



Progress Report
and
Implementation
Plan

Promoting Rural Income through Support
for Markets in Agriculture

Strengthening Agricultural Finance
in Rural Areas

August 2018 – Public Version

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List of Abbreviations

AIP-Rural	Australian-Indonesia Partnership for Rural Economic Development
ARISA	Applied Research and Innovation Systems in Agriculture
AUD	Australian dollar
BAPPENAS	Badan Perencanaan Pembangunan Nasional (National Development Planning Agency)
BPS	Badan Pusat Statistik (Central Bureau of Statistics)
BUMDes	Village Business Council
CAPI	Computer Assisted Personal Interview
CMT	Central Management Team
Dana Desa	Village Fund
DCED	Donor Committee for Enterprise Development
DFAT	(Australian) Department of Foreign Affairs and Trade
DCS	Digital Credit Scoring
EDA	Environmental Desk Assessment
ELCIA	Environmental Life Cycle Impact Assessment
EMS	Environmental Management System
ESC	Environmental Smart Checklist
EJ	East Java
EWINDO	East West Indonesia Ltd (a private input company)
FI	Financial institution
GAP	Good agricultural practices
GoA	Government of Australia
Gol	Government of Indonesia
GSP	Generalized System of Preferences
HH	Household
IOD	Indian Ocean Dipole
IP	Intervention plan
ISD	Intervention steering document
ISP	Intermediate service provider
KPI	Key performance indicator
KUR	Kredit Usaha Rakyat (Credit for the Poor)
M4P	Making markets work for the poor
Mio	Million
MIS	Management information system
MRM	Monitoring and Results Measurement
MOMF	Ministry of Marine and Fisheries
NAIC	Net attributable income change
NTB	Nusa Tenggara Barat (West Nusa Tenggara province)
NTT	Nusa Tenggara Timur (East Nusa Tenggara province, including West Timor)
OPV	Open pollinated variety (a hybrid seed)
PA	Papua
PKK	Pembinann Kesjahteraan Keluarga (Family Welfare Movement) (a network of women's farmer groups)
PPI	Progress out of poverty index

PPP	Purchasing power parity
PRISMA	Promoting Rural Income through Support for Markets in Agriculture
PRIP	Progress Report and Implementation Plan
PT	Perseroan Terbatas (limited liability company)
QMT	Quality management tool
RML	Results measurement and learning
SAFIRA	Strengthening Access to Finance in Rural Agriculture
SOFIA	Survey on Financial Inclusion and Access
SROI	Social return on investment
TA	Technical assistance
TIRTA	Tertiary Irrigation Technical Assistance
UPSUS	Upaya Khusus (Special Efforts program of the GoI's Ministry of Agriculture)
VCF	Value chain finance
WA	West Papua

Executive summary

PRISMA

BACKGROUND

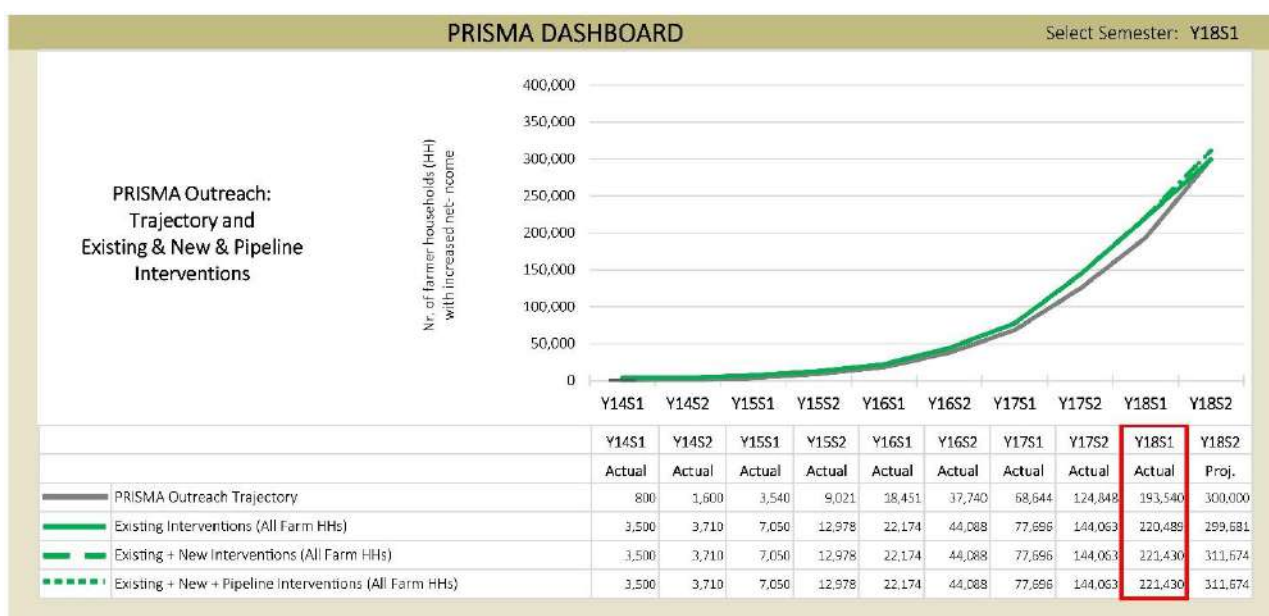
The objective of Promoting Rural Income through Support for Markets in Agriculture (PRISMA) is to increase the competitiveness of 300,000 smallholder farming households (HH) in Eastern Indonesia, resulting in a net attributable income increase of at 30% by the end of 2018. PRISMA is the largest program under the Australia-Indonesia Partnership for Rural Economic Development (AIP-Rural), a partnership between the Governments of Australia and Indonesia to address the most significant constraints to rural income growth and boost farmer incomes in five provinces in Eastern Indonesia.

One of PRISMA's main goals over the past six months was to continue strengthening the portfolio in terms of systemic impact, and diversification of sectors. Recently added sectors, Rice and Vegetable began to demonstrate good results and a new cross-cutting sector of Fertilizer was added after market analysis, and in response to demand from partners. Other key challenges involved maintaining staff confidence and reducing anxiety as preparations for PRISMA-2 began.

PROGRESS

1. PRISMA developed 24 new contracts against a target of 15, and 15 new partners were added in the first semester of 2018. A new sector for Fertiliser was created, with five new interventions launched. Three new interventions designed jointly with local government during M4P training were also launched (two in Maize and one in Shallot), three interventions were added in Cashew, two were added in the Shallot, Peanut and Coconut sectors, and one intervention each in Soybean, Maize, Beef, Seaweed and Rice.
2. Through existing and new interventions, PRISMA reached 77,367 HHs (51,788 HHs < USD 2.50 PPP) during the reporting period, 10,858 HHs over the semester projection of 66,509 HHs, and 27,890 over the semester target of 49,477 HHs. This amounts to a cumulative 221,430 HHs (152,028 HHs < USD 2.50 PP) since the beginning of the project, 14% or 17,980 HH above the target trajectory.

FIGURE 1: PRISMA OUTREACH TRAJECTORY



3. The expected cumulative outreach for existing and new interventions is 311,674 HHs (214,292 HHs < USD 2.50 PPP) by the end of Y18S2, down from the 348,714 HHs projected last semester. The revision of the final outreach projection downwards was due to small adjustments in projections across several

sub-sectors from interventions that were not started or dropped, not being replaced with new interventions and difficulties experienced with negotiating new contracts for 2019.

4. **Outreach through systemic change is increasing**, with a corresponding increase in difficulty to forecast accurately for new businesses entering the market for the first time and existing partners expanding into new regions across Indonesia. Nevertheless, with strong progress and impact accelerating in all key sectors, we remain confident in the end-of-program projections.
5. **Average NAIC per farm household is 327%, up from 191% at the end of the last semester**, significantly above the target of 30%. This was primarily from the Pig NTT (West Timor) intervention which recorded an increase in NAIC of 1,326%. Maize EJ continues to perform strongly, with interventions with DuPont, BISI and AHSTI increasing household incomes by an average of 270%.
6. **Other key performance indicators (KPI) continue to reflect increasing levels of sustainability**. The number of intermediary service providers (ISPs) grew by 38%, far greater than projected. Cumulative co-investment grew by 56% to IDR 253 bn (AUD 25.3m) from a total of IDR 163 bn (AUD 16.3m) last semester. Of this, 22% or IDR 57.2 bn (AUD 5.7 Mio) of investment is from private partners, with the remaining 77.4% or IDR 196.3bn (AUD 19.6 Mio) from farmers.

TABLE 1: PRISMA KEY PERFORMANCE INDICATORS

KPI tracking	Actual cumulative Y18S1	Actual Y18S1
1 # Outreach (all farming HHS)	221,430	77,367
1b # Outreach (< USD 2.50 PPP)	152,028	51,788
2 Net income impact in IDR (all farming HHS)	1,419,563,901,147	731,458,354,221
2b Net income impact in IDR (< USD 2.50 PPP)	957,414,088,803	477,017,130,707
3 # ISPs	4,895	3,540
4 Increased turnover of ISPs in IDR	349,018,837,376	173,853,604,718
5 # Innovations/interventions	142	27
6 # Initiatives by GoI to improve BEE	27	5
7 # Intervention partners (public and private sectors)	122	24
8 Private partner co-investment in IDR	57,222,459,278	20,107,130,574
9 Value of additional investment by farmers	196,348,183,623	70,473,994,427

7. **All value for money indicators continue to improve in line with the expected impact curve**. PRISMA exceeded the target set during the mid-term review of 50% for investment leverage at direct intervention level for the first time, recording 63.86% for direct intervention costs only, up from 49.03% last semester. Investment leverage for total intervention costs is 14.4%, up from 10.29% last semester.
8. **PRISMA disbursed AUD 8,290,159 in Y18S1 against the projection of AUD 8,646,544** (not including Management Fees or Outcome Performance Payments) estimated in the previous PRIP, underspending by AUD 356,385 for the semester, an approximate 4% total variance. The largest variances were higher than expected expenditure on Short-Term Adviser and Personnel costs. Expenditure is at 82 per cent of the total contract value at the end of June 2018 or AUD 63,074,033 and the anticipated expenditure for the rest of the phase, that is, July to December 2018, is AUD 12,085,705 which will bring the program to 98% of total contract value.

MANAGEMENT RESPONSE FOR THE NEXT TWELVE MONTHS

9. **Measures to reduce staff uncertainty and mitigate against potential impacts on implementation activity and achievement of impact** continues to be implemented and will remain a key priority for Y18S2.
10. **We expect to start negotiating new contracts with partners from early September** to convert existing letters of intent into partnership agreements (reducing the use of MoUs) by December.

11. **A clear position regarding if, and how to engage co-facilitators will be developed.** Several options to improve efficiency and effectiveness for PRISMA have been presented, with a final outcome to be decided in Y18S2.
12. **PRISMA will continue strengthening its monitoring system to enable better capture of systemic impact.** We are already proactively testing new indicators with key partners to have better visibility of changes happening in the field and will intensify related efforts.
13. **We will continue with the current portfolio construction strategy in accordance with the QMT process for the remainder of this phase.** This means continuing to support Maize and Pigs to accelerate systemic impact, and investing in Vegetable, Beef and Mungbean as sectors with high potential for PRISMA-2.
14. **Once the framework conditions for PRISMA-2 are clear, we will assess whether changes in the portfolio structure would lead to greater value for money.** Considerations for moving towards a more cross-sector approach will be defined during an additional portfolio strategy workshop in August.

SAFIRA

BACKGROUND

Under AIP-Rural, Strengthening Agricultural Finance in Rural Areas (SAFIRA) focuses on agricultural value chain financing to expand small holder farmers' access to finance, with the goal of increasing the incomes of rural small holder farmers in Eastern Indonesia. SAFIRA aims to improve the overall value chain finance (VCF) market through enhancing supporting market functions and institutional strengthening at financial institutions. These activities intend to formalise agricultural VCF with partner financial institutions as one way to scale up cost effective and sustainable lending to smallholder farmers.

SAFIRA's revised strategy prioritises the institutionalisation of value chain finance among various actors in the market. The three main approaches to achieve this are:

1. Institutional strengthening of financial institutions in terms of core business practices and systems.
2. Developing the VCF consulting and support services market through institutional strengthening of consulting firms and other actors.
3. Knowledge sharing among stakeholders.

In Y18S1, SAFIRA provided partners with VCF technical assistance including training and consultancy. The support this semester included a focus on activities with BPR Arta Kencana, TLM, BRI, CU Sawiran and Puskopdit. SAFIRA's partners which earlier received VCF training continued to demonstrate commitment this semester and confidence in the commercial viability of the model at an institutional level.

SAFIRA continues to develop the relationship with selected consulting companies and has prepared an agreement related to use of the VCF toolkit. Three consulting companies continue to work with SAFIRA to support partner institutions to integrate VCF: Hadidaya Jaya Abadi, Spire Consulting and MicroSave. These companies continue to offer VCF as one of their services.

This semester, SAFIRA not only focused on pillars 1 and 2, to supporting financial institutions and the development of consulting services, but also started to implement pillar 3: knowledge-sharing among stakeholders. This semester SAFIRA developed four reports and hosted two knowledge-sharing events. The reports were the Guide to Digital Credit Scoring (DCS), the commercial case for targeted marketing to women, and a deeper dive into the SOFIA data analysis.

PROGRESS

1. **At the end of Y18S1 SAFIRA added two new interventions and will drop two, as the program portfolio matures.** This brings the total number of active interventions to ten with no new interventions in the pipeline. The first semester of 2018 is the third period in which SAFIRA recorded farming HHs benefiting from intervention activities, with 2,519 HHs (1,163 HHs < USD 2.50 PPP) reported from the

interventions with BNI and BISI. This semester, SAFIRA achieved 41.9% of the overall program outreach target (6,000 HHs benefiting), bringing the cumulative outreach total to 2,730 HHs (45.6% of the overall target).

2. **This semester over 55,515 farmers were made aware of the availability of VCF schemes and a total of 10,644 farmers used the new products.** SAFIRA's impact assessment is in its initial phase but preliminary data shows that 2,519 farmers have already benefited with a combined NAIC of IDR 8,646,642,192.
3. **SAFIRA expects to achieve total outreach of 9,909 HHs (4,051 < USD 2.50 PPP) from existing and new interventions by the end of the current phase of the program, exceeding the target by 65.2%.**
4. **The total NAIC for all farming HHs in Y18S1 is IDR 8.6 bn (AUD 0.86 Mio), with absolute NAIC per HH at IDR 3,432,569 (AUD 343).** All NAIC recorded this semester was from PT BISI and BNI. SAFIRA's partner institutions (which we expect to make a significant contribution to NAIC next semester) are BRI, BPR Central Pitoby, Tanaoba Lais Manekat, and BPR Arta Kencana.
5. **Partner financial contribution to VCF this semester increased by IDR 159.5 Mio, the majority of which was from the Bank Sinarmas (IDR 75 Mio) and BISI (IDR 84.5 Mio).** In addition to the continued buy-in for VCF and an institutional level from Sinarmas, next semester SAFIRA expects co-investment to increase significantly through commitments from Tanaoba Lais Manekat (TLM), BPR Central Pitoby, and Puskopdit.
6. **This semester SAFIRA continued to record all SAFIRA specific indicators in accordance with the protocol.** Next semester, five impact assessments are planned with SAFIRA partners BRI, Tanaoba Lais Manekat, BPR Central Pitoby, BPR Arta Kencana and Bank NTB with ARISA. This will provide more substantial data on SAFIRA's overall outreach to the end of the current phase.
7. **SAFIRA disbursed AUD 545,222 in the first semester of 2018 against a projection of AUD 620,649, underspending by AUD 75,427, or 12%.** To date SAFIRA has spent 60% of the total project value, or AUD 2,448,966. Anticipated expenditure Y18S2 is AUD 937,873 which will bring the program to 83% of its budget allocation at the end of the program. SAFIRA is currently forecasting an overall underspend of approximately AUD 709,721.

MANAGEMENT RESPONSE FOR THE NEXT 12 MONTHS

8. **SAFIRA is approaching the final semester of the program and therefore will be looking to determine which interventions have potential to adapt to a single program design as per PRISMA 2.** SAFIRA is currently observing all interventions and by the end of this semester will close Bank NTB and CU Sawiran, and may close Bank BNI in Sumenep.
9. **The situations that have taken place in Sinarmas and BNI show evidence of the need for a broader scope of VCF in addition to input credit financing** which is currently taking place. SAFIRA has ventured into trader credit with a few interventions and has begun to touch on insurance. In addition, the program recommends expansion into blockchain technologies for developing a credit wallet and credit history for farmers, alongside other forms of VCF, such as warehouse receipt systems, savings, asset financing and factoring.
10. **In Y18S2 SAFIRA will share some additional learning.** This will include circulating an in-depth look into the difference between Banks BNI and BRI in disbursing and collecting KUR, generating an examination into the program's systemic change and developing a strategy for commercial lending alongside KUR.
11. **SAFIRA will also conduct a final five impact assessments to gauge impact within Bank NTB (for a final time), BPR Central Pitoby, BRI, TLM and Arta Kencana.**
12. **In its final semester, SAFIRA will focus on delivering the current portfolio of interventions, increasing the quality of the portfolio, achieving impact, and developing lessons learned before closing the program at the end of 2018.**

1 Broader policy, institutional and environmental context

Indonesia's economy continues to expand at a robust pace, growing by 5.1% in the first half of 2018. The Ministry of Finance expects to achieve annualised growth of 5.3% by the end of the year. The 0.2% increase from the 4.9% annual growth in 2017 has been driven primarily by rising commodity prices and stronger domestic investment in machines, equipment and vehicles. Although this is still below the Gol's target growth rate of 5.4%, and below the level that some analysts believe is necessary in order to achieve its poverty reduction targets by 2040, growth is expected to continue to accelerate in 2019. According to the Gol's Minister of Finance, since 2013 the growth elasticity of poverty has declined. Every 1% in growth now reduces the poverty rate by only 0.059%, compared to 0.116% before 2013.

The inflation rate for the first half of 2018 has been maintained at 3.1% despite inflationary pressure from a weaker rupiah, and is expected to remain within the Gol target range of 2.5%-4.5% for the remainder of the year. Inflation has been controlled through the strong administration of staple food prices, including a decision to relax import restrictions on rice at the beginning of the year and the successful harvest season before Lebaran in June 2018. The Gol is expected to maintain its role in controlling key commodity prices for the foreseeable future, particularly in the lead-up to presidential elections in April 2019, and strict import restrictions remain in place for PRISMA's sectors including maize and shallot.

The national poverty rate fell below the 10% mark for the first time in Indonesia's modern history. Indonesia's Central Bureau of Statistics, BPS, recently released poverty data which reported the current rate at 9.82%¹, a significant milestone and a reduction from the 10.12% reported in September 2017. This represents 633,000 people graduating out of poverty, with 26.58 Mio people defined as poor in September 2017 falling to 25.95 Mio by March 2018. However, there are large regional disparities, with poverty rates remaining highest in Papua and West Papua at 27.74% and 23.01% respectively. Measured against the World Bank's poverty line for lower-middle income countries at USD 3.2 per person per day, in Indonesia 82.1 Mio people or 31.4% of the population are classified as living in poverty. The Gol targets to reduce the Gini coefficient to 0.38 by the end of 2018, which PRISMA does not regard as realistic.

The US government is currently reviewing 124 Indonesian export products listed under the Generalized System of Preferences (GSP), which enables tariff-free trade in key commodities with Indonesia and other developing countries. Commodities covered by the GSP include coffee, pineapple, pepper and processed chili. Other Indonesian agricultural products that are not covered under the GSP but nonetheless have 0% import duty include rubber, palm oil, snapper, coconut, cinnamon, vanilla and cashew. Should the US government decide to introduce tariffs on these commodities, export prices are expected to increase by 10%-25%. For AIP-Rural, the sectors which may be adversely impacted if tariffs are imposed are coffee, cocoa, coconut and cashew.

Bank Indonesia increased the national benchmark interest rate (BI 7-Day Reverse Repo Rate) from 4.35% to 5.25% during the first semester of 2018. This was in response to a weaker rupiah, resulting from uncertainty over global trade disputes (driven by US-China trade relations). The higher lending rates will increase costs for businesses in general; however, it remains to be seen how long Bank Indonesia can continue defending the IDR at its current rate. The Coordinating Minister for Economic Affairs stated that the Gol will review whether the current rate of KUR (Kredit Usaha Rakyat) of 7% can still be maintained. A higher rate could be potentially beneficial to the overall viability of KUR as financial institutions seek profitability.

The impact of the weak El Niño this semester has been limited and rainfall has been normal or slightly above normal across AIP-Rural's intervention areas. The El Niño phenomenon itself is projected to return in the coming semester, with a forecasted effect ranging from moderate to minor for PRISMA intervention areas.

¹ Indonesia's national poverty line is based on USD 2.5 per person per day, adjusted for PPP: <https://ekonomi.kompas.com/read/2018/07/31/080400526/begini-hitung-hitungan-angka-kemiskinan-di-indonesia-cara-bps>.

2 PRISMA - Portfolio management and monitoring

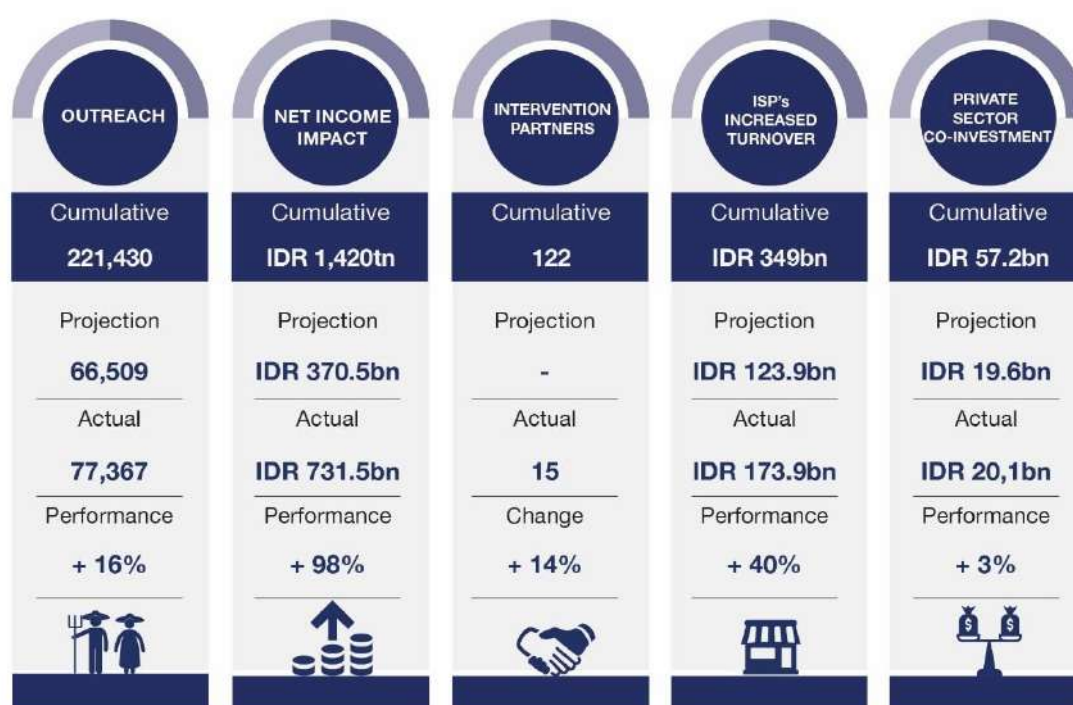
2.1 Portfolio development progress

A total of 24 new contracts (9 more than the standard target of 15) and 15 new partners were added in the first semester of 2018. 27 new interventions in total were launched, including a new sector for Fertilizer with 5 new interventions. The Vegetables sector continues to grow, with 5 new interventions this semester focusing on seeds. 3 new interventions jointly designed with local government during the M4P training were also launched in (2 Maize and 1 Shallot), 3 new Cashew interventions, 2 each in the Peanut, Coconut and Shallot sectors, and 1 new intervention was added in Seaweed, Soybean, Maize, Beef, and Rice.

Fertiliser was opened as a new sector this semester after evidence and market analysis showed that the supply of government subsidised fertiliser is failing to meet demand from farmers in certain sectors, including Coffee and Cashew. This also recognises that fertiliser is a cross-cutting sector, and responds to demand from PRISMA's partners who want to work in several commodities (focused on fertiliser) rather than just one or two.

Rice, the new sector opened last semester, has shown high levels of partner interest. Interventions are now being tested with one partner who has shown interest in promoting hybrid maize. Results from the Rice sector will be recorded next semester, following the planned impact assessments.

2.2 Progress of Key Performance Indicators



*Performance is defined as the % variance between projections and actuals for Y18S1.

OUTREACH²

PRISMA reached 77,367 HHs (51,788 HHs < USD 2.50 PPP) during the reporting period, 10,858 HHs over the semester projection of 66,509 HHs, and 27,890 over the semester target of 49,477 HHs. This

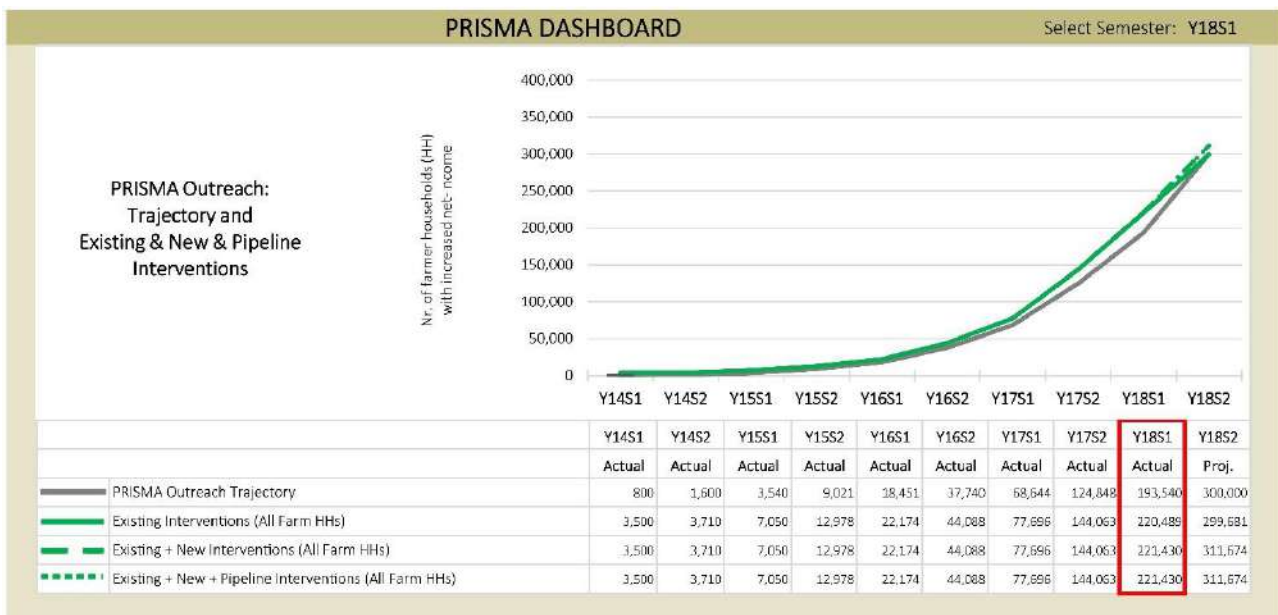
² Up to end Y17S2, PRISMA calculated the User to Benefit outreach ratio by calculating the Users who have higher NAIC compared to average of the non-users. However, advice from the DCED suggested that we should count all Users as outreach if average NAIC for Users is higher than of Non-users, and count no outreach if average Users NAIC is lower than average of Non-users. This Semester PRISMA applied this new method to calculate outreach from all impact assessments.

amounts to a cumulative 221,430 HHs (152,028 HHs < USD 2.50 PP) since the beginning of the project, 14% or 17,980 HH above the target trajectory. The following subsectors were the main contributors:

- **Pig NTT +23,074 HHs (+15% above projections).** This increase is largely a result of impact recorded from vaccines administered in response to the hog cholera outbreak. The program continues to receive strong support from government, and potentially will expand to new provinces next semester. Although investment and demand for pigs and pig feed in Flores have not yet recovered to pre-outbreak levels, this semester also saw a new partner (Malindo) entering the feed market on Sumba Island.
- **Maize EJ +16,965 HHs (-13% below projections).** The majority of outreach this semester is attributed to ongoing interventions with PT AHSTI (6,033 HHs), PT BISI (5,760 HHs) and PT DuPont (3,850 HHs). AHSTI sold all its seed to the government subsidy program due to high demand and lower transactional costs compared to those incurred by selling to the open market; the results of this will be captured next semester. PRISMA also supported the Sumenep Agricultural Office to refocus the UPSUS subsidy away from areas with high numbers of existing hybrid seed users, to remote islands and marginalised areas previously not receiving any subsidised seed. This resulted in significant numbers of beneficiaries receiving high quality seed for the first time, the results of which will be captured after next semester's impact assessment.
- **Vegetable EJ +10,589 HHs (+107% above projections).** Impact was primarily as a result of IT-based interventions with NASA (6,945 HHs) and the Sipindo app developed in partnership with EWINDO (3,130 HHs), both of which have proven to be popular and effective for the Vegetable sector. The results captured this semester represent only a portion of the total impact, and we expect to report at least another 10,000 HHs through these interventions next semester when full impact assessments have been completed.
- **Shallot NTB +4,553 HHs (+128% above projections).** Although a small sector, PRISMA's intervention shows clear evidence of systemic change, particularly through the program's strong partnership with EWINDO. True shallot seed (TSS) has spread across Indonesia through EWINDO (3,539 HHs), Croplife (385 HHs) and NuFarm (629 HHs). All of the impact in this semester came from systemic change, with sales reported in Central Java, West Java and Sumatra; PRISMA will capture sales in other regions in Y18S2. Nevertheless, uncertainties remain around the competitiveness and long-term sustainability of quality shallot seed production in Indonesia. ARISA's Shallot intervention is expected to provide more clarity in this area by the end of this phase of the program.
- **Maize NTB +3,367 (208% above projections).** BISI's YARO financing model developed in collaboration with SAFIRA is proving to be popular with farmers, who perceive the product to be relevant and of high quality. BISI now plans to replicate the model across other provinces in Indonesia, including Sulawesi.
- **Vegetable Papua +1,851 (620% above projections).** The intervention with EWINDO continues to deliver surprising results, with a significant increase in small farmers buying the seed this semester. Many new smallholders are buying the seed and entering commercial vegetable production for the first time. This intervention is indicating that the M4P approach is relevant in Papua.

The variance between total projections and actuals this semester is +16%. Total outreach from systemic change increased by 31% to 70,958 HHs in total. It is now at 32% of total outreach (compared to 38% last semester and 31% in Y17S1 and this semester was primarily from Vegetable interventions with NASA and EWINDO (Sipindo app; 13,268 HHs), and Shallot with EWINDO (3,539 HHs). Although indirect impact occurred through the Pig and Maize interventions, this will not be reported until the data is verified through impact assessments next semester.

FIGURE 2: PRISMA OUTREACH TRAJECTORY



The expected cumulative outreach for existing and new interventions is 311,674 HHs (206,852 HHs < USD 2.50 PPP) by the end of Y18S2, down from the 348,714 HHs projected last semester. The revision of the final outreach projection downwards was due to small adjustments in projections across several sub-sectors from interventions that were not started or dropped, not being replaced with new interventions and difficulties experienced with negotiating new contracts for 2019.

Outreach through systemic change is increasing, with a corresponding increase in difficulty to forecast accurately for new businesses entering the market for the first time and existing partners expanding into new regions across Indonesia. Nevertheless, with strong progress and impact accelerating in all key sectors, we remain confident in the end-of-program projections. Interventions in the pipeline will not achieve impact in Semester 2, 2018 as the current phase of the program is coming to an end.

INCOME

Average NAIC per farm household is 327%, up from 191% at the end of the last semester, significantly above the target of 30%. This was primarily from the Pig NTT (West Timor) intervention which recorded an increase in NAIC of 1,326%. Maize EJ continues to perform strongly, with interventions with DuPont, BISI and AHSTI increasing household incomes by an average of 270%. Looking at the lower end of the scale, sub-sectors with NAIC of less than 30% were Soybean NTB (28.8%), Cashew NTT (26.8%), Vegetable Papua (22.9%), Vegetable West Papua (3.8%), and Seaweed NTT (4%). Low NAIC for Seaweed is due to farmer's income increases only being measured through market prices for seaweed so far, despite challenges with this sector we expect to see better results following the planned impact assessment in Y18S2. Vegetable P and WP, transmigrant farmers with high baseline income and good existing use of quality seed and GAP influence the average baseline income for the regions' control group, reducing the relative income impact of PRISMA's interventions.

Total NAIC for all farming HHs in Y18S1 is IDR 731.4bn (AUD 73.1 Mio), with absolute NAIC per HH at IDR 6,410,892 (AUD 641), compared to IDR 4,776,421 (AUD 478) last semester. The average NAIC per farming HHs < USD 2.50 PPP is IDR 6,275,344 (AUD 627), IDR 1,530,991 (AUD 153) higher than the IDR 4,744,353 (AUD 474) recorded last semester.

The sectors contributing the most to total NAIC are Pig, Vegetable, Beef, Maize and Shallot. Pig interventions in Timor have contributed the largest share at IDR 540.6 bn (AUD 54.06 Mio) in total. Adding in contributions from Flores and Sumba Island, Pig interventions have achieved at least IDR 747,23 bn (AUD 74.7 Mio) in total income increases, close to the total program value of PRISMA. Vegetable as a relatively new sector for PRISMA significantly exceeded expectations, with the second largest absolute contribution at IDR 241.2 bn (AUD 24.1 Mio), with half of this accounted for by the Vegetable EJ intervention. Beef, Maize

and Shallot contributed IDR 107.9bn (AUD 10.7m), IDR 128.2bn (AUD 12.8m), and IDR 104.1 (AUD 10.4m) respectively.

Less successful interventions with a NAIC of less than IDR 1 Mio (AUD 100) this semester were Seaweed in NTT, and Mungbean EJ. Seaweed is a new intervention in a remote area and it has been challenging to work on activities which target significant productivity increases to date. This semester PRISMA was only able to monitor prices for seaweed to calculate contribution to farmers' income. Productivity increases will require a few more planting cycles to deliver meaningful data or results. Although mungbean is not the main commodity for farmers in East Java, through our intervention certified mung bean seed was introduced to the market for the first time. Farmers have purchased small quantities (an average of 1.43 kg per farmer) to test the product; early results indicate that even with this small quantity, farmers are experiencing a 62% increase in yield and an average of 154% in NAIC. We expect greater results to be captured when it has passed the 'trial' phase and more farmers acknowledge the benefits of using certified seed.

