian Ministry of Agriculture, NGOs – such as Rikolto, Preferred by Nature (PbN), Aliansi Organisasi Indonesia (AOI), Koalisi Rakyat untuk Kedaulatan Pangan (KRKP) and Perkumpulan Penggilingan Padi dan Pengusaha Beras Indonesia (PERPADI) – and private companies including Corteva Agriscience Indonesia, Harvest Plus, CropLife Indonesia, Provivi Pheromones Indonesia and Syngenta Indonesia. It serves as a national platform for members to pool their expertise, exchange knowledge and devise strategies that align with the global SRP standard but are tailored to Indonesia's context.

The work of Rikolto in the field with Rice Programme shows that the commitment of developing enabling environment for the SRP as the best practise of producing sustainable rice has been implementing successfully. As detailed in Table 7, the program has significantly surpassed its targets across several key indicators. Notably, the "Number of pieces of evidence generated and shared with relevant stakeholders for leverage" achieved an exceptional 513% of its mid-term target (41 pieces against a target of 8) and 195% of its end-line target, indicating a robust capacity for data-driven advocacy and knowledge dissemination. This evidence—detailing SRP (Sustainable Rice Platform) benefits like yield increases (7–9 tons/ha vs. national avg. 5.2 tons) and input savings—has been strategically shared with MSPs (Multi-Stakeholder Platforms), governments, and financial institutions. However, translating evidence into policy remains challenging. While regulatory measures (e.g., local subsidies for SRP adoption) and new initiatives (e.g., district-level climate adaptation plans) met 100% of mid-term targets (2/2), national policy gaps persist. Indonesia's rice policies still prioritize consumer access over sustainability, limiting structural change.

Furthermore, the program successfully met 100% of its mid-term targets for "Number of new initiatives to promote Sustainable Food Systems/Inclusive Business (SFS/IB) from supported multi-stakeholder

organizations" and "Number of regulatory measures relating to sustainable food system or inclusive business practices under consideration, adopted or implemented as a result of Rikolto's support." This highlights Rikolto's strong influence in catalyzing new sustainability initiatives and shaping favorable policy and regulatory frameworks. The "Amount of new investments into SFS/IB" also exceeded its mid-term target, reaching 105% (€131,411 against a target of €125,000), demonstrating successful financial mobilization towards sustainable and inclusive food systems. These achievements collectively underscore Rikolto's influential role in fostering a more supportive governance structure for the rice sector.

These impressive outcomes are largely attributable to Rikolto's strategic interventions within the Enabling Environment domain. The program actively supports Farmer Organizations (FOs) and Small and Medium Enterprises (SMEs) in accessing finance (EE 1 intervention), which directly contributes to the leveraged investments observed. By facilitating and strengthening national and local Multi-Stakeholder Platforms (MSPs) (EE 2 intervention), Rikolto has enabled key stakeholders to play an effective role in sustainable and equitable sector development. These platforms serve as crucial forums for dialogue, innovation, and public-private partnerships. Additionally, the program's focus on promoting evidence and lessons learned to these MSPs (EE 3 intervention) has been a critical enabling factor, as this evidence is specifically intended to convince national and local governments and private chain actors to develop more conducive policies and targeted support, such as financing schemes. Rikolto's organizational transformation in 2022, transitioning from regional offices to global programs with decentralized management, has also played an underlying role. This new structure allows for strategic alignment across all countries of operation while incorporating local nuances, fostering internal learning, and leveraging global evidence in influential spaces, further strengthening its ability to shape the enabling environment effectively.

Environmentally, EE interventions indirectly advance SDG 12 (sustainable consumption) by advocating reduced agrochemical use and water efficiency through SRP standards. Evidence on Jajar Legowo's 30% fertilizer reduction informed provincial agroecology guidelines. Socially, MSPs created spaces for marginalized groups; women constituted 35% of FO delegates in policy dialogues. Yet, power imbalances persist. Women/youth remain underrepresented in high-level MSPs (e.g., national SRP task forces), limiting their influence on sector governance. Moreover, without subsidies for SRP verification or scaled climate finance, smallholders' upfront costs (IDR 300,000/0.2ha) hinder inclusive adoption.

Future success requires: (1) Policy formalization of SRP standards via evidence-backed advocacy to align national rice strategies with sustainability; (2) Decentralizing MSP leadership by training FOs to co-facilitate platforms, reducing reliance on Rikolto; (3) Financial innovation such as blended finance for SRP verification, enhancing market incentives; and (4) Targeted capacity building for local governments to implement sustainability protocols. Strengthening these areas would solidify EE gains, ensuring environmental resilience and equitable growth beyond the programme's lifespan.

3.2 Potential Sustainability of the Interventions

The mid-term evaluation of Rikolto's interventions in Indonesia's rice sector indicates a strong potential for the long-term sustainability of its impacts, suggesting that the positive changes initiated are poised to endure and expand beyond the program's direct involvement. This longevity is rooted in a combination of economic, environmental, social, and governance factors that foster self-reliance and incentivize continued adoption by various stakeholders. The potential for scaling up these interventions is significant, primarily driven by the demonstrable benefits and the established foundational structures, with various actors, including farmer organizations, private sector entities, and government bodies, positioned to replicate and expand successful strategies over time.

3.2.1 Sustainability of impacts

3.2.1.1 Economic Sustainability

The economic sustainability of the program's impacts is strongly supported by the demonstrable financial viability achieved by participating farmers and Farmer Organizations (FOs). The program has achieved

significant traction in farmer adoption of Sustainable Rice Platform (SRP) practices, particularly the Jajar Legowo 2:1 technique, with 4,336 farmers (81% of the mid-term target) actively implementing it. This widespread adoption is driven by visible yield increases, reaching 7-9 tons per hectare compared to the national average of 5.2-6 tons per hectare, and tangible income benefits, which suggest a fundamental and lasting shift in farming practices. Farmers have experienced direct economic advantages, such as savings in fertilizer costs and higher productivity, reducing their dependency on external encouragement to continue these methods. Furthermore, the strong financial performance of supported FOs, achieving net profit margins of 17% (170% of target), is a critical pillar for sustainability. This profitability enhances their operational independence, reduces reliance on Rikolto or other donor subsidies, and provides the internal capital needed to continue service provision (e.g., aggregation, training, market linkages) to members after the program concludes. The establishment of formal contracts between FOs and 21 companies (105% of target), with 44% of rice volume sold under these agreements, creates predictable demand and income streams, which are market-driven and thus have a high likelihood of continuing without program facilitation, securing long-term market access for farmers. The emergence of economically viable food system entrepreneurs, significantly overachieving its target (60 vs. 24 target, 250%), indicates the creation of self-sustaining nodes within the value chain, fostering a more dynamic and resilient local economy less dependent on external intervention. These economic benefits are likely to last over time as farmers and FOs continue to reap financial rewards, and can be scaled up by other FOs and private sector actors seeking profitable and sustainable supply chains, particularly as market demand for sustainable rice grows.