OTHER KPIS

Additional cumulative intermediate service providers (ISPs) turnover almost doubled to IDR 173.8 bn (AUD 17.3m) in Y18S1, an increase of 99% from IDR 175.1 bn (AUD 17.5m) last semester. We expect this trend to continue next semester as interventions in mature sectors with proven business models continue to expand and newer interventions in areas such as Vegetable EJ begin to scale up.

The cumulative number of ISPs increased significantly by 3,540 or 265% (1,697 above projections), the largest increase in one semester to date. This increase was driven primarily by the Vegetable EJ intervention with NASA, which contributed 2015 new ISPs through distribution of its app. To better understand this crucial level across all results chains, we have commissioned a broad study to assess the nature and business environment of intermediaries of all kinds operating in rural markets in Eastern Indonesia. The study will provide us with a better understanding of whether PRISMA should increase its focus on intermediaries vis-à-vis larger partners. In the Pig sector for instance, we have seen that some (not all) of the large partners are rather ineffective, whereas the ISPs have been very active at adopting and adapting new models. Merging successful ISP strategies with our strategies to ensure commitment from larger companies could be a key future area of focus.

Cumulative co-investment grew by 56% to IDR 253 bn (AUD 25.3m) from a total of IDR 163 bn (AUD 16.3m) last semester. Of this, 22% or IDR 57.2 bn (AUD 5.7 Mio) of investment is from private partners, with the remaining 77.4% or IDR 196.3bn (AUD 19.6 Mio) from farmers. This semester, on-farm investment at IDR 70.5bn (AUD 7 Mio) was 3.5 times higher than partner investments, compared to 5.5 times higher last semester. This shift is due to a significantly greater increase in partner investment (+78%) during the semester, compared to the increase in farmer co-investment (+15%).

PRISMA added 15 new public and private intervention partners this semester, with five new public-private initiatives launched, half of them resulting from the government M4P training. At the end of June 2018, PRISMA has worked with a cumulative total of 122 partners, a strong indication that the program is well-regarded as a partner for both private and public sector actors.

TABLE 1: PRISMA KEY PERFORMANCE INDICATORS

KPI tracking	Actual cumulative Y18S1	Actual Y18S1
1 # Outreach (all farming HHs)	221,430	77,367
1b # Outreach (< USD 2.50 PPP)	152,028	51,788
2 Net income impact in IDR (all farming HHs)	1,419,563,901,147	731,458,354,221
2b Net income impact in IDR (< USD 2.50 PPP)	957,414,088,803	477,017,130,707
3 # ISPs	4,895	3,540
4 Increased turnover of ISPs in IDR	349,018,837,376	173,853,604,718
5 # Innovations/interventions	142	27
6 # Initiatives by Gol to improve BEE	27	5

7	# Intervention partners (public and private sectors)	122	15
8	Private partner co-investment in IDR	57,222,459,278	20,107,130,574
9	Value of additional investment by farmers	196,348,183,623	70,473,994,427

VALUE FOR MONEY INDICATORS

All value-for-money indicators continue to improve, in line with the expected impact curve as the program nears the final semester for this phase.

Ex-post investment against total intervention costs per HH has fallen to AUD 179, from AUD 250 at the end of the last semester. This decrease has been linear over the past 4.5 years. If, as expected, 75% (AUD 55 Mio) of PRISMA's overall budget is spent on interventions and the projected outreach of 311,674 HHs is achieved next semester, this figure will reach approximately AUD 170 at the end of this phase.

Social return on investment (SROI) (total intervention costs) increased by 87% to AUD 3.58 this semester, up from AUD 1.91 in Y17S2. The key interventions contributing towards this indicator this semester are the ICT NASA (EJ), Pig and Shallots Nufarm (NTB) interventions, which have an SROI of over AUD 50.

PRISMA has clearly exceeded the target set during the mid-term review of 50% for investment leverage at direct intervention level. Investment leverage for total intervention costs is 14.4%, up from 10.29% last semester, and is at 63.86% for direct intervention costs only, up from 49.03% last semester. This is expected to continue to increase next semester in line with current impact trajectories.

2.3 Portfolio analysis

PRISMA's portfolio currently comprises a total of 88 active interventions with 27 new interventions added this semester. This brings the cumulative total number of interventions over the lifetime of the program to 142. Geographically, 31 interventions are active in EJ, 18 in NTB, 27 in NTT, six in WP and six in PA. Together they are projected to reach 311,674 HHs, and 11,674 HHs over the target for this phase.

Risks to the portfolio from over-reliance on few sectors was further reduced this semester through the growing success of Vegetable interventions. The share of total outreach from the Vegetable sector increased from 7% to 16%, Pig shrank slightly from 31% to 26% and Maize is now the largest sector with 32%, up from 29%. This outcome supports the decision to invest resources into growing the Vegetable sector, when five interventions were put into the push category at the last CMT strategy meeting in Y17S2. However, we also need to consider that many Vegetable (as well as Rice) interventions are actually input focused (mostly chemicals) rather than crop focused. On average, PRISMA now has six interventions per sector³, one more per sector compared to last semester and double the number compared to S1Y17. Beef and Mungbean as promising sectors have five and six active interventions respectively⁴.

A similar picture emerges when we look at partner diversification within each sector. A higher number of successful partners in each sector reduces risks to the overall portfolio, as of Y18S1 sectors with the highest number of partners are Pig (16), Maize (15), Seaweed (13), GOI (12), and Vegetable and Peanut with 8 each.

Using the revised QMT scoring, the July 2018 strategy meeting determined 11 interventions to push, spread evenly across the Maize (3), Mungbean (3), Beef (2), Pig (2) and GoI (1) sectors. Twelve interventions will be changed or improved, 34 let flow, 10 to innovate, four coming to an end, and eight interventions will

³For all sectors with more than one active intervention.

⁴Looking at these numbers, we need to keep in mind that number of interventions is a problematic indicator for informing resource allocation. Thanks to the fact that we are measuring HR allocation, we will ensure that we replace this indicator starting from next semester.

be dropped. The high number of interventions under 'let flow' reflects the program's confidence in the ongoing interventions as it nears the end of the current phase.

PRISMA's process for selecting and prioritising sectors has proven to be effective for this phase. Among the top five sectors in terms of expected outreach, Maize, Pig, Vegetable and Beef are large, pro-poor, demonstrate a positive contribution to women's economic empowerment dimensions, and exhibit good growth potential and partner take-up. Unsuccessful sectors include Soybean⁵, which will be closed at the end of Phase 1 due to consistently declining production and harvested area resulting from heavy government intervention in the market to achieve self-sufficiency targets (see 2.4, below). Other interventions which were dropped include two in Coconut NTT (where the partners had low willingness or low capacity), one each in Seaweed NTT, Cocoa Papua, and Anggur Merah NTT (due to low partner buy-in) and one in Mango EJ (which was just being monitored).

EXPERIENCE BOX 1: SIGNS OF SYSTEMIC CHANGE

Our partner, DuPont (also known as Corteva Agriscience) has expanded its maize seed business in NTB and NTT following the commercial success they had in Madura, East Java.

DuPont and BNI Pamekasan together with DAGRIO started providing agriculture input financing in order to expand the hybrid seed markets in Pamekasan and Sampang districts of Madura.

NASA has internalised the agriculture app developed through the partnership with PRISMA as a core part of their corporate brand. The app is source of agriculture knowledge for distributors, who continue to promote NASA products through farmer meetings and market storms. 92% of App users are recorded as benefiting from utilisation of the App, and 55% app users have applied the innovations/ agricultural practices recommended through the App.

Bank NTB and PT Pura Barutama is exploring the feasibility of providing post-harvest machinery credit to new and existing threshing service providers in Lombok.

Following the partnership in Mango and Maize sector, Syngenta started promoting crop protection products to the peanut farmers in East Java. Syngenta made additional investment in expanding their business to another district without PRISMA's support. BASF has independently engaged with Garuda Food, the biggest domestic peanut processing company, to jointly promote its products to Garuda Food's contract farmers.

EWINDO has reached out to World Vegetable Center (AVRDC) to obtain new varieties of mung bean seed and share knowledge. The investor of EWINDO, East West Group, has started assessing South East Asia market for mung bean.

BEJO True Seed Shallots (TSS): BEJO has entered the market for TSS, evidence of crowding-in from our TSS intervention with EWINDO. Our intervention is to promote TSS technology to the farmers for two new variety of TSS (Masserati and Tropix) offered by the new company.

More pig actors (inter-connected market) are responding and diversifying up and down the value chain, indicating more systemic change in the pig market, for example: More feed companies are assessing or entering the market, such as Patriot, Menara, Chiel Jeddang, and Pharmaceutical companies (Romindo and Boehringer) have started to develop their distribution channel in NTT; and conducted vaccinator training to improve knowledge and skills of private and public vaccinators.

This semester progress was made in using the structured approach developed last semester to measuring and facilitating systemic change in partners. A trial was conducted with eight selected partners (Agricon, BASF, BISI, Danken, Dupont, Novelvar, Rembu Tedeng and Sierad) using a set of indicators to measure 'incentive' and 'independence'. The related report provides recommendations for how to effectively engage with the partners to move them into the 'kaizen' category, and will be further refined next semester.

PRISMA has successfully restructured to seven portfolios. The new Head of Portfolio 6 will be responsible for Gender and Social Inclusion and interventions with strong gender elements (currently Peanut and Mungbean), while the Head of Portfolio 7 will lead interventions focusing on policy and the business enabling environment, including laying out the foundation of the policy work for PRISMA-2. To this end we plan to

⁵ PRISMA launched one new intervention in Soybean in partnership with Nestlé this semester, despite challenges facing the sector overall. This was a niche intervention in response to Nestlé's consideration of Indonesia as a key source for baby food in Southeast Asia, which could also open up broader collaborations with this new partner.

carry out a stock-take of all interventions which already engage with policy issues, as well as assessing the policy environment for all sectors.

2.4 Highlights, challenges and lessons learned

This semester further progress was made in reducing over-reliance on demo plots for achieving institutional level systemic change (graduating from level-1, towards greater level-2 and -3 systemic change). Our support to develop a national-level strategic plan with PT EWINDO, development of the Sipindo app, and the expansion of the IT-based intervention with NASA across the whole of Indonesia are strong examples of successful engagement at a strategic level with partners. In Pig NTT, the Gol intends to expand massively the provision of vaccinations on Timor and Sumba Island, and we have seen further evidence of crowding-in of new feed producers.

Thematically, there is increasing demand from partners to work across multiple commodities in cross-cutting areas such as fertiliser, soil treatment and pest management. Further discussions on adopting a broader cross-sector approach, value-for-money considerations, the efficiency of resources deployed, and overall portfolio structures will be addressed in the planned transition workshop at the end of August 2018.

A mild, but nonetheless observable slow-down in intervention activities was experienced due to difficulties in negotiating new contracts starting in 2019 and the factual hiring freeze as preparations for transition to PRISMA-2 began. An assessment of the number of staff PRISMA has lost and should replace, as well as the ratio of staff per intervention needs to be considered as we look forward to expansion in PRISMA-2 in the August workshop.

Issues around the effectiveness and efficiency of using MoUs compared to partnership agreements have been identified. Our experience shows that although MoUs offer more flexibility, they have usually resulted in less commitment from the partner and a corresponding increase in workload for PRISMA staff to carry out interventions. Ultimately, we also find that MoUs tend to accompany lower staff satisfaction, and have therefore decided to strive for a shift towards more partnership agreements.

Previous observations regarding the performance, relative to cost of using co-facilitators were evaluated during the CMT strategy meeting this semester. Key issues include: low partner commitment, lack of understanding and adherence to facilitation principles (the M4P approach), with a tendency to deliver activities directly; low spending on implementation and low results in the field; poor financial reporting; higher overhead costs and administrative costs for oversight from PRISMA staff, which results in poor value-for-money overall.

Government intervention in key (self-sufficiency) commodities, including soybean and maize continue to present challenges for achieving sustainable impact. Inflated maize prices due to the zero-import policy has incentivised farmers to abandon soybean *en masse* and switch to planting maize. In general terms, while farmers may experience benefits from badly designed subsidy programs, import restrictions and price targeting in the short-term, in the long-term lack of exposure to international competition has reduced incentives for adopting productivity-enhancing measures and GAP, further widening the productivity gap between Indonesia and leading global and regional producers. For example, PRISMA was not able to identify a single quality soybean seed variety available at scale in Indonesia, and no large seed producers investing in seed development. In addition, PRISMA's partner PT EWINDO has decided to pull out of the sector due to the unfavourable business environment and an almost 100% subsidised seed market.

2.5 Management response

To reduce staff uncertainty, anxiety and mitigate against a significant slowdown of implementation activities and achievement of impact, regular and structured communications, staff updates, and town hall meetings will continue. However, should external impacts outside of the program's control adversely impact the environment, the program's ability to maintain current momentum and achieve targets for PRISMA-2 may

be at risk, for example, through limited ability to hire a sixth cohort of new staff to replace those leaving the program during or at the end of 2018.

We expect to start negotiating new contracts with partners from early September to convert existing letters of intent into partnership agreements (reducing the use of MoUs) by December. This will help to mitigate against any slowdown in intervention activities, reducing partner uncertainty as longer-term commitments are made.

A clear position regarding if, and how to engage co-facilitators will be developed. Options include changing their MoUs to partnership agreements, with a more direct allocation of budgets to specific activities and deliverables; providing prospective their partners with a budget, ToR, contract and reporting templates; no longer requiring co-facilitators to produce an intervention concept note, i.e. reducing their role in strategy development; involvement of a PRISMA Principal or Senior Business Consultant in all deal-making; or dropping the current co-facilitators completely, with activities either delivered in-house or through a direct subcontract with a local partner.

PRISMA will continue strengthening its monitoring system to enable better capture of systemic impact. Challenges experienced in previous semesters as key interventions begin to achieve greater system change includes low visibility of partner activities as they expand into new areas, resulting in only partial impact being captured and often on a reactive basis (e.g. finding out through third-parties). To address this, we are already proactively testing new indicators with key partners to have better visibility of changes happening in the field and will intensify related efforts.

We will continue with the current portfolio construction strategy in accordance with the QMT process for the remainder of this phase. This means continuing to support Maize and Pigs to accelerate systemic impact, and investing in Vegetable⁶, Beef and Mungbean as sectors with high potential for Phase 2. Although the number of current interventions in partnership with government is high, there are severe doubts over whether they will lead to large scale and genuine systemic change in the long-term. We will continue to monitor progress closely to inform our strategy for developing such partnerships going forward.

Once the framework conditions for PRISMA-2 are clear, we will assess whether changes in the portfolio structure would lead to greater value for money. The current structure was built on crops / livestock sectors combined with a geographical dimension, which were defined as sub-sectors (crop in a specific province). Overtime we added ICT as a sector, however more recently the need to include more cross-cutting issues such as Fertiliser or pesticides became evident, resulting a mix of core and cross-sectors. We plan to define the way forward for PRISMA-2 in an additional portfolio strategy workshop in August.

3 SAFIRA - Portfolio management and monitoring

3.1 Portfolio development progress

SAFIRA added two new interventions and will drop two, as the program portfolio matures. This brings the total number of active interventions to ten with no new interventions in the pipeline. The two new interventions were with Bank Papua and Puskopdit, focusing on institutional strengthening. SAFIRA continued to capitalise on the benefits from leveraging existing relationships. In response to a request from Bappenas and DFAT in the PCC in November 2017, as well as PRISMA's observed access to finance challenges, SAFIRA signed an MoU with Bank Papua in mid-Y18S1. Ten out of 12 interventions are focused on institutional strengthening and delivering VCF; the remaining two interventions are YARO with BISI and Maize with Bank NTB (ARISA).

In Y18S1, SAFIRA provided partners with VCF technical assistance including training and consultancy. The support this semester included a focus on activities with BPR Arta Kencana, TLM, BRI, CU Sawiran and

⁶ The Vegetable sector has produced strong results this semester and significant outreach projected for Y18S2; however, some research has indicated over-production of some specific vegetables, which will be explored further next semester. A potential area of focus has been identified, working in stimulating greater demand for vegetables, which will contribute to the nutrition agenda for PRISMA-2.

Puskopdit. SAFIRA's partners which earlier received VCF training continued to demonstrate commitment this semester and confidence in the commercial viability of the model at an institutional level.

SAFIRA continues to develop the relationship with selected consulting companies and has prepared an agreement related to use of the VCF toolkit. Three consulting companies continue to work with SAFIRA to support partner institutions to integrate VCF: Hadidaya Jaya Abadi, Spire Consulting and MicroSave. These companies continue to offer VCF as one of their services.

This semester, SAFIRA not only focused on pillars 1 and 2, to supporting financial institutions and the development of consulting services, but also started to implement pillar 3: knowledge-sharing among stakeholders. This semester SAFIRA developed four reports and hosted two knowledge-sharing events. The reports were the Guide to Digital Credit Scoring (DCS), the commercial case for targeted marketing to women, and a deeper dive into the SOFIA data analysis. Events which SAFIRA hosted included a launch of the DCS Guide in Jakarta at the end of May 2018 in collaboration with Grow Asia. SAFIRA invited Dattabot, PRISMA's ICT partner, to this event, as a key informant to share practical experiences in data digitalisation. The second event was a Market Data-Sharing Workshop held in early June 2018 in Jakarta. SAFIRA shared information about new opportunities to market to women and in agriculture (through the SOFIA analysis).

SAFIRA continued to strengthen integration and collaboration with other AIP-Rural programs this semester, with eight of the 12 active interventions implemented in collaboration with PRISMA (7) and ARISA (1), up from six last semester. SAFIRA interventions with BISI and BNI in collaboration with PRISMA have produced good results; the other collaborations (including with BPR Central Pitoby, Tanaoba Lais Manekat, BPR Arta Kencana, Bank Papua, and BRI) began just this semester for vegetables, shallot, maize and seaweed, and are still in the process of developing the VCF product specific to those commodities. SAFIRA will not continue with Bank NTB after Y18SI as ARISA will lead the intervention in full. In addition, SAFIRA will drop CU Sawiran as the relationship will fold into the program's work with Puskopdit. This will result in ten interventions at the close of the program in Semester 2. SAFIRA partner institutions have continued to expand VCF to other regions and sectors: BRI is scaling up Sugarcane in EJ, Bank Papua is looking to expand beyond Seaweed and is keen to explore opportunities to provide VCF loans to the Coffee sector, and BPR Central Pitoby is currently scaling up VCF for the Pig sector in Kupang district.

3.2 Progress of key performance indicators



This semester SAFIRA continued to report positive results from its interventions, with notable gains in loans disbursed, farmer's increased income, and partner co-investment, captured in the KPI data below. The program also received data on loans disbursed by partner institutions, including BISI, Bank NTB and Bank Sinarmas. The two planned impact assessments for the YARO intervention with BISI International in NTB,

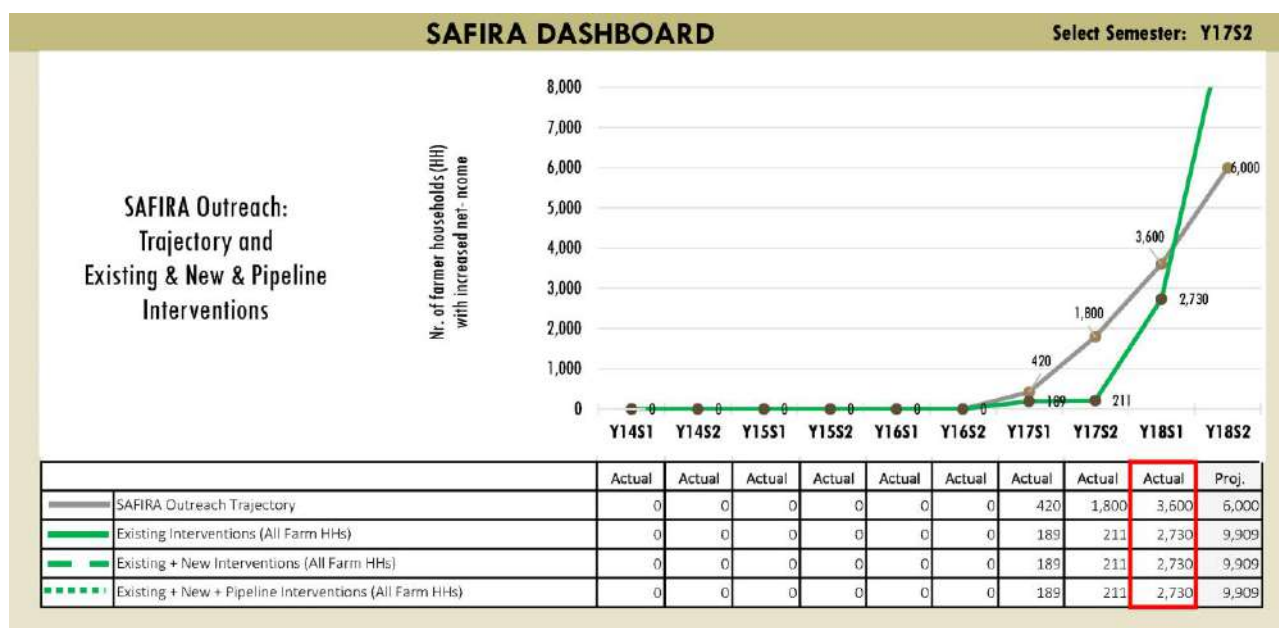
and Institutional Strengthening with BNI in Sumenep, EJ were also successfully completed. The assessments show positive results catch up to forecasted expectations.

This semester over 13,144 farmers were made aware of the availability of VCF schemes and a total of 10,644 farmers used the new products. SAFIRA’s impact assessment is in its initial phase but preliminary data shows that 2,519 farmers have benefited in Y18S1 with a combined NAIC of IDR 8,646,642,192. Similarly, out of the 70 ISPs engaged by FI partners, 58 have increased turnover with a total value of IDR 2,276,015,890.

SAFIRA continues to engage in ICT including the SRIYA application with CU Sawiran, and plans to support PT BISI to transition from manual to digital book-keeping. This semester SAFIRA dropped the intervention with BPR Pesisir Akbar regarding the credit scoring tool, SIMBUKA, as the relationship has deteriorated after frequent changes in management and continued misalignment of the use of the application. Instead, the program will continue to support CU Sawiran’s 593 credit union members who have installed the SRIYA application. At the last count, SAFIRA recorded that 494 (76%) of the members are active users of the app.

The first semester of 2018 is the third period in which SAFIRA recorded farming HHs benefiting from intervention activities, with 2,519 HHs (1,167 HHs < USD 2.50 PPP) reported from the interventions with BNI and BISI. Data captured through the two planned impact assessments reported 1,010 HHs from BNI and 1,509 HHs from BISI. This semester, SAFIRA achieved 41.9% of the overall program outreach target (6,000 HHs benefiting), bringing the cumulative outreach total to 2,730 HHs (45.6% of the overall target). SAFIRA expects to achieve total outreach of 9,909 HHs (4,051 < USD 2.50 PPP) from existing and new interventions by the end of the current phase of the program, exceeding the target by 65.2%.

FIGURE 3: SAFIRA OUTREACH TRAJECTORY



The total NAIC for all farming HHs in Y18S1 is IDR 8.6 bn (AUD 0.86 Mio), with absolute NAIC per HH at IDR 3,568,894 (AUD 356). All NAIC recorded this semester was from PT BISI and BNI. SAFIRA’s partner institutions (which we expect to make a significant contribution to NAIC next semester) are BRI, BPR Central Pitoby, Tanaoba Lais Manekat, and BPR Arta Kencana.

TABLE 2: SAFIRA KEY PERFORMANCE INDICATORS

KPI tracking		Actual cumulative Y18S1	Actual Y18S1
1	# Outreach (all farming HHs)	2,730	2,519
1b	# Outreach (< USD 2.50 PPP)	1,765	1,617
2	Net income impact in IDR (all farming HHs)	9,743,082,157	8,646,642,192
2b	Net income impact in IDR (< USD 2.50 PPP)	6,313,577,336	5,544,962,012

3	# SMEs with increased turnover	58	22
4	Increased turnover SMEs in IDR	17,261,141,883	2,276,015,890
5	# Innovations/interventions	16	4
6	# Initiatives by government to improve BEE	4	3
7	# Intervention partners (public and private sectors)	17	3
8	Private partner co-investment in IDR	1,098,272,980	159,510,000

Partner financial contribution to VCF this semester increased by IDR 159.5 Mio, the majority of which was from the Bank Sinarmas (IDR 75 Mio) and BISI (IDR 84.5 Mio). In addition to the continued buy-in for VCF and an institutional level from Sinarmas, next semester SAFIRA expects co-investment to increase significantly through commitments from Tanaoba Lais Manekat (TLM), BPR Central Pitoby, and Puskopdit.

TABLE 3: SAFIRA PROJECT SPECIFIC INDICATORS

SAFIRA specific indicators		Cumulative Y18S1	Actual Y18S1
1	# HHs who have received finance based on our intervention(s) (directly and indirectly)	16,478	10,644
2	# farmers with increased income	2,730	2,519
3	# farmers who benefit from inputs purchased	2,974	2,785
4	# SMEs/ISPs which receive finance and on-lend	58	22
5	# financial institutions which increase agricultural lending by a significant amount	5	1
6	Percentage of non-performing loans in partner FIs	22%	22%

This semester SAFIRA continued to record all SAFIRA specific indicators in accordance with the protocol. Next semester, five impact assessments are planned with SAFIRA partners BRI, Tanaoba Lais Manekat, BPR Central Pitoby, BPR Arta Kencana and Bank NTB with ARISA. This will provide more substantial data on SAFIRA's overall outreach to the end of the current phase. Nineteen unpaid loans remain outstanding in the intervention with Bank Sinarmas, where an issue with the off-taker PT DBM resulted in DBM refusing to make payment to all farmers for their cattle. By the end of June, the intervention with BNI had a repayment rate of 21% (79% unpaid) due to pressures on the market system. This is discussed in more detail with the lessons learned section.

3.3 Portfolio analysis and strategy

SAFIRA's vision of change is that more financial institutions in eastern Indonesia are equipped with the skills and capability to engage in profitable applications of agricultural value chain financing (VCF) so that value chain actors have the access to finance they need to make the investments required to enhance productivity and increase their incomes. SAFIRA's strategy aims to achieve this systemic change by formalising VCF within the financial ecosystem by three main pillars: (1) supporting financial institutions and agribusinesses to develop VCF products; (2) development of and linkages to VCF consulting services, and (3) facilitating knowledge-sharing amongst stakeholders.

To have a FI support a VCF product requires holistic support in order to develop products for the market. To achieve this, SAFIRA uses an institutional strengthening or institutional development method of working with partners in order to embed knowledge of VCF so that the FI can reach scale in a sustainable means with its implementation. This includes the following major activities:

Technical assistance (TA) in VCF development: Areas for TA support include developing VCF products, change management, operations procedures, new product marketing and advice. The methodology involves a toolkit which can be walked through as a training or utilised as a TA tool, both of which are taking place.

Within the toolkit and TA, the program supports the FIs in the following ways:

- **Market assessment:** VCF requires a thorough understanding of the market value chain in order to observe the opportunities and barriers to accessing finance.

- **Self-assessment:** the FI also undergo a process of assessing themselves as an organisation in terms of their readiness and ability to undertake a VCF product offering, as well as exploring existing products to determine if any would be suitable for adaptation.
- **Product design:** VCF implementation requires intense discussion to design new (or adapt existing) products to meet the needs of the value chain, especially during the first course of the TA.
- **Technical assistance to improve internal synergies:** VCF implementation requires adjustments to internal tools and processes of operation; often, it needs to develop new ones.

In addition to the toolkit, as part of the support provided under the IS approach, SAFIRA works with the partner in the following:

- **Developing and strengthening linkages with private partners:** VCF requires collaboration and coordination with third party actors in the agriculture value chain to formulate the business model.
- **Project / change management:** the VCF implementation requires project/change management as it affects company-wide functions and may transform several parts of it. In some instances, SAFIRA has developed a steering committee to support implementation where additional staff is not possible.
- **Promotional and socialisation:** to acquire new borrowers for the new VCF products, SAFIRA showcased an alternative marketing strategy required to reach the low-income groups.

SAFIRA's IS strategy works because it creates large gains in terms of:

- **Institutional and systemic change:** Sector projects then arise through this process as a means of testing, learning and developing core business practices, systems and human resources.
- **Staged and interactive interventions which sometimes start with lighter engagement (such as a PRISMA intervention in need of finance) and build upon it by working alongside the partner,** rather than attempting to lay out a complete plan from the outset. This re-emphasises careful facilitation which is centred around behaviour change, ensuring that activities are adapted accordingly.
- **Institutional strengthening of consulting services** as legacy-supporting functions to the VCF market system.

It clear that the innovations tested by SAFIRA have shown positive results. The institutional strengthening approach has been well and truly proven as all the partnerships have yielded a VCF product being put out to market. As frequently discussed, SAFIRA required a longer runway to ensure working with partners and developing products as well as lending and cultivating harvests before income could be increased. The primary rationale for this is the sustainability factor, as well as the need to establish a firm foundation with an FI before it can provide new products.

In all, 11 VCF products were developed by partners, encompassing eight agricultural sectors across eight districts in our provinces in the pilot phase. Of the 11 VCF products developed thus far, eight have been commercialised. This means that the partners have seen the economic value in the product and now offer it at a competitive market rate. Furthermore, all 10 FIs have staff dedicated to upholding the change within their institutions. Five partners have further invested by hiring a new team or dedicating an entire team to manage VCF; they have also increased lending significantly in the agriculture sector. Six partners have extended VCF to other agriculture commodities; five of these have also increased geographic coverage.

To date, SAFIRA can claim attribution for the fact that VCF is available in 13 agriculture sectors across almost 30 districts in five provinces. This is a clear indication of up-take of the VCF innovation by partner FIs which have invested further by modifying product structures for new products, expanding their ISP networks and marketing in new areas through their own initiatives after the initial intervention from SAFIRA. Two partners further invested in ICT infrastructures and have branded their VCF product lines. Three partners went beyond extending just across districts by going into new provinces; two partners now have VCF schemes available for more than two commodities, and three partners have diversified the VCF model into non-agriculture commodities.

In response to the innovation piloted by partner FIs, there is preliminary evidence of VCF models or variants of it being offered by at least seven non-partner FIs. The government has also responded and

are now disbursing KUR loans to cattle farmers following the VCF model and OJK approached SAFIRA to attempt a collaborative intervention.

TABLE 4: SCALE-UP OF VCF BY PARTNERS

Partner	Pilot		Scale	
	Commodity	Location	Commodity	location
BNI	Maize	Sumenep District, EJ	Maize	Malang, Sulawesi, EJ
			Rice	Bojonegoro, EJ
BPR-AK	Shallot	Nganjuk, EJ	Maize*	Ngawi, EJ
BRI	Sugarcane	Malang, EJ	Sugarcane	Madiun, EJ
			Soybean*	Jember, EJ
			Maize	Pacitan, Ponorogo, Madiun, Malang, Situbondo, and Bondowoso EJ
			Vegetable	Kupang, NTT
			Seaweed*	Multiple locations, NTT
Sinarmas	Cattle	Tuban, EJ	Cattle	10 branches in 5 provinces
			Vegetable	2 branches in WJ
			Horticulture	
NTT	Coffee	Ruteng area, Flores, NTT		
TLM	Vegetable*	Kupang, NTT		
Pitoby	Vegetable	Kupang, NTT	Vegetable	Kupang
			Pig*	Kupang
Sawiran	Potato	Malang, EJ	Multiple	All branches
BISI	Maize	Lombok, NTB	Maize	Kupang, NTT
			Paddy*	Lombok, Sumbawa, NTB and NTT
			Sweet corn	Sumbawa, NTB and Kupang, NTT
Bank Papua	Seaweed*	Papua		
	Coffee*	Papua		

**Denotes products under development*

3.4 Challenges and lessons learned

SAFIRA has collected lessons learned and actioned each within the other interventions for a stronger overall portfolio. This includes the ongoing challenge with PT DBM as an off-taker in the Sinarmas intervention, which is continuing to fail to pay for the cattle they have collected from the farmers. SAFIRA has attempted to mediate discussions between the stakeholders and move towards a collective resolution. Since February 2018 DBM has declined to make any further payments or to engage in any further discussion. SAFIRA and Sinarmas are supporting the farmers through a process of engagement to collect their money, alongside outreach to the Indonesian Financial Mediation Centre (LAPSPI) if necessary. It has been decided that as a part of a market systems development program and in line with DFAT's recommendations, no payments in lieu will be provided to the farmers affected by DBM.

Despite the issue with DBM, Sinarmas remains engaged in VCF and interested to continue disbursing loans under the existing business model. SAFIRA is supporting processes to further strengthen the likelihood of repayments in future, including reinforcing and strengthening the quality and reliability of agreements, improving the quality of all actors in the chain, and assessing to what degree the actors followed the Standard Operating Procedures (SOPs) as designed. This is being implemented across the portfolio and will build a more robust process and contribute to a better success rate going forward.

SAFIRA has also experienced the first-hand influence which non-market actors can have to impact a market system with our partner BNI in Sumenep, even when all the conditions are in place to ensure a properly working VCF model. Together with PRISMA, SAFIRA was requested to participate in the business model in a maize intervention in Sumenep. BNI was already engaged and was planning to offer a KUR loan as part of the intervention to assist with the adoption of hybrid maize. SAFIRA became involved in an attempt to integrate the KUR loan into the VCF model to ensure a higher rate of repayment, thereby making it a more sustainable lending model, while at the same time supporting BNI to potentially expand into other agriculture lending without KUR.

On first glance, one might not see the failure of the market system in this intervention, but the loan factor makes it much easier to assess which loans have been repaid and which ones have not. The intervention experienced challenges from the start, including government involvement from DAGRIO, which led to pressure for each party to circumvent SOPs that were developed intentionally to support the operation of the market. As well the ADGRIO attempt to fix the off-take price of the maize beyond what the off-taker was willing to pay. In addition to involvement from DAGRIO, the PPL (Gol's own business providing extension services) was involved; however, as it was unfamiliar with hybrid maize it was unable to provide adequate GAP. As a result, in the months following the harvest period (May and June) and due to the harvest itself, farmers had to negotiate a new price with the off-taker; some elected to side-sell their maize, resulting in becoming responsible for repaying their own loans (rather than this being through the off-taker). The key learning here is around the involvement of government players and their potential influence on what is supposed to be a free-market system; this might not have been observable if it were not for the loan mechanism of this intervention.

It is expected that because of the unpaid loans, banks BNI and Sinarmas will reschedule most of the outstanding loans, allowing the debtors an additional term to repay the loan. In the case of BNI, it is looking to renew the terms for an additional five months for the majority of the farmers. This would have the knock-on impact of reducing the NPL rates the following semester, a move the bank would conduct to avoid public scrutiny, and which would also affect the appearance of SAFIRA's portfolio. As of this semester however, 16% of SAFIRA's portfolio is in unpaid loans (not yet counted as NPL), with 99% of that coming from BNI. The program continues to support both Sinarmas and BNI in the collection of these outstanding loans, and in making suggestions for field-level activities which may reduce the possibility for future disbursement.

This semester, SAFIRA has also generated a number of other opportunities for learning with partners, including generating reports to further assess learnings from the SOFIA dataset and to build a commercial case for working with women farmers. Last semester the program identified that SOFIA did not produce results which met the needs of SAFIRA's partners. As a result of this lesson, during this semester SAFIRA engaged a consultant to carry out a further analysis/deep dive into what the data showed. This report was presented to all partners and several stakeholders in June. SAFIRA took this same opportunity to identify lessons learned in the broader agricultural finance and microfinance communities to show its partners the commercial value in lending to women, and in utilising women as distribution and sales agents. This concept was presented to the partners at the same event.

3.5 Management response

SAFIRA's overall portfolio is strong. In a very short time SAFIRA has executed a complex strategy, introduced and embedded new products in financial institutions and in the market, and will continue to see results in the semester ahead. This semester, SAFIRA successfully brought two new members of staff on board to tackle the growing workload: a Rural Finance Specialist and a part-time Project Assistant. SAFIRA's Team Leader returned from 2.5 months maternity leave and has integrated back into the team. SAFIRA conducted an internal recruitment process and secured a Senior Business Consultant from PRISMA to support SAFIRA's workload and to provide additional market systems development expertise to the team. A Project Assistant was also recruited to support the team members with administration around travel and internal operations, as well as consolidation of team reports and follow-ups.

SAFIRA is approaching the final semester of the program and therefore will be looking to determine which interventions have potential to adapt to a single program design as per PRISMA 2. SAFIRA is currently observing all interventions and by the end of this semester will close Bank NTB and CU Sawiran, and may close Bank BNI in Sumenep. It is still too early to determine the best course of action with some interventions (Arta Kencana, TLM, Central Pitoby, Puskopdit and Bank Papua), while at this point it makes sense to continue with the interventions with BISI International, Bank BRI, Bank Sinarmas and Bank NTT.

The situations that have taken place in Sinarmas and BNI show evidence of the need for a broader scope of VCF in addition to input credit financing which is currently taking place. SAFIRA has ventured

into trader credit with a few interventions (Bank NTB and Bank Papua) and has begun to touch on insurance (with BISI and Arta Kencana). In addition, the program recommends expansion into blockchain technologies for developing a credit wallet and credit history for farmers, alongside other forms of VCF, such as warehouse receipt systems, savings, asset financing and factoring. Had some of these things been in place in the current interventions, such as warehouse receipts, these situations likely would have been less impactful to farmers.

PRODUCTS IDENTIFIED FOR FURTHER EXPLORATION

Category	Instrument
Product financing	<ul style="list-style-type: none"> • Trader credit • Input-supplier finance • Marketing and wholesale company finance • Lead-firm financing
Receivables financing	<ul style="list-style-type: none"> • Trade-receivables finance • Factoring • Forfaiting
Physical asset collateralisation	<ul style="list-style-type: none"> • Warehouse receipts finance • Repurchase agreements (repos) • Financial leasing (lease-purchase)
Risk mitigation product	<ul style="list-style-type: none"> • Insurance • Forward contracts • Futures
Financial enhancements	<ul style="list-style-type: none"> • Securitisation instruments • Loan guarantees • Joint-venture finance

In Semester 2, SAFIRA will share some additional learnings. This will include circulating an in-depth look into the difference between Banks BNI and BRI in disbursing and collecting KUR, generating an examination into the program's systemic change and developing a strategy for commercial lending alongside KUR.

SAFIRA will also conduct a final five impact assessments to gauge impact within Bank NTB (for a final time), BPR Central Pitoby, BRI, TLM and Arta Kencana. SAFIRA will not be able to conduct impact assessments within Bank NTT, CU Sawiran, Puskopdit or Bank Papua, as impact is expected to be observed after the program ends.

In the remaining semester, SAFIRA will focus on delivering the current portfolio of interventions, increasing the quality of the portfolio, achieving impact, and developing lessons learned before closing the program at the end of 2018.

4 Cross-cutting issues

4.1 Results measurement

During the first semester of 2018, the RML team completed 50 intervention impact assessments,⁷ and impact from four interventions (Pig Feed, Maize Storing and Mango) was extrapolated from previous assessments. This semester, the RML team started to use the Computer Assisted Personal Interview (CAPI) tool to improve data quality and streamline the data collection process.

The RML team implemented WEE measurement indicators as part of almost all impact assessments. The gender-specific questions that had been piloted in the second semester of 2017 were integrated into the new questionnaires. These WEE questions mainly focused on assessing the Level of Effort and Level of Control over productive resources between women and men in farming households.

Disability inclusion indicators and questions were integrated to all impact assessment questionnaires following the successful testing of the pilot in the second semester of 2017. All impact assessments now

⁷ Impact assessments were carried out in the following subsectors: Cashew NTT, Coconut NTT, Goi EJ, Maize EJ, Maize NTB, Maize NTT, Mango EJ, Mango NTB, Mung bean EJ, Pig NTT, Seaweed NTT, Shallots EJ, Shallots NTB, Soybean NTB, Vegetable EJ, Vegetable NTB, Vegetable NTT, Vegetable Papua, Vegetable West Papua.

integrate refined disability inclusion questions. In addition, the Pig NTT subsector recorded at least one disabled ISP who is selling pig feed.

Next semester RML will complete up to 63 impact assessments in total. The final semester of this phase will have the highest number of impact assessments compared to all previous semesters. A pilot survey for a 'copying' study will also be conducted in the Pig NTT subsector.

A DCED auditor will assess the health and performance of PRISMA's Results Measurement systems in Y18S2. Phitcha Wanitphon arrives in early August to check the current status of PRISMA systems, and provide recommendations on potential areas for improvement, including ongoing work to enhance PRISMA's ability proactively to capture systemic impact.

4.2 Gender and social inclusion

Last semester the focus was on setting the conceptual grounding for a far more commercial, case-driven approach to WEE within AIP-Rural. This semester has looked at the critical aspect of rooting this thinking firmly into implementation teams, i.e. fostering a continued team behavioural shift around WEE. Tactically, this is being achieved via two routes: the continuation of the stock-take (to support and proactively assess the progress of the individual teams' capacity and proactivity around WEE); and the addition of lean, tactical tools to help ground WEE design thought processing into key intervention lifecycle points (such as Intervention Concept Note, Intervention Plan, Sub-Sector Review and Quality Management Tool).

Positive indicators of increased staff capacity and ownership of this new approach by teams were demonstrated. As of June 2018, 76% of interventions (of 96 interventions assessed) have effectively utilised key gender information in their intervention implementation, compared to just 44% (of 83 interventions assessed) back in the second semester of 2017. Of the 96 interventions, 58 have high participation of women, and 38 of these have already implemented gender inclusive business case strategies. Some strong examples include:

- A market research-based study commissioned to better understand women's usage and attitudes towards seed purchases for their home gardens, looking at critical factors such as appropriate packaging, price, and distribution channels for the product. Insights from this study will be presented to EWINDO to support their understanding of the home gardening market potential and more clearly enable them to develop strategies to pursue in targeting women in rural areas.
- In the BISI agrochemical intervention, broader information beyond levels of engagement in chemical purchasing and application by women was gathered, to include safety awareness, input purchasing location, trustful source of information, and chemical marketing considerations. This was then translated into business language for the partner, focusing on how the insights could help them maximise sales. Critically, this explained that although the purchasing and application of chemicals is dominated by men, this is mostly because of the limitations in women's involvement. Consequently, to increase the access of women while still effectively bearing the cost, BISI invited women farmers to farmer meetings, and farmer field days in the same session with men.
- To increase the uptake of more gender sensitive VCF products and practices by financial institutions and agribusinesses, SAFIRA invited its financial institution partners and VCF consulting firms to participate in a workshop highlighting the strong commercial case for investing in growing their female customer base. The report, "Commercial Case for Indonesian Financial Institutions to Increase Engagement of Women" was published and shared with SAFIRA's partners, VCF consulting firms, and other stakeholders as an insight for their decision makers to adopt this strategy to increase their profitability. Consequently, 55% of the financial institution participants have implemented gender-inclusive strategies as a follow up from this workshop.

Taking this further forward, next semester, AIP-RURAL's goals for WEE will be as follows:

The establishment of a WEE-focused Portfolio 6. Continuing to build the business-centred approach to WEE is a demanding, intellectually challenging task that will need to be driven from within the heart of the

program. Thus while this will continued to be supported by the ad-hoc engagement of the International WEE implementation STA, a broader, more continuous driver will come from setting up an intensive support unit made up of those who well understand how to design and implement successful AIP-Rural interventions. Such individuals need to be credible and analytically capable, gaining the trust to work closely alongside teams to form and make sense of their WEE findings, translate this into viable business cases, and effectively track the progress and uptake by partners. Portfolio 6 has thus been formed from members of the implementation team, led by Dhita Niken, who comes with a strong track record of having implemented successful WEE interventions, and who will work closely with the Results Measurement team. Alongside capacity building, Portfolio 6 will seek to make sense of the broader WEE learning and aggregation of WEE results across the overall AIP-Rural portfolio, and finally drive some strategic WEE interventions focused on more cross-cutting functions, such as strengthening the broader approach to targeted agricultural marketing.

Portfolio 6 will require a more actively-driven, impact focused approach to WEE strategy planning, with clearly identified 3-6 monthly progress milestones, and well-drawn out framework for the emerging AIP-Rural WEE pillars of work. The team will begin working on the proactive revised strategy for PRISMA-2, including firming in the scope of Portfolio 6's work, in the upcoming semester.

In terms of broader inclusion, based on preliminary data available data the impact assessment carried out in the past semester across select sectors, it was found that on average, 15% of PRISMA users are disabled; TIRTA and SAFIRA had 6% and 14% disabled users respectively.

As a continuation of the survey carried out in 2017, a small qualitative survey on disability was conducted in January 2018, the purpose of which was to find how disabled people were involved and affected by the program's interventions. This enabled the team to develop stronger techniques for assessing disability, alongside opening broader questions as to whether and how disability inclusion can best be fostered in the context of market systems development (from the perspective of both economically active and dependent populations). Subsequently, a far broader disability in the specific context of AIP-Rural exploratory study was commissioned, with a view to developing a highly focused strategy for disability inclusion in AIP-Rural. The study is scheduled to be completed in late August 2018.

4.3 Environment

The current portfolio poses acceptable levels of risks to environment and has a relatively high but largely unavoidable level of exposure to environmental risks. 23 PRISMA interventions and one SAFIRA intervention have been identified as posing a moderate risk to the environment. At the same time, 44 PRISMA interventions and one SAFIRA intervention are exposed to a higher-than-moderate risk from environmental conditions. None of the current PRISMA and SAFIRA's interventions have been rated as posing a high risk of negative impact to the environment. One of PRISMA's interventions was identified as being highly exposed to external climatic risks and has implemented measures to mitigate the risk.

This semester PRISMA focused on updating the Environmental Management Strategy, refining our current approach to mainstreaming environmental considerations into intervention design and monitoring. The updated document introduces PRISMA's new environmental lens, improving depth and scope. This includes a formalised Environmental Life Cycle Impact Assessment (ELCIA); awareness of critical issues such as moral and environmental hazards; enhanced strategic focus on how the program can capitalise on existing interventions to better the environment, and how better environmental awareness could benefit future intervention design. The update seeks to add greater depth, awareness and ownership of environmental issues via the integration of an Environmental Smart Checklist. Dissemination and further mainstreaming will take place in S2Y18. Full implementation is expected to be rolled out for PRISMA-2 from January 2019.

PRISMA is currently undertaking an Environmental Desk Assessment (EDA) of seven interventions. These EDAs should provide better data and a more systemised way of monitoring and reviewing environmental impact. Two ELCIA are also currently underway in the Livestock and Maize sectors. Two vendors were identified and engaged to carry out the ELCIAs. The program will use results from these two

ELCIAs to inform all related interventions working in the Maize and Livestock sectors across PRISMA and SAFIRA.

4.4 Communications

Communications were a strong area of focus this semester, with key activities designed and delivered to support both internal and external communications priorities. Internally, a package of communications tools has been rolled out to inform and receive feedback from staff on transition arrangements for PRISMA-2. This has been critical to minimise uncertainty and potential disruption. Other internal communications activities included finalising the AIP-Rural Social Media Guideline, which promotes the responsible use of social media to build strong online safety skills, and to establish a positive digital footprint in line with our core values of integrity, professionalism and respect for diversity.

To capture the program's lessons learned and achievements, 6 case studies analysing areas of interest to the international community have been commissioned, covering the topics of gender, collaboration with government, collaboration with the private sector, using data for programming, adaptive management and scale and sustainability.

To ease the start of PRISMA 2, preparatory studies were initiated analysing key PRISMA sectors in Central Java; background studies for nutrition-sensitive agriculture; access to water for agriculture; retail shop mapping and business analysis; and a sector analysis on mechanisation.

AIP-Rural's communication strategy has been updated, taking into account feedback from the Stakeholder Engagement Perception Survey conducted last semester. Structured updates to the website and the AIP-Rural Info-Package are ongoing, with key deliverables to be completed next semester.

A key area of focus going forward is more strategic use of social media channels to achieve greater impact. In response to evidence that farmers' are active users of social media platforms including WhatsApp and Facebook, PRISMA will conduct a deeper analysis into the potential for using these channels as an entry point for new interventions.

The AIP-Rural Media Engagement Protocol will review standards and procedures determining the programs' relationships with the media. In close coordination with DFAT, we are taking proactive measures to establish key relationships with media actors. A strong media engagement strategy will become increasingly important as the program grows in reputation as a result of its larger impact.

4.5 Risk management

The key focus for risk management in Y18S1 and Y18S2 is minimising potential disruption to the program arising from uncertainties about the transition to PRISMA-2. The approved transition plan has commenced implementation, with additional resources brought in from both internal and external sources to support the process. Nevertheless, any transition entails a certain degree of disruption arising from necessary changes and natural staff turnover, as well as potential external factors outside the program's control. Our preparations are sufficient to respond to and manage the phase transition to minimise risks to program delivery.

Staff safety and security is an area of increasing concern. This semester saw a sharp increase in natural disasters including earthquakes, tsunamis and volcanic activity, as well as terrorist attacks in Surabaya. Our safety and security systems are robust and we were able to account for all AIP-Rural staff within hours of each incident. However, recognising the severity of the potential risks, we are currently intensifying training and awareness-raising, updating security protocols and increasing the level of monitoring for security risks.

Heightened political tensions and an increased likelihood of government intervention in key markets is the most significant risk from a programmatic perspective over the next 12 months. PRISMA will intensify engagement with local government counterparts to determine win-win solutions and mitigate against any potentially poorly thought-out policies that could negatively impact farmers.

5 Stakeholder relationship management

5.1 Government of Indonesia national and subnational agencies

The interventions designed in collaboration with local governments do not yet yield significant results. Only for one out of 9 interventions (Maize Pamekasan) impact has been recorded so far (1950 HH). However, it needs to be noted that all interventions are very young and that we have seen at the example of Maize Sumenep (not a result of the M4P training) that collaboration with government can be crucial to success.

In response to a request from Bappenas, we conducted M4P training for the agency in Bandung at the end of June. The training was held for two days and provided a basic understanding of the market system development approach.

Three out of five of PRISMA provinces elected new governors and 50%-60% of the program districts will have new leaders. This will lead to changes of the agency heads in the next 6-12 months. Consequently, our provincial managers will need to introduce PRISMA and build relationships again.

PRISMA will have to deal with increasing the likelihood of government interference in markets. With Indonesia's upcoming presidential elections next year, we expect 2019 to be rife with political tension and disputes. The current administration will not risk being perceived as being against the interests of the poor or smallholder farmers. It is therefore expected that government policy will not become less populist and that existing subsidy programs will probably remain the same, if not increase between now and the elections. Taking current trade tensions into consideration, the Gol may have to focus more on keeping food prices stable and controlling inflation. Food import restrictions may be relaxed accordingly. For PRISMA, any policy strategy development will have to wait for the election results. However, in consultation with DFAT and Bappenas, PRISMA will begin to build potential topics likely to be relevant regardless of the election results.

5.2 Private sector and civil society partners

PRISMA has developed a new systemic change tool to measure the strength and likelihood of private partners expanding innovations beyond the program's intervention. The goal is to map where our existing partners are in the journey and identify the best form of support to move them to the next level. The tool is currently being tested with eight private sector partners across four sectors. Support is tailored based on the partner's risk profile and the incentive they receive from the intervention.

Looking forward, one challenge will be to maintain the good relationships with our current partners during the transition to PRISMA 2. To address this, we will strive to keep the time during which we will not be able to work with our partners as short as possible; openly inform them about the changes and developments; and use this as an opportunity to open more strategic discussions with some of them.

6 Operations and finance

6.1 Operations

Operational support across the three programs continued to build on earlier improvements with ongoing reviews of internal processes, tools and templates. This ensured the efficiency and robustness needed to manage company and client requirements and the many risks inherent in a large and complex program. To build capacity, some job rotation in finance, administration and HR has provided staff with variety of work, broader capacity and personal growth. Administration and Finance have worked closely with the MIS team to create online tools to better track payment of supplier invoices, report on the monthly budget vs. the actual, and general staff information.

The revised Project Budget has been in use now for six months, providing historical data to assist in the identification of spending trends and to inform future forecasts. Applying a known discount ratio to

team forecasts has reduced the overall budget vs. an actual variance from (18%) to (7%). This discount ratio continues to be adjusted as the program collects more financial data.

The final six months will focus on ensuring interventions are well-supported through the transition phase, existing activities are closed in an orderly manner and everything is in order for seamless transitional support to Phase 2.

6.2 Human Resource Management

New Performance Management Guidelines including talent management approach and rules were developed and introduced, reflecting a competency-based framework. Staff performance reviews will provide input to the ongoing capacity building needs of staff in the final year and in preparation for Phase 2.

Two staff joined PRISMA in this Semester with six leaving. This brings total staff numbers to 108 and an average staff turnover of 10.9%. One staff joined SAFIRA this Semester with none leaving, bringing total staff numbers to 10.

The transition to PRISMA 2 is expected to result in an increased staff turnover. One of the reasons is that the end of the current program is a natural moment to look for other opportunities. Another is that some staff may have stayed longer than intended due to the expected severance pay out.

6.3 IT and MIS

Poor internet access in the provinces continued despite the additional ISPs and increased bandwidth. Further changes are being explored including cloud based solutions for some of the tasks currently performed on MS GP.

Several finance reports and KPI snapshots were developed for the Power BI dashboard. The purpose of the tools is to inform teams of the progress of their implementation budget and to help them to identify areas of potential concern. The KPI snapshots report was developed to “lock” the figures obtained from the live system, so that the numbers from each reporting period can be displayed.

Development of Portfolio Management Tool 2.0 is underway. Unlike its predecessor, this new tool will be a web-based application. At the moment, a prototype exists, and a final version will be ready for deployment in the near future.

Annex 1 – Sub Sector Profiles

SAFIRA

1. INSTITUTIONAL STRENGTHENING – BANK SINARMAS

Indonesia is the largest beef producer in Southeast Asia. Nevertheless, the country is experiencing a shortfall in production as domestic consumption outstrips supply. Hence, there is still dependency on imports to fulfil national demand. But since 2010, the government has been tightening import quotas with the aim of creating 90% self-sufficiency in beef. These two factors have significantly increased the demand for locally sourced beef. In 2016, the government lifted the import quota for beef and live cattle but imposes new requirement for importers to import one breeding cattle for every five feeder cattle, this to increase beef supply and domestic cattle population.

The high cattle population figure was not in line with beef production since it low productivity problem. PRISMA's research indicates that increasing the availability of good nutritious feed and artificial insemination services will enable cattle farmers to increase their cattle productivity and increase their volume of cattle production. The existence of financial institutions surely can help farmers to get better access of those services where currently only few farmers can access it due to limited capital or guarantee to get credit.

Challenges and constraints

- Lead farmers reached through PRISMA's cattle fattening intervention **lack the access to finance** to increase their cattle numbers. Meanwhile, other farmers who are potentially interested in applying better fattening practices do not have sufficient funds to do so. Some of the farmers may purchase better feed but do not necessarily supply themselves with enough feed or purchase feed but give this to low quality young cattle.
- **Limited capacity of feedlots** which play the roles of cattle suppliers and off-takers in target area (Tuban). The business model for cattle fattening loan requires involvement of feedlots which supply farmers with better quality calves to farmers. Existing feedlots only have limited number of calves which can be supplied to farmers. Thus, despite the willingness of the partner financial institution to meet the target number of farmers to be financed, the partner is restrained by feedlots' capacity to supply calves to farmers.

Vision of change

SAFIRA's vision of change is that by 2018, cattle farmers can increase access to finance through VCF model and enabling them to access better inputs and services which can lead them to get better production and income. the recipient cattle farmers can access credit to purchase better calves, increase use of better inputs and improve the market prices for the fattened cattle, as a result of which smallholder farmers will increase their incomes.

The SAFIRA approach

To achieve this vision, SAFIRA has partnered with Bank Sinarmas and will collaborate with the private sector, as follows:

- Bank Sinarmas and SAFIRA will develop a loan product for cattle fattening in Tuban. The loan is provided 'in-kind', in the form of quality calves and feed.
- **To deliver such a loan product, Bank Sinarmas collaborates with other value chain actors.** SAFIRA facilitated the collaboration between Bank Sinarmas and feedlots and feed producers.

Specifically, the main additional value from SAFIRA in this partnership is Institutional Strengthening on Value Chain Financing (VCF) through human capacity development (training and technical assistance on VCF) as well as:

- Providing advice and technical assistance to develop VCF loan products;

- Hire a consultant to develop SOPs for the loan product;
- Hire and build the capacity of VCF Focal Points, whose role is to promote the loan product, assist farmers in preparing loan applications, and monitor cattle growth and health;
- Re-engineer and improve loan sales and cattle monitoring tools;

The Business Model and Partners

Collaboration occurs with three private partners (PT Dua Berlian, PKM Holcim, and UD Wahyu Utama). Their roles in regard to expanding finance to farmers will be:

- PT Dua Berlian Mandiri
 - Provide calves to farmers and purchase fattened cattle;
 - Deduct loan amount from proceeds before paying the farmers.
- PKM Holcim
 - Provide a list of farmers recommended for the loan;
 - Provide concentrate feed and inputs to farmers.
- UD Wahyu Utama
 - Provide a list of farmers recommended for the loan;
 - Provide calves and supplementary feed to farmers and purchase fattened cattle;
 - Deduct loan amount from proceeds before paying the farmers.

Progress and signs of systemic change

Bank Sinarmas has adopted and adapted the financing model that SAFIRA developed during a pilot cattle fattening VCF intervention in Tuban. By the end of May 2018, 188 farmers have been financed, Although the majority of these farmers are in Tuban, Bank Sinarmas has expanded the application of VCF to other areas (Lampung, Bandung, Solo, Tegal, and Magelang) and has selected and worked with 7 new off-takers in these areas.

In addition to expanding to new geographical areas, Bank Sinarmas has also widened the VCF product to commodities outside of cattle. Bank Sinarmas is implementing horticulture VCF in Bandung and Magelang with PT. Royal Sun Fruit & PT. JIT Investama Harapan Sukses.

SAFIRA met with the Board of Directors of Bank Sinarmas in November 2017 and confirmed that they are still very much interested and committed to continue pursuing applications of the VCF model. Despite a fraud issue with one of off-takers in Tuban (PT DBM), Bank Sinarmas' CEO remains convinced that the business model is sound and views the incident as an isolated due-diligence issue. He wishes to further the application of VCF with more caution however, factoring in lessons learned from the pilot phase. One of Bank Sinarmas' Directors has also expressed interest in developing a cocoa VCF product in Mamuju, West Sulawesi.

In December 2017, SAFIRA conducted an impact assessment in Tuban and a field visit to Lampung & Bandung to monitor VCF application in those areas. The findings in Tuban show that Bank Sinarmas's VCF product, SimasAgri, is well received by Wahyu Utama and its farmers. Wahyu Utama has reported positive feedback from the financing model and intends to continue adopting it, while some of the farmers have taken a second loan from Bank Sinarmas. Although the fraud issue with DBM has caused delays in Tuban, with repayments still being made to Sinarmas and the farmers in instalments by DBM, Bank Sinarmas' long-term plan is to continue VCF application in this region by finding another off-taker to replace DBM.

The findings from Lampung & Bandung show that SimasAgri is also well received by its stakeholders. Bank Sinarmas staff are positive about the product as the scheme allows borrower searching to be done through recommendations from off-takers. Farmers have also expressed positive feedback about the product for two main reasons: 1) no requirement for collateral, and 2) more favourable payment terms in comparison to other available options and conventional lending products offered by financial institutions. Based on the

information gathered so far, VCF application in both areas is likely to move forward. Nevertheless, there are risks involved with outsourcing key functions to off-takers. Bank Sinarmas has reviewed its due-diligence processes following the incident with PT. DBM and is proceeding cautiously, learning as it goes.

One indicator of systemic change in Bank Sinarmas' is their investment in building systems to support the SimasAgri product. When the product first launched all records were kept manually. Since March 2017, Sinarmas has digitised and automated application systems that contain complete borrower information profiles. In Bandung, to deal with geographical obstacle of conducting surveys in very remote horticulture plantation areas, Bank Sinarmas staff used satellite data to monitor the conditions of fields remotely. The off taker In Lampung, PT. Great Giant Live Stock (GGL) provides field officers (PPL) to monitor and provide technical assistance and information on a daily basis on rearing practices to farmers who are involved in this program. Also Bank Sinarmas' staff have to monitor the progress of rearing and achievement of ADG weekly to ensure that the program and loans provided are running well.

Bank Sinarmas continues to provide Agri-financing through VCF product outside of Tuban area with more prudence due to off-taker payment issue in Tuban. Amendment of previous MoU is still on progress to provide more support to Bank Sinarmas on Institution level to expand VCF implementation in other areas and commodities driven by lesson learned in Tuban.

2. INSTITUTIONAL STRENGTHENING – BANK BRI, EAST JAVA

BRI is currently the largest bank in Indonesia in terms of assets and has one of the most extensive networks of branches and ATMs in Indonesia. Given its extensive reach in rural areas, BRI is in a strong position when it comes to agricultural lending in the Indonesian banking industry landscape. BRI's agriculture lending accounts for approximately 22% of its own overall lending and a significant portion of national lending for the sector as well. BRI is also the forefront of government programs attempting to boost the agriculture sector.

BRI's current model of agriculture lending still lacks coordination between market actors however, limiting its efficiency in acquiring new borrowers (clients). BRI has several interfaces with market actors but misses a robust financing model that can be replicated and modified throughout all sectors. Having assessed the market conditions, SAFIRA works with the Program Division of BRI Regional Office Malang to enhance their institutional capacity in agricultural lending through a value chain finance (VCF) approach.

Challenges and constraints

- **Limited market access.** BRI has a financing model similar to VCF called the Trickle Down Business (TDB) model. In this model, BRI finances a large firm, and then aims to finance all parts of the firm's supply chain from the buyers to the suppliers. BRI accesses actors in the supply chain both upstream and downstream of the lead firm. This model allows BRI to capture all the potential clients in a specific supply chain, but is reliant upon successfully finding the entry point by providing financing to a large firm. If BRI is not successful in securing a deal with the firm, they may miss the entry point to provide services along the entire supply chain. Financing a large firm can be an extremely complicated and exhaustive process, in which BRI incurs significant time and labour costs until a deal is reached. Not to mention, there are other factors which might influence the deal such as pricing or terms & conditions of the financing. In contrast, the VCF model allows BRI to still work collaboratively with market actors without having to necessarily finance a large firm (although the option to do so remains open). With VCF, other market actors such as agriculture input providers or off-takers play an important role in sourcing, securing and distributing finance. The benefits of VCF can be experienced relatively sooner in comparison to traditional financing. Input providers will have more market to sell their products, while off-takers will have a more stable supply of agricultural production.
- **Inefficient processes for acquiring new borrowers** in terms of time and costs. Despite its extensive portfolio of clients, BRI's access to large segments of the rural population remains low. In many smaller branch offices, agricultural lending is still conducted through a time consuming traditional process where Account Officers spread across an area to promote BRI products and look for new clients. This model has high operational costs and relies on extensive networks to achieve targets for agricultural

lending. BRI can benefit from a financing model that improves efficiencies in this process. VCF offers this benefit through coordination and cooperation with intermediaries and other market actors. VCF allows BRI to tap into market information that other actors have through years of contact and experience in the area. Through this model, time and costs of searching for new clients and mapping borrowers' profiles & capacity, commodities & area potential can be significantly reduced.

- **Limited human resource capacity** to implement financing models involving various market actors. Even in TDB, initiatives to develop new models mostly come from the Regional Office, which is transferred to branch offices and then executed by the branch officers. This condition is undesirable as branch offices are expected to be able to develop and execute their own financing model.

Vision of change

- SAFIRA's vision of change is that, by 2018, BRI is able to implement Value Chain Finance independently, has internalised & operationalised the VCF knowledge & tools at an institutional level, and utilises VCF as a key market strategy of agricultural lending.

The SAFIRA approach

To achieve this vision, SAFIRA has partnered with Bank Rakyat Indonesia (BRI) to develop value chain finance, as follows:

- SAFIRA hires trainers to deliver VCF training for BRI Program Account Officers & Managers to empower human resources & institutional capacity of agriculture lending.
- SAFIRA hires consultants to provide technical assistance for BRI to develop the pilot project of VCF scheme, develop VCF tools & operational guidance, and documents the knowledge and learnings of the pilot project for future reference.
- SAFIRA assists BRI in linking with other market actors.

Specifically, SAFIRA supports the bank to:

- Conduct market analysis.
- Develop a business model for value chain finance.
- Develop BRI staff and farmer internal capacity on farm/livestock management.
- Develop a toolkit to evaluate, develop, and implement a VCF scheme.

Progress and signs of systemic change

In February 2018, SAFIRA supported by RML, conducted baseline survey for BRI sugarcane VCF in Malang, with one of the main purpose to collect the total number of sugarcane loan user up to the member of farmer groups level. This then supplemented as well by Cooperatives Survey in March 2018. In total from this review, 9000 farmers became the recipient of sugarcane loan from BRI at the end of 2017, directly and indirectly. SAFIRA will support with Impact Assessment in October 2018, after the peak of sugarcane harvest period has ended. Insights & recommendations from all the research projects above will be shared to BRI to assist BRI in improving business model for the next planting season and as a reference to further business model replication in other areas.

BRI has also planned to replicate the same model to sugarcane in Madiun district and Jember district, considering the huge potential of sugarcane there. BRI has requested SAFIRA's support in conducting this replication project.

Further sign of systemic change was shown by the new development of VCF model in maize sector and the involvement of BRI's Micro Unit in its implementation. Previously, SAFIRA worked with BRI's Program Business Division. Micro Unit has always been ripe with agriculture financing potential, but has always conducted financing in the conventional method, which is person-to-person relationship rather than through a value chain finance model. SAFIRA was met with enthusiasm by them when inviting them to be involved in maize VCF, citing that this year is the appropriate momentum to do so since the general directive from the

high-ranking officials in Micro Unit is to shift financing strategy to value chain finance. Micro Unit has also been quick to absorb knowledge dissemination and technical assistance about VCF from SAFIRA and implementing it.

Another sign of strong buy-in comes from the fact that both department, Program Business & Micro Division, will conduct joint VCF project in beef sector, a project in which SAFIRA has been asked to support.

3. MAIZE NTB –BANK NTB, PT BISI INTERNATIONAL TBK

Maize is one of Indonesia's primary food crops. According to USDA data, around 9 million MT⁸ are grown each year in Indonesia on three to four million ha of farmland; more than half is used to cater to the ever-increasing demand for animal feed. It is a seasonal crop, with a surplus during peak harvest months and a severe undersupply the rest of the year.

At the national level the price of maize has been increasing steadily over recent years. However, the province of NTB has experienced no growth in its maize production, despite productivity being above the national average at 5.8 MT per ha. Most farmers there plant their crop during the wet season on dry farmland, with only a small number having the capacity to irrigate their land during the dry season. Poor post-harvest handling and lack of storage facilities add to the problem of inconsistent supply.

Around 127,000 ha of land in NTB is given over to maize farming, with approximately 87,700 maize farming households living below the poverty line. Just over half of these (43,900) are in Bima, Dompu, West Lombok and North Lombok.

Challenges and constraints

Analysis of the market reveals number of problems that currently constrain the ability of NTB farmers to take advantage of this market opportunity. Related to finance as it pertains to SAFIRA:

- **Limited affordable options for finance**, particularly given the difficulties in accessing bank loans. The use of hybrid seed requires a sufficient supply of other inputs such as fertilizer, agro chemicals (e.g. herbicide, pesticide) and labour, as well as careful and informed treatment and maintenance. Poor farmers have little money to support these in the short term even though use of them will increase production and in the long term increase incomes. There is also little access to external financial resources. Some farmers rely on moneylenders who provide loans at exorbitant rates of interest.

Vision of change

- SAFIRA's vision of change is that, by 2018, maize farmers in NTB, through inputs paid for with credit and embedded provision of good agricultural practices by partner, will have increased the volume and quality of their maize production, in ways which are sustainable and increase their income.

The SAFIRA approach

To achieve this vision, SAFIRA: 1) has collaborated with ARISA to facilitate its beneficiaries to receive loan from Bank NTB so that they were able to apply agricultural practices that ARISA introduced, 3) is working with PRISMA to support PT BISI International Tbk, an input company, to develop an input financing scheme for farmers through YARO financing scheme. This financing scheme allows farmers to pay some amount upfront and do repayment through YARO agents with flexible payment term agreed by the agents and PT BISI International. SAFIRA supports PT BISI on bookkeeping, promotion tools and events, marketing methodology, and develops a new model that is more inclusive of women, as well as supporting the selection of female farmers to act as distribution agents on behalf of PT BISI.