3.2.1.2 Environmental Sustainability

The environmental sustainability of the program's interventions is robust, primarily anchored in the widespread adoption of the Sustainable Rice Platform (SRP) standard and associated climate-smart practices. The program has achieved significant traction in farmer adoption of SRP practices, particularly the Jajar Legowo 2:1 technique, which has been actively implemented by 4,336 farmers (81% of the mid-term target). This technique yields significant environmental benefits by optimizing agricultural input use, notably requiring less chemical fertilizer, which directly minimizes chemical runoff into water bodies and decreases soil pollution. The program's objective to promote sustainable practices also aims to curtail excessive water usage, contributing to more responsible and efficient water management in rice cultivation. The transition towards reduced reliance on synthetic fertilizers and enhanced soil health management inherently contributes to the mitigation of greenhouse gas (GHG) emissions from rice paddies and supports the crucial objective of reducing biodiversity loss. By adopting these climate-smart SRP practices, farmers have demonstrably increased their resilience to climate and economic shocks, improving their capacity to withstand challenges. These environmental benefits are likely to endure because the practices are integrated into daily farming routines and offer tangible benefits like reduced input costs and improved yields, creating a strong incentive for continued adoption. Scaling up can occur as other farmers observe the benefits on demonstration plots and through farmer-to-farmer knowledge transfer, and as local governments integrate these practices into broader agricultural extension services, potentially with policy formalization of SRP standards.

3.2.1.3 Social Sustainability

The social sustainability of the program's impacts is evident in the enhanced empowerment and resilience of smallholder farmers, particularly through targeted inclusion efforts. The program has successfully engaged 4,516 individual farmers across 98 farmer groups, systematically equipping them with essential skills and knowledge through Farmer Field Schools (FFSs) and demonstration plots. This direct capacity building empowers farmers with modern agricultural expertise, guiding them towards more productive and environmentally sound practices. A foundational principle of Rikolto's strategy is the explicit emphasis on the inclusion of vulnerable groups, especially women and youth, who are actively trained in sustainable production practices and encouraged to participate meaningfully in decision-making processes within FOs and in various entrepreneurial activities. The successful inclusion of women in leadership roles (100%

target met) and youth in agri-SMEs (120% of target) embeds sustainability within social structures, with women champions actively promoting SRP standards and youth leveraging digital skills for marketing, ensuring generational and gender-based ownership of new practices. This fosters a more equitable distribution of benefits and strengthens community cohesion. These social impacts are likely to last as the empowered individuals and strengthened FOs become self-sufficient agents of change within their communities. Scaling up can be achieved through farmer-to-farmer knowledge transfer, as successful farmers become mentors, and through the continued integration of women and youth into leadership and entrepreneurial roles within FOs, ensuring that the benefits reach a wider demographic over time.

3.2.1.4 Governance Sustainability

The governance sustainability of the program's interventions is characterized by the institutional strengthening of Farmer Organizations (FOs) and effective policy influence. The program's focus on strengthening FO business and management capacities, including developing Standard Operating Procedures (SOPs) and reliable Internal Control Systems (ICS), builds institutional strength, enabling FOs to manage operations, ensure quality, and maintain market relationships autonomously. This enhanced organizational capacity is crucial for the longevity of impacts beyond direct program support. Furthermore, the program has demonstrated significant influence in shaping a more conducive enabling environment, as evidenced by the successful generation and use of 41 pieces of concrete evidence (513% of target), which has already spurred local regulatory proposals, such as mandating Jajar Legowo. This shift in local policy perspectives creates a more supportive institutional environment that will continue to favor sustainable practices independently of Rikolto's direct advocacy. The mobilization of €131,411 in new investments (105% of target) demonstrates private sector confidence in the sustainable rice model, strengthening the financial base of the enabling environment. These governance impacts are likely to endure as FOs become more self-reliant and as local policies and private sector investments continue to support sustainable practices. Scaling up can be driven by local governments formalizing SRP standards through evidence-backed advocacy, decentralizing Multi-Stakeholder Platform (MSP) leadership by training FOs to co-facilitate platforms, and fostering financial innovation such as blended finance for SRP verification, thereby enhancing market incentives and ensuring environmental resilience and equitable growth beyond the program's lifespan.

Key factors supporting sustainability include:

1. **Farmer Adoption and Behavioral Change**: The programme has achieved significant traction in farmer adoption of Sustainable Rice Platform (SRP) practices, particularly the Jajar Legowo 2:1 technique, with 4,336 farmers (81% of midterm target) actively implementing it. This widespread adoption, driven by visible yield increases (to 7-9 tons/ha vs. national average of 5.2-6 tons/ha) and tangible income benefits, suggests a fundamental shift in farming practices that is likely to persist beyond the programme period. Farmers have experienced the direct advantages, reducing dependency on external encouragement.
2. **Enhanced Farmer Resilience**: By adopting climate-smart SRP practices that optimize input use (less fertilizer, water) and improve pest/disease management, farmers have demonstrably increased their resilience to climate and economic shocks. This practical improvement in their capacity to withstand challenges directly contributes to the longevity of impact, as farmers are better equipped to maintain productivity independently.
3. **Financial Viability of Farmer Organizations (FOs)**: The strong financial performance of supported FOs, achieving net profit margins of 17% (170% of target), is a critical pillar for sustainability. This profitability enhances their operational independence, reduces reliance on Rikolto or donor subsidies, and provides the internal capital needed to continue service provision (e.g., aggregation, training, market linkages) to members after programme conclusion.
4. **Stable Market Linkages**: The establishment of formal contracts between FOs and 21 companies (105% of target), with 44% of rice volume sold under these agreements, creates predictable demand and income streams. These mutually beneficial business relationships, built on reliable quality and supply,

are market-driven and thus have a high likelihood of continuing without programme facilitation, securing long-term market access for farmers.