Progress and signs of systemic change

Related to agriculture financing from Bank NTB to maize farmers, Bank NTB has financed 227 farmers in Lombok by the end of 2016. Under the supervision of Universitas Mataram, farmers have applied better agricultural inputs and practices in December 2016. Bank NTB is keen to expand the loan if the repayment

⁸ The Ministry of Agriculture claim annual production of 20 million MTs against USDA data of 9million MTs. The reason for this discrepancy is that MoAg obtains a substantial portion of their budget based on high production figures.

rate is high. ARISA welcomes SAFIRA to support the design of loan products if the bank is positive about the results. This semester, Bank NTB has elected to expand the loan model to Kabupaten Sumbawa.

In partnership with PT BISI for YARO financing, several activities were already conducted with a total of 2,191 maize farmers including events for female farmers, farmers meetings, farmer field days, and field visit events. In May 2017, SAFIRA supported PT BISI for capacity building to PT BISI's staff and to retailers, individual investors and farmers group. SAFIRA also trained on bookkeeping, promotion tools and marketing methodology, and provided the YARO financing module as a guideline for BISI's agronomist.

During the 2nd semester of 2017, PT BISI has conducted YARO agent training with a total of 117 participants in which 22 of them are female agent candidates. During this semester, promotional events were also conducted four times with 318 farmers attending, 126 of them female. Moreover, 150 socialisation events on GAP for hybrid seeds to promote the YARO scheme were delivered to 2,515 farmers this semester. As a result, PT BISI has distributed seeds with YARO scheme through the selected agents to 1,692 farmers in Lombok Island. This actual number is slightly higher than the target of 1,680 farmers. In the next semester, PT BISI plans to expand YARO financing to new areas in Central Lombok.

Mr. Ruruh Sujadmoko, Area Manager of PT BISI Nusa Tenggara stated that female farmers are one of the best market segments for maize seed promotion. This follows SAFIRA's initiative suggesting to PT BISI in the 1st semester of 2017 to hold promotional events for female farmers. PT BISI learned that female farmers are eager to learn and pay attention to detail for good farming practices in maize, with high levels of adoption of GAP. In addition, bookkeeping and promotion tools developed by SAFIRA has had a significant effect on outreach to reach new farmers, resulting in a 70%-80% increase in sales for BISI over the past year.

In May 2018, SAFIRA conducted the first Impact Assessment in YARO intervention which resulted in 1509 farmers increase income (beneficiary) from 2627 farmers who received YARO (user) through 41 agents in which 10% of the users are female farmers who decided to take YARO independently and 42% of the users are spouses who decided to take YARO together. In addition to this Impact Assessment, there is an interesting finding on the average of repayment duration between female and male users. On the average, female farmers repay within 92 days compared to man's average which needs 100 days to repay. Knowing that YARO financing contributes to significant increased sales and more secured repayment through the role of YARO agents, PT BISI Nusa Tenggara will expand YARO financing to more commodities (paddy hybrid and sweet corn) and new areas in NTT during the 2nd semester of 2018.

4. INSTITUTIONAL STRENGTHENING – CREDIT UNION SAWIRAN

Credit Union (CU) Sawiran is a financial institution that focuses on the economic empowerment of the local community on a (sub) district level. CU Sawiran with the experience of its members, noticed a lack of financing was available for potato production. CU Sawiran is one of the credit cooperatives in Indonesia which has a very strong reputation in terms of technical capacity and innovation, with a good rating from MICRA based on standard rating of CGAP decided to venture into financing for potatoes and engaged with SAFIRA to support this.

Currently CU Sawiran is a major CU in East Java in terms of total assets and number of members, and recently became one of the members of the respected East Java Puskopdit. CU Sawiran is perceived to be an influential role model for other members of the CU Puskopdit in East Java, with members of Puskopdit-East Java covering about 2/3 area of the province.

Credit Unions operate based on a trust model, its members have shares as a form of collective ownership, so the whole organization is focused on a single purpose - the welfare of the members. Professionally managed, CU Sawiran provides financial services in savings, loans and other financial services. Starting from a cooperative for employees (KopKar: Employees Cooperative), CU Sawiran was established to find a solution to the difficulties of communities looking for a cheap and accessible working capital so that it can help increase the amount of income and standards of living within the community.

Challenges and constraints

Initially, the collaboration with SAFIRA in VCF has focused on developing schemes for potato cultivation, providing quality seeds/certification and restoring the quality of agricultural land. With support from SAFIRA, CU Sawiran is developing products specifically using VCF methods (Seasonal Loans VCF) including specific COAs (Code of Account), where there are easier loan terms compared to regular seasonal loan products that already exist in terms of interest rate, and collateral requirements.

However, during field implementation various activities that have been conducted do not show the expected results in terms of the number of seed grower farmers who received VCF loan. Early results and findings from implementation have highlighted challenges to implementing VCF with CU Sawiran:

- Weather constraints: variable weather patterns made the seed grower farmers hesitate to start planting seed potatoes.
- Some farmers, particularly in Tosari and Ngadisari have a bad credit record with CU Sawiran in the past so were ineligible for VCF loans.
- Some farmers who are interested and need financing have no collateral and/or less economic assets, or collateral ownership is not clear and/or already have another loan from CU Sawiran or other financial institutions.
- Internal communication and socialisation in CU Sawiran and externally to farmers and, ISPs, and off-takers did not successfully convey the model or the rationale for implementing it effectively.
- The independence of the ISP and the off taker has not appeared because of all the market participants involved in the business model are members of CU Sawiran.
- The availability of seed G2 in the market turned out to be quite varied with a price that is much less expensive compared to certified seeds. Most farmers do not check the quality of G2 seeds and prefer a cheaper price that cannot be guaranteed in terms of results.
- The cost of investment for generating quality seeds is significant and the duration of the breeding process is long, which reduces the regularity of income for smallholders.
- Variations in the needs of the farmers for cultivation of agriculture varies between percentage needs seeds, fertilisers, pesticides and labor, so it takes a loan package with the VCF product designation is more flexible.

Taking into consideration the challenges experienced above, several meetings have taken place to change the nature of the collaboration between CU Sawiran and SAFIRA as follows:

- 1) We will expand VCF Financing for commodities other than potatoes, broadened the scope of farmers who can get access to loans from the VCF CU Sawiran.
- 2) SAFIRA will conduct a review of CU Sawiran's customised Loan products, including VCF that are able to the needs of farmers.
- 3) We will not form new VCF farmer groups, but rather optimise the farmer groups that already exist, with both members and non-members to socialize the VCF model.
- 4) We will optimise applications from farmers and field officer applications already developed by CU Sawiran an SAFIRA to function effectively in the implementation of the financing of the VCF.

Vision of change

- SAFIRA's vision of change is that, by 2018, the farmers can access credit that facilitates access to high quality seeds, other inputs, and advice on good agricultural practices so that farmers can increase their productivity.

The SAFIRA approach

To achieve this vision, SAFIRA has partnered with Credit Union Sawiran to strengthen its capacity to develop and implement value chain finance at an institutional level through the following activities:

- **CU Sawiran and SAFIRA will develop a flexible loan product and supporting tools for farmers.** The loan is provided 'in-kind', in the form of quality seeds, fertilizers, and agricultural advice.

- **CU Sawiran collaborates with other value chain actors.** SAFIRA facilitates the collaboration between the credit union, seed suppliers, and Agri-kiosks

Specifically, SAFIRA supports the credit union to:

- Develop a business model for value chain finance.
- Develop their internal capacity for loan monitoring through mobile based applications.
- Optimize SRIYA application to support engagement and VCF with the members
- Provide advice on the credit union's business plan for VCF implementation.

Progress and signs of systemic change

- SAFIRA and CU Sawiran have signed amendment to more potential agriculture financing in more branches and strengthen the internal capacity to implement VCFCU Sawiran has adopted the proposed business model. The credit union has financed 19 farmers until S1Y18 and still committed to finance a number of farmers as planned in amendment: 655 farmers until S2Y18.
- CU Sawiran is interested in developing further institutional capacity for value chain financing as an enabler to develop loan products in other market segment i.e. VCF for trading segments in urban areas.

5. INSTITUTIONAL STRENGTHENING BANK NTT

Coffee

Initially, SAFIRA became involved because PRISMA witnessed a need to support access to finance for coffee associations and coffee farmers in NTT area. Coffee in NTT is mainly produced in Flores Island, especially Arabica. There are approximately 17,000 Ha Arabica area and 33,000 Ha Robusta cultivation area. The increase demand of coffee worldwide is a big opportunity for coffee farmers in Flores.

However, current production of good quality coffee (Grade 1 and Specialty Arabica coffee) is still low with approximately 10% of total production. Farmers currently, not only facing low productivity due to their regular coffee maintenance process but also low-price due to low quality of the coffee produced.

Most of plantation uses traditional cultivation technique instead of treating it as a coffee plantation. The trees are too high and not yielding much cherries to be picked. Another reason of the low productivity is lack of labour. Most of the farmers have 1 or more hectares coffee plantation, however the high tree and lack of labour result production loss (cannot harvest all of the plant).

There are several causes for the low quality of the coffee produced, two of them are lack of knowledge of good post-harvest processing and also limited processing unit available in the area. SAFIRA together with PRISMA links buyer/exporter/cafe (such as INDOKOM, one of exporter) and Bank NTT to local traders. The local traders have local coffee processing unit and buyer/exporter/cafe (INDOKOM) provide standard operational procedures of producing good quality coffee to local traders as a procedure to be met by each of their agents in procuring their cherries. These cherries will be processed by and sold by the local traders to the buyer based on agreed price. To buy cherries from farmers, local traders get a bridging loan from Bank NTT with the INDOKOM contract as a major consideration to disburse loan. Besides having a wider access of market, farmers get an opportunity to sell the cherries higher than existing market, resulting in increasing of their income.

Institutional Strengthening

Based on SOFIA report dated May 2017, only 36% of NTT population has access to borrowing functions from financial institutions, 7% of them are served through informal lending while the remaining 57% are financially excluded. These figures demonstrate the pertinent access to finance problem in NTT.

Having the coffee financing model agreed by all the parties involved and contemplating on the broader access to finance issue mentioned above, SAFIRA moves toward a more comprehensive strategy which is providing Institutional Strengthening ('IS') to Bank NTT for implementing VCF in several agricultural sectors. SAFIRA

believes the access to finance problem is not sourced solely from the farmers side, but also resides in the Financial Institution sides (“FI”). Under IS approach, SAFIRA works focus more on the capacity building of Bank NTT to provide financing to all potential sectors in NTT to reach approximately 770,000 farmers household based on the BPS data. IS approach enables Bank NTT to work in multi-sectors with potential in NTT such as seaweed, cocoa, paddy, maize and soy bean.

Challenges and constraints

There are several challenges that currently constrain the ability of both FI and farmers in NTT. As related to finance applies to SAFIRA:

- **Limited affordable options for finance:** As mostly the farmers are smallholders in NTT area, their bankability is low due to available collateral. Several credit unions offer non-collateralised loans however it comes with high interest rate (>2% per month). Farmers in NTT are also accompanied with high uncertainty from climate changes and limited GAP knowledge that will affect their repayment ability. This then repels farmers in NTT from formal financial institution and some of them must resort to money lenders who provide loans at exorbitant rates of interest.
- **Lack of knowledge from FIs to provide financing to farmers:** FI’s understand that agriculture sector posits abundant potential but comes with high risks. Consequently, banks impose higher requirements and expensive financing methods to reach out farmers through traditional financing activities. FIs must adopt a new model of financing which will reduce the perceived and real risks of the farmers to increase the access of finance toward agriculture sector.

Vision of change

SAFIRA’s vision of change is that, by 2018, farmers in NTT, can have increased access to finance from Bank NTT directly or indirectly through VCF model which will enable them to obtain quality inputs and embedded provision of GAP, which will lead to increase volume and quality of their production and increase their income in a sustainable manner.

The SAFIRA approach

To achieve this vision, SAFIRA has expanded the partnership with Bank NTT from coffee financing to institutional strengthening for VCF implementation. Bank NTT has welcome the agenda for IS which will be initiated with the provision of VCF training to Bank NTT. By providing IS, SAFIRA will also facilitate technical assistance on VCF to Bank NTT, brokering partnerships between Bank NTT with agriculture players, ISPs and PRISMA for potential agriculture financing. SAFIRA also emphasises to Bank NTT that the VCF model can be implemented in other sectors, improving financial inclusion in multiple areas. Additionally, SAFIRA conducts financial bookkeeping training based on Bank NTT input to the local traders in order to ease Bank NTT’s monitoring activity of the loan.

Progress and signs of systemic change

The intervention with Bank NTT was initiated through supporting PRISMA’s coffee intervention in NTT. There was a change of ISPs from the previous model where the coffee cooperatives were replaced by local traders. The business model has been set using VCF schemes comprising farmers, local traders, local trader’s agent and PT Indokom as ultimate buyers. In the VCF model, Bank NTT will provide bridge financing to local traders which will procure the coffee with premium through their agents and provide cash payment to farmers. Bank NTT is fully committed to support this model and received well the three local traders suggested by PRISMA.

Among the three local traders, two of them has their loan approved. Even, SAFIRA also helped the negotiation between the Bank NTT and one of the trader, Gaspar, and managed to improve the revolving loan facility into two-fold from IDR 500 million to IDR 1 billion with the condition that Gaspar redeems all the outstanding debt in BRI.

However, during the redemption process in BRI, Gaspar received a counter offer from BRI with the same facility without having to incur any additional collateral pledging and administration cost estimated at IDR 60 million. Please be advised that previously Gaspar only has ordinary working capital loan with facility up to IDR

500 million from BRI which is less advantageous compared to revolving credit facility. Finally, Gaspar took the loan facility from BRI and start to get the loan since May 2018. The other trader, Kornelis, is still in collateral-pledging process due to the collateral being on the behalf of his brother. Considering the ending peak season of coffee harvest, it is unlikely that Kornelis will continue the process with Bank NTT.

As part of IS, SAFIRA also held bookkeeping module development and training to the local traders in May and June 2018 respectively to strengthen the monitoring activities of Bank NTT and traceability of cashflow. The broader IS activities and strategy in S1 2018 could not be executed due to the absence of directors and commissionaires.

6. INSTITUTIONAL STRENGTHENING – KBPR ARTA KENCANA

There is a prevalent lack of access to finance in East Java. Based on SOFIA report dated May 2017, only 29% of East Java population has access to borrowing from a financial institution, 13% of the population is served through informal lending while the remaining 58% are financially excluded.

SAFIRA is providing Institutional Strengthening (‘IS’) to KBPR Arta Kencana (‘BPR-AK’) for implementing VCF in agricultural sectors. SAFIRA believes the access to finance problem is not sourced solely from the farmers side, but also resides in the Financial Institution sides (‘FI’). Under an IS approach, SAFIRA focuses more on the capacity building of BPR-AK to provide financing to all potential sectors in BPR-AK’s working area, which are Madiun, Ngawi, Nganjuk and Pacitan district, to reach approximately 577,000 farmer households based on BPS data. The IS approach enables BPR-AK to work in multi-sectors with potential in East Java such as paddy, shallot, maize and soy bean.

Currently, SAFIRA supports Institutional Strengthening for BPR Arta Kencana on VCF through the following activities:

- 1) Delivering capacity building on VCF to BPR Arta Kencana by holding training and providing technical assistance for their staff;
- 2) Assisting in the development of promotional strategies, activities and tools;
- 3) Providing linkages to ISP or private partners.

SAFIRA is focused on agriculture value chain financing (VCF) to improve access to finance for smallholder farmers. SAFIRA’s intention is not only to support financial institutions and other value-chain actors to utilise the available information about VCF and strengthen the institutional capacity in VCF at each level but also to strengthen the support system surrounding financial institutions through guidance and implementation assistance.

There is a large demand for agriculture finance as farmers, suppliers, processors and buyers need access to finance to operate and develop their businesses. However, on the supply side, financial institutions often struggle to contain their risks and cover costs for financing smallholder farmers, which results in a large gap in adequate financing.

Challenges and constraints

There are several challenges that currently constrain the ability of both FI and farmers in East Java. As it pertains to SAFIRA as follows:

- **Limited affordable options for finance:** As mostly the farmers are smallholders in East Java, their bankability is low due to lack of collateral. Several credit unions offer non-collateralised loans however it comes with a high interest rate (>1.75% per month). Farmers in East Java are also categorised as higher risk, due to limited GAP knowledge and fluctuations in prices that will affect their repayment ability. These factors mean farmers in East Java are not attractive for formal financial institutions and some of them must resort to money lenders who provide loans at exorbitant rates of interest.
- **Lack of knowledge from FI to provide financing to farmers:** FI understands that the agriculture sector posits abundant potential, but comes with high risks. Consequently, banks impose higher requirements and expensive financing to reach out farmers through traditional financing methods. FIs

must adopt a new model of financing which will reduce the perceived and real risks for the farmers to increase access of finance in the agriculture sector.

- **Lack of organisational capacity of FI to implement VCF:** Implementing VCF requires extra resources both tangible and intangible. The intangible resources such as mindset, behaviour and organisation culture is the main challenge in implementing VCF provided that the organisation barely knows VCF. Adoption of VCF requires time and hands on approach from SAFIRA and the consultant to the FI to achieve sustainability. This is due to the fact that Arta Kencana has neither developed a new product nor collaborate with third party nor conduct physical promotion activities previously.
- **Expansion of KUR:** KUR expansion in recent years has hampered the growth of FI who is not KUR agent including BPR-AK. The cheap rate and no collateral requirement has hindered several farmers to switch from BPR-AK loan to KUR which might reduce the potential of the VCF scheme product.

Vision of change

SAFIRA's vision of change is that, by 2018, farmers in Madiun, Ngawi, Nganjuk and Pacitan, can have increased access to finance from BPR-AK directly or indirectly through VCF model which will enable them to obtain quality inputs and embedded provision of GA and better access to market, which will lead to increase volume, quality of their production and price and finally increase their income in a sustainable manner.

The SAFIRA approach

To achieve this vision, SAFIRA has established the partnership with BPR-AK with an IS approach for VCF implementation. One of the main activities is the provision of agriculture VCF training to BPR-AK. Under IS activities, SAFIRA will also facilitate technical assistance on VCF to BPR-AK, brokering partnerships between BPR-AK and agriculture private players, ISPs and PRISMA for potential agricultural financing. SAFIRA also emphasises to BPR-AK that this VCF model can be implemented across all sectors and can enhance financial inclusion. The implementation of the VCF by BPR-AK will be started by conducting pilot project for VCF scheme in the Nganjuk for shallot. Afterwards, BPR-AK will expand it to another commodity and area such as maize in Ngawi opportunity.

Progress and signs of systemic change

SAFIRA commenced IS for VCF approaches to BPR-AK in August 2017. In October 2017 and February 2018 SAFIRA conducted the first and second VCF training to BPR-AK respectively. Prior to the arrival of the technical assistance consultant in March 2018, SAFIRA assessed all the three of the biggest branches of BPR-AK, namely Madiun, Nganjuk and Ngawi for VCF potential. After assessing the market potential, we found that Nganjuk branch has better readiness with shallot as main commodity. SAFIRA with BPR-AK has focused on VCF in Nganjuk with consultant with provision of monthly technical assistance since March 2018 which are planned to be 5 times until July.

SAFIRA and BPR-AK agree that shallot farmers in Nganjuk have been identified as needing access to finance due to high cost of inputs, especially for pesticides. On that basis, SAFIRA collaborates with PRISMA to introduce NuFarm, a chemical company which has specialised products for shallot treatment.

In May 2018, BPR-AK and NuFarm conducted a socialisation activity on the VCF initial VCF scheme model towards both BPR-AK and NuFarm farmers which was attended by 98 farmers. The farmers responded well to the idea of VCF scheme planned by BPR-AK.

SAFIRA sees that there is a high potential for BPR-AK to adopt VCF at an institutional level, as they are now preparing the shallot in-kind loan for inputs and consider bridging loans idea for maize collectors despite being very slow in the progress due to their limited organisational capacity. Additionally, BPR-AK considers assigning specialised team to run the VCF product once it has been launched. It is expected that BPR-AK will apply the VCF to another commodity financed by them.

7. INSTITUTIONAL STRENGTHENING – BANK BNI

Bank BNI is one of the three largest Government Banks in Indonesia, and has a service network spread across Indonesia through 1,763 domestic branches. BNI provides its services mostly to corporate clients, where corporate customers contribute significantly to BNI's portfolio. However, in line with the Indonesian government's program to provide adequate financial services for micro-scale enterprises, BNI began to establish micro businesses as one of their target clients. One of the efforts made by BNI in providing services to micro-enterprises is through the channeling of credit programs initiated by the government i.e. Kredit Usaha Rakyat Mikro or KUR Mikro.

Currently, BNI is working to expand its agricultural financing services and the allocation of KUR micro which has not yet been allocated. BNI's management team considers Value Chain Financing to be a potential method for improving KUR Micro. Some potential sectors are maize, rice, soybean, and other commodities that can be targeted through Value Chain Financing.

In 2014, PRISMA has been started implementation Maize intervention in Sumenep District, Madura, East Java Province. Started 2016, PRISMA is working with Agriculture Institution of Sumenep District to develop Private Public Partnership with signed MoU between PRISMA and Agriculture Institution of Sumenep District. In 2017, PRISMA scale up the intervention related with introduce and promote maize hybrid seeds, PRISMA support Agriculture Institution of Sumenep District program in implementation of free market maize hybrid seeds development.

This program aims to mitigate the overlapping of hybrid maize market by the government subsidized seed program and needs coordination and partnership between private sectors and Agriculture Institution of Sumenep District. Not only to support free market for maize hybrid seeds in Sumenep District, the Agriculture Institution of Sumenep District also will support National Government related to Farmers Card and KUR Program. Sumenep Agriculture Institution needs to collaboration with BNI as a designated bank to deliver KUR to Agriculture Sector and manage Farmers Card in Sumenep District.

In 2nd semester of 2017, PRISMA considered involving SAFIRA in order to provide assistance and contribution to BNI especially in providing an appropriate loan product to maize farmers and using KUR as an introduction to VCF (loans unsecured by collateral) and hopefully eventually moving away from KUR to a more sustainable model.

Challenges and constraints

- BNI is a government-owned bank that has been accustomed their operational to serve large corporation. To provide services to the agricultural sector especially to micro farmers, BNI has difficulties with the lack of experience and infrastructure they have. As a result, to do the financing for small farmers in massive quantities, BNI has difficulty to accelerate the process.
- Understanding of micro farmers on government program financing (KUR) is very low. Most farmers understand this financing program as a subsidized government assistance program, where there is no obligation of farmers to return the financing.
- Farmers in East Java tend to use working capital from the previous harvest or can access low-interest or no-interest loans from collectors. Given the high constant demand for agriculture products from agroindustry, collectors have incentives to encourage agriculture production, particularly during the low season. By providing input credit, collectors can secure greater volumes of agricultural product. In East Java, small-scale subsistence agriculture product farming requires minimal investments and a low input-low output production system. This, however, also means that households are not accumulating sufficient capital from traditional agriculture product farming to engage in more capital-intensive activities such as high-quality agriculture product farming. Some of the farmers who are now growing high quality agriculture products were initially introduced to these varieties through the government's project to promote higher quality agriculture products. These farmers have used the higher incomes that they generated during the project to continue growing high quality agriculture product without government support.

Vision of change

SAFIRA's vision of change is that, by 2018, BNI can implement VCF in the agriculture sector, also farmers in East Java have ability to plant high quality agriculture product according to good agriculture practices and have access to the capital offered by banking institutions, so farmers able to obtain greater harvest volume and increased income.

The SAFIRA Approach

To achieve this vision, SAFIRA has partnered with Bank BNI to develop agricultural value chain financing, as follows:

- 1) SAFIRA supports BNI to increase their capacity to provide agricultural lending through Value Chain Financing.
- 2) SAFIRA provides technical assistance for BNI to develop and implement VCF in their operations.
- 3) SAFIRA supports BNI linking with market actors in specific agricultural products.
- 4) SAFIRA provides assistance to BNI in piloting the VCF approach for specific agricultural products.

Specifically, SAFIRA will support BNI to:

- Conduct VCF training and provide the VCF toolkit.
- Assist BNI to develop loan scheme and loan disbursement mechanism.
- Develop standard operating procedures (SOP) for VCF loan disbursement.
- Facilitate linkages to BNI with off-takers.
- Develop repayment schemes for the off-taking process through Farmer Groups.
- Assist BNI to develop tripartite agreements between off-takers, farmer groups and BNI.
- SAFIRA support BNI in development of loan collection agent

Progress and signs of systemic change

SAFIRA and BNI have developed a Memorandum of Understanding for the collaboration and signed in June 2018. Since November 2017, BNI has already implemented the business model through SOPs, providing loans to maize farmers. Until January 2018, approximately 3,561 maize farmers received loans from BNI.

In July 2018, BNI has plans to further develop institutional capacity for value chain financing as an enabler to provide financing for the agriculture sector in maize, but also in rice, soybean, and other commodities that can be helped through Value Chain Financing in East Java.

Willingness to pay from small holder farmers is very low, due to their basic needs and their need for new capital to buy agriculture input for their next planting season. Small holder farmers have preference to use their income from agriculture business for buying inputs than to repay their loan. This condition has made the repayment rate of BNI Sumenep still very low.

8. INSTITUTIONAL STRENGTHENING FOR BPR CENTRAL PITOBY

BPR Central Pitoby is a rural bank in Kupang, East Nusa Tenggara. The number of their borrowers currently amounts to approximately 300 to 400 customers, with 80% of the loan portfolio being SMEs in and around the Kupang area dealing in general trading business. BPR Central Pitoby has experience of agricultural financing using conventional methods in the past. It did not lead to encouraging results as many farmers defaulted on the loan. BPR Central Pitoby cited that lack of supervision and mentoring in cultivation practices and weakness in the financing model to be the leading cause of high default rate among farmers.

Refusing to give up on their previous experience, BPR Central Pitoby now wishes to find an alternative financing scheme that can open avenues for relatively secure investments for the bank and a more accessible source of capital for agriculture value chain actors. In addition to that BPR Central Pitoby aims to outpace competitors in Kupang area in agricultural financing.

The pilot commodity of this intervention will be vegetables and will be a collaboration between BPR Central Pitoby and various vegetables market actors (input shops, off-takers) in Kupang area to conduct VCF.

Challenges and constraints

- BPR Central Pitoby has limited know-how and capacity to assess the market potential for agricultural lending, and low knowledge of appropriate methods of agriculture financing, but high enthusiasm to do so.
- BPR Central Pitoby has limited linkages to agricultural value chain actors to develop a collaborative scheme.
- Agriculture, specifically, smallholder farmers, is a sector that is relatively untapped by financial institutions in East Nusa Tenggara. The problem is still prevalent even in agriculture regions surrounding the capital city.

Vision of change

SAFIRA's vision of change is that, by 2018, BPR Central Pitoby will be able to deploy agricultural financing through VCF scheme to SMEs and farmers across potential commodities in areas surrounding Kupang. Farmers in and around the Kupang area are also expected to have better access to financial products which can help to boost agricultural production through purchase & use of good quality inputs, increasing their income.

The SAFIRA Approach

To achieve this vision, SAFIRA is committed to support the bank's institutional capacity to implement VCF, with activities as follows:

1. Capacity building on VCF through training and technical assistance on VCF
2. Provide linkage to ISPs, third-party agricultural buyer or agricultural input company, and other possible actors which can potentially enhance the business model
3. Assist BPR Central Pitoby's product promotion

Specifically, SAFIRA will support BPR Central Pitoby to:

- Hold training & technical assistance for BPR Central Pitoby's staff.
- Conduct agricultural market assessments and develop the VCF business model.
- Facilitate stakeholder meetings between various agricultural value chain actors and BPR Central Pitoby.
- Hold promotional events either independently or jointly with other market actors.

Progress and signs of systemic change

In the first semester of 2018, many developments in BPR Central Pitoby's intervention took place. Through SAFIRA's support, BPR Central Pitoby managed to link with various vegetables market actors (input shops, off-takers) and develop a vegetables VCF model. By June 2018, BPR Central Pitoby have started disbursing agriculture loan for vegetables farmer through VCF model.

Realizing its potential and the need for larger scale loan, BPR Central Pitoby has expressed interest to develop a similar VCF scheme in pig sector. SAFIRA respond to this move from BPR Central Pitoby by inviting PRISMA, which has longstanding experience in pig intervention in Kupang area, to collaborate together to assist BPR Central Pitoby in exploring and developing an appropriate financing scheme for the pig sector in the second semester of 2018.

BPR Central Pitoby has also expressed that if VCF models are successful, they intend to spread the news of the success in Perbarindo (Indonesia's rural bank association) meetings, which will be attended by Director & Commissioner from rural banks across Indonesia, to inspire other rural banks to conduct the same thing.

9. INSTITUTIONAL STRENGTHENING FOR TANA OBA LAIS MANEKAT

Tanaoba Lais Manekat (TLM) is a financial group in East Nusa Tenggara (NTT) consisting of TLM Foundation, TLM Rural Bank (BPR), TLM Loan and Saving Cooperative, and TLM Business Cooperative. TLM is known as an institution that has a strong commitment to empowering grassroots communities through its foundation and empowering women through its TLM Loan & Saving Cooperative (KSP TLM), which has offices spread across NTT. KSP TLM has members/ borrowers that are all women as it is a financial service body with women's group financing at its core. Women from villages are put into several groups, and then each member of the group receives a loan. The group serves as a form of social control and joint responsibility among the members because if one of the group members fails to repay the loan, every other member of the group has to take joint responsibility to cover up the outstanding debt. Through this scheme, KSP TLM manages to capitalize on existing social fabric within the rural women community to mitigate default risks. As a result of this scheme, non-performing loans have been very low in KSP TLM.

KSP TLM may have served farmers currently, but they might still be facing the risk of loan fund not used for its intended purposes, as all the loans are hand out in cash. Therefore, SAFIRA intends to support improvements of KSP TLM's loan disbursement process to minimize this risk. In addition to that, realizing that there is huge potential for women's economic empowerment, SAFIRA also intends to enhance the already existing women's group financing model in KSP TLM and farmers financing in BPR TLM through application of agricultural value chain financing.

Challenges and constraints

- TLM has limited know-how and capacity to assess agricultural market potential in areas surrounding KSP TLM's branch offices, and low understanding of appropriate methods of agriculture financing, but high enthusiasm to do so.
- TLM has limited linkages to off-takers and other actors in the value chain to conduct agriculture value chain finance. Agriculture and smallholder farmers are a segment that is relatively untapped by financial institutions in East Nusa Tenggara generally. The problem is most prevalent in Flores & Sumba Island as many farmers still resort to informal sources of finance to support farming activities.

Vision of change

SAFIRA's vision of change is that, by 2018, TLM will be able to deploy agricultural financing through VCF schemes to farmers across several potential commodities in NTT. Farmers in several districts of NTT are also expected to have better access to financial products which can help to boost agricultural production through purchase & usage of good quality inputs, therefore increasing income.

The SAFIRA Approach

To achieve this vision, SAFIRA is committed to support the TLM's institutional capacity to implement VCF, with activities as follows:

1. Capacity building on VCF through training and technical assistance on VCF.
2. Provide linkages to ISPs, third-party agricultural buyers or agricultural input companies, and other possible actors which can potentially enhance or benefit from the business model.
3. Assist TLM's product promotional activities.

Specifically, SAFIRA will support TLM to:

- Hold training & technical assistance for TLM's staff.
- Conduct agriculture market assessments and develop a VCF business model.
- Support TLM in modifying the current financing scheme to fit the agricultural market.
- Hold promotional events either independently or jointly with other market actors.

Progress and signs of systemic change

In the first half of 2018, due to TLM's internal organizational restructuring, SAFIRA had to sign a new agreement in the form of Tripartite agreement with KSP TLM & TLM Foundation to continue the plan. After

negotiations & introductions with the new structure, SAFIRA completed the signing of the new Tripartite agreement in April 2018. It was promptly followed by the first activity, VCF Training for KSP TLM personnel in two offices, Kupang & Waingapu.

Currently, SAFIRA continue striving to reach final agreement between KSP TLM – Ewindo on farmer data sharing and preparation of technical assistance to KSP TLM's Research & Development division to conduct market research, business process improvements, and innovative product developments.

10. INSTITUTIONAL STRENGTHENING FOR PUSKOPDIT

SAFIRA works with Puskopdit Jawa Timur (Puskopdit) for implementing Institutional Strengthening (IS) on Value Chain Finance (VCF). Puskopdit is a Secondary Cooperative in East Java that comprises 43 members of Primary Cooperatives with more than 61 thousand individual members. Puskopdit member cooperatives provide financing to various sectors including agriculture. Puskopdit working area covers East Java region across Banyuwangi to Ngawi.

Currently, Puskopdit has savings, loans, Permata (insurance for members savings and loans) program and take the role as knowledge and training centre as well as audit and monitoring of the cooperative activities. Puskopdit is active in terms of providing knowledge and training for member cooperatives based on initiative from Puskopdit and request from members. Currently, total assets of Puskopdit reach Rp 39.2 billion.

The commodity in the implementation area of Puskopdit cooperative members are various such as vegetables, paddy, maize and others. SAFIRA will collaborate with Puskopdit to become the VCF center of excellence hence the VCF know how will be disseminated throughout all Puskopdit members. In the future, it is expected that all the Puskopdit members can refer to Puskopdit for VCF implementation to ensure the sustainability.

Challenges and constraints

- Puskopdit has limited capacity in terms of number of people.
- VCF is new knowledge for Puskopdit to majority of CU members CUs in majority has limited organization capacity and financial capacity however have competence in community grooming as the last mile financing provider.
- Limited time of intervention as TA activities were just started in May 2018 with consultant onboard only in June 2018.
- Disparity between CU capabilities and agriculture situations hence Puskopdit must be sharp in synthesizing lessons learned from every CU VCF case.

Vision of change

SAFIRA's vision of change is that, by the end of 2018, Puskopdit will be the VCF Center of Excellence for its member who is able to provide or facilitate capacity building, linkage to third party and case studies on agri VCF implementation of its CU members and its CU members implementing VCF to be able to provide access to agriculture financing to increase farmers income.

The SAFIRA Approach

Several approaches are utilized by SAFIRA:

1. SAFIRA will treat Puskopdit as service provider of VCF knowledge and information and CU members as VCF implementing FIs.
2. The main precedent is that Puskopdit has assigned its people to enroll in each VCF related activities at CU level.
3. 2 CUs are selected to perform VCF implementation through monthly technical assistant by SAFIRA since June 2018 and consultants with different background and capabilities to provide different cases resulting in different lessons learned.
4. To address the time constraint, the development of Puskopdit as Center of Excellence and implementation of VCF will be conducted simultaneously with Puskopdit VCF team to enroll in CU VCF implementation activities.

5. SAFIRA and Puskopdit form cadre model for VCF Center of Excellence from the VCF-implementing CUs and volunteer from other CU members to address staff limitation of Puskopdit. These cadres will be facilitated by Puskopdit to conduct sharing session on the VCF implementation experience during Puskopdit's gathering activities.
6. To address financial capacity issue of VCF-implementing-CUs, Puskopdit will provide soft lending to CU as a startup capital for VCF pilot project.

Progress and signs of systemic change

SAFIRA initiated the intervention by conducting presentation about VCF during Puskopdit annual member gathering which was attended by 100 persons representing the 43 CU members in November 2017. A questionnaire was then distributed to get the basic understanding on the agriculture potential of each CU. The MoU with Puskopdit was signed in January 2018 SAFIRA received questionnaire responses from 16 CUs who are interested to VCF. SAFIRA then held VCF training in February to attended by 30 personnels representing 16 CUs. Based on the interaction during training, data from questionnaire and discussion with Puskopdit, SAFIRA chose 2 CUs namely CU Gema Swadaya and CU Yos Sudarso to implement VCF. Each CU involved will sign a tripartite Letter of Commitment between SAFIRA-Puskopdit-CU to ensure commitment of the implementation.

Puskopdit has assigned 4 people as the part of VCF Center of Excellence team. One of them is newly hired in March 2018 with major tasks to enroll in VCF Center of Excellence. Puskopdit has participated twice in TA in CU Gema Swadaya and has been always involved in the correspondences related to VCF activities. SAFIRA also encouraged Puskopdit to start enforcing agriculture actors' data from each member CU to be published in Puskopdit website to enhance awareness of each CUs agriculture potential and the possibility to link each CU members to create agribusiness trading forum. Puskopdit also has confirmed the provision of soft lending to CU as a start-up capital for VCF project with the model now being formulated. It is expected that besides VCF Center of Excellence, Puskopdit can be catalyst as well for VCF implementation by CU in the future. Additionally, Puskopdit will hold a manager gathering in August 2018 and agreed with SAFIRA to provide a slot for the VCF team and cadres to share and promote their experience in VCF implementation.

At the CU level, 2 TAs has been conducted with CU Gema Swadaya with potato sector in Lumajang as pilot project. The initial business model for the VCF scheme has been settled. CU Gema Swadaya has a positive buy in to the VCF model as indicated by their willingness to assign project team and conforming to SAFIRA and the consultant recommendations to implement VCF.

Meanwhile, CU Yos Sudarso will start the VCF implementation activities on July 2018 hence systemic change indication has not yet been observable.

11. INSTITUTIONAL STRENGTHENING FOR BANK PAPUA

Initially, SAFIRA was brought into this collaboration with PRISMA after they saw a need to support access to finance for seaweed local traders and seaweed farmers in Papua and West Papua. Bank Papua has experienced in agriculture financing, yet they used conventional lending method. Nevertheless, Bank Papua is interested with VCF model offered by SAFIRA. Bank Papua has also a very good impression towards PRISMA's intervention in seaweed sector as its focus in agriculture financing is related to production and marketing.

Recently, Bank Papua headquarter encourages the development of farmers from several commodities such as coffee farmers in Wamena. However, the number of borrowers is small and improvement in financing model is needed. SAFIRA is committed to support Bank Papua on its capacity to implement VCF model in various potential commodities instead of one single commodity.

Challenges and constraints

There are several challenges that currently constrain the ability of both FI and farmers in Papua as follows:

- **Limited seaweed seeds:** limited seeds supply from private sectors entering to Papua, inadequate infrastructure and handling process in seeds shipment to Papua affect to the limited number of

farmers received the seeds. Hence, seaweed nurseries' role is very needed to increase the supply, although currently, seeds production from the nurseries is going slow.

- Limited technical assistance due to limited number of extensions service focusing on seaweed sector.

Vision of change

- SAFIRA's vision of change is that, by 2018, farmers or other market actors from any potential commodities in Papua and West Papua could have direct or indirect impact from increased access to finance through VCF from Bank Papua. In term of sustainability, by the end of 2018, Bank Papua could earn a deep understanding on VCF and have a high willingness to continue implementing VCF in agriculture after SAFIRA program ends.

The SAFIRA approach

To achieve this vision, SAFIRA has initiated to enhance Bank Papua's capacity in implementing VCF. There are two main agenda that SAFIRA has agreed with Bank Papua including delivering VCF training to the headquarter and branches and supporting the pilot through VCF technical assistance.

Progress and signs of systemic change

The intervention with Bank Papua was initiated through supporting PRISMA's seaweed intervention in Papua. In January 2018, SAFIRA had its first visit to Bank Papua Headquarter to see their interest in VCF, and the result was positive. After SAFIRA's first visit to Bank Papua, SAFIRA assessed the needs of financing from seaweed market actors in 3 districts (Fakfak, Biak, Yapen) where PRISMA had involved before. This visit was including Bank Papua's branches visit to see their interest in VCF. Overall, head of branches shows a great feedback in seaweed financing, but they also considered about the seeds supply. Moreover, local trader was also assessed during this visit. Some parties are identified having role as seaweed local buyers namely two private local traders (Krapu and Yamase), Yayasan Runsrans through its cooperative, Department of Marine and Fisheries (DKP), and BUMKam. In addition, PRISMA has coordinated with PT Indonusa, a company that has interest in buying seaweed from the local traders.

By having the assessment, SAFIRA developed three business model possibilities and the SOP for Bank Papua. This business model included input financing for farmers and ISPs and bridging loan for off-taker. This SOP can be used for guidelines tools for Bank Papua to apply VCF practice in multiple commodities. In April 2018, Bank Papua and SAFIRA signed a MoU and will conduct the VCF training and technical assistance in the 2nd semester of 2018.

Not only for that, because Bank Papua has experiences coordination meeting with stakeholders in seaweed sector and received information about VCF model, Bank Papua interested to provides financing for coffee sector through off-taker financing with VCF business model.

1. BEEF

Beef Sector Summary

Indonesia is the largest beef producer in Southeast Asia. Nevertheless, the country is experiencing a shortfall in production as domestic consumption outstrips supply hence, there is still dependency on imports to fulfil national demand. But since 2010, the government has been tightening import quotas with the aim of creating 90% self-sufficiency in beef. These two factors have significantly increased the demand for locally sourced beef. In 2016, the government lifted the import quota for beef and live cattle but imposes new requirement for importers to import one breeding cattle for every five feeder cattle.

Quick facts:



Total production
531,800 ton



Total population
16 million



Consumption
0.42kg/head



Female participation*
38%



Demand
3.21% (increase)

*from AIP-Rural intervention areas



East Java

- ✓ Total production : 103,625
- ✓ Total population : 4.5 million cattle
- ✓ Total farm HHs : 1.9 million HHs
- ✓ Female participation : 35%

Indicator	Total
Cumulative outreach up to S1 2018	6,182 HHs
Total outreach projection to Dec 2018	12,903 HHs
NAIC actual cumulative S1 2018	IDR 103,068,090,000
Total projected NAIC to Dec 2018	IDR 212,199,290,000



NTB

- ✓ Total production : 10,444
- ✓ Total population : 1.1 million cattle
- ✓ Total farm HHs : 192,000 HHs
- ✓ Female participation : 44%

Indicator	Total
Total outreach projection to Dec 2018	1,706 HHs
NAIC actual cumulative S1 2018	IDR 4,678,090,000
Total projected NAIC to Dec 2018	IDR 12,724,810,000



NTT

- ✓ Total production : 12,719 ton
- ✓ Total population : 1 million cattle
- ✓ Total farm HHs : 207,539 HHs
- ✓ Female participation : -

Indicator	Total
Total production	12,719
NAIC Actual Cumulative S1 2018	IDR 212,240,000
Total Projected NAIC to Dec 2018	IDR 489,890,000



Beef OVERALL

Indicator	Total
Cumulative outreach up to S1 2018	6,892 HHs
Total Outreach Projection to Dec 2018	14,947 HHs
NAIC actual Cumulative S1 2018	IDR 107,958,410,000
Total Projected NAIC to Dec 2018	IDR 225,414,090,000

Value For Money (VFM)	Beef
Overall	
Investment Leverage:	0.10
Investment Per HH:	AUD 500.9
Social Return:	3.13

Subsector Profiles

1.1 Beef East Java

East Java is Indonesia's biggest cattle producing province accounting for 19.5 percent of national beef production and 27.4 percent of the national beef cattle population. Development of its cattle and beef sector is being driven by inter-regional cattle exports and local consumption of beef. It is the largest exporter of inter-provincial live cattle, contributing up to 25 percent of the national trade in live cattle. Local consumption is also one of the primary drivers of its cattle and beef sector development. Despite being the largest cattle and beef production province in Indonesia, East Java's cattle production systems are relatively unproductive. The majority of farmers raise cattle as a family asset and a source of ready cash. They experience low productivity because of sub-optimal cattle growth due to poor nutrition intake. They do not see cattle rearing as a business or livelihood, and do not usually make conscious decisions to take advantage from beef cattle deficit in Indonesia.

This approach to raising cattle, coupled with a lack of supplementary feedstock, poor know-how on feeding practices, and limited awareness on the commercial benefit of using improved feed results in the low productivity of cattle farmers in East Java, particularly during the dry season (May to November) when farmers that mostly depend on grass as fodder experience a shortage in supply. Farmers generally experience a fattening period of 11 to 12 months, but this fattening period can be halved with the use of good nutritious feed. Low cattle productivity is also due to inferior breeding practices using natural mating which contribute to poor genetics of calves and low conception rates. The provision of artificial insemination services by government agents has been largely ineffective.

Challenges and constraints

There are two main reasons for the low income of East Java's cattle farmers:

- **Inability to increase production.** Inefficient artificial insemination (AI) practices are a result of farmers having a) a lack of information on proper AI practices and b) a lack of access to timely AI services; and
- **Low productivity.** Slow weight gain in calves and cattle is due to farmers lacking awareness of and access to quality and quantity of improved feed and proper feeding practices that are primarily needed to accelerate weight gain of cattle.

Intervention areas

To address the challenge of low productivity mentioned above, PRISMA collaborates with private partners to:

- Promote commercially available, appropriate and affordable feed and GRPs for cattle fattening to boost cattle weight gain and raise awareness among farmers of the commercial benefits of investing in cattle feed products. This intervention was piloted in Tuban district, second largest cattle population in East Java, and has expanded to other cattle-producer districts in East Java and Madura island.
- Promote appropriate financial products for cattle fattening, aiming to provide farmers, especially poor farmers, with the financial means to enter the cattle fattening business. PRISMA is working with SAFIRA on this intervention.

Progress and signs of systemic change

In the first semester of 2018, the following activities and progress towards systemic change were observed:

Adopt

- Japfa Comfeed conducted a trial of feed in 6 locations in East Java to exhibit the benefit of using Japfa's feed compared to traditional fodder.
- PKM promoted the improved cattle feed in traditional markets and livestock markets in Tuban, Bojonegoro, and Lamongan. Moreover, PKM also encouraged its agents to do market promotions.
- Nutrifeed has employed the same market promotion strategies in the new areas of Madiun, Kediri, Tuban, Probolinggo, and Magetan.

Adapt

- Several beef EJ partners have expanded into new areas (districts) as they try to capture more of the vast cattle market in EJ. Nutrifeed has entered Trenggalek, Pacitan, and the NTB market while Japfa has expanded to Bondowoso and Situbondo.
- Nutrifeed repaired its old machines and bought new machineries for its Magetan factory to increase its production capacity from 15 – 25 MT/day to 50 – 60 MT/day. This action was taken because of growing demand for Nutrifeed's feed in East Java.
- Nutrifeed held marketing forums for all Nutrifeed's marketing staff in East Java and Central Java to improve their skills and knowledge in marketing and sales. PRISMA was invited to the forum to share some strategies on marketing mix and learnings from the PRISMA – Nutrifeed intervention.
- Nutrifeed built a pen in Klaten to rear 20 cattle that are fed with its newly developed complete feed. The pen also functions as a learning centre for farmers to learn about cattle rearing from Nutrifeed.
- Nutrifeed was invited by Trenggalek government to share the benefit of using concentrate feed to farmers in Socialization of Cattle Insurance and Cattle Feed event.

Expand

- A few feed companies have shown indications that they intend to enter to cattle feed market. Malindo has committed to produce cattle feed in 2018; the company has submitted several applications to GOI to get their license to produce cattle feed.
- Sierad is also looking to diversify its production line in Sidoarjo to encompass cattle feed as well as the existing poultry and swine production lines.

Respond

- Several large animal pharmaceutical companies have shown their interest to enter the cattle market in East Java. Cargill, Sanbe, and Medion are giving a positive response to PRISMA's proposal for working in cattle interventions in EJ, including in NTB and NTT.
- The Livestock Department of Magetan ordered 20MT of Nutrifeed to be distributed to 1,000 farmers in Magetan Calves Harvest event. This event was held by Livestock Department of Magetan and was attended by Indonesia's Minister of Agriculture.
- Banks and other financial service providers are now developing financial products for small scale cattle farmers.

1.2 Beef NTB

NTB is the Indonesian province with the fourth largest cattle population, the thirteenth largest for beef production, and the ninth largest for inter-provincial cattle trade. Local consumption of beef and inter-regional live cattle trade are the main drivers of its cattle sector development. NTB plays an important role for Indonesia's beef and cattle production by providing finished live cattle for slaughtering and breeds for supplying to other provinces in Indonesia. Cattle play an important role in the provincial economy, as well as for household incomes. Livestock accounts for 10.2 percent of agricultural GDP in NTB, and cattle contributes 14 percent to agriculture GDP. There are around 208,500 households working in the cattle sector. The sector's development is strongly supported by national and local government. However, they have so far been unable to capitalise on the demand for beef cattle and meet the demand deficit in Indonesia.

Farmers experience low productivity because of poor growth rates. This arises from a lack of access to good nutritious feed sources and rudimentary know-how on good feed nutrition for cattle, feeding practices, as well as proper breeding and animal diseases treatments.

Two different cattle rearing techniques are observed in NTB, with a spatial pattern to each. Farmers in the Sumbawa area raise cattle following the ranch system – an extensive farming practice relying on pastures and open water sources. In Lombok, on the other hand, an enclosed system is the most common; here, cattle rearing practices are intensive. The enclosed system is more investment intensive and allows greater control over breeder selection, feed management and disease control. PRISMA has chosen to work in NTB because of (1) the potential to achieve change on a large scale, and (2) the province will be able to fill the national

demand gap currently being supplied by imports by expanding its market potential for slaughter and breeder cattle trade.

Challenges and constraints

One of the reasons behind the low income of NTB's cattle farmers is the low weight of their cattle, which results in it fetching a low market price. There are two main reasons for low cattle weight in NTB:

- **Limited availability of good quality calves, particularly among ranch beef cattle in Sumbawa Island.** For cattle reared in a ranch, calves are of low quality, largely as a result of inbreeding due to the farmer's limited knowledge of animal and breeding management. Even in an enclosed system, production of calves has not been optimal because farmers have (a) inadequate knowledge of the proper timing of artificial insemination (AI) and (b) limited access to effective and quality AI service.
- **Poor nutritional intake for the cattle.** Good quality fodder is lacking during the dry season, as farmers depend on natural production and do not have knowledge of quality fodder production or understand the need for fodder cultivation. There is a lack of water resources for cattle due to poor water infrastructure. In addition, there is low use of supplementary feed because farmers are unaware of its benefits. They do not know how to produce nutritious feed, and ready-to-use feed is unavailable.

Intervention areas

To address the challenges above, PRISMA collaborates with the private sector to:

- Encourage feed companies to promote commercially available, appropriate and affordable feed and animal pharmaceuticals for cattle fattening to boost weight gain of cattle; and
- Disseminate good rearing practices (GRP) including method of estimating cattle's weight with length-to-weight conversion tables to raise awareness among farmers of the benefits of investing in cattle feed products.

Progress and signs of systemic change

Progress and signs of systemic change that were observed in the first semester of 2018:

Adopt

- Nutrifeed has established 11 demo plots, 3 demo events, and 3 market promotion events in Lombok to promote the use of concentrate feed for cattle.
- Nutrifeed hired new marketing staff for Lombok. He received training on product knowledge and technical skill in Nutrifeed's head office in Klaten before starting.
- Nutrifeed installed billboards in 3 locations: Masbagik cattle market (East Lombok), Selagalas cattle market (Mataram), and in Puyung (Central Lombok).
- Nutrifeed placed ads on RRI radio Lombok during the month of Ramadan. Nutrifeed's marketing team have followed-up to the farmers who responded to the advert to learn more about the feed.

Adapt

- The feed agent had initiatives to offer "Buy 1 Get 1" promotion to farmers who buy the feed in demo plot locations.

Respond

- A few large animal pharmaceutical companies have shown their interest to enlarge their market of large animal pharmaceutical products for cattle in NTB. Sanbe and Medion are planning to partner with PRISMA to promote their pharmaceutical products to cattle farmers in Lombok.

1.3 Beef NTT

NTT is the Indonesian province with the fifth largest cattle population accounting for 6 percent of national cattle population in 2017. Development of its cattle sector is primarily driven by inter-regional live cattle exports. Its live cattle trade has increased by 7.6 percent CAGR over recent years. DKI Jakarta, Kalimantan, and West Java are the main destinations of NTT's cattle.

National and local government strongly support the cattle trade by providing special vessels for transporting cattle out of NTT through their maritime highway or short-sea shipping (Tol Laut) programme. The government has committed to increase the number of vessel to 4 units in 2018 from 1 unit in 2017. The use of special vessel for cattle (Kapal Ternak) from NTT to DKI Jakarta and Kalimantan will help the province to increase the amount of cattle exports and reduce potential weight loss of the cattle during transportation. It is expected that this govt's policies will bring more benefits for cattle traders and smallholder farmers as the cattle traders will receive a better purchasing price of cattle to smallholder farmers.

Despite being the fifth largest cattle producing province in Indonesia, the export quota policy is a challenging issue that limits the ability of inter-regional cattle traders to increase their cattle trade. Farmers also experience low production and productivity because of long inter-calving intervals and high rates of calf mortality, and the slow growth of cattle due to lack of access to good nutritious feed sources and rudimentary know-how on good feed nutrition for cattle, feeding practices, as well as proper breeding and animal diseases treatments. In addition, cattle farmers raise their cattle as a source of savings and they are sold for cash to meet household financial needs hence they often sell their cattle before they reach their optimum weight.

Challenges and constraints

The major reasons for the low income of NTT's cattle farmers are:

- **Inability to increase production of calves because of long inter-calving intervals and high rates of calf mortality.** This is due to farmers lacking access to feed, water, and good rearing practices to reduce mortality among calves; low awareness of the benefits of quality feed and water; and minimal access to services and information on proper breeding (including on the management and selection of prime bulls and female breeders)
- **Low productivity because of slow weight gain in cattle.** This is due to low farmer access to nutritious feed, water, and good practices to accelerate weight gain and farmers having low awareness of the benefits of appropriate quantity and quality feed and water for cattle productivity. Moreover, there is no incentive for farmers to fasten their cattle weight increase as there is limited market.
- **Inability to expand inter-regional cattle trade due to provincial govts export quota policy.** As provincial government of NTT has program to reach cattle population more than 1 million by the end of 2018, they limit the number of live cattle to be exported.

Intervention areas

To address the challenges above, PRISMA collaborates with the private sectors and govts agencies to:

- Promote good nutritious feed for cattle and good feeding practices,
- Promote animal pharmaceuticals for cattle to reduce cattle mortality,
- Promote good rearing practices (GRPs) including animal welfare practices, and
- Review and provide recommendations to improve the export quota policy of inter-regional cattle trade reflecting the market dynamic.

Progress and signs of systemic change

The "lamtoro intervention" was closed due to low commitment of the partner (Puskud) to adopt the innovations and the business has not proven its commercial viability. However, the local government has copied the model and spread information of using lamtoro as a good nutritious forage for cattle. BPTP continues to produce the lamtoro seeds and develop their local nurseries in several districts across NTT.

Other progress was achieved in the last semester:

- Approached feed millers and pharmaceutical companies in Java such as JAPFA, Malindo, Cargill, Fermen HiPro Feed, Cheil Jedang, Medion, and SANBE to expand their market to NTT
- Review export quota policy. PRISMA is seeking a Consultant to work on this policy study and provide recommendations to provincial government to improve the policy.
- Lobbying the government authorities/ agencies to use the vessels for cattle to carry cattle feed and pharmaceutical products to NTT.

2. COCOA

COCOA Sector Summary

Demand for cocoa is rising globally, Indonesia being 3rd largest cocoa producing country can benefit from this unmet demand, with relatively young plantation in certain parts, however the overall production in Indonesia has decreased. Sulawesi (70-80%) is the major cocoa producing region in Indonesia, with production reaching almost saturation.

Meanwhile Papua has a strong potential to emerge as a strong supplier (young trees and scope for area expansion) from its current position (1.4% of total national production). However, there is currently very little investment in the commercialisation of cocoa farming to use fertiliser and quality seedlings resulting in low productivity. Local farmers adoption is low, and they lack the knowledge on good farming practice and linkage to better markets. PRISMA works with the partner to enable farmers in gaining sustainable access to knowledge and information on appropriate farm management and cultivation practices for cocoa production.

Quick facts:



Total production
3,660 MT



Total harvested area:
14,697 Ha



Productivity:
0.2 MT/Ha



Female participation*:
5%



Average productive land:
1 Ha/HH



Subsector Profiles

2.1 Cacao Papua

In Papua, cocoa is an important cash crop, however the province contributes to only 1.47% to total national production. Jayapura and Keerom are Papua's major cocoa producing districts, with 74% of the province's total cocoa farmers. Cocoa is an important source of income for majority Papuan farmers where women are involved mostly in post-harvesting activities. There is currently very little reinvestment in the commercialisation of cocoa farming to use fertiliser and quality seedlings which results in low productivity at around 200 kg per ha compared to the national average of 800-900 kg per ha.

The cocoa market in Papua has been dominated by few large local traders who determine the price at the farmers' level. In the past Mondelez, in collaboration with Armajaro, introduced a 'cocoa doctor' concept

where interested parties (collectors or key farmers) were trained to provide technical services to farmers, including the nursery establishment up to drying process. The model did not last however and currently no big processing companies are present or have direct involvement in Papua.

Challenges and constraints

The main challenges faced by the cocoa farmers in Papua are low productivity, low production and low price, primarily due to the reasons below;

- **Farmers do not apply good agricultural practices.** Cocoa trees do not receive proper nutrients and frequently experiencing pest and disease attacks which are mainly caused by inappropriate farm maintenance practices. Farmers tend to have little knowledge on how to grow cocoa properly.
- **Cocoa trees are old and unproductive.** The average of age of cocoa trees in Papua are more than 10 years and farmers do not rejuvenate or replant their cocoa trees.
- **Input markets and information channels related to cultivation techniques are largely dominated by public agencies.** Government attempt to involve in cocoa sector yet lacks the focus. On the other hand, farmers' incentives are driven by subsidies resulting in their lack of motivation and willingness to cultivate cocoa.
- **Lack of technical assistance from both private and public extension services** who can provide GAP information and knowledge. Public extension workers have limited capacity while private sectors do not have enough incentive and willingness to invest in providing extension services.
- **Weak market linkages to big market players (traders or big processing companies).** Market players outside Papua are not aware of the market potential in Papua and some are doubtful to enter due to high risk of investment in the area. Meanwhile local collectors and traders dominate the market, prompting long supply chain that prevents farmers from obtaining better price and market information.
- **Farmers prefer to sell cocoa wet beans than dry beans for quick cash payment.** Many farmers sell their cocoa in the form of fresh cocoa beans without drying because drying process takes some effort and time investment (varied between 2-3 days). Farmers are also constantly in need for quick cash and they can get it from the collectors while some traders who are willing to pay higher price do not come frequently to the villages.

Intervention areas

To address the challenges, PRISMA will work with public and private sector partners to implement the following interventions:

- Promote GAP including side grafting to increase productivity of cocoa.
- Support the development of new ISPs (in this case, the cocoa collectors at a village level) to enhance the cocoa supply chain which can leverage the access to information, knowledge on GAP and price information to farmers.
- Promote the use of appropriate inputs (good quality seedlings, fertiliser, cultivation tool) to increase the cocoa productivity.
- Support financial institutions and provincial government in exploring possibility to develop appropriate risk sharing and financing products targeting key cocoa farmers.

Progress and signs of systemic change

The following progress was achieved in the last semester:

Adopt

- The partner (Ecom) expand to other sub-districts/districts in Papua.
- Ecom hired additional extension service workers to support their activities in Papua.

- Ecom established 8 new drying facilities for selected ISPs

Adapt

- Ecom replicated the business model in the Sarmi district in collaboration with local government to promote GAP and side/ top grafting.
- Ecom established 4 new nursery facilities to strengthen the cocoa supply chain in Papua.

3. CASHEW

Cashew Sector Summary

Indonesia is the 8th largest producer of cashew in the world, contributing 3.5% to the global raw cashew nut market in 2015. Global demand for cashew has increased by 53% since 2010, with half of consumption accounted for by India and the US. Since 2009, production of RCN in Indonesia has been decreasing however – the cultivated area has declined from 572,870 ha in 2009 to 554,315 ha in 2013, during the same period production decreased from 147 thousand MT, to 130 thousand MT in 2016. There are opportunities to improve farming practices, access to market information and financial literacy to address underlying reasons for decline in this crop and allow Indonesian farmers to benefit from the global boom in demand.

Quick facts:



Total production
130,072 MT



Total harvested area
513,348 Ha



Productivity
438.5 kg/Ha



Female participation*
33.6%



Demand
5.95% (increase)

*from AIP-Rural intervention areas



NTT

- Total harvested area : 169,272 Ha
- Total farm households : 249,871
- Total production : 39,295 MT

Indicator	Total
Outreach Plan S1 2018	1,400 HHs
Outreach Actual S1 2018	1,075 HHs
Cumulative outreach Plan S1 2018	5,395 HHs
Cumulative outreach up to S1 2018	5,030 HHs
Total Outreach Projection to Dec 2018	5,449 HHs
NAIC actual Cumulative S1 2018 (IDR)	IDR 7,301,910,000
Total Projected NAIC to Dec 2018	IDR 7,910,160,554



NTB

- Total harvested area : 55,075 Ha
- Total farm households : 60,068
- Total production : 11,320 MT

Indicator	Total
Outreach Plan S1 2018	-
Outreach Actual S1 2018	-
Cumulative outreach Plan S1 2018	1,387 HHs
Cumulative outreach up to S1 2018	1,387 HHs
Total Outreach Projection to Dec 2018	1,387 HHs
NAIC actual Cumulative S1 2018 (IDR)	IDR 2,979,160,000
Total Projected NAIC to Dec 2018	IDR 2,979,160,000



Cashew OVERALL

Indicator	Total
Outreach Plan S1 2018	1,400 HHs
Outreach Actual S1 2018	1,035 HHs
Cumulative outreach up to S1 2018	6,417 HHs
Total Outreach Projection to Dec 2018	6,836 HHs
NAIC actual Cumulative S1 2018	IDR 10,281,070,000
Total Projected NAIC to Dec 2018	IDR 10,889,320,554

Value For Money (VFM) Cashew Overall

Investment Leverage:	0.09
Investment Per HH:	AUD 99.89
Social Return:	1.85

Subsector Profiles

3.1 Cashew NTT

NTT is one of Indonesia's most suitable cashew production zones with comparatively low rainfall and a long dry season. Afforestation program from government and International Fund for Agriculture (IFAD) are main reasons for NTT becoming the largest cashew area. NTT has the highest cashew production in Indonesia, contributing 33.2% of national production. The current production decline in NTT has resulted in a national decline in cashew production. Around 99% of raw cashew nuts (RCN) produced in NTT is exported to other islands and countries, and the rest is processed locally to make kernel. Cashew is one of NTT's major commodities with around 250,000 farmers who mainly generate income through cashew plantation. 80% of them fall into the under USD \$2.00 consumption spending per day category for extreme poverty. Declining farmer production has translated into high probability of falling into poverty. Productivity of cashew in NTT is low and in decline. The two major reasons are pests, disease and the relatively old age of cashew trees.

Challenges and constraints

The specific problems and their underlying causes are summarised below:

- **Lack of access to rejuvenation and grafting techniques**, and seedlings that cashew trees are old and less productive.
- **Lack of proper agriculture practices** (pruning and sanitation) leading to infection by pests and disease and nearly no one appears to have an interest in offering these information services.
- **Farmers lack knowledge of better farming practices**, are not business and financially literate, and cannot access market information.
- **Government extension services have little interest in cashew and insufficient knowledge about cashew production practices.** With limited resources, they prioritise other major crops; an exception is the occasional free distribution of seedlings to cashew farms.

Intervention areas

PRISMA works with partners to address the constraints above by:

- Supporting the development of input supply services that provide embedded services (plant protection services, better farming practices).
- Supporting the supply and promotion of grafting services that have embedded services (grafting technology, total plantation management).
- Supporting for extension service capacity building to provide knowledge for better and proper agricultural practice

Progress and signs of systemic change

The following progress was achieved in the last semester:

Adopt

- 6 District Governments provided good practice cashew farming capacity building to their extension service officers, who disseminated the better farming practices to farmers in their respective areas.
- Comextra Majora expanded their knowledge dissemination of cashew and cocoa GAP in NTT and NTB

Adapt

- East Sumba, West Manggarai and Alor district government will provide budget for a cashew program in the next fiscal year

Expand

- CU Swastisari will provide financial schemes for farmers to obtain supporting tools and inputs for agriculture in West Sumba

4. COCONUT

Coconut Sector Summary

Indonesia produces around 61 billion coconuts annually or around 31% of total global production. The country is also one of the major exporters of fresh coconuts, alongside the Philippines and India. Despite being a major producer, Indonesia is far below other countries in terms productivity and exports of value-added coconut products. With the increasing global demand for coconut products such as crude coconut oil (CCO), coconut sugar, Virgin Coconut Oil (VCO), Indonesia has huge potential to increase its average yield and coconut value-added products derived from coconut.

Quick facts:



Total production
around 2.88 million MT
(1.1 ton/Ha x 2.6 million Ha)
in Indonesia



Total harvested area
2.6 million Ha
productive from 3.6 million Ha
in Indonesia



Productivity
1.1-ton copra/Ha
(based on 3CTB IP in July 2017)



Female participation*
52%
(based on 3CTB Impact
assessment in May)



Demand
around 26,000 ton/year for
crude coconut oil (based
on 3CTB IP in July 2017)

*from AIP-Rural intervention areas



East Java

- ✔ Total harvested area : 10,562,966 trees
- ✔ Total farm households : 688,250 farmers
- ✔ Total production : around 158,444,490
(10,562,966 trees x
15 coconuts/tree
in average)

Indicator	Total
Outreach Plan S1 2018	-
Outreach Actual S1 2018	-
Cumulative outreach up to S1 2018	431 HHs
Total Outreach Projection to Dec 2018	917 HHs
NAIC actual Cumulative S1 2018	IDR 302,292,000
Total Projected NAIC to Dec 2018	IDR 921,942,000



NTT

- ✔ Total harvested area : 31,056 Ha
- ✔ Total farm households : 177,402 farmers
- ✔ Total production : around 34,161
(31,056 Ha x 1.1 ton/Ha) MT

Indicator	Total
Outreach Plan S1 2018	-
Outreach Actual S1 2018	91 HHs
Cumulative outreach up to S1 2018	91 HHs
Total Outreach Projection to Dec 2018	571 HHs
NAIC actual Cumulative S1 2018	IDR 121,169,922
Total Projected NAIC to Dec 2018	IDR 760,380,162



Coconut OVERALL

Indicator	Total
Outreach Plan S1 2018	-
Outreach Actual S1 2018	91 HHs
Cumulative outreach up to S1 2018	522 HHs
Total Outreach Projection to Dec 2018	1,488 HHs
NAIC actual Cumulative S1 2018	IDR 423, 481,922
Total Projected NAIC to Dec 2018	IDR 1,682,322,162
Value For Money (VFM)	Coconut Overall
Investment leverage:	1.20
Investment per HH:	AUD 1,545.82
Social return:	0.05

Subsector Profiles

4.1 Coconut EJ

East Java is a major coconut producing area in Indonesia, but coconut is seen as a low value supplementary crop and cultivation is rudimentary. Coconut is widely cultivated by smallholders in selected areas, but normally as a supplementary crop. It is planted on farm boundaries and yards, and to a lesser degree intercropped with major cash crops like sugar cane, cacao, and cassava. Land holdings in East Java are small and average tree ownership is low, with only around 41 trees per household. Low farm gate prices and lack of access to extension services mean that smallholder farmers, the major coconut producers, treat it as a secondary crop and rarely apply inputs or seek to control pests. The typical supply chain, from farmer to collectors to local market, adds little value and is sometimes dominated by larger collectors.

There is unmet demand from the local food industry for coconut sugar, which is a preferred ingredient in sweet soy sauce. Although growing numbers of producers in West and Central Java are producing coconut for export, in East Java coconut sugar is produced by smallholders, collected and traded by local intermediaries, and sold almost exclusively on local markets. There is significant domestic demand from the local food industry for coconut sugar, which can be used to make *kecap manis* (sweet soy sauce), a popular condiment. However, demand from food manufactures reportedly outstrips supply, and has led some to substitute brown cane sugar for coconut sugar. Coconut sugar is also used in the manufacture of *kretek* (sweet clove cigarettes) and the production of local foodstuffs and herbal remedies

The major production centres for coconut sugar in Java lie along the south coast stretching from Ciamis in West Java through Banyumas in Central Java and Kulonprogo in Yogyakarta, to Pacitan, Trenggalek and Banyuwangi in East Java. It is estimated that a minimum of 100,000 people in these areas are engaged in the production of coconut sugar, including an estimated 16,000 producers in the initial target areas Trenggalek and Pacitan in East Java. As in most coconut sugar producing areas, coconut sugar produced in these districts is collected and traded by local intermediaries and sold almost exclusively on local markets within East Java.