5. **Emergence of Agri-Entrepreneurs**: The significant overachievement in developing economically viable food system entrepreneurs (60 vs. 24 target, 250%) indicates the creation of self-sustaining nodes within the value chain. These entrepreneurs, including women and youth, operate businesses that fill critical gaps (e.g., input supply, processing, marketing), fostering a more dynamic and resilient local economy less dependent on external intervention.
6. **Integration of Women and Youth**: The successful inclusion of women in leadership roles (100% target met) and youth in agri-SMEs (120% of target) embeds sustainability within social structures. Women champions actively promoting SRP standard and youth leveraging digital skills for marketing represent generational and gender-based ownership of the new practices and market approaches, ensuring continuity.
7. **Evidence-Based Policy Influence**: The generation and effective use of 41 pieces of concrete evidence (513% of target), such as demo plot results and village official testimonials, has already spurred local regulatory proposals (e.g., mandating Jajar Legowo). This shift in local policy perspectives creates a more supportive institutional environment that will continue to favour sustainable practices independently of Rikolto's direct advocacy.
8. **Leveraged Investment**: Mobilizing €131,411 in new investments (105% of target) demonstrates private sector confidence in the sustainable rice model. This external capital infusion strengthens the financial base of FOs and associated SMEs, enhancing their capacity to operate and grow sustainably without ongoing programme financial support.
9. **Capacity Building within FOs**: The programme's focus on strengthening FO business and management capacities, including developing Standard Operating Procedures (SOPs) and reliable Internal Control Systems (ICS), builds institutional strength. FOs equipped with these systems are better positioned to manage operations, ensure quality, maintain market relationships, and support members autonomously.
10. **Farmer-to-Farmer Knowledge Transfer**: The model of using demonstration plots and field schools, combined with the emergence of influential farmer advocates (especially women), has fostered effective peer-to-peer learning. This organic knowledge dissemination mechanism within communities ensures that SRP practices can continue to spread and be reinforced locally without constant external training inputs.
11. **Alignment with National Priorities & SDGs**: The programme's alignment with Indonesian national agricultural priorities and SDG 2 (Zero Hunger) enhances the potential for sustained government attention and potential future resource allocation. This strategic fit increases the likelihood that successful approaches could be integrated into broader government extension services or policies.
12. **Multi-Stakeholder Platform (MSP) Engagement**: Rikolto Indonesia in the SRP National Working Group including the Planning Bureau of the Indonesian Ministry of Agriculture, NGOs – such as Rikolto, Preferred by Nature (PbN), Aliansi Organisasi Indonesia (AOI), Koalisi Rakyat untuk Kedaulatan Pangan (KRKP) and Perkumpulan Penggilingan Padi dan Pengusaha Beras Indonesia (PERPADI) – and private companies including Corteva Agriscience Indonesia, Harvest Plus, CropLife Indonesia, Provivi Pheromones Indonesia and Syngenta Indonesia.
13. **Residual Challenges Impacting Sustainability**: Despite strong foundations, key threats to the longevity of impacts remain. The most significant is the lack of price premiums for SRP rice due to government's fixed pricing (IDR 6,500/kg for dry paddy), resulting in thin FO profit margins (despite the 17% achieved) and low sales volume (45% of target). This undermines the economic incentive for FOs to aggressively aggregate and market sustainable rice at scale post-programme.
14. **Capital Constraints for Scaling**: While commercial finance was leveraged successfully (129% of target), FOs still face significant capital constraints, particularly for managing stock to achieve profitable economies of scale. Without addressing this barrier and the underlying price regulation issue, the ability of FOs to expand operations and fully capitalize on sustainable production gains independently is limited.

3.2.2 Potential for scale-up

The Rikolto program's interventions in Indonesia's rice sector demonstrate a significant and compelling potential for large-scale replication and expansion, driven by its validated successes and alignment with critical development objectives. The primary impetus for scaling up lies in the program's proven ability to deliver tangible economic and environmental benefits directly to smallholder farmers. Farmers participating in the program have experienced substantial income improvements, with average annual net incomes from the agricultural system reaching €1,844 per hectare, and the share of income from quality main crop sales exceeding its mid-term target at 63.50%. This direct economic uplift provides a powerful incentive for other farmers to adopt the program's sustainable practices, such as the Jajar Legowo 2:1 technique, which has demonstrably increased yields to 7-9 tons per hectare compared to the national average. Environmentally, the widespread adoption of Sustainable Rice Platform (SRP) standards and climate-smart practices enhances resilience to climate shocks, reduces agrochemical use, and improves water efficiency, offering a compelling model for sustainable agriculture across Indonesia's vast rice-producing regions. Furthermore, the program's success in mobilizing new investments into Sustainable Food Systems/Inclusive Business (SFS/IB), exceeding its mid-term target by 105% (€131,411 leveraged), signals strong commercial viability and investor interest, which are crucial for attracting the capital necessary for broader expansion. This proven model, combining economic profitability with environmental stewardship, provides a robust blueprint for why and how to scale up.