Challenges and constraints

Since 2012 Indonesia coconut harvest area has decreased by an average of 53,887 ha per year and the production reduced by an average of 74,791 ton copra equivalent per year. With 47,000 Ha old or damaged trees, East Java requires 517,000 coconut seedlings per year just to have 5% rejuvenation/year. Government regulates that these seedlings must originate from registered high producing block (BPT) to ensure good seedling quality. Originally, 1996's BPT registration by Ministry of Agriculture created 100 Ha of BPT in East Java, with potential production of 540,000 seeds/year. Yet, the ideal seeds to be used is maximum 15% of the best parent trees in BPT (PIK), which is only 81,000 seeds. Also, additional BPT registered by Province Department of Agriculture has been revoked by Permentan 50/2015. **Currently there is 0 registered Coconut *Genjah*⁹ (dwarf coconut) BPT in East Java because of the convoluted and bureaucratic registration process.**

Intervention areas

To address the challenges above, since March 2018 PRISMA collaborated with CV Sekar Arum, one of the two registered nurseries in Pacitan District, East Java, to **promote coconut BPT registration to coconut farmers in Pacitan, East Java.**

Established in 2016, CV Sekar Arum produces 60,000 coconut seedlings/year, 250,000 patchouli seedlings/year, and 58,000 clove seedlings/year. For coconut, CV Sekar Arum mostly sells to government for government replanting program. CV Sekar Arum has willingness to expand into retail market, especially for

⁹ Recently, *Genjah* variety is seen by local food industry as a viable alternative source of coconut sugar because of its shorter height (max. 10 meters) and it starts to flower in 3-4 years compared to local *Dalam* variety that grows to 30 meters and starts to flower 7-8 years after planting.

dwarf coconut variety. For this, a registered coconut parent trees high producing block or BPT is needed and CV Sekar Arum is willing to collaborate in the registration process, prioritizing on dwarf coconut as currently there is no BPT for dwarf coconut in East Java.

Progress and signs of systemic change

The following activities and progress towards systemic change were observed:

Adopt

- The partner has identified 1,500 potential parent trees and conducted 7 socialisations that were attended by 375 farmers in 3 sub-districts of Pacitan.
- Agriculture Office of Pacitan District has signed a three-partied minutes-of-agreement with PRISMA and CV Sekar Arum to assist in socialisation and technical visits.

Adapt

- Not yet observed

Expand

- Not yet observed

Respond

- UPT P2MBTP (Seed monitoring body) of East Java has joined in socialising to farmers in our targeted areas about the requirement, process and benefit of registering their coconut parent trees.

4.2 Coconut NTT

NTT is the third poorest province in Indonesia. NTT supplies around 2% of the total national production of fresh coconut, with potential to improve production and productivity further. Of the 110,000 coconut farming households in NTT, 78,000 are in Flores and the rest are in Timor Island. On Flores island, the majority of coconut farmers live in 6 districts - Malaka, Kupang, East Flores, Ende, Nagekeo and Sikka (110,000 or more than 45 % of total coconut farmers). Those 6 districts have more than 79% (71,000 Ha) of the total plantation of coconut trees in NTT.

Fresh coconut, copra and coconut oil are the dominant coconut products in these districts. The majority of farmers involved in coconut, copra and VCO production are poor. CCO and VCO are more profitable than fresh coconut and copra. Coconut oil, both CCO and VCO are home-based industry and generally dominated by female entrepreneurs.

According to FAO, recently there has been a significant fall in global demand for copra. Nevertheless, Indonesia's supply remains stable, primarily because of price competitiveness. Another coconut product that has experienced significant growth in demand over the past few years mainly is organic Virgin Coconut Oil (VCO). Driven by rising consumer attention on healthier diets especially in developed countries, VCO products have now become more known in the global market.

Despite the significant fall in copra's global demand, the national demand is still growing and unfulfilled. Most copra supply is from Sumatra, Kalimantan, and Sulawesi mostly used as mixing ingredients in food, chemicals, and cosmetic industries. In NTT, most coconut farmers in NTT process their coconut into copra and send it to Surabaya to be processed into crude coconut oil (CCO). Even though farmers in NTT have been producing CCO at the household level for decades, they are prone to selling copra to inter-island traders instead of supplying CCO directly to CCO buyers. CCO supply only meets about 50% of the demand, there is therefore a lot of room for improving supply, especially from NTT.

Challenges and constraints

The overarching problems encountered by the coconut, copra and coconut oil farmers in NTT are:

Decreasing productivity of coconut trees, particularly in Sikka and Nagekeo due to poor management of aging trees. High yield coconut seedlings are produced and supplied by specific nurseries via government replenishment projects. Farmers do not have regular access to best quality seedlings and many are reluctant to plant new trees due to lack of awareness and knowledge about the long-term benefits. Also, most of the coconut farmers do not treat coconut as a priority crop and there is little to no replenishment.

Low value addition for coconut derivative product. Most coconut farmers in NTT sell fresh coconut or process them to copra. It is because of a lack of downstream market linkage (to coconut oil buyers in national/international level), so farmers do not have much incentive to produce coconut oil. Farmers that sell fresh coconut do not get any additional value since they sell all the products at once (the whole fruit) while farmers that sell copra may utilize the husk, shell, and water, even, the farmers who sell coconut oil can actually feed the oil cake to their livestock (pigs or chicken).

Production of coconut oil is low and not known to national and international buyers. Previous government program failed to attract buyers; this has discouraged trained women to continue producing VCO with the expected quality standard. Accordingly, the quality of VCO produced in NTT is low at the moment. However, the quality of CCO from NTT, especially from Flores, is well known in local market, and is suitable for national market as well. Added with the absence of market linkage to buyers, lack of information on required standard quality and limited access to quality processing equipment, farmers suffer low competitiveness from coconut products, thus resulting in low income.

Low quality of copra in NTT due to the use of old technology, and low provision of information about better technologies. On-farm and off-farm copra producers operate at sub-optimal capacity as they do not have enough capital to finance expansion of production. Limited interest in and access to financial services exacerbates the problem.

Lack of incentives for public extension services to provide information on coconut, copra and VCO. Government subsidies have deterred private sector actors from providing relevant information on coconut trees replenishment and quality standards for copra. Provincial traders demonstrate weak knowledge and capacity for improving existing copra drying techniques at the producer level. Financial institutions (FIs) are not motivated to invest in developing this market segment. They do not understand the need of copra and coconut oil markets.

Intervention Approach

PRISMA approach

To address these challenges, PRISMA collaborates with partners to:

- Support industrial organic VCO buyer to develop a sourcing model from coconut farmers in Flores
- An industrial buyer, CV. Nusa Permai provides organic certification to coconut farmers in Flores through socialisation and information dissemination. Farmers are expected to practice organic farming on their coconut lands, resulting in high volume of high quality organic coconut supply.
- In partnership with VCO industrial buyer & exporter (CV. Nusa Permai) & local Intermediate Service Provider (ISP), PT. Mahesar Chandra & Larantuka Diocese which brings an agreement that the ISP will build local organic VCO production house.
- Aggregation of fresh organic coconuts for VCO production by ISP to achieve the minimum quantities required by industrial buyers. The establishment of VCO production house will be able to absorb the fresh coconut supply from local farmers.
- Support industrial coconut oil buyers to develop sourcing models from coconut farmers in Flores

- In partnership with the biggest national Crude Coconut Oil company, PT. Barco, to procure CCO from farmers in their household level production and providing transportation service (collection pick up) and technical assistance about how to make CCO in high productivity.

Progress and signs of systemic change

PRISMA has started implementing the first intervention 'Support industrial organic VCO consumers to develop a sourcing model from coconut farmers in Flores' and the second intervention 'Better value market for crude coconut oil (CCO) farmers/producers in Flores.

In the first semester of 2018, the following activities and progress towards systemic change were observed:

Adopt

VCO

Nusa Permai has shown initial buy-in by agreeing to procure organic VCO supplied by the ISPs/aggregators at an agreed price. It is willing to pay the organic certification expenses in targeted areas.

The identification of farmers to be registered organic certification has been done where there are 2,274 potential farmers in Sikka and 728 farmers in Adonara. The registration is expected to happen in early 2017 along with the completion of the production house. More than 2,000 farmers are to be registered as the first batch.

The building of the production house in Sikka has been completed since December 2016, yet it has not started producing VCO since the operation has been postponed and delay due to the incapability and lack of commitment of ISP in Sikka, PT. Mahesar Chandra.

Meanwhile the 2nd ISP in Adonara, Larantuka Diocese, has started to produce the VCO even though they are still in trial phase to determine maximum capacity of the production house.

CCO

- PT. Barco has invested warehouse, pick-up car, and two staff in Ende, driver & admin, available as contact persons for farmers, to set up their business collecting coconut oil in Ende.
- PT. Barco, regularly, has visited Ende to socialize & influence farmers to sell CCO as their CCO collection business has been running in Ende. They also guarantee that PT. Barco will collect the CCO directly from farmers house/collection point so farmers will not need to have transportation cost.
- PT. Barco has also been Barco has been implementing the CCO collection and purchase the CCO from farmers continuously.

Adapt

VCO

- Nusa Permai has recruited two ICS (Internal Control System) officer to maintain farmers performing organic farming in Larantuka & Sikka.
- Nusa Permai is also willing to take over the operation of the Sikka production house. The machinery procurement is to be decided, whether they will procure by themselves or they will take over the machinery from PT. Mahesar Chandra
- Larantuka Diocese develop new business unit that will be focused on managing coconut product (CV. OASE NSP-KL).
- CV. OASE NSP-KL has recruited a set of factory manager & workers to work exclusively for the VCO production house to ensure the production run smoothly.
- Nusa Permai has been giving technical assistance to CV. OASE NSP-KL to ensure the production of the production house will be maximum.

- CV. OASE NSP-KL has been procuring fresh coconut, not only from farmers that have been registered to organic certification, but also from farmers that has not been registered. This is due to regular production to determine the maximum production. Also, it is still allowed, to produce VCO from uncertified farmers since the organic certification has not been done yet.

CCO

- Barco field staff in Ende has coordinated well with farmers group in Ende and Nagekeo to ease the collection of the CCO.
- Barco has expanded their oil collection to Nagekeo to add more oil collected to fulfil their target of 1 container of CCO/month.

Expand

- Other coconut derivative player, PT Diamond Oil (Malaysian Coconut Company) is interested to expand organic and non-organic VCO business to Flores.

Respond

- The Ministry of Villages has offered government grants to villages wishing to procure oil pressing machines to produce CCO for possible sale to PT Barco.

5. COFFEE

Coffee Sector Summary

Indonesia is the world's fourth largest coffee producer and exporter. It produces approximately 10 million bags of green beans annually (equivalent of 639,412MT of coffee) from about 1.2 million Ha farms annually. There are five main coffee production areas in Indonesia: Sumatera, Java, Eastern Nusa Tenggara and Bali, Kalimantan, and Sulawesi, where 96% of production comes from smallholder farmers. Despite a strong international reputation for Indonesian coffee, the overall quality of processed coffee is low, suppressing prices for farmers. A clear opportunity exists to increase production volume and quality to meet steadily increasing international demand.

Quick facts:



Total production
639,412 MT



Total harvested area
1.2 million Ha



Productivity
0.7 MT/Ha
(mature only)



Female participation*
51%



Demand
1.55% (increase)

*from AIP-Rural intervention areas



East Java

- ✓ Total harvested area : 103,809 Ha
- ✓ Total farm households : 253,358
- ✓ Total production : 65,691 MT

Indicator	Total
Outreach Plan S1 2018	-
Outreach Actual S1 2018	-
Cumulative outreach actual to S1 2018	-
Total Outreach Projection to Dec 2018	-
NAIC actual Cumulative S1 2018	-
Total Projected NAIC to Dec 2018	-



NTT

- ✓ Total harvested area : 65,718 Ha
- ✓ Total farm households : 110,858
- ✓ Total production : 21,324 MT

Indicator	Total
Outreach Plan S1 2018	-
Outreach Actual S1 2018	-
Cumulative outreach actual to S1 2018	7,907 HHs
Total Outreach Projection to Dec 2018	7,907 HHs
NAIC actual Cumulative S1 2018	IDR 16,232,270,019
Total Projected NAIC to Dec 2018	IDR 16,232,270,019

Coffee OVERALL

Indicator	Total
Outreach Plan S1 2018	-
Outreach Actual S1 2018	-
Cumulative outreach actual to S1 2018	7,907 HHs
Total Outreach Projection to Dec 2018	7,907
NAIC actual Cumulative S1 2018	IDR 16,232,270,019
Total Projected NAIC to Dec 2018	IDR 16,232,270,019
Value For Money (VFM) Coffee Overall	
Investment leverage:	0.48
Investment per HH:	AUD 96.83
Social return:	2.12

Subsector Profiles

5.1 Coffee East Java

East Java is the third highest coffee producing provinces in Indonesia, accounting for around 66,000 MT or 10% of the total national production (2015 figures). Productivity is slightly higher than the national average at 836 kg/Ha (average national productivity: 702 kg/Ha), although it still falls much behind other coffee producing countries such as Vietnam (2,681 kg/Ha), Brazil (1,687 kg/Ha), and Colombia (1,012 kg/Ha). PRISMA is currently piloting on 3 districts (Malang, Banyuwangi, and Jember) which has the highest number of Robusta coffee farmers in the province whom are also characterized by having more awareness about GAP, thus higher propensity for applying input products. Higher productivity in coffee cultivation has been linked to the use of fertilizer, yet there is a limited availability of it in coffee producing areas.

Challenges and constraints

Coffee farmers in East Java are experiencing low productivity due to three reasons:

- **Improper use of input products.** A substantial portion of coffee farmers in East Java have yet to apply the recommended frequency and dosage of fertilizer.
- **Low application of plant rejuvenation practices.** Aging crops proves to be one of the biggest inhibitors for productivity, yet rejuvenation practice is uncommon among coffee farmers in East Java
- **Severe weather conditions.** Heavy rains over the past two years created unhealthy environment for coffee trees to grow, made worse by farmers' lack of knowledge in disaster management practices.

Intervention areas

- Promoting higher productivity through improved inputs, including creating market access and embedded GAP training;
- Promoting Value Chain Finance to lower down the economic barrier of rejuvenation

Progress and signs of systemic change

The following progress was achieved in the last semester:

Adopt

- Hextar stationed 1 Product Development Officer (PDO) in Malang, Jember, and Banyuwangi and continues to promote its fertilizer products to coffee farmers through direct selling activities. As of June 2018, 600 new farmers have bought Hextar products.
- On April 2018, Hextar conducted a GAP training for coffee farmers from Jember, attended by 17 key farmers who are also targeted to become drop shippers in their respective villages.

Adapt

- Hextar has promoted its non-fertilizer products, such as soil rejuvenator and crop protection, to coffee farmers in Malang, Jember, and Banyuwangi.
- Hextar also targets non-coffee farmers in promotional activities in intervention districts.

5.2 Coffee NTT

East Nusa Tenggara ranks as the tenth highest coffee producing provinces in Indonesia, accounting for 6% of the national production in 2015. According to the Tree crop estate statistic of Indonesia (2017), East Nusa Tenggara produced around 21,000 MT of coffee, where 65% of the coffee produced is of the Robusta variety and 35% is of the Arabica variety. It constitutes a harvested area of 40,000 Ha, over 19 producing districts; the top 5 districts with the highest harvested area are Manggarai Timur (12,952 Ha), Ende (5,145 Ha), Manggarai (4,421 Ha), Manggarai Barat (4,291 Ha), and Ngada (4,291 Ha). In terms of production, the top Robusta producing districts are Manggarai Timur (3,546 MT), Sumba Barat Daya (2,161 MT), Manggarai Barat (1,896 MT), Ende (1,537 MT), Flores Timur (1,313 MT), and Manggarai (1,123 MT), whereas the top Arabica producing districts are Ngada (3,259 MT), Manggarai Timur (1,263 MT), Ende (1,799 MT), Manggarai (615 MT), and Manggarai Barat (206 MT). When combined, however, Manggarai Timur, Ende, and Ngada were the only districts that produce both varieties in substantial amount, accounting for more than 1,000 MT for each variety during that year in which PRISMA is focusing its intervention

Challenges and constraints

Coffee farmers in East Nusa Tenggara are experiencing low income from coffee due to the following reasons:

- **Low productivity** mainly due absence of the application of good agricultural practices (GAP), (such as fertilizing, rejuvenation, pruning, etc.). Few factors contributing to this are a) lacking access to information on GAP from both private and public extension services b) having difficulties to apply GAP due to absence of coffee farming tools and equipment services.
- **Uncompetitive price** because of inconsistent coffee quality due to limited access to information on coffee good processing practices (GPP). It is aggravated by “ijon” payment system at which farmers receive money from collectors before the harvest season with high interest rate. As a result, during the harvest season, coffee price received by farmers is discounted to “ijon” interest rate.
- **Suboptimal use of land** due to lacking information on coffee growing requirements from both private and public extension services. In Manggarai Timur Districts, most coffee farmers do not realize their land potential as they cultivate Robusta coffee in area that is more suitable for Arabica coffee, a variety that is more valuable than Robusta coffee. .

Intervention areas

- Improving coffee productivity by promoting coffee Good Agricultural Practices that covers fertilizing, rejuvenation, pruning, coffee spacing, grafting, bio – pore development, etc. The promotion of coffee GAP and GPP is executed through the development of coffee masters for both coffee collectors and government’s extension services who are expected to be trainers for coffee farmers.
- Improving coffee price competitiveness by opening more access to new market players while also improving coffee quality through promotion of coffee Good Processing Practices.

Progress and signs of systemic change

The following progress was achieved in the last semester:

Adopt

- Department of Agriculture of Ngada district has seen the importance of its Extension Services’ role for coffee farmers while Department of Rural Village Empowerment of East Manggarai District has agreed to push local villages’ government to allocate village fund for coffee farmers capacity building facilitated by Coffee Masters. To date, 19 head of villages have agreed to allocate their village fund for this initiative.
- Local processor partner (UD Karunia) has been using Coffee Masters as its new buying stations, expecting them to supply more high-quality coffee while also to educate coffee farmers under their networks.

- Bank NTT has been providing financial loan for PRISMA's coffee processor partner (UD Karunia) aiming to increase their ability to provide more competitive price to farmers.

Adapt

- PRISMA's coffee processor partner (UD Karunia) has shown their interest to invest more in providing coffee pulper machines for farmers to lend.
- PRISMA's government partner (Department of Agriculture of Ngada District) held a monthly learning activity on coffee GAP and GPP for increasing Extension services staffs abilities to train farmers.

Expand

- Bank BRI decided to provide financial loans to PRISMA's processing partner (UD Karunia)
- Mayora has started to buy its Robusta coffee from PRISMA's processing partner (UD Karunia)

6. EXTENSION SERVICES AND ICT

Extension Services & ICT Sector Summary

According to government legislation (UU No. 19 Tahun 2013), each farming village ideally should have one dedicated extension service worker. However, the current condition shows that there are only 32,299 public extension workers for 71,470 farming villages throughout Indonesia, which shows a wide gap of about 39,190 workers. While voluntary extension workers might gradually close the gap, the sector's scope has been expanded to include Information and Communications Technology (ICT) services as we see it as the key driver to solve information-shortages at the farmer's level. PRISMA recent large-scale farmer's survey in East Java, NTB, and NTT shows some opportunities for ICT to take its part in closing the gap and solve information-shortages.

Quick facts:



Extension workers:
32,299



Farming villages
71,470



Labour gap
39,190



Smartphone ownership
15%



Internet usage
5%

*from AIP-Rural intervention areas



Subsector Profiles

ES – ICT East Java

East Java farmers are frequently regarded as the most advanced farmers nationally, probably due to the fact that a number of district governments – such as Malang or Banyuwangi – are being open to innovations and actively supporting their farmers. Farmers in East Java also benefit from the presence of strong government research bodies which focus on high yield seed and agriculture technologies. In the majority of districts, private agronomists have a significant presence and are also a source of information for farmers. However, as per 2016, there are only 2,039 public extension workers in the whole province, which means that one worker has to cover 2,442 farmer households on average. Assuming 260 working days per year and a single worker able to serve 9 households per day, each farming household will only see a public extension worker once a year.

With the minimum technical assistance from public extension workers and limited reach of private extension workers, according to our “Farmers Information Source Survey”, fellow farmers are considered as the most trusted information provider by farmers in East Java. Besides fellow farmers, these farmers obtained various

types of information, including land treatment, pest and disease management, planting method, and post-harvest technique, through their own experience. As for market price information, farmers in East Java rely to local collectors as their main source combined with information from their fellows. Our recent survey also shows that farmers' smartphone and internet usage is relatively low, only 15% use smartphone and 5% have access to internet.

Challenges and constraints

The major challenges faced by the extension and ICT services sector in East Java and NTB are:

- **Limited provision of information.** Farmers have insufficient knowledge of modern, appropriate and efficient farming techniques and practices, which results in low productivity compared to the potential. This is caused by a) a lack of public extension workers combined with limited capacity of the workers, b) general government neglect of non-priority crop farmers, and c) limited reach of private extension services. The challenge is even bigger since these extension workers should cover a large population of farmers which spread in wide rural area across the island with different population density level in each region.
- **Poor agricultural kiosk extension services.** Kiosk owners usually direct farmers to purchase products that bring them the highest margins, with little regard to product quality or the farmer's actual needs. This is a serious challenge because collectively these kiosks reach practically all farmers, who are dependent on them for both input availability and advice.
- **Gradual uptake in technology adoption.** Due to its geographical remoteness, most of the area have a very limited connectivity with only basic telco infrastructure available. Hence, the technology adoption is rather slow in rural area. The geographical remoteness combined with farmers behaviour of 'seeing-then-believing' make technology adoption even more challenging. It will take time and different approached in solving the information asymmetry and lack of access to outside resources in farmers level through technology.
- **Poor ICT actors understanding of the sector.** Most of the agriculture start-ups have very minimum business experience and little to no agriculture knowledge. Furthermore, most ICT actors are currently focusing to urban area as they have little interest in exploring rural area which consider having a high barrier to entry.

Intervention areas

To address the challenges above, PRISMA works with partners to:

- Intervention 1: Introduce the productive use of smartphone and provision of information for farmers through mobile apps

Intervention area: promote productive use of smartphone technology to access the latest and most up-to-date agricultural information related to good agriculture practice, market prices of commodities, as well as pest and disease to farmers through the use of agriculture mobile apps called KARSA.

Karsa is an Indonesian agriculture mobile apps, aiming to increase farmer access to the latest and most up-to-date agricultural information. Supported by the increased penetration of smartphone use and broadband internet access in villages, Karsa will equip farmers, extension workers, traders and product owners with the information they need and enhance the way they work. Karsa is developing new features and business models (including information dissemination, finance, off-taking, price information) while at the same time working aggressively to acquire customers to grow the user base for the apps.

- Intervention 2: Agriculture Intelligence Platform (HARA) with Dana Desa: Agriculture Village Cadre

Intervention area: Improving farmers' access to information, good quality inputs, market and financing through digital platform.

Information is important yet still considered rare in the village. Flows of Information into the village usually hampered by limited access while information from the village most of the time isolated and could be accessed by only few stakeholders. In this action research PRISMA supports a private big data company

to enter into a Public Private Partnership (Databot) with the Ministry of Village. The private sector partner will build a smartphone-based application platform to collect farmers information and help agriculture-related actors sell and/or buy products from farmers at the village level.

The action research is relying on village agriculture cadre to collect and distribute information through the application. We expect this intervention to have positive effect in terms of improving farmers access to financing, crop insurance, better inputs, and potential off takers. We are also testing the hypothesis whether a dedicated resource in the village (Agriculture Cadre), equipped with the power of Smartphone and Internet, will be able to bring value to farmers. The end goal of this action research is to address the information gap between farmers, input producers, and off takers. Through better flow of information and coordination, smallholder farmers will be benefited from more suitable product offering / promotional activities and/or higher offer price for their produce. On the other hand, valid data and information of farmers will drive financial institution at the same time crop insurance to deliver their services to farmers.

Progress and signs of systemic change

Introducing the productive use of smartphone and provision of information for farmers through mobile apps (Karsa)

The intervention is still under action research phase where PRISMA provided support for Karsa in conducting offline activities in Malang to directly reach farmers to promote the app. With the initiatives, we saw a 407 increase of user base with indirect exposure to another 1,196 farmers due to Karsa's referral program. PRISMA also provides business consultancy for Karsa and connect it to relevant stakeholders within PRISMA's network. Together with the partner, we are aiming to create awareness among farmers of smartphone functions to solve the information scarcity and asymmetry in rural areas.

Databot: Agriculture Intelligence Platform (HARA) with Dana Desa: Village Agriculture Cadre

Databot, formerly known as Mediatrac, is an Indonesian Big Data Analytics company with a focus on data integration. As part of its action research, PRISMA and Databot endorsed by MoV conducted a pilot project for the Village Agriculture Cadre in thirteen villages spread in East Java, NTB and NTT. In collaboration with village government, these Agriculture Cadres are funded by *Dana Desa*. These villages have demonstrated strong buy-in for the concept, as the Agriculture Cadres serve not only as extension workers for field data collection (including geotagging of farmer's land) but also as the village's contact point for agricultural sector actors (including farmers, input producers, off takers, government and village-owned enterprises or BUMDES). The involvement of village Government is the entry point and we consider it as temporary model, eventually other actors will finance the Village Agriculture Cadre.

- Databot has developed the HARA platform, which will be tailored to accommodate the current business model and concept as suggested by PRISMA. It has demonstrated its commitment by deploying dedicated resources to the villages to support Agriculture Cadres in conducting geotagging and data collection.
- Databot plans to expand outside the pilot project areas of Bojonegoro and Karawang, and set specific targets and business metrics for the platform up to Feb2019.
- The Ministry of Villages plans to expand the program of Village Agriculture Cadre and ICT platform to other villages in Indonesia following the success of this pilot project.
- BNI has expressed an interest in partnering to provided loans to the farmers in the pilot area (specifically East Java) in relation to the Village Agriculture Centre's data collection conducted using Databot's platform.

Agent Scaling up Off-Taker, GAP and Agriculture Platform (Eragano)

Note: *We decided to close this intervention. Due to lack of resources, the partner failed to deliver good coordination with us and was struggling to execute the implementation on the ground. For more than one semester we had 'wait and see' for the partners' improvement before finally we decided to close it.*

Crop Protection Papua (PT BASF Indonesia)

Note: *This Intervention has been moved under Rice Sector*

7. FERTILIZER

Infographic for Fertilizer will be added once impact is recorded next semester.

Subsector Profiles

7.1 Fertilizer EJ

East Java (EJ) has 37.5 million inhabitants¹⁰ and 11% of them are considered poor¹¹. Increase in economic disparity between rich and poor is visible and this level of inequality has been on the increase – both in urban and rural areas – for the last 5 years.

EJ's fertilizer market is sophisticated with lots of market actors and farmers that are far more informed and able to access market information, compared to other provinces such as NTT and NTB.

There is high consumption of fertilizer in EJ due to increased agricultural activity and its large harvest area, driving overall demand. Some fertilizer companies have established production plants in East Java to take advantage of its booming economy and capitalise on economies of scale. For example, the distances required to transport goods are shorter and the presence of several transporters and an integrated infrastructure system increases competition and lowers cost – ultimately benefitting market actors and farmers alike.

The potential fertilizer demand in EJ is 4.1 million tons - calculated by multiplying the harvested area by the ideal fertilizer usage. This potential fertilizer demand is not equal to “real” demand because farmers may not know the ideal quality and quantities of fertilizer needed and consequently buy more or demand less.

Challenges and constraints

To address these market conditions, PRISMA decided to prioritise the following constraints:

- **Limited farmers' knowledge of good fertilizer practise.** Farmers rarely adhere to the government's recommended ratio per hectare. This is a risk for farmers as it could result in low productivity and/or higher cost.
- **Limited farmer's knowledge of the benefit of high quality commercial fertilizer.** Although there are high quality commercial fertilizers in the market that can produce better yields, these fertilizers are relatively more expensive. Therefore, farmers rarely use them because of low confidence and limited knowledge of business calculation.

Intervention areas

PRISMA collaborates with PT. Behn Meyer to tackle these constraints:

- The partnership promotes Blaukorn Fertilizer technology (high quality fertilizer) to the farmers in East Java.
- PT. Behn Meyer as a partner will provide the embedded service on GAP to the farmers.

Progress and signs of systemic change

In the first semester of 2018, the following activities and progress towards systemic change were observed:

Adopt

- PT. Behn Meyer established 25 demo plots in 5 districts in East Java, namely Banyuwangi, Malang, Jember, Ngawi and Magetan. These demo plots represent 10 types of horticulture crops: shallot, *bengkoang*, chilli, orange, peanut, chrysanthemum, cabbage, melon, paddy and cucumber.
- PT. Behn Meyer conducted 9 Farmer Meetings in Malang, Ngawi, Jember and Banyuwangi for leafy vegetable, melon, chilli, and durian.
- 2 Farmer's Field Day – done at harvest time – and 4 Farmer Field Trips were conducted in Banyuwangi, Magetan and Ngawi to showcase the usage of Blaukorn Fertilizer Technology and crop protection product.

¹⁰ Based on 2010 census by BPS. <https://www.bps.go.id/statictable/2009/02/20/1267/penduduk-indonesia-menurut-provinsi-1971-1980-1990-1995-2000-dan-2010.html>

¹¹ In 2017, based on provincial poverty line by BPS. <https://www.bps.go.id/dynamictable/2016/08/18/1219/persentase-penduduk-miskin-menurut-provinsi-2007---2017.html>

- PT. Behn Meyer also conducted 4 one-day promos in Magetan and Malang, collaborating with kiosk owners, where farmers were given a special promo for one day when they purchase Behn Meyer's product. Apart from marketing strategy, this activity aims to inform farmers kiosks about Behn Meyer's product.
- 2 videos for crop profiles have been produced and will be used for marketing promotion.

Adapt

- Since this intervention still in early stage, the Adaption on the market system is not shown yet.

Expand

- Not yet happened

Respond

- Not yet happened

7.2 Fertilizer NTB

Nusa Tenggara Barat (NTB) is divided into two main islands, Lombok and Sumbawa. NTB can be regarded as a "quiet" economy, especially in comparison to East Java (EJ). Its two main islands, Lombok and Sumbawa have a sizeable poor population, estimated at 40% according to the PPI study of maize farmers conducted by PRISMA.

Lombok is in the west of NTB and its agricultural landscape has fertile land, sufficient rainfall and a variety of climate zones. In the rain fed regions, most farmers cultivate maize, rice, tobacco and vegetables. South Lombok however is drier. Sumbawa on the other hand is in the east of NTB, scarcely populated and characterised by dry land throughout, making it easier and more suitable to cultivate dry rice and sugarcane.

The government has taken significant strides to push for domestic maize cultivation in NTB, especially in drylands, previously underutilised. However, this push has not impacted its allocation of subsidies which has remained flat for some time and is persistently in short supply. This has created an opportunity for the use and supply of commercial fertilizers despite awareness and acceptance being low amongst farmers. It is estimated that there is a total demand for 0.69 million tonnes of fertilizer, where only 38% is covered by subsidized fertilizer, in other words 62% of the demand – equivalent to 0.43 million tonnes – is yet to be fulfilled.

Challenges and constraints

PRISMA has decided to prioritise the following constraints:

- **Unstable supply of subsidized fertilizer.** The demand for fertilizer which is significantly higher than supply creates risk for farmers resulting in low productivity.
- **Farmers' knowledge of good fertilizer practise is limited.** Farmers rarely adhere to the governments recommended ratio per hectare. This become a risk for farmers as it also results in low productivity and/or higher cost.

Intervention areas

To address these constraints, PRISMA collaborates with three different fertiliser companies to promote commercial fertilizers and good fertilizer application practises. The expectation is that farmers will begin to make the shift from subsidized to commercial fertilizers and would be able to maximize their harvest with proper knowledge. The interventions which started in early-mid 2018 aim to:

- Improve the sales and promotional skills of the company's extension service agents on promoting commercial fertilizer and supporting products;
- Encourage partners to disseminate product knowledge of the products on offer, including the application technique through demonstrations to farmers; and
- Develop marketing strategies that could accelerate market penetration for commercial fertilizer and supporting products.

Progress and signs of systemic change

In the first semester of 2018, the following activities and progress towards systemic change were observed:

Adopt

- All the partners established demo plots around Nusa Tenggara Barat, PT Pupuk Kaltim in Sumbawa Barat, providing the support of fertilizer, seed, and when necessary also crop protection. CV. Saprotan established 6 demo plots in Lombok Tengah in late June 2018. PT. Behn Meyer established 34 demo plots in April 2018 around the districts of Lombok Timur, Lombok Tengah, and Bima. These 34 demo plots vary between 9 crops (shallot, garlic, bean, chilli, orange, strawberry, cabbage, paddy and tomato).
- Before the establishment of demo plots, CV. Saprotan conducted retailers' meetings which were attended by their largest distributor in Lombok, several retailers, and demo plot farmers to introduce their new product and provide technical knowledge.
- Since April 2018, PT. Behn Meyer has conducted 19 farmer meetings in Lombok Timur, Lombok Tengah, and Bima. They also held one big farmer meeting – attended by more than 100 farmers – to conduct direct selling and product branding.
- PT. Behn Meyer conducted 3 one-day promos, collaborating with kiosk owners, where farmers are given a special promo for one day when they purchase Behn Meyer's product. Apart from marketing strategy, this activity aims to inform farmers kiosks about Behn Meyer's product.
- A farmer's field day – done at harvest time – was conducted to showcase the usage of Blaukorn Fertilizer Technology and crop protection product on shallot from PT. Behn Meyer. The event was attended by more than 250 participants, varying from farmers, PPL, distributors, and kiosk owners.

Adapt

- Seeing the demand for smaller packaged fertilizer, PT. Pupuk Kaltim started producing small packaging fertilizer. PT. Pupuk Kaltim is also piloting terms of payment to selected distributors as a marketing strategy to boost their sales.

Expand

- Not yet happened

Respond

- Not yet happened

7.3 Fertilizer NTT

East Nusa Tenggara (Nusa Tenggara Timur, NTT) is one of the poorest and least developed of Indonesia's provinces. Poverty is widespread among rural households. According PPI study conducted by PRISMA on vegetable farmer as references, 65% farmers in NTT are considered poor (*Accounted by 150% of National Poverty Index*). While the majority of the population is dependent on agriculture, the province has not been able to achieve food security.