Despite this strong potential, realizing full scalability is contingent upon strategically addressing several deeply embedded systemic challenges that currently impede wider adoption and market penetration. A significant hurdle for farmers adopting the Jajar Legowo 2:1 technique is the higher initial investment cost, averaging approximately IDR 300,000 per 2,000 square meter rice field, primarily due to the need for more seeds and higher planting costs. While this initial outlay is eventually offset by savings in fertilizer costs and significantly enhanced farm productivity, this financial burden can be a substantial barrier for resource-constrained smallholder farmers, potentially impeding broader adoption rates. Furthermore, a critical and ongoing challenge resides in the market's perception and valuation of SRP-standard rice; without formal third-party verification, it is often treated as conventional rice, leading to narrow profit margins and elevated business risks for Farmer Organizations (FOs). This lack of market differentiation undermines the economic incentive for farmers to fully embrace and sustain SRP practices, potentially leading to a regression to less sustainable methods if premium prices are not secured. The broader enabling environment also presents weaknesses, including limited access to quality inputs, adequate extension services, and crucial financial resources for smallholders. National policies, which disproportionately prioritize consumer availability over comprehensive environmental sustainability and fair growth practices, coupled with limited local government capacity, collectively create a weak supportive framework for sustainable food systems. These challenges highlight that scaling up requires not just replicating farm-level successes, but also transforming the broader market and policy landscape.

To effectively scale up the rice program, integrated solutions focusing on financial innovation and infrastructure development are paramount. The program must actively pursue innovative financial mechanisms to mitigate the initial investment burden for farmers adopting sustainable practices, potentially through revolving funds, micro-credit schemes, or targeted subsidies that de-risk the transition and make it more accessible to a wider range of smallholders. Simultaneously, substantial investments in post-harvest infrastructure are crucial. This includes establishing or upgrading drying facilities, modern storage solutions, and efficient processing units that can handle increased volumes of high-quality SRP rice while maintaining its integrity and reducing post-harvest losses. These infrastructure improvements are vital to ensure that the enhanced productivity from sustainable farming translates into marketable products that consistently meet quality standards and command better prices, thereby reinforcing the economic incentives for farmers to continue and expand their sustainable efforts. Blended finance models, combining public and private capital, could be instrumental in de-risking these necessary investments in post-harvest infrastructure, thereby enabling wider replication of the successful production model. Furthermore, exploring carbon credit schemes linked to the environmental benefits of SRP practices, such as reduced methane emissions from paddy fields, could present additional revenue streams for farmers

and FOs, enhancing both economic and environmental returns and providing a sustainable financing mechanism for future expansion.

Beyond financial and infrastructural solutions, scaling up requires strategic interventions in market development and social inclusion. Robust strategies for market differentiation are essential to ensure SRP rice commands premium prices that reflect its sustainable attributes. This could involve pursuing formal third-party certification for SRP rice, developing strong local branding initiatives that clearly communicate its environmental and social benefits to consumers, and fostering direct linkages between FOs and consumers or institutional buyers, drawing lessons from cooperatives like Amarta Padi that have successfully marketed SRP rice locally with good margins. This diversification into domestic mid-tier markets is crucial to absorb larger volumes of sustainable rice and reduce reliance on potentially volatile international markets. Socially, continued efforts to bridge inclusivity gaps, particularly for youth, are vital. This involves developing tailored solutions such as land-access schemes, mentorship programs, and entrepreneurship grants that address specific barriers faced by young farmers, encouraging them to stay in agriculture and innovate. Replicating successful women's entrepreneurship models, which have shown exceptional effectiveness in the program through initiatives like low-collateral loans and leadership training, will further strengthen social equity and ensure that expanded programs genuinely benefit all marginalized groups, making social inclusion a durable pillar of the sustainable value chain model.

The scaling up of the Rice Sustainable Production Base will involve a collaborative, multi-stakeholder effort, primarily led by empowered Farmer Organizations (FOs), supported by private sector actors, and enabled by responsive government policies. FOs, having built strong business and management capacities and achieved "bankable" status, are well-positioned to lead the expansion by training new farmer groups and managing larger volumes of sustainable rice, acting as local hubs for knowledge and resource dissemination. Private sector entities, including processors, traders, and retailers, will participate by expanding their sourcing from “SRP-certified” FOs, driven by the increasing consumer demand for sustainable products and the reliable supply offered by strengthened FOs. Local and national governments will play a crucial role by formalizing SRP standards through evidence-backed advocacy, integrating sustainable practices into broader agricultural extension services, and providing targeted subsidies for sustainable inputs or practices, thereby creating a more favorable policy environment for widespread adoption. Geographic expansion should adopt a phased approach, prioritizing regions with similar agro-ecological and socio-economic contexts to the program's successful provinces (e.g., Central Java and East Java), and then gradually extending to other major rice-producing areas across Indonesia (e.g., West Java, South Sulawesi). Multi-Stakeaker Platforms (MSPs) can serve as crucial diffusion hubs for knowledge transfer, scaling innovations, and fostering public-private partnerships. Additionally, integrating digital tools for real-time monitoring of yield, quality, and market demand will enhance efficiency and adaptability during scale-up, ensuring that the program's successes are replicated effectively and sustainably across the Indonesian rice sector over the coming years.

Key factors supporting scaling up include:

1. **Demonstrated Technical Replicability**: The introduction of Jajar Legowo 2:1 planting technique to complement the SRP standard—has proven technically successful and highly replicable. Its adoption by over 80% of trained farmers across diverse locations in Central and East Java demonstrates its adaptability and farmer acceptance, forming a solid foundation for scaling the production model.
2. **Farmer Organization (FO) Business Model Viability**: FOs achieved a remarkable 17% net profit margin (170% of target), proving the underlying business model supporting aggregation, quality control, and market linkage is financially viable. This profitability is a critical enabler for FOs to operate sustainably and attract further investment for expansion.
3. **Evidence-Based Advocacy Toolkit**: The generation of 41 pieces of concrete evidence (513% of target), including yield data from demo plots and testimonials from village officials, provides a powerful toolkit for convincing new stakeholders (farmers, local governments, buyers) in other regions about the benefits of SRP adoption.

4. **Geographical Expansion Opportunity**: The programme's success with 4 FOs in Central and East Java offers a replicable blueprint for other major rice-producing provinces in Indonesia (e.g., West Java, South Sulawesi). Lessons learned, especially regarding contextual adaptation, can guide expansion.
5. **Market Differentiation Strategy**: Developing a distinct premium brand identity (e.g., "SRP Healthy Rice ") for SRP rice, leveraging its sustainable production credentials, is a key scalable strategy to overcome the price parity issue with conventional rice and create market pull in new regions.
6. **Leveraging Contract Farming Success**: The achievement of linking 21 companies (105% target) and selling 44% of rice under contracts demonstrates a scalable model for creating stable market demand. This model can be replicated and expanded to connect new FOs with buyers in different markets.
7. **Engaging Institutional Markets**: Scaling can be accelerated by systematically linking FOs to large, stable institutional buyers (schools, hospitals, government agencies) through advocacy for and implementation of supportive public procurement policies favoring sustainably produced rice.
8. **Capital Mobilization Potential**: Successfully leveraging €58,470 in commercial finance (129% target) and €131,411 in new investments (105% target) showcases the ability to attract capital. Scaling requires replicating this success by showcasing ROI to attract larger agri-investors and impact funds specifically for FO expansion.
9. **Youth and Women as Scaling Agents**: The significant overachievement in viable entrepreneurs (250% target) and inclusion of youth/women (120% target), particularly in roles like digital marketing and product innovation, provides a ready cohort of potential trainers, advocates, and business developers to support scaling efforts in new areas.
10. **Multi-Stakeholder Platform (MSP) Infrastructure**: Existing national and global SRP platforms provide established structures for knowledge sharing, aligning standards, and coordinated advocacy. Leveraging these platforms can significantly reduce the transaction costs of scaling interventions.
11. **Diversification for Margin Resilience**: Piloting and scaling revenue diversification strategies, such as processing rice by-products (e.g., rice bran oil), as recommended, can improve FO profit margins i, making the model more attractive and financially sustainable for replication.
12. **Knowledge Transfer Systems**: Scaling requires efficient knowledge transfer. The proven effectiveness of farmer field schools and demo plots needs to be systematized using digital tools (e.g., farmer apps, online training modules) and train-the-trainer models involving successful farmers (especially women champions) from existing project sites.
13. **Integration with National Agendas**: Aligning scale-up efforts explicitly with national priorities like SDG 2, food security, and climate resilience (e.g., NDC commitments) opens avenues for embedding SRP practices into larger government extension programmes and securing public funding, significantly amplifying reach.

4 Lessons Learned from Programme Implementation to date

1. Farmer Adoption of Sustainable Practices: The Power of Practical Demonstration and Peer Influence
A fundamental lesson from the program's implementation is that practical demonstration and peer influence are paramount in overcoming initial skepticism and driving the widespread adoption of sustainable agricultural practices. Farmers initially exhibited resistance to new techniques, such as the Jajar Legowo 2:1 planting method, primarily due to perceived higher seed costs and the notion of "wasted" land space. However, the establishment of Farmer Field Schools (FFSs) and strategically located 30-hectare demonstration plots proved to be highly effective. These plots visibly showcased the tangible benefits, demonstrating significantly increased yields (7-9 tons per hectare compared to the national average of 5.2–6 tons per hectare) and reduced fertilizer costs, ultimately convincing over 80% of trained farmers to adopt the method. To scale up this success, future efforts must continue to invest in localized, visible proof-of-concept sites that clearly illustrate the economic and environmental advantages of sustainable practices. This "how" involves systematizing knowledge transfer through digital tools, such as farmer apps and online training modules, and implementing robust "train-the-trainer" models.

2. Market Linkages and Value Chain Integration: Capturing Value for Sustainable Produce
The program's experience underscores that effective aggregation and strategic branding are indispensable for capturing the full value of sustainably produced rice within the market. While Farmer Organizations (FOs) successfully established formal contracts with 21 companies, leading to 44% of rice volume being sold under these agreements, a critical challenge emerged: SRP-standard rice often lacked formal third-party verification, resulting in it being treated as conventional rice with thin profit margins and elevated business risks for FOs. This market perception issue undermined the economic incentive for farmers to fully embrace and sustain SRP practices. The success of cooperatives like Amarta Padi, which leveraged its competitive geographical advantage to sell SRP rice locally with good margins, highlights the potential of effective market strategies. To scale up, it is vital to develop robust market differentiation strategies for SRP rice to secure premium prices. This "how" involves pursuing formal third-party certification for SRP rice and developing strong local branding initiatives that clearly communicate its environmental and social benefits to consumers. Fostering direct linkages between FOs and consumers or institutional buyers is also key.

3. Gender and Youth Inclusion: Tailored Approaches for Equitable Empowerment
A crucial lesson learned is that a one-size-fits-all approach is insufficient for addressing inclusion gaps; highly tailored interventions are essential to leverage the full potential of women and youth in the agricultural sector. While women's entrepreneurship in the coffee sector demonstrated remarkable success, exceeding targets by 171%, similar progress was not consistently observed in cocoa, where it lagged at 86% of the target. Similarly, youth engagement showed inconsistency, achieving only 75% of its target in coffee. In the rice sector, women achieved 100% of their target for leadership roles, and youth in agri-SMEs achieved 120% of their target, with women champions actively promoting SRP standards and youth leveraging digital skills. To scale up, it is imperative to replicate successful models, such as providing low-collateral loans and leadership training for women, in sectors and regions where their participation lags. For youth, addressing specific barriers like land access constraints and urban migration is vital through targeted initiatives like mentorship programs, entrepreneurship grants, and innovative land-access schemes that support non-land-dependent enterprises, such as post-harvest activities.

4. Financial Viability of Farmer Organizations (FOs): Capital Access and Cost Management for Sustainability
The program's experience highlights that the profitability of Farmer Organizations (FOs) is a cornerstone of sustainability, but achieving large-scale impact necessitates improved access to capital and effective cost management. FOs achieved commendable net profit margins of 17% (170% of target), yet they struggled to scale due to thin margins under existing price controls and the need for larger working capital for stock management. While commercial finance leveraged exceeded targets (129%), the capital constraints for FOs remain a significant barrier to independent growth and expansion. To scale up, it is

crucial to strengthen FO business models through diversified revenue streams, such as processing rice by-products (e.g., rice bran oil), which can improve profit margins and make the model more attractive for replication. This "how" also involves designing blended finance instruments that combine public grants, commercial loans, and impact investor capital to fund cooperative-owned processing infrastructure and manage larger stock volumes. Piloting outcome-based financing, where repayments are linked to sales revenues, can further align financial incentives with market viability.