NTT provinces consists of 3 main Islands - Flores, Timor and Sumba. **Flores Island** leads in term of production, especially for vegetable with 28% of the total production of NTT. Generally, Flores Island is characterized with deep rich volcanic soils and high rainfall, which is more conducive to agriculture as compared to other districts. **Timor Island** is characterized by shallow soils, a long dry season and variable rainfall, poor physical and social infrastructure, isolation and low literacy levels. Timor Island is one of the driest regions in Indonesia, with an average of 8 dry months in a year. Annual rainfall is as low as 350mm per year, and many districts experience high evaporation, poor soil filtration, and ground water deficit. Therefore farmers are dependent on rainwater fed irrigation can only rely on crop growth for between 60-100 days a year. **Sumba Island** lies between of Flores and Timor in term of climatic conditions.

Challenges and constraints

Core functions cover the demand for and supply of fertilizers and the activities required to cultivate, produce, process and sell to the final consumer. This value chain is made up of different transactions and actors including A) fertilizer companies or producers, B) distributors, C) retailers, before eventually reaching D) the consumer. For these transactions to happen optimally, they require interactions with supporting functions such as input suppliers, transportation, extension services, financial services, warehouse and storage, packing and inspection, testing and certification. This entire market system is influenced and affected by certain rules and regulations which govern the behaviour and activities of market actors. The constraints which exist within this market system and the ones PRISMA has decided to prioritise and tackle

A. Fertilizer companies or producers

Constraints include:

- Unstable raw materials prices;
- Competition from subsidized products;
- Competition from imported brands; and
- Difficulty getting their products “endorsed” or promoted by government extension agents

B. Distributor

- Aside from competition with subsidized products, the other problem they face is the high volume and frequency of returns from retailers, despite incentives given by their sales teams

C. Retailers

Constraints include:

- Competition from subsidized products
- Stock availability and delays (especially with subsidized products)
- Limited support from fertilizer companies (promotional materials, extension services, product knowledge, etc.)
- Difficulty managing an unwieldy subsidized fertilizer allocation process. It is a matching exercise of approved farmers & farmer groups with the final list approved by the government. It is also time consuming, and if they get it wrong, they risk losing their license

D. Consumers (Farmer / Farmer groups)

Constraints include:

- Subsidies are not always available (Limited access to fertilizer)
- The price of commercial fertilizers is (perceived) expensive and poor value for money
- Fertilizer promotion by extension agents largely targets food crops cultivation to the detriment of other crops such as vegetables.
- Lack of knowledge and GAP related to fertilizer and crop

E. Supporting Function

- The transportation services supporting the fertilizer value chain is two-fold. First, at the fertilizer company–distributor stage, sea transport is used. Then, at the distributor-retailer-customer stage, land transport is used. Sometime due to the weather condition the delivery of fertilizer experiences delays.
- Government extension workers focus on food crops and the fertilizer required for its cultivation. As a result, they have limited knowledge of the fertilizer suitable for other crops, such as vegetables. In addition, they are poorly motivated and mostly go into the field when a government programme requires support and pays them a stipend.
- In the case of private extension workers, the anticipated geographical coverage area is very large, often remote and inaccessible. There is also a limited number of workers available to service such coverage area, resulting in a decline in promotional activities and in the dissemination of information on product and/good agricultural practises (GAP).

Intervention areas

PRISMA collaborates with PT. Behn Meyer to tackle the constraints above:

- The partnership promotes Blaukorn Fertilizer technology (high quality fertilizer) to the farmers in East Java.
- PT. Behn Meyer as a partner will provide the embedded service on GAP to the farmers.

Progress and signs of systemic change

In the first semester of 2018, the following activities and progress towards systemic change were observed:

Adopt

- PT. Behn Meyer has established 14 of demo plots within first semester 2018 in Timur Tengah Utara district. These 14 demo plots represent 5 types of crop: Chili, Tomato, Cabbage, Eggplant and Paddy.
- PT. Behn Meyer has conducted 3 Farmer Meeting in Timor Tengah Utara District. Pre and Post Test evaluation was conducted to measure the assimilation of information at farmer level. The same question for Pre and Post Test were about Product (Name of product, ingredient and what for) and GAP (Variety, When to Plant, How to Plant, When to Manuring/Apply Fertilizer, Dosage). The test showed significant improvement of knowledge on the post-test (25% correct during pre-test and 75% correct at post-test).

Adapt

- Since this intervention is in its early stages, the Adaptation on the market system is not shown yet.

Expand

- Not yet happened

Respond

- Not yet happened

8. MAIZE

Maize Sector Summary

Maize is one of Indonesia's primary food crops. Across the country, more than 20 million MT are grown each year on around 4.4 million Ha of farmland; more than half is used to cater the ever-increasing demand for animal feed. It is a seasonal crop, with a surplus during peak harvest months and a severe undersupply the rest of the year. The Government of Indonesia, under its 'self-sufficiency' agenda, highly subsidizes the sector; in 2017 around 80% of total harvested area is covered by the free seeds and subsidized fertilizers. The maize price has been increasing steadily over the years; the zero-import quota has further contributed to the higher corn price in 2017. The average productivity is estimated to be around 5.5 MT/Ha; however, the field observation and USDA data shows lower productivity (around 3-3.5 MT/Ha) of maize, especially in Eastern Indonesia. PRISMA has identified a clear opportunity to increase maize production, productivity and quality as part of Indonesia's drive towards import substitution.

Quick facts:



Total production
23,578,293 Tons



Total harvested area:
4,444,343 Ha



Productivity:
5.31 Tons/Ha



Female participation*:
50%



Demand increasing
7%



East Java

- ✓ Total harvested area : 1,238,616 Ha (2016)
- ✓ Total farm Households : 1,922,318 HH (2013)
- ✓ Total production : 6,278,264 Tons (2016)

Indicator	Total
Outreach Plan S1 2018	28,728
Outreach Actual S1 2018	34,530
Cumulative outreach up to S1 2018	57,306
Total Outreach Projection to Dec 2018	68,415
NAIC actual Cumulative S1 2018	IDR 89,194,753,233
Total Projected NAIC to Dec 2018	IDR 99,635,845,878



NTB

- ✓ Total harvested area : 206,885 Ha (2016)
- ✓ Total farm Households : 73,816 HH (2013)
- ✓ Total production : 1,278,271 Tons (2016)

Indicator	Total
Outreach Plan S1 2018	1,620
Outreach Actual S1 2018	3,764
Cumulative outreach up to S1 2018	3,764
Total Outreach Projection to Dec 2018	8,447
NAIC actual Cumulative S1 2018	IDR 11,156,772,078
Total Projected NAIC to Dec 2018	IDR 18,680,217,833



NTT

- ✓ Total harvested area : 265,318 Ha (2016)
- ✓ Total farm Households : 522,612 HH (2013)
- ✓ Total production : 688,432 Tons (2016)

Indicator	Total
Outreach Plan S1 2018	-
Outreach Actual S1 2018	182 HHs
Cumulative outreach up to S1 2018	19,501 HHs
Total Outreach Projection to Dec 2018	35,488 HHs
NAIC actual Cumulative S1 2018	IDR 27,902,528,703
Total Projected NAIC to Dec 2018	IDR 50,016,225,119



Maize OVERALL

Outreach	Total
Outreach Plan S1 2018	28,348 HHs
Outreach Actual S1 2018	38,476 HHs
Cumulative outreach up to S1 2018	80,571 HHs
Total Outreach Projection to Dec 2018	110,350 HHs
NAIC actual Cumulative S1 2018	IDR 128,254,054,015
Total Projected NAIC to Dec 2018	IDR 188,332,288,732

Value For Money (VFM)	Maize Overall
Investment Leverage	0.46
Investment per HH	AUD 17.74
Social Return	9.23

Subsector Profiles

8.1 Maize EJ

East Java province is the largest producer of maize in Indonesia; however, growth in production is very low at only 3% per year (2013-2016 figures). While productivity is only 5.07 MT per ha (2016 figures) which was below than national average (5.31 MT per ha). PRISMA is focusing on the island of Madura, where farmers cultivate maize as a subsistence crop and where productivity is less than a quarter (1.7 MT per ha) of that on mainland East Java. Traditional cultivation methods, used of local seed varieties and the lack of knowledge of and access to irrigation and post-harvest management services are the main reasons for the lower productivity.

Challenges and constraints

Farmers in Madura are unable to increase their maize production and productivity for three main reasons:

- **Lack of understanding of GAP.** Many maize farmers are unaware of the benefits of using improved seed and continue to rely on local seed varieties which provide lower yields.
- **Availability of more lucrative commodities.** Many farmers here have chosen to plant tobacco. The pull towards this is increased by two local cigarette companies which have provided storage facilities for the crop.
- **Lacklustre government subsidies which provide no incentives.** Farmers get free or subsidised hybrid seed and fertiliser from the government. Not only is this unsustainable, it provides no incentives for the private sector to get involved in supplying these inputs.

Intervention areas

To address the challenges above, PRISMA works with partners to:

- Promote good quality hybrid seed and GAP application.
- Facilitate farmers' access to markets for hybrid maize.
- Promote use of improved seed suitable for dry season farming in non-irrigated drylands.
- Facilitate public-private coordination to expand the hybrid seed market (especially in Madura).
- Facilitate access to finance and off-takers (piloting in Sumenep).

Progress and signs of systemic change

The following progress was achieved in the last semester:

Adopt

- PRISMA's partners (PT AHSTI, PT Syngenta, PT DuPont and PT BISI) are actively promoting hybrid seed in the islands of Madura. Since July 2017 until 2018 first semester, these private companies sold more than 300 MT, a significant increase on the 60 MT of 2016.
- The public-private committee in Sumenep district established by the project (comprising the district agriculture office - DAGRIO, and PRISMA's partners) shifted the location of OPV seed program to the islands. Private companies have not yet entered into this market.

Adapt

- DuPont and BISI increased their investment in the promotion of hybrid maize seed and shifted their marketing efforts to non-hybrid seed. BISI appointed agronomists to one additional districts to promote hybrid seeds. Similarly, PT. DuPont allocated budget to promote hybrid seed in another district i.e., Pamekasan.
- PT DuPont started to collaborate with DAGRIO of Pamekasan and Bank BNI to expand their market using agri-input financing model. It will be different with Sumenep model since BNI also considered to use Collection Agent rather than off taking scheme.

8.2 Maize NTB

At national level the price of maize has been increasing steadily over recent years. The province of NTB has experienced significant growth in its maize production, productivity in NTB is above the national average at 5.8 MT per ha. Most farmers here plant their crop during the wet season on dry farmland, with only a small number having the capacity to irrigate their land during the dry season. Despite all these opportunities, farmers still experience low profits from maize cultivation. In addition to that, the import restriction leads to a hike in harvest prices, limiting maize traders' capacity to purchase maize. Improper application of maize good agricultural practices (GAP) and good handling practices (GHP) hinders farmers from obtaining optimum productivity which can be up to 8 to 10 MT per ha, and optimum price from traders. On top of that, particularly in Lombok, farmers' limited access to in-kind credit, agricultural machineries, and traders adds on to the low price and profit received by farmers.

Challenges and constraints

Maize farmers in NTB find it difficult to increase their income because of three major reasons:

- **Maize productivity not reaching its optimum level due to improper application of GAP.** This can be traced to the limited amount of information farmers obtain from public extension officers, as they only visit farmers at times of subsidy provision and proposal development. On the other hand, input suppliers do provide information services; however their delivery has not been effectively received by farmers. In addition to that, farmers perceive GAP application as more complicated, labour-intensive, and costly. Even for farmers who realize the net benefits of GAP, applying them would require more financial resources and extensive capital.
- **Limited affordable options for finance, particularly given the difficulties in accessing bank loans.** The use of hybrid seed requires a sufficient supply of other inputs such as fertiliser, agro chemicals (e.g. herbicide, pesticide) and labour, as well as careful and informed treatment and maintenance. Poor farmers have little money to support these, and no access to external financial resources. Some farmers rely on moneylenders who provide loans at exorbitant rates of interest. On the other hand, banks are reluctant to provide loans to farmers due to their perceived low bankability. Farmers tend to resort to borrowing from other sources.
- **Limited access to post-harvest services for farmers.** Maize prices vary depending on the physical form in which it is being sold, i.e. grains are much more expensive than cobs. Nevertheless, farmers particularly in West and Central Lombok, do not have access to affordable maize threshing machines or service providers.

Intervention areas

To address the challenges above, PRISMA works with private sector partners to:

- Promote the use of improved hybrid seed, GAP and GHP.
- Facilitate private sector partners to provide effective capacity building to their extension workers and retailers.
- Promote affordable internal and external value chain financing schemes as a means to encourage farmers to adopt improved hybrid seed varieties.

Progress and signs of systemic change

The following progress was achieved in the last semester:

Adopt

- BISI implemented an aggressive marketing activity with a focus on extension services. This resulted into around 104% increase of seed sales to 159.5 MT in 2017. BISI, therefore, has doubled its sales target to 300MT in 2018.
- BISI partnered with government extension workers and trained them on maize GAP in order to provide extension services to farmers.

Adapt

- BISI has recruited one more staff for its maize seed business in Sumbawa Barat.

Expand

- Corteva Agriscience has targeted the tobacco farmers in NTB in order to promote maize hybrid seeds.

Respond

- Bank NTB and PT Pura Barutama is exploring the feasibility of providing post-harvest machinery credit to new and existing threshing service provider in Lombok.

8.3 Maize NTT

In NTT, maize is the staple food for the majority of the population, and one of the local farmers' most popular crops. Despite its importance however, maize cultivation is characterized by low input, low output subsistence farming practices. This low productivity, which consistently fails to meet mainly for local consumption, is largely caused by the limited access to improved seeds as well as use of extension services, which are insufficiently equipped to assist farmers. Most farmers in NTT plant their crops during the wet season on dry farmland; only a small number have the capacity to irrigate their land during the dry season. Poor post-harvest handling and lack of storage facilities adds to the problem of production loss.

Challenges and constraints

Maize farmers in NTT find it difficult to increase their income for two following reasons:

- **Limited supply of good quality seed.** High yielding maize seed such as OPV or hybrid variety is difficult to obtain by farmers. The supply of OPV and hybrid seed through government subsidy cannot meet the need for quality seed in NTT.
- **Limited knowledge of GAP.** Farmers practice subsistence farming on a small amount of land (usually half a Ha or less). This produces insufficient maize to feed the household, partly because of low yielding variety crop management practices and substantial post-harvest loss due to pest attack.
- **Recycling of seed from the previous harvest.** Most farmers in NTT do this, a practice which eventually reduces yields.

Intervention areas

To address the challenges above, PRISMA works with private sector partners to:

- Promote the use of high yielding maize seed (composite or OPV and hybrid seed) with embedded GAP information.
- Introduce good drying practices and affordable farm-level storage solutions.
- Introduce affordable commercial fertiliser.

Progress and signs of systemic change

The following progress was achieved in the last semester:

Adopt

- Partner seed nurseries (Dominggus Bengu in TTS district, Pancratius Padi and Gaspar Bao in Sikka district) have increased the quantity and quality of their OPV seed production during the last semester. The nurseries hired sales agronomists, conducted promotional activities and established demo plots to stimulate farmers' demand for good quality OPV seed. During 2017-2018 planting season, these nurseries sold 55 ton of OPV seed to government seed subsidy procurement and retail channel.
- Corteva Agriscience (formerly known as DuPont Pioneer) is investing to penetrate hybrid maize market in NTT. Pilot promotion activities to stimulate hybrid maize seed demand in NTT has been carried out in South West Sumba and Kupang districts.

Adapt

- Yayasan Mitra Tani Mandiri (YMTM), a local OPV seed company in West Timor, is investing to expand their market to other islands. YMTM started pilot production of OPV seed in Nagekeo district, Flores island.
- PT BISI partnered with a local poultry farm and a cooperative i.e., Koperasi Swastisari, in order to expand their contract farming model. This model grew from only 1 farmers groups to 6 farmers group for the next planting season.

9. MUNGBEAN

Mung Bean Sector Summary

Mung bean is an important crop in Indonesia, having high nutrients and ability to endure dry soil. Current domestic consumption is 288,741 MT per year, with 0,5 Ha average land ownership for farmers and yield of 0.8-1 MT/Ha. Although the harvested area is increasing, mung bean is experiencing a downward trend in production, contributed by a slow growth in productivity. Although domestic demand for mung bean seeds remains substantial supply for high quality seeds remains low. This results in persistent increase in imports in 2013 to cater for the food processing industry which dominates domestic demand. PRISMA has identified a clear opportunity to increase mung beans production, productivity, and quality through commercializing quality mung beans seed.

Quick facts:



Total production
252,985 MT



Total harvested area
223,948 Ha



Productivity
1.13MT/Ha



Female participation*
59%



Demand
-1% (decrease)
(CAGR of the past 5 years)



East Java

- ✓ Total harvested area : 49,597 Ha
- ✓ Total farm households : 205,845 HH
- ✓ Total production : 56,806 MT

Indicator	Total
Outreach Plan S1 2018	2,323 HHs
Outreach Actual S1 2018	289 HHs
Cumulative outreach Plan S1 2018	2,323 HHs
Cumulative outreach up to S1 2018	289 HHs
Total Outreach Projection to Dec 2018	5,019 HHs
NAIC actual Cumulative S1 2018	IDR 136,837,454
Total Projected NAIC to Dec 2018	IDR 7,242,388,800



NTB

- ✓ Total harvested area : 15,242 Ha
- ✓ Total farm households : 36,828 HH
- ✓ Total production : 41,602 MT

Indicator	Total
Outreach Plan S1 2018	161 HHs
Outreach Actual S1 2018	-
Cumulative outreach Plan S1 2018	161 HHs
Cumulative outreach up to S1 2018	-
Total Outreach Projection to Dec 2018	161 HHs
NAIC actual Cumulative S1 2018	-
Total Projected NAIC to Dec 2018	IDR 312,076,800



NTT

- ✓ Total harvested area : 10,586 Ha
- ✓ Total farm households : 54,642 HH
- ✓ Total production : 6,128 MT

Indicator	Total
Outreach Plan S1 2018	2,590 HHS
Outreach Actual S1 2018	-
Cumulative outreach Plan S1 2018	2,590 HHs
Cumulative outreach up to S1 2018	-
Total Outreach Projection to Dec 2018	2,590 HHs
NAIC actual Cumulative S1 2018	-
Total Projected NAIC to Dec 2018	IDR 13,746,411,200



Mung Bean OVERALL

Indicator	Total
Outreach Plan S1 2018	5,074 HHs
Outreach Actual S1 2018	289 HHs
Cumulative outreach Plan S1 2018	5,074 HHs
Cumulative outreach up to S1 2018	289 HHs
Total Outreach Projection to Dec 2018	7,479 HHs
NAIC actual Cumulative S1 2018	IDR 136,837,454
Total Projected NAIC to Dec 2018	IDR 20,722,842,800

Value For Money (VFM)	Mung Bean Overall
Investment Leverage:	1.75
Investment Per HH:	AUD 121
Social Return:	0.39

9.1 Mungbean EJ, NTT & NTB

East Java is Indonesia's second largest producer of mung bean - together with the largest producer, Central Java, the two provinces accounted for 61% of Indonesia's total production of mung bean. East Java has around 200,000 mung bean farmers, roughly half of whom are in Madura, while the rest are spread throughout 30 or more districts. Since 2005, mung bean production and its cultivation area has decreased in East Java, although productivity has increased.

Mung bean is rich in easily digestible protein and other nutrients. It adds nitrogen to the soil, requires less water and has a short crop duration, therefore it is widely used in crop rotation. It remains particularly relevant to the poor in terms of both income and nutrition. It is cultivated as an attainable interval cash crop in the dry season due to its low maintenance and production costs. Poor farmers in EJ have the potential to increase mung bean productivity without significantly raising production costs. There is viable scope for import substitution, due to escalating domestic and international demand coupled with the rising sale prices witnessed over the last years.

Challenges and constraints

The major challenge to mung bean farmers in East Java, East Nusa Tenggara, and West Nusa Tenggara is low productivity, and the underlying causes for this are:

- **Lack of commercial production and distribution of quality mung bean seed.** Seed producers are reluctant to instigate production as they are not assured of demand and profit.
- **Farmer reliance on residual fertiliser present in the soil from previous crops.** Although mung bean adds nitrogen to the soil, which can be used to support its own growth, it still requires some additional fertiliser. Residual fertiliser from the previous crop (typically paddy) is also considered to be insufficient for mung bean cultivation.
- **Lack of information about better cultivation practices, improved seed and inputs, and the overall potential of mung bean as a more profitable cash crop.** No information is actively supplied by any actor in the market.
- **Mung bean is not considered a nationally important crop** according to the government development strategy. As a result, extension services – which are functioning with limited knowledge and resources – do not focus on mung bean. Nevertheless, there is some growing interest from the government as seen from several local government mung bean seed subsidy programs.

Intervention areas

To address the challenges above, PRISMA works with partners to:

- Promote high yielding variety of mung bean seed and application of GAP.
- Facilitate partnerships between seed research institutes i.e., Balitkabi and private sector in order to improve the private sector's access to foundation seeds.

Progress and signs of systemic change

The following progress was achieved in the last semester:

Adopt

- After the production and marketing trial, PT. EWINDO is undergoing a legal process of expanding their scope of business to food crop production. EWINDO has also trained their staff on mung bean farming and conducted promotional activities to sell around 5.6 MT of mung bean seed.
- Two partner nurseries in central java experienced increased sales of mung bean seeds in east java. Both the nurseries invested in machineries to support their seed business.
- Balitkabi has increased the quantity of foundation seed production and already sold to the nurseries in NTT. Balitkabi has also conducted capacity building activities to mung bean nurseries.

Adapt

- EWINDO has reached out to World Vegetable Center (AVRDC) to obtain new varieties of mung bean seed and share knowledge. The investor of EWINDO, East West Group has started assessing South East Asia market for mung bean.
- Another government research institute, BATAN is conducting trials on their mung bean variety with EWINDO and CV. Luwes.

Expand

- The local seed multiplication agency, BBI planned to sell good quality extension seeds to nurseries by approaching BALITKABI.

Respond

- Local governments in East Java and Central Java have partnered with CV. Semi Purwadadi and CV. Luwes (PRISMA partners) to procure mung bean seeds for their subsidy programs.

10. PEANUT

Peanut Sector Summary

Indonesia is among the top fifteen global producers of peanuts, but its peanut production and harvested area have been declining over the past decade. Indonesia's peanut productivity is also relatively low with considerable scope for yield improvement. From 2010 to 2014, peanut imports into Indonesia grew steadily by 7.7%, today Indonesia is the world's 2nd largest importer of peanuts. Java Island is the centre of production and East Java the highest contributing province, supplying 30% of total national production. Despite this, local producers are still unable to meet domestic demand, a clear business opportunity exists therefore, to increase the production volume and the quality of the peanut crop.

Quick facts:



Total production
570,477 MT



Total harvested area
436,382 Ha



Productivity
1.31 MT/Ha



Female participation*
62%



Demand
-3% (decrease)
(CAGR of the past 5 years)

*from AIP-Rural intervention areas



East Java

- ✓ Total harvested area : 136,411 Ha
- ✓ Total farmers : 424,330 HH
- ✓ Total production : 175,925

Indicator	Total
Outreach Plan S1 2018	-
Outreach Actual S1 2018	-
Cumulative outreach Plan S1 2018	-
Cumulative outreach up to S1 2018	-
Total Outreach Projection to Dec 2018	2,857 HHs
NAIC actual Cumulative S1 2018	-
Total Projected NAIC to Dec 2018	IDR 5,714,400,000



NTT

- ✓ Total harvested area : 11,474 Ha
- ✓ Total farmers : 48,793 HH
- ✓ Total production : 10,431 MT

Indicator	Total
Outreach Plan S1 2018	-
Outreach Actual S1 2018	-
Cumulative outreach Plan S1 2018	-
Cumulative outreach up to S1 2018	155 HHs
Total Outreach Projection to Dec 2018	793 HHs
NAIC actual Cumulative S1 2018	IDR 127,615,500
Total Projected NAIC to Dec 2018	IDR 584,164,763



Peanut OVERALL

Indicator	Total
Outreach Plan S1 2018	-
Outreach Actual S1 2018	-
Cumulative outreach Plan S1 2018	-
Cumulative outreach up to S1 2018	155 HHs
Total Outreach Projection to Dec 2018	3,650 HHs
NAIC actual Cumulative S1 2018	IDR 127,615,500
Total Projected NAIC to Dec 2018	IDR 6,298,564,763

Value For Money (VFM)	Peanut Overall
Investment leverage:	0.11
Investment per HH:	AUD 1,520
Social return:	0.04

10.1 Peanut EJ

East Java is home to around 420,000 peanut farmers. Bangkalan, Sampang, Sumenep, Tuban, Pamekasan, Pacitan, Magetan, Bojonegoro, Ngawi and Ponorogo are the ten areas with the highest concentration. Here, the farmers use impure local seed varieties or retained seed, which produces a poor yield and lower quality; at the same time, they have little access to information on other quality inputs. On average, the farmers use seeds from the previous harvest, both from inventory kept themselves or purchased from local collectors (traders). Although Balitkabi (the Indonesian Legumes and Tuber Crop Research Center) has developed and released some varieties of better quality peanut seed, there are few nurseries able to produce it in quantities large enough to be commercially viable. The nurseries which do, do so to provide a small quantity for free distribution by the government.

Challenges and constraints

Peanut farmers in East Java are currently unable to increase production for the following reasons:

- **Low quality and low productivity.** East Java's peanut farmers are unable to access high quality or improved varieties of seed. Instead they are dependent on local, retained and impure seed which produces suboptimal yields. The low quality and quantity of their crop hinders them from selling their harvest to the big buyers.
- **Minimum usage of quality inputs.** Farmers in East Java suffer from rat infestation and other pests and diseases on their farms due to the minimum usage of high quality agri-inputs.
- **Lack of stable production.** Peanut farmers only cultivate in the rainy season. Lack of irrigation, good storage facilities, and access to peanut varieties resistant to fungi, hinder them from building the capability to supply big buyers.
- **Lack of knowledge on how to sort retained seed.** The farmers have a lack of knowledge on how to handle, sort and select the previous seed to be used during the next planting session.
- **Limited number of nursery who able to produce certified quality seed.** The demand for certified peanut seed from farmers is much lower than demand for other seed. The certification expiry date is too short to give farmers enough of an opportunity to sell the seed. At the same time, Garuda, a producer of peanuts for consumption, already owns a patent for its peanut seed implemented by its captive farmers. These constraints have led to a reluctance by nurseries to develop a peanut seed business.
- **Limited application of GAP.** If well-managed, peanut productivity can reach two to three MT per hectare of dry peanuts. One of the constraints leading to optimal results not being achieved by farmers is that they frequently tend not to fully adopt improved cultivation techniques.
- **Lack of knowledge about market standards.** Most farmers in East Java do not know about the standard preferred by the market, particularly industrial markets.
- **Limited knowledge of good post-harvest handling practices.** Peanut traders have to ship their crop to food processing companies within forty-eight hours of harvest to avoid the risk of spoilage by Aflatoxin (a naturally-occurring carcinogenic toxin which can develop in warm, damp storage conditions).

Intervention areas

To address the challenges above, PRISMA works with partners to:

- Facilitate partnerships between seed breeder and nurseries to increase the availability of good quality peanut seed.
- Promote proper application of GAP in peanut cultivation to farmers.
- Promote effective use of crop protection products for peanut cultivation.

Progress and signs of systemic change

The following progress was achieved in the last semester:

Adopt

- Peanut seed breeder, BALITKABI increased the production of peanut foundation seed for the nurseries and conducted capacity development activities for the nurseries on GAP and good handling practices. One nursery in east java has already started selling the seed.
- BASF, an agrochemical company, has included peanut sector into their business portfolio. BASF has begun promoting their products in Tuban, Magetan, Ngawi, Blitar, and Tulungagung this year.
- Syngenta, another agrochemical company, also expanded their business portfolio by entering the peanut market. Syngenta targets peanut farmers in Tuban, Magetan, Pasuruan, Sampang, and Bangkalan as their new focus areas this year.
- As a part of their effort in penetrating East Java market, BASF and Syngenta have allocated additional human resources to promote their products on the ground.

Adapt

- Syngenta made additional investment in expanding their business to another district without PRISMA's support. BASF has independently engaged with Garuda Food, the biggest domestic peanut processing company, to jointly promote its products to Garuda Food's contract farmers.

Respond

- BATAN has conducted a seed trial with a local nursery in East Java, to test the production and suitability for the market demand.

10.2 Peanut NTT

Although NTT is the sixth largest peanut producing province in Indonesia, it lags far behind the top four provinces which are all in Java. Here, productivity, at 0.87 MT per ha, is below the national average of 1.33 MT per ha; peanut production and acreage however have steadily increased, contrary to the national trend of decreasing production and area cultivated, regardless of the significance decrease in terms of acreage and yield of peanut production. NTT's peanut is produced in Flores, Sumba and Timor. Timor has the largest production base spread over four districts. Significant imports have occurred during periods of lean production, such as 2011 when up to 8,000 MTs were imported into the province.

Many poor farmers are involved in peanut cultivation in NTT. Climatic conditions here make peanut a suitable crop. There is immense scope for improving productivity and quality by introducing quality seed, improving production and post-harvest practices, and increasing the number of buyers. Peanut in NTT thus has potential to reduce poverty, substitute imports, and increase exports to other provinces and countries.

Challenges and constraints

The overarching problem with the peanut sub-sector in NTT is its low competitiveness. This stems from relatively low productivity and production, which does not attract traders to rely on the domestic supply. The specific problems and their underlying causes are summarised below.

- Farmers do not apply good farming practices (in terms of seed selection, land preparation, planting and maintenance); in general, farmers lack access to information on better farming practises.
- Farmers use retained seed, as there is no commercial business to multiply and distribute good quality seed in NTT. Seed producers in other provinces have no established networks, stable water supply, or knowledge of NTT to motivate them to promote peanut seed.

- Farmers do not apply good post-harvest technology (especially drying technology) and this restricts them from improving the quality of their produce and storing them for long periods. As peanut is not yet a highly commercial crop, no commercial provider has been motivated to address this information and service gap. The collectors and inter-island traders lack capacity to provide information about post-harvest techniques and drying. Inferior quality pulls down the price further. As well as dry processing, the traditional threshing methodology also adversely affects the harvesting time; due to lack of labour, farmers often leave their crop too long and allow the peanuts to sprout in the ground. This reduces yields and contributes to a decrease in the farmer' income.
- Farmers often do not have enough capital to buy and use better inputs and tools. Their financial literacy is often limited, meaning they are unable to make use of the financial services available.
- Farmers also plant peanuts for their subsistence needs, not focusing production on gaining profit. Thus, productivity is not essential for them.
- The government extension service has limited resources and capacity; it therefore tends to focus on other priority sectors and is unable to meet the needs of the peanut farmers.
- Private input companies do not see peanut farmers as major clients, and lack the capacity and vision to expand their client base.
- Local **Seed Supervision and Certification Agency (BPSB)** has limited capacity and experience on technical skills in peanut.

Intervention areas

To address the challenges above, PRISMA works with private sector partners to:

- Facilitate production planning of Balitkabi and pre-ordering system from nurseries.
- Capacity development of nurseries in GAP and post-harvest practices.
- Promote proper GAP application for peanut cultivation to farmers.

Progress and signs of systemic change

The following progress was achieved in the last semester:

Adopt

- PRISMA's partners (CV. Tiga Putri Mandiri, CV. Sinar Tunbes Makmur, CV Anjas, DJT and Pius) are producing and selling good quality peanut seeds for farmers in Kupang and Belu districts. The nurseries have sold around 8 MT in the first semester of 2018. These nurseries have recruited agronomists to promote the seeds as well as to provide GAP information to farmers.

Adapt

- PRISMA's partners are also expanding their business to other areas and crops. CV STM has invested in mung bean production, and CV Anjas is currently at the trial stage for soybean seed production.
- CV. STM and Pius Botu have invested in mung bean production, and CV. Anjas is currently on a trial stage for soy bean seed production.

11.PIG

Pigs Sector Summary

With a predominantly Muslim population, pork is the 4th most widely consumed source of meat protein in Indonesia after chicken, cattle and fish. Consequently, pork consumption per capita for the country is less than 3kg per head, compared with more than 20kg per head in neighbouring Philippines and up to 40% in Hong Kong. Nevertheless, certain areas of Indonesia have a high per capita consumption rate e.g. Bali with its predominantly Hindu population, Nusa Tenggara Timur (NTT) and Papua with predominantly Christian populations. There is a growing demand at 2.14% in the last 7 years from the 32.5 million non-Muslim Indonesians and 9.5 million tourists visiting the country every year.

Quick facts:



Total production
344,246 MT



Total population
8.1 million



Consumption
0.3 kg/head



Female participation*
41%
Source: Livestock and Animal Health Statistics, 2017



Demand
4.48% (increase)
taken from Pig Production Growth instead.

*from AIP-Rural intervention areas



NTT

- ✓ Total production : 33,856 MT
- ✓ Total population : 1.9 million
- ✓ Consumption : 5-17kg/head (non-muslim population, 2014)

Indicator	Total
Outreach Plan S1 2018	23,081 HHS
Outreach Actual S1 2018	27,302 HHS
Cumulative outreach Plan S1 2018	69,922 HHS
Cumulative outreach up to S1 2018	74,143 HHS
Total Outreach Projection to Dec 2018	85,915 HHS
NAIC actual Cumulative S1 2018	IDR 383,812,975,925
Total Projected NAIC to Dec 2018	IDR 1,089,350,456,715



Pigs OVERALL

Indicator	Total
Outreach Plan S1 2018	23,081 HHS
Outreach Actual S1 2018	27,302 HHS
Cumulative outreach Plan S1 2018	69,922 HHS
Cumulative outreach up to S1 2018	74,143 HHS
Total Outreach Projection to Dec 2018	85,915 HHS
NAIC actual Cumulative S1 2018	IDR 383,812,975,925
Total Projected NAIC to Dec 2018	IDR 1,089,350,456,715

Value For Money (VFM)	Pigs Overall
Investment leverage:	0.78
Investment per HH:	AUD 30.19
Social return:	26.80

Subsector Profiles

11.1 Pig NTT

East Nusa Tenggara (NTT) contributes 23% of national production with approximately 1.8 million pigs, followed by Sumatera Utara (15%) and Bali (10%). Within NTT, pig production is dispersed unequally. Flores has the largest pig population (45%), followed by Timor (43%) and Sumba (6.5%). Approximately 85% of households owning at least one pig and the smallholder sector being the dominant industry.