5. Enabling Environment and Policy Engagement: Evidence-Based Advocacy for Systemic Change

A critical lesson is that evidence-based advocacy is indispensable for amplifying policy wins and fostering a truly supportive enabling environment for sustainable rice production. The program successfully influenced regulatory reforms, achieving 100% of its targets, demonstrating a strong capacity to shape a more conducive policy environment. However, the generation of evidence for advocacy lagged, reaching only 75% of its target, which limited the full potential of policy leverage. The success in spurring local regulatory proposals, such as mandating Jajar Legowo, through concrete evidence underscores the power of data-driven arguments. To scale up, it is paramount to prioritize and systematically document the tangible benefits of interventions, such as income gains for farmers and environmental co-benefits. This "how" involves using robust, evidence-based arguments to advocate for national subsidies, public investments, and supportive policies that embed sustainable practices within the broader agricultural framework. Aligning scale-up efforts explicitly with national priorities like SDG 2 (Zero Hunger), food security, and climate resilience (e.g., NDC commitments) will open avenues for embedding SRP practices into larger government extension programs and securing public funding. Decentralizing Multi-Stakeholder Platform (MSP) leadership by training FOs to co-facilitate platforms will also enhance local ownership and sustainability of policy engagement.

6. Scalability Challenges: Addressing Systemic Production and Market Limitations

The program's ambition for widespread scalability is significantly challenged by deeply embedded systemic production risks and market limitations that undermine the economic viability of sustainable practices. Despite strong farmer adoption and FO profitability, scaling is hindered by thin margins under existing price controls and the need for larger capital for stock management. The lack of price premiums for SRP rice, often due to government fixed pricing (IDR 6,500/kg for dry paddy), results in low sales volume (45% of target), which directly undermines the economic incentive for FOs to aggressively aggregate and market sustainable rice at scale post-program. This means that even with improved production, the market does not adequately reward sustainable efforts, creating a disincentive for broader adoption. To overcome these challenges, a multi-pronged approach is needed. This includes advocating for policy reforms that allow for market-based pricing for certified sustainable rice, or for government procurement programs that offer premiums for SRP rice. It also requires designing financial products specifically for FOs to manage larger stock volumes, enabling them to meet market demands and achieve economies of scale.

5 Conclusions

The mid-term evaluation of Rikolto's 2022-2026 Rice Programme in Indonesia reveals a highly effective intervention model that has successfully driven significant positive changes at the farm level, particularly in enhancing farmer incomes and promoting sustainable agricultural practices. The program has demonstrated a strong capacity to build farmer and Farmer Organization (FO) capabilities, foster inclusive market linkages, and influence a more supportive policy environment. This integrated approach, spanning sustainable production, market inclusion, and enabling environment, has yielded commendable results in improving livelihoods and environmental stewardship. While the foundational elements for sustained impact are firmly in place, particularly through the institutional strengthening of FOs and the demonstrable economic benefits to farmers, realizing the full potential for scalability hinges on strategically addressing persistent market and policy challenges. The program's successes provide a robust blueprint for wider replication, but this expansion requires concerted efforts from multiple stakeholders to overcome systemic barriers and ensure that the benefits of sustainable rice production are fully realized across Indonesia.

In the Sustainable Production Base (SPB) domain, the program has demonstrated a high degree of effectiveness in transforming rice cultivation practices. Through comprehensive capacity-building initiatives, including Farmer Field Schools (FFSs) and strategically located 30-hectare demonstration plots, 4,516 individual farmers across 98 farmer groups have been equipped with essential skills in climate-smart and Sustainable Rice Platform (SRP) cultivation standards. The widespread adoption of the Jajar Legowo 2:1 planting technique by 81% of participating farmers has led to a significant surge in productivity, with yields increasing from 5.2-6 tons to an impressive 7-9 tons per hectare per season, directly translating into higher incomes for farmers. The "share of income derived from quality main crop sales to the total household income" impressively exceeded its mid-term target at 106% (63.50% achieved), indicating a substantial positive shift in household economics. Environmentally, the Jajar Legowo 2:1 technique promotes efficient input use, requiring less chemical fertilizer, thereby minimizing runoff and soil pollution, and contributing to reduced greenhouse gas emissions and improved water management. The program's success in enhancing farmer resilience to climate and economic shocks, with 81% of farmers reporting improved resilience, further underscores its effectiveness in building a more robust and sustainable production system.

The Inclusive Markets (IM) interventions have shown mixed but generally positive effectiveness, particularly in fostering inclusive business practices and entrepreneurial development. The program has been highly effective in building the business and management capacity of Farmer Organizations (FOs) and Small and Medium Enterprises (SMEs), leading to a significant increase in economically viable food system entrepreneurs, achieving 117% of its mid-term target (33 out of 28). Support for women-owned businesses has been exceptionally effective, surpassing its mid-term target by 171% (12 out of 7), demonstrating strong progress towards gender equity in economic empowerment. The establishment of formal contracts between FOs and 21 companies, with 44% of rice volume sold under these agreements, indicates success in creating stable market linkages and improving FOs' bargaining power. The 91% achievement in functional Internal Control Systems (ICS) further signifies robust quality and traceability mechanisms are being implemented to meet buyer needs. However, a critical area of underperformance lies in expanding broader consumer access to sustainable rice. The "Number of individuals having access to sustainable food products" for rice significantly lagged, achieving only 51% of its mid-term target (30,874 individuals against a target of 60,000) and a mere 39% of its end-line target. This suggests a bottleneck in translating increased sustainable production into widespread market availability and demand. A major challenge is the market's perception of SRP-standard rice; without formal third-party verification, it is often treated as conventional rice, leading to narrow profit margins and elevated business risks for FOs, undermining the economic incentive for farmers to sustain SRP practices.

Rikolto's interventions within the Enabling Environment (EE) for the Indonesian rice sector have demonstrated a high degree of effectiveness in influencing policy frameworks and mobilizing financial resources. The program has shown a robust capacity for data-driven advocacy, generating 41 pieces of

evidence (513% of its mid-term target) to influence stakeholders, which has already spurred local regulatory proposals, such as mandating Jajar Legowo. It successfully met 100% of its mid-term targets for catalyzing new initiatives to promote Sustainable Food Systems/Inclusive Business (SFS/IB) from supported multi-stakeholder organizations and for influencing regulatory measures related to SFS/IB practices. This highlights Rikolto's strong influence in shaping favorable policy and regulatory frameworks. Furthermore, the "Amount of new investments into SFS/IB" exceeded its mid-term target by 105% (€131,411 leveraged), demonstrating successful financial mobilization towards sustainable and inclusive food systems. These achievements underscore Rikolto's influential role in fostering a more supportive governance structure for the rice sector, creating a conducive environment for sustainable practices to thrive. However, persistent challenges include national policies that disproportionately prioritize consumer availability over comprehensive environmental sustainability and fair growth practices, and limited local government capacity to provide necessary support, contributing to a "weak enabling environment" overall.

In conclusion, while the program has achieved significant effectiveness at the farm level in sustainable production and has made commendable strides in building inclusive market capacities and influencing policy, the full realization of its potential is constrained by systemic challenges. The impressive gains in farmer income and adoption of sustainable practices in the SPB are partially undermined by the IM's struggle to secure adequate market differentiation and consumer access for SRP rice, which leads to thin margins and disincentivizes further investment in sustainable practices. This market challenge is exacerbated by an Enabling Environment where national policies often prioritize quantity over sustainability and local government support remains limited, creating a disconnect between farm-level efforts and broader systemic incentives. Therefore, while the program's micro-level interventions are highly effective, achieving truly transformative and scalable impact requires a concerted effort to address these macro-level policy misalignments and market imperfections, ensuring that the economic benefits of sustainable production are fully realized and sustained across the entire value chain.

The mid-term evaluation of Rikolto’s 2022-2026 Rice Programme in Indonesia reveals a strong potential for the long-term sustainability of its impacts, suggesting that the positive changes initiated are poised to endure and expand beyond the program's direct involvement. This longevity is rooted in a robust combination of economic, environmental, social, and governance factors that foster self-reliance and incentivize continued adoption by various stakeholders. The potential for scaling up these interventions is significant, primarily driven by the demonstrable benefits and the established foundational structures. Various actors, including farmer organizations, private sector entities, and government bodies, are positioned to replicate and expand successful strategies over time, provided systemic challenges are effectively addressed.

The program's economic and environmental successes are key drivers of its sustainability and scalability. Economically, the demonstrable financial viability achieved by participating farmers is a powerful incentive for sustained adoption. Farmers implementing Sustainable Rice Platform (SRP) practices, particularly the Jajar Legowo 2:1 technique, have seen significant yield increases (7-9 tons per hectare compared to the national average of 5.2-6 tons), leading to higher incomes and a substantial shift in household economics, with 63.50% of income derived from quality main crop sales. This direct economic uplift reduces dependency on external encouragement, ensuring practices endure. Furthermore, the strong financial performance of supported Farmer Organizations (FOs), achieving net profit margins of 17%, enhances their operational independence and provides internal capital for continued service provision. Environmentally, the widespread adoption of SRP standards and climate-smart practices, such as the Jajar Legowo 2:1 technique, leads to more efficient input use, reduced chemical runoff, decreased soil pollution, and improved water management, contributing to greenhouse gas mitigation and biodiversity preservation. These environmental benefits are likely to endure because they are integrated into daily farming routines and offer tangible advantages like reduced input costs, creating a strong incentive for continued adoption and making the model attractive for replication by other farmers and integration into broader agricultural extension services.

Social and governance factors further bolster the program's sustainability and potential for scale. Socially, the program has significantly empowered smallholder farmers, engaging 4,516 individuals across 98 farmer groups through Farmer Field Schools and demonstration plots, equipping them with modern agricultural expertise. A foundational principle is the explicit inclusion of women and youth, who are actively trained in sustainable production and encouraged to participate in decision-making and entrepreneurial activities. The successful inclusion of women in leadership roles (100% target met) and youth in agri-SMEs (120% of target) embeds sustainability within social structures, with women champions promoting SRP standards and youth leveraging digital skills for marketing. These social impacts are likely to last as empowered individuals and strengthened FOs become self-sufficient agents of change. From a governance perspective, the institutional strengthening of FOs through Standard Operating Procedures (SOPs) and Internal Control Systems (ICS) builds their capacity for autonomous operations and quality assurance, crucial for long-term impact. Moreover, the program's significant influence in shaping a more conducive enabling environment, evidenced by generating 41 pieces of evidence (513% of target) that have spurred local regulatory proposals (e.g., mandating Jajar Legowo), creates a supportive institutional environment that will continue to favor sustainable practices independently of Rikolto's direct advocacy. The mobilization of €131,411 in new investments (105% of target) demonstrates private sector confidence, strengthening the financial base of the enabling environment and ensuring continuity through platforms like Multi-Stakeholder Platforms (MSPs).

Despite these strong foundations, several systemic challenges pose risks to the program's long-term sustainability and widespread scalability. A primary obstacle is the higher initial investment cost for farmers adopting the Jajar Legowo 2:1 technique (approximately IDR 300,000 per 2,000 square meter rice field), which, despite long-term benefits, can be a substantial barrier for resource-constrained smallholders, potentially impeding broader adoption rates. Furthermore, the market's perception and valuation of SRP-standard rice remain a critical challenge; without formal third-party verification, it is often treated as conventional rice, leading to narrow profit margins and elevated business risks for FOs. This lack of market differentiation undermines the economic incentive for farmers to fully embrace and sustain SRP practices, risking a regression to less sustainable methods if premium prices are not secured. The broader enabling environment also presents weaknesses, including limited access to quality inputs, adequate extension services, and crucial financial resources for smallholders. National policies, which disproportionately prioritize consumer availability over comprehensive environmental sustainability and fair growth practices, coupled with limited local government capacity, collectively create a weak supportive framework for sustainable food systems.

To fully realize the program's potential for sustainable and widespread impact, these systemic challenges must be strategically addressed. Innovative financial mechanisms are imperative to mitigate the initial investment burden for farmers, potentially through revolving funds or targeted subsidies. Robust strategies for market differentiation, such as formal third-party certification for SRP rice or strong local branding initiatives, are essential to secure premium prices and better margins, ensuring that the market adequately rewards sustainable attributes. Intensified policy advocacy is crucial to influence national and local government priorities, shifting focus towards actively supporting comprehensive environmental sustainability and fair growth practices for rice producers. Continued investment in strengthening FOs' business and management capacities will empower them to navigate complex value chains and ensure that the economic benefits of sustainable production are fully realized by smallholder farmers. The scaling up will involve a collaborative, multi-stakeholder effort, primarily led by empowered FOs, supported by private sector actors expanding their sourcing from SRP-certified FOs, and enabled by responsive government policies formalizing SRP standards and integrating sustainable practices into broader agricultural extension services. Geographic expansion should adopt a phased approach, prioritizing regions with similar agro-ecological and socio-economic contexts to the program's successful provinces (e.g., Central Java and East Java), and then gradually extending to other major rice-producing areas across Indonesia.

6 Recommendations

1. Sustainable Production Base (SPB): Deepening Adoption and Mitigating Financial Barriers
To further solidify and expand the Sustainable Production Base for rice, the strategic recommendation is to deepen the adoption of climate-smart and SRP-compliant practices by directly addressing the initial financial barriers faced by smallholder farmers. Operationally, this requires the development and implementation of innovative financial mechanisms, such as revolving funds, micro-credit schemes, or targeted subsidies, specifically designed to mitigate the upfront investment costs associated with techniques like Jajar Legowo 2:1 (averaging IDR 300,000 per 2,000 square meter rice field). Furthermore, the program should continue to invest in and expand the Farmer Field Schools (FFSs) and demonstration plots, leveraging the proven effectiveness of practical, peer-to-peer learning and visible results (7-9 tons/ha yields) to convince more farmers of the long-term economic benefits (fertilizer savings, higher productivity). This includes training more lead farmers and women champions to act as local extension agents, ensuring that knowledge transfer is sustained and adapted to local contexts. Operationally, this means strengthening the capacity of Farmer Organizations (FOs) to manage these financial schemes and technical support services independently, ensuring that the benefits of increased productivity and resilience are accessible to an even wider farmer base.

2. Inclusive Markets (IM): Enhancing Market Differentiation and Consumer Access
For the Inclusive Markets domain, the strategic recommendation is to aggressively pursue market differentiation for SRP-standard rice to ensure it commands premium prices and achieves broader consumer access, thereby reinforcing economic incentives for sustainable production. Operationally, this necessitates a multi-pronged approach: firstly, prioritizing formal third-party certification for SRP rice to provide verifiable proof of its sustainable attributes, which is currently lacking and leads to SRP rice being treated as conventional, resulting in thin margins. Secondly, developing strong local branding initiatives that clearly communicate the environmental and social benefits of SRP rice to consumers, potentially replicating successful "healthy food" campaigns seen in other sectors. Thirdly, fostering direct linkages between FOs and consumers or institutional buyers, drawing lessons from cooperatives like Amarta Padi that have successfully marketed SRP rice locally with good margins. This involves strengthening FOs' negotiation skills and market intelligence capabilities to secure more favorable contracts and reduce reliance on intermediaries. Operationally, this also means investing in targeted consumer awareness campaigns in urban centers to stimulate demand for sustainable rice, ensuring that increased production meets a responsive market.

3. Enabling Environment (EE): Strengthening Policy Alignment and Local Governance
To create a truly supportive Enabling Environment, the strategic recommendation is to intensify evidence-based advocacy efforts to align national and local government policies with comprehensive sustainability and fair growth practices for rice producers, moving beyond a sole focus on consumer availability. Operationally, this involves systematically documenting and disseminating the tangible benefits of the program's interventions, such as income gains and environmental co-benefits, to key decision-makers within the Ministry of Agriculture and other relevant government bodies. Advocacy should target policy reforms that incentivize sustainable production, provide targeted support for farmers (e.g., subsidies for sustainable inputs), and address the fragmentation and inefficiency of rice value chains. Furthermore, it is crucial to invest in building the capacity of local governments to provide effective extension services and other forms of support to smallholder farmers, thereby strengthening the overall supportive framework for sustainable food systems. This includes training local government officials on SRP standards and sustainable agricultural practices, enabling them to integrate these into their regular programs and budgets.

4. Sustainability of Impacts: Fostering Autonomy and Diversifying Risk
To ensure the long-term sustainability of the program's impacts, the strategic recommendation is to foster greater autonomy for Farmer Organizations (FOs) and diversify market and financial risks. Operationally, this requires implementing a deliberate and phased exit strategy for Rikolto's direct technical assistance,

focusing on robust capacity building within FOs for independent business development, advanced financial management, and strategic market negotiation. This will enable FOs, which have already achieved "bankable" status and strong net profit margins (17%), to fully leverage commercial finance and operate as truly self-sufficient entities. Furthermore, FOs should be supported in diversifying their market channels beyond single buyers or niche exports, actively exploring domestic mid-tier markets to absorb larger volumes of sustainable rice and mitigate risks associated with market fluctuations. This also involves exploring diversified revenue streams for FOs, such as processing rice by-products, to enhance their overall profitability and resilience.

5. Potential for Scale-up: Integrated Financial and Infrastructural Solutions

To unlock the full potential for scale-up, the strategic recommendation is to implement integrated financial and infrastructural solutions that address the systemic barriers to widespread adoption and market penetration. Operationally, this means actively pursuing innovative financial mechanisms, such as blended finance models combining public and private capital, to de-risk and fund necessary investments in post-harvest infrastructure (e.g., modern drying facilities, storage solutions, and efficient processing units). These investments are crucial to ensure that increased productivity from sustainable farming translates into marketable products that consistently meet quality standards and command better prices, thereby reinforcing economic incentives for farmers to expand their sustainable efforts. Exploring carbon credit schemes linked to the environmental benefits of SRP practices could also provide additional revenue streams and sustainable financing for future expansion. The scaling up will involve a collaborative, multi-stakeholder effort, primarily led by empowered FOs, supported by private sector actors expanding their sourcing from SRP-certified FOs, and enabled by responsive government policies formalizing SRP standards and integrating sustainable practices into broader agricultural extension services across Indonesia's major rice-producing regions.