Although NTT ranks number 1 in terms of pig population, it only contributes 11% to the share of pig meat production in Indonesia. In terms of pig meat production, Bali is by far the most productive province, followed by Sumatera Utara.

Prior to 2014, an assessment of the pig market system in NTT was undertaken which revealed that farmers usually buy piglets from neighbours and family members in the local community, and raise them using

traditional methods, including local breed, traditional feed, and minimum pharmaceutical input. Local breeds are prevalent within NTT leading to low productivity of sows (high rate of stillborn) high mortality, low weight and overall poor health of piglets. Feeding pig with traditional feed is time consuming for the farmer and less nutritious for the animals. There was also a small number of shops selling pig drugs and many feed agents reported farmers requests for medicines.

Challenges and constraints

There are several reasons for the low-income NTT's pig farmers:

- **Farmers' poor knowledge on Good Rearing Practices (GRP) results in low productivity.** Traditional feeding practise results in pigs taking between 12 and 24 months to reach market weight. With good rearing practise, this can be done in four to six months. Little attention to pig's health also affects to the weight gain and mortality risk.
- **Farmers also have little or no knowledge of and access to all the improved inputs such as breed, feed, health products and support service providers.** Feed and pharmaceutical companies have weak distribution network or channel to get their products to the island, let alone into the market. The relationship between feed companies and shops was informal, most of them had no presence in NTT at all. Because these feed companies paid little attention to NTT, they had limited knowledge of the NTT pig market. ISP / shop owners also lacked the basic knowledge of pig feed and pharmaceutical products, and consequently misinformed farmers on its appropriate use.
- **Pig rearing is not really considered to be a commercial business by poor farmers.** Hence, no incentive for farmers to invest in alternative good rearing practises. Rather, farmers sell pigs in the local market or raise them until cash is required or slaughter them during festivals and ceremonies such as weddings and funerals.
- **Farmers lack knowledge in estimating their pig weight creating information asymmetry** which affect farmers' bargaining power in the market when selling their pigs.
- **High mortality rate due to endemic diseases in NTT.** Most of the pig farmers in NTT are using traditional practice to rear pig and do not have an access on how to prevent from losses or high mortality rate because of diseases such as Hog Cholera. Unfortunately, farmer has limited knowledge and skills to address above constraint including access to vaccine.

Intervention areas

To address the challenges above, PRISMA collaborates with partners to:

- Support feed and pharmaceutical companies to develop their distribution channel with “agents tier-structure model” and to provide technical assistance to their distribution networks through trainings and facilitation by companies' staff.
- In partnership with the feed and pharmaceutical companies, promote commercially available, appropriate and affordable feed and pharmaceutical products for pig fattening to boost pig weight gain in shorter rearing period. Introduce improved marketing strategies such as improved design for brochures and other gimmicks, market storm, customer loyalty point, SMS marketing, etc. that drive product awareness and demand.
- Promoting Good Rearing Practices with partner. Not only for quality inputs, weights and measures were also introduced during the implementation phase, to address farmers' information asymmetry. Its practical application and use is shown at demonstration plots and other training and contained within marketing materials and literature provided by the feed companies.
- Market linkage between upstream and downstream market players to provide markets for farmers increased outputs and stimulate increased demand for pork products through restaurants and processing plants.
- Support the relevant stakeholders involved to synergize and share vision and goals of improved NTT's livestock sector development especially related to hog cholera eradication effort. The intervention helps the government of NTT to develop a Hog Cholera Eradication Roadmap and Strategy including

linking public sector with private partner (feed and pharmaceutical companies) and collaborate with university and other DFAT's program (AIP-EID).

Potential in Downstream Market

- PRISMA has been approaching other supporting actors to stimulate the growth of the downstream industry. These actors include:
 - Educational Institutions. Discussion with Sumba Hospitality School in Southwest Sumba and POLITANI Kupang in Kupang to include pork menu into the curriculum also provide commercial cooking course for non-students such as local restaurants, meat processors, etc.
 - Machineries Providers. MASEMA a processing and packaging machinery manufacturer from Jakarta, which already have clients in NTT specifically for bakery could also promote their processing machineries.
 - Financial Institutions. Obor Mas Credit Union in Maumere to create a new loan scheme for pork business. The target would be their members (around 30,000 people). This is potential to scale-up to other financial institutions (banks).
 - Chain Stores. Transmart, one of the largest retail chain in Kupang, has dedicated one stall in their store for pork products. They are interested in sourcing locally as currently, some of their products are imported from outside the island.

Progress and signs of systemic change

In the first semester of 2018, the following activities and progress towards systemic change were observed:

Adopt

- Partners with support from project develop their distribution networks' capacity through business development trainings and regular assistance.
- Partners produce more promotional tools with improved design, such as brochures, calendars, booklet, banners, etc.
- Partners conduct/develop a serial of promotional activities of commercial feed and good rearing practices in partnership with their distribution networks, such as:
 - Market storms (Sierad Produce, Japfa Comfeed, Sinar Terang Madani, Malindo Feedmill, etc.)
 - Demo plots (Sierad Produce, Malindo Feedmill, Sinar Terang Madani, etc.)
 - GRP trainings (Cargill Indonesia, Sierad Produce, Sinar Terang Madani, etc)
 - Customer loyalty points (Sierad Points)
 - SMS marketing (Perkasa Feed, Malindo Feedmill)
 - Radio Talkshow and Advertisement (Sierad, Malindo)
- Partners invest in technical staff on the ground (Sierad Produce and Medion in Timor).

Adapt

- Several partners and ISPs start growing their networks by themselves (i.e.: a distributor of Sierad Produce, Malindo find new agents and sub-agents without any support from project, etc).
- More ISPs invest in warehouse as they experience the growing of their pig feed business.
- More ISPs start selling more varieties / brands of pig feed in their shops.
- ISPs improve their promotional strategies, such as promoting through social media, informing feed products in their communities, designing their own brochure, hire local Vet and provide clinic consultation services, etc. One of these active ISPs is also a part of disability community in Kupang.
- Partners produce feed in smaller package (Sierad Produce).
- Several partners claim to have distributed their pig feed into new provinces as they plan to enlarge their market presence. (Sinar Terang Madani to South Sulawesi and Papua)

- Sierad Produce have assessed potential of export feed to Timor Leste and are currently adjusting their feed ingredient to fit the requirement to enter that country.
- Rembu Tedeng, a partner for the feed intervention in Flores, has moved his feed mill – previously located in the middle of the city – to have more space to increase the feed mill's capacity. It is also moved to a separate location to fit in with his vision on pig business. He plans to vertically integrate the business, from a breeding farm, feed business, up until expanding to slaughterhouse, meat shop, processing, and restaurant to secure their market. He has spent IDR 100 million for breed and establishing pig pens. In addition, he plans to invest a total value of IDR 250 million to start a slaughterhouse, a meat shop, a restaurant as well as for labor, permits and vehicles.

Expand

- More pig actors (inter-connected market) are responding and diversifying up and down the value chain, indicating more systemic change in the pig market, for example:
 - More feed companies are assessing or entering the market, such as Patriot, Menara, Chiel Jeddang.
 - Pharmaceutical companies (Romindo and Boehringer) started to develop their distribution channel in NTT; and conducted vaccinator training to improve knowledge and skills of private and public vaccinators.

Respond

- The Livestock Dept in NTT province launched a roadmap for Hog Cholera Eradication.
- Ministry of Agriculture provided Hog Cholera vaccine to respond Hog Cholera outbreak in Flores island and support the development of NTT's Hog Cholera Eradication program.
- Local government started discussing with feed companies and ISPs about feed business potential to them (i.e.: Bupati in TTU district invite a feed distributor of Sinar Terang Madani, Bupati in Larantuka invites project and Malindo Feedmill's ISP, etc.)
- In Sumba, a distributor of Malindo feed (Pak Rofinus) collaborates with a local pig butcher and supported by a butcher from Ende, to sell fresh cut pork in Pasar Baru Pogo Tena, SBD. Within less than 2 hours 40 kilograms were sold and ever since, Pak Nober has been selling 2 times every week (Wednesday and Saturday) at an average sale of 40 kg each time.
- Veterinary service providers are starting to offer door to door services to pig farmers for a fee as well as supporting feed retailers to promote feed and pharmaceuticals.
- BUMDES entities begin to aware of the feed business potential. Some of them have started selling pig feed in Timor.
- Other companies who are working in the livestock sector such as milk and farming/ animal husbandry tools are interest to assess NTT market and develop their distribution channel.

12. PPC MAIZE

PPC Maize Sector Summary

The Government of Indonesia, under its 'self-sufficiency' agenda, highly subsidizes the sector; around 80% of the total harvested area is covered by the free seeds and subsidized fertilizers. The maize price has been increasing steadily over the years. There is a clear opportunity to increase maize production, productivity and quality as part of Indonesia's drive towards import substitution; the zero-import quota has further contributed to the higher corn price in 2017. The average productivity is estimated to be around 5.5 Tons/ha; however, the field observation and BPS data shows lower productivity (around 3 - 3.5 Tons/ha) of maize, especially in Madura island. PRISMA has identified a clear opportunity to increase maize production, productivity and quality by supporting a private public collaboration in promoting short maturity hybrid maize seed in the island.

Quick facts:



Funds for GAP Provision
IDR 4.1 Trillion



Average land ownership
< 0.5 Ha



Average productivity (Maize)
3.5 MT/ha



Total planting area
2.63 million Ha



Total farming households
3.2 million

*from AIP-Rural intervention areas



NTT

- ✓ Average land ownership : ~0.5 Ha
- ✓ Average productivity : ~2 MT/ha
- ✓ Latest number of Private Seed Companies involved : 1

Indicator	Total
Outreach plan S1 2018	-
Outreach last semester	-
Cumulative outreach up to S1 2018	-
Total Outreach Projection to Dec 2018	1,761 HHs
NAIC actual Cumulative S1 2018	-
Total Projected NAIC to Dec 2018	IDR 3,074,706,000



Maize PPC OVERALL

Indicator	PPC Maize Total
Outreach plan S1 2018	2,440
Outreach last semester	1,950
Cumulative outreach up to S1 2018	2,170
Total Outreach Projection to Dec 2018	4,421
NAIC actual Cumulative S1 2018	IDR 5,140,944,887
Total Projected NAIC to Dec 2018	IDR 9,507,478,603

12.1 PPC Maize – East & West Manggarai (GoI)

The District Governments of East Manggarai and West Manggarai are among 22 districts in East Nusa Tenggara that have made efforts to ensure the success of PATB (a national maize subsidy program to expand new maize planting area). This will be done by promoting the use of hybrid seed to increase productivity. In 2017, the program has distributed 76.3 MT hybrid seed from BISI and Syngenta to 15,258 farmers in Manggarai Timur (2017 data). While in Manggarai Barat, the program has distributed a total of 97.7 MT hybrid seed to 19,545 farmers. However, the rate of success of the program is still low. The main contributing factor is that farmers in both districts have less knowledge and interest to apply GAP in maize farming. The existing PATB program, however, does not include the provision of GAP from private seed companies. Farmers also concern about the market of their yields, due to poor access to collector and prices (less added value). While DISTAN (agriculture office) in both districts concerns that farmers would not continue using hybrid seed, due to poor access to market and poor knowledge on good harvest & post-harvest practices. This intervention has been developed by referring to the learning from similar model applied in Pamekasan, where PRISMA collaborates with related DINAS (participated in the M4P training) and also private seed companies to promote the use of maize hybrid seed.

Challenges and constraints

- Lack understanding and application of GAP by farmers, including unaware of the benefits of using quality seed, and continue to rely on local seed varieties which provide lower yields;
- Lack motivation of farmers to plant hybrid seed due to poor access to collectors and low prices (less added value).

Intervention areas

To address the challenges above, PRISMA works with partners to:

- Promote good quality hybrid seed and good agriculture practices & good harvest practices application;
- Facilitate farmers' access to markets for hybrid maize.

Progress and signs of systemic change

- There is political will from the head of the two districts to support the increase of maize planting areas and productivity, by shifting the policy of hybrid maize seed distribution through the PATB program. Previously, subsidized-seed distribution is only conducted at the first planting-season (started in October), to add also the second planting-season (started in April). In both districts, during the second planting-season, those planting areas are less used for farming activities. The district government of West Manggarai, as an example, has set-up a target to reach one million metric-tonnes of maize yields in the next three years. While the district government of Manggarai Timur has put maize as one of the priority commodities to increase farmer's income. This will be reached by developing and stimulating maize-farming zones in the district, in order to boost productivity, and to facilitate private sector (input producers and buyers) to reach that areas for promoting their products and buying maize yields. In addition to that, DISTAN has agreed to add new maize-planting areas, by motivating farmers to make use of paddy field for planting maize after harvest during first planting season.
- DISTAN of West & East Manggarai has involved private sector companies in the promotion of GAP to be embedded in the PATB subsidy program. This is to familiarize farmers with the use hybrid maize seeds. In the long term, it will affect the growth of free market in the future when the subsidy program ceases; not only for the maize hybrid seed but also for other input products, such as fertilizers and pesticides.
- The private sector partner, BISI, has increased its investment in the promotion of GAP through the PATB program, by adding more field workers (2 persons in each district); promoting GAP to farmers' groups through demo-plots at the sub-district level; and co-funding promotional and capacity building events for farmers and PPL (government extension staff) in each district.
- There are several potential local buyers in Flores Island who are interested to buy farmer's maize products from the CPCL location as well as surrounding areas. They are small to medium scale feed producers,

and also local and inter-island maize-traders. Those market actors have also agreed to share knowledge to farmers regarding the standard quality of yields to be absorbed, as part of promoting good harvest practices to farmers. To support this, DISTAN in both districts has continuously linked potential buyers to farmers, in order to absorb potential increase of maize production volume from farmers in the coming harvest period and beyond.

12.2 PPC Chili Sampang – Madura(GOI)

Subsector Profiles

Chili is one of the sectors where the government put a lot of attention as it is a contributor of inflation. From year to year, though not significant, the demand for chili keeps growing. One of the major issues with chili as a subsector is price; it can be highly uncertain and there can be a disparity in price between farmers and consumers. Price fluctuation might result from weather uncertainty, production cost, and the long distribution flow. Meanwhile, the issue of disparity is mostly caused by production being centralized in certain locations, difficult transportation, and distance.

National productivity level for chili is at 7.49 MT/Ha with a production of 1,915 million tons, according to 2015 data. Java Island remains the highest chili producer nationwide, with an estimated share of 57.21%, and East Java becomes the number one chili producing province, where a large portion of its share is from the small chili.

In Madura, most chili farmers grow small chili and only a few subdistricts in Sumenep and Pamekasan grow big chili. However, they use retained seeds and this results in a production level of 5 MT/Ha, far below its potential productivity of 9 - 12 MT/Ha. The massive use of retained seeds is mainly caused by limited availability of hybrid chili seeds at local kiosks, due to low penetration effort from seed companies, and in fact, EWINDO is the only company with field worker present in Madura.

Provided the poor distribution of hybrid chili seeds to farmers due to a limited number of retailers selling them, lead farmers have to serve as collective buyers, where they travel to retailers located far from their residence, to purchase seeds for other farmers. Therefore, this intervention helps to obtain information for the promising market potential for chili and vegetable in Madura.

Challenges and constraints

- Farmers' low adaptation of hybrid chili seeds.
- Poor access to Good Agricultural Practices (GAP) particularly in chili sector that also results to low productivity.
- Farmers' lack of seeds and GAP knowledge, contributed by limited private seed companies' presence in Madura.

Intervention areas

To address the above challenges, PRISMA seeks collaboration with private seed companies to:

- Promote hybrid chili and vegetable seeds to Madurese farmers.
- Establish a distribution channel through retailer development.
- Establish and nurture hybrid seeds nurseries.

Progress and signs of systemic change

To ensure that systemic change is viable, the following signs have been observed:

- This intervention helps EWINDO discover new and/or existing retailers to further expand its market. It is known that retailers selling hybrid seeds in EWINDO have not been optimally identified. Farmers in Sampang, for instance, have to travel to Pamekasan to find a retailer that sells quality seeds. At the moment, EWINDO has identified retailers in Pamekasan, Sumenep, and Sampang, with each of them selling EWINDO seeds.
- Certain farmers prefer to plant seedlings so they can avoid the risk that may occur during the seedling process. Therefore, to fulfil this need and to ensure that farmers purchase high quality seedlings, a number

of nursery businesses have been identified in each district in Madura and they will do seedlings using EWINDO seeds to be sold to farmers. Prior to this, they will receive extensive training on nursery know-how and business management, and these nursery will not only do chili seedlings but also other vegetables.

EWINDO will hire an additional field staff to work in Madura and planned to set up a dealer to cater to the need of farmers in Madura in 2018

13.PPC HOMESTEAD GARDENING



PPC Homestead Gardening Sector Summary

Indonesia is among the largest vegetable consumers, along with India, Japan and China. It is the 14th largest producer, and the largest producer out of the ASEAN countries - contributing to approximately one per cent of the global vegetable production. However, when the productivity of each crop key vegetable crop in Indonesia remains lower compared to its neighboring countries. There is a significant gap between vegetable consumption and production in Indonesia, where the consumption rate is higher than that of production (-0.78). PRISMA collaborate with private sector and public sector to introducing women to good home gardening practices and good nutritional practices for economic and health benefits. This is new sector that start in Oct 2017 and first impact assessment is planned for S2 2018.

Quick facts:



Average production per HH/Month/Plant
Tomato 8 pcs, Eggplant 4 pcs, chili 0.25 kg/



Average planting area
20 – 30 m² per HH



Average cost saving for vegetable expense
IDR 300,000 per HH/Month



Female participation*
95%



Basic crops
Chili, tomato, eggplant, kangkong, mustard, spinach, kelor

*from AIP-Rural intervention areas; data from FGD with 10 female groups in 5 districts



East Java

- ✓ Average planting area : 20 m² per HH
- ✓ Total female group and location : 19 female groups in 19 Villages (7 Sub-Districts in 1 District)

Indicator	Total
Outreach plan S1 2018	-
Outreach last semester	-
Cumulative outreach up to S1 2018	-
Outreach Plan S2 2018	1,039 HHs
NAIC actual Cumulative S1 2018	-
Total Projected NAIC to Dec 2018	IDR 587,525,400



NTB

- ✓ Average planting area : 20 m² per HH
- ✓ Total female group and location : 97 female groups in 27 Villages (8 Sub-Districts in 2 Districts)

Indicator	Total
Outreach plan S1 2018	-
Outreach last semester	-
Cumulative outreach up to S1 2018	-
Outreach Plan S2 2018	1,828 HHs
NAIC actual Cumulative S1 2018	-
Total Projected NAIC to Dec 2018	IDR 244,112,064



NTT

- ✓ Average planting area : 30 m² per HH
- ✓ Total female group and location : 84 female groups in 143 villages (11 Sub-Districts in 2 Districts)

Indicator	Total
Outreach plan S1 2018	-
Outreach last semester	-
Cumulative outreach up to S1 2018	-
Outreach Plan S2 2018	2,445 HHs
NAIC actual Cumulative S1 2018	-
Total Projected NAIC to Dec 2018	IDR 1,300,646,800



PPC Homestead Gardening OVERALL

Indicator	Total
Outreach plan S1 2018	-
Outreach last semester	-
Cumulative outreach up to S1 2018	-
Outreach Plan S2 2018	5,112 HHs
NAIC actual Cumulative S1 2018	-
Total Projected NAIC to Dec 2018	IDR 2,132,284,264

Subsector Profiles

13.1 PPC Homestead Gardening EJ, NTB, NTT

Under its 'food sovereignty' agenda, the Gol legislates for the promotion of food diversification to mitigate against the risk of social problems arising from food and nutrition scarcity at the household level. One approach has been to implement a homestead gardening program. The MOA, provincial governors and district heads have been instructed by government to allocate funds to female farmer groups to establish fruit and vegetable seedling nurseries, greenhouses, demonstration plots and annual GAP training. In addition, and significantly for the PRISMA, the Gol is also encouraging local government to manage and scale up the homestead gardening program through collaboration with the private sector. PRISMA has identified a clear opportunity to increase vegetable production, productivity and quality by facilitating a private-public collaboration to promote vegetable quality seed through homestead gardening in rural regions of East Java, starting with Madura Island and NTB. In Madura, this initiative is facilitating EWINDO's reach to an increased number of rural farmers, enabling it to deliver GAP and sell more vegetable seed.

Challenges and constraints

- Farmers are unaware of availability of diverse good quality vegetable seeds varieties in the market.
- Farmers has limited knowledge on GAP (especially Pest & Disease Control)
- Most of female farmers in East Java prefer to buy seedling from local nurseries
- Promoting urban farming/personal package is not part of existing EWINDO's sales strategy for rural area. Consequently, it's field staffs do not get incentive from urban farming package sales increase, nor motivated to pro-actively promote the package to rural area.
- In NTB, farmers believe that the cost of planting vegetables at home is greater than buying from the market instead
- The absence of a homestead yard constitutes one of the main reasons women in NTT are hesitant to plant vegetables at home. This is coupled with lack of information about the use of polythene bags for planting

Intervention areas

To address the challenges above, PRISMA works with partners to:

- Promote small quality vegetable seed packages to improve rural farmers access to seed, for homestead gardening need.
- Promote home garden utilisation using high quality vegetable seeds and its GAP to improve family nutrition and to increase female farmers' income.

Progress and signs of systemic change

- **Understanding the capability of local government to support market penetration acceleration process in East Java, EWINDO is interested to expand its collaboration in homestead gardening with PRISMA in NTT and NTB.** In East Java, District Food Security and Livestock Agency of Pamekasan (DKPP) in collaboration with EWINDO and PRISMA have organized a Training of Trainer for selected 25 Female Lead Farmer Groups and the agency's extension service. The collaboration has exposed GAP and availability of diverse good quality vegetable seed in the market to 850 new female farmers.
- Local government agencies support private partners to reach more potential farmers through organizing a series of farmers meetings and mini expo events. As the impact, private partners confirm that they are exposed to new potential market. In East Java, private partner works more in villages in 2 sub districts. While their main target area are 7 sub-districts. **By working with local government, EWINDO is**

introduced to new potential farmers from the remaining 5 sub districts. Moreover, they are also facilitated to expand their promotion reach to 2 new potential sub districts, too.

- The increasing demand for smaller seed package from farmers and the agency has encouraged EWINDO to start selling small pouch through its main retailers in Pamekasan. However, the small pouch size is not considered small enough by farmers and local retailer. Unfortunately, promoting personal/urban farming package is not part of EWINDO's sales & promoting strategy for rural area. As response to this issue, **PRISMA is conducting market research to convince EWINDO to improve their marketing strategy for personal seed package.**
- BISI (in NTB and NTT), acting as PRISMA's private partners in the homestead gardening intervention, invest in good quality packets of vegetable seed by distributing an increased number of products to the targeted intervention area.
- The Government of Indonesia (in this context, represented by the district govern_{ent} of the intervention areas) used seeds from BISI and EWINDO for its KRPL program, therefore the government ensured that the KRPL groups received GAP from the companies.
- EWINDO and BISI will approach the district government suggesting the use of KRPL program as a means for their market penetration. This will provide an indication of private partner buy-in to the intervention, which is an essential part of any M4P programme and is required by PRISMA before the intervention can proceed. PT EWINDO and PT BISI International have thus to establish a relationship with government as the intervention owner.

At the moment homestead gardening is not only carried out by parties who signed the MoU but has begun to involve other parties such as the Public Health Office, Posyandu Cadre, PKK, Villages, and Sub-District to develop homestead gardening according to their respective capacities.

14. RICE

Rice Sector Summary

Indonesia is the 3rd largest rice producer in the world, only behind China and India. This is hardly surprising, looking at the population size and the percentage of people who see rice as staple food - In fact, Indonesia is among the largest rice consumers across the globe. Indonesia was ranked at 26th in global productivity level, despite increased to 5.41 Ton/Ha in 2014 from 5.34 Ton/Ha in 2016 and 5.13 Ton/Ha in 2015. Indonesia's level of productivity increase was still behind China and Vietnam in Asia, and far behind non-rice producing countries such as Australia, Egypt, and United States. A clear business opportunity exists to increase the production volume and the quality of rice in Indonesia.

Quick facts:



Total production
77,297,509 MT



Total harvested area:
14,275,211 Ha



Productivity:
5.41 MT/Ha



Female participation*:

*E1 = from 7,536 attendance,
1,810 are female
(21.4% out of total,
or 32.4% out total identified),
4,984 are male, 961 unidentified



Demand increasing
3.2% (increase)



East Java

- ✔ Total harvested area : 2,152,070 Ha
- ✔ Total farm Households : 12,654,472
- ✔ Total production : 13,154,967 MT

Indicator	Total
Outreach Plan S1 2018	-
Outreach Actual S1 2018	-
Cumulative outreach Plan S1 2018	-
Cumulative outreach up to S1 2018	-
Total Outreach Projection to Dec 2018	3,003 HHs
NAIC actual Cumulative S1 2018	-
Total Projected NAIC to Dec 2018	IDR 12,536,998,850



PAPUA

- ✔ Total harvested area : 10,753 Ha
- ✔ Total farm Households : 10,349
- ✔ Total production : 184,124 MT
- ✔ Productivity : 2 MT/Ha
- ✔ Female participation : from 892
total access number,
171 are female

Indicator	Total
Outreach Plan S1 2018	-
Outreach Actual S1 2018	-
Cumulative outreach Plan S1 2018	-
Cumulative outreach up to S1 2018	-
Total Outreach Projection to Dec 2018	834 HHs
NAIC actual Cumulative S1 2018	-
Total Projected NAIC to Dec 2018	IDR 3,048,670,800.00

Subsector Profiles

14.1 Rice Papua

Rice is one of the most important staple foods in the world. Despite being the 3rd largest rice producer in the world with 75 million MT of production (FAO, 2017), Indonesia still imports around 1.5 million MT (FAO, 2017). With over 14 million farming households are rice farmers, the commodity is an important source of income for farmers.

East Java is the largest rice producer in Indonesia, contributing 17% of national production or 13.2 million MT (BPS, 2016), followed with West Java and Central Java. Meanwhile, Papua only produces 181,774 MT of rice (BPS, 2016) with majority of production comes from Merauke district.

In particular, Merauke was designated by the Government of Indonesia as food estate development aiming for self-sufficiency. There are 8,734 rice farmers in Merauke (BPS 2016) or more than 50% of total number of rice farmers in Papua province. Majority of rice farmers are transmigrant farmers who on average own 4-5 hectares land each and plant rice 2 times per year. Despite being the main producer area, rice productivity in Merauke is low, around 2 MT/Ha compared with national productivity at 5 MT/Ha. In addition to rice, many farmers in Papua particularly in Jayapura and Sorong, also plant vegetables (such as tomatoes and chillies) where their productivity is also still low.

Challenges and constraints

The major challenges faced by the rice farmers in Papua are:

- **Low productivity** due to lack of knowledge on GAP, particularly on pest and disease management. There is relatively high number of cases on crop harvest failures in Papua due to pest and diseases attack mainly because farmers have limited knowledge on GAP and limited access to information on high-quality crop protection products.
- **Limited provision of information on GAP.** Very few or almost no private sector players provide extension services to the farmers in Papua while public extension workers do not have enough capacity to reach out to farmers.
- **Limited access and supply of agriculture inputs** in general (seeds, fertilizer, pesticides) due to limited existence of market players in Papua as they do not see the market potential. High cost of investments remains as the main challenges for the private sectors. Meanwhile local government do not actively attract private sector to engage in the market as they lack the linkages to the market players. This in Papua, has stretched out not only for rice but also for vegetables as some farmers plant both and some have changed from cultivating rice to vegetables.
- **Poor quality seeds.** Government high involvement on rice sector through subsidies prevent farmers to swift to higher quality seeds resulting in low attractiveness for the seed producers to enter the market. Commercial seeds are unavailable and farmers are not aware of their benefits to increase their rice productivity and production.
- **Irrigation issues,** particularly during dry season. Whilst water is crucial for rice cultivation, irrigation system is not well-built nor well-managed and the available service providers could not serve all farmers.
- **Lack of access and information on modern harvesting technology.** Farmers have limited knowledge, information and access to better harvesting technology due to inadequate financial capacity, limited interests from the private sector and lack of government's focus on proper technology.

Intervention areas

To address the challenges above, PRISMA will work with the private sector partners to:

- Promote the use of effective crop protection products and GAP to reduce the loss from pest and disease attack to increase the productivity of rice as well as vegetables.
- Enhance the collaboration with public extension services to promote the information on GAP and proper quality inputs.

- Promote the improved inputs, including high-quality seeds, fertilizer, pesticides to introduce appropriate use of inputs which can result in higher productivity and production.

Progress and signs of systemic change

The following progress was achieved in the last semester:

Adopt

- PT BASF hired new field staff to conduct demo plots and promotional activities on the ground
- PT BASF established a collaboration with public extension services
- PT BASF conducted 35 demo plots for rice and vegetables, 2 expo or farmers' field day, and 40 farmers gathering to promote the crop production products and knowledge on GAP.
- PT BASF conducted 1 stakeholder gathering in Merauke and 1 stakeholder gathering in Jayapura.

Adapt

- PT BASF continues to strengthen the distribution channel with distributors and retailers in Jayapura, Sorong and Merauke by implementing promotional activities such as discounts, points and prizes, and adjust their agreements with distributors to improve the easiness for payment schemes and product shipment. This alteration is special treatment for Papua market.

Respond

- Responding positively to PT BASF's initiative in collaborating with public extension service, Dinas Pertanian District government Merauke integrated the pest and disease management module into the field schools, which is part of the Dinas regular activities. This will help to reach out more farmers.

15. SEAWEED

Seaweed Sector Summary

Global demand for seaweed since 2010 has grown 13% annually, driven by vast growth of products in which seaweed is an important raw material including in food, materials, and for the pharmaceutical industry. Between 2000 and 2013, annual Raw Dried Seaweed (RDS) production in Indonesia rose from under 200,000 MT to around 1.1 million MT, and in 2007 Indonesia replaced the Philippines as the world's largest seaweed producer. In Indonesia, RDS production is mainly centralized in Eastern Indonesia, where the Sulawesi and NTT provinces account for the majority of national production.

Quick facts:



Total production
1.1 million MT



Total harvested area
384,733 Ha



Productivity
2.8 MT/Ha



Female participation*
46%



Demand
13% (increase)

*from AIP-Rural intervention areas



NTT

- ✓ Total cultivated area : 10,786 Ha *(2014)
- ✓ Total farm households : 30,589 *(2014)
- ✓ Total production : 200,144 MT *(2014)

Indicator	Total
Outreach Plan S1 2018	638 HHs
Outreach Actual S1 2018	850 HHs
Cumulative outreach up to S1 2018	1,480 HHs
Total Outreach Projection to Dec 2018	1,842 HHs
NAIC actual Cumulative S1 2018	IDR 330,440,903
Total Projected NAIC to Dec 2018	IDR 661,140,903



PAPUA

- ✓ Total harvested area : 23.2 Ha
- ✓ Total farm households : 900
- ✓ Total production : 115-125 MT (2017)

Indicator	Total
Outreach Plan S1 2018	91 HHs
Outreach Actual S1 2018	-
Cumulative outreach up to S1 2018	-
Total Outreach Projection to Dec 2018	63 HHs
NAIC actual Cumulative S1 2018	-
Total Projected NAIC to Dec 2018	IDR 2,566,892,427



WEST PAPUA

- ✓ Total harvested area : 23.2 Ha
- ✓ Total farm households : 900
- ✓ Total production : 115-125 MT (2017)

Indicator	Total
Outreach Plan S1 2018	383 HHs
Outreach Actual S1 2018	0
Cumulative outreach up to S1 2018	0
Total Outreach Projection to Dec 2018	118 HHs
NAIC actual Cumulative S1 2018	0
Total Projected NAIC to Dec 2018	IDR 7,844,914,037



Seaweed OVERALL

Indicator	Total
Outreach Plan S1 2018	1,112 HHs
Outreach Actual S1 2018	850 HHs
Cumulative outreach up to S1 2018	1,480 HHs
Total Outreach Projection to Dec 2018	2,023 HHs
NAIC actual Cumulative S1 2018	IDR 330,440,903
Total Projected NAIC to Dec 2018	IDR 10,902,947,367

Value For Money (VFM)	Seaweed Overall
Investment Leverage:	0.02
Investment Per HH:	AUD 424.18
Social Return:	0.05

Subsector Profiles

15.1 Seaweed NTT

NTT is the second largest producer of raw dried seaweed, producing 200,144 MT in 2014 – falling second to South Sulawesi. There are a total of 30,589 smallholder farmers, *involving both male and female members of the household in cultivation practice*. Prices of RDS in NTT had fluctuated from an average of IDR 7,000 per kg in July 2017, to IDR 25,000 per kg in December 2017 – and then fluctuating between the range of IDR 13,000-23,000 ever since, with a slight price difference in each district. Logistics and transportation services are functioning well and are provided by collectors and traders in areas of intensive cultivation where RDS is available all year long. Areas which produce seasonally, however, have limited access to ISPs as they will only consider these areas as ‘back-up’, buying RDS from these areas when they have no other option. Farmers lack access to knowledge, market information, quality seedlings, as well as finance to rejuvenate cultivation after severe environmental impacts. In most regions in NTT, farmers do not apply improved technologies or cultivation techniques, and often engage in labour-intensive practices and unproductive cultivation techniques. Technology transfer services from the private sector are either nonexistent, or performing poorly, while support provided by local government are not focused on knowledge and information, but rather on the provision of cultivation materials instead.

Challenges and constraints

- Limited access to information and knowledge on seaweed’s good agricultural practices, as well as post-harvest handling.
- Lack of information sharing and knowledge of quality standards by both the end market as well as local traders
- Limited access to quality seedlings and related supporting functions to cultivate seaweed
- Lack of access to financial products for farmers who want to reactivate their seaweed farms.
- Interrupted source of income due to the effects of current weather anomalies, and geographical constraint
- Loose relationship among market players due to weak incentives in between

Intervention areas

- Promoting application of GAP and GHP through demo plots.
- Facilitating better business practices between market players through better price and feedback mechanism from industry to farmer on seaweed quality standards
- Facilitating access to finance through strengthening partners by collaborating with financial institutions

Progress and signs of systemic change

Adopt

- Mazu Seaweed built 4 demoplots and nursery for surrounding farmers and carried out a seaweed campaign (comprising of film showing for seaweed GAP)
- Sentinel provides trainers to conduct knowledge transfer for GAP to cultivation areas in East and West Sumba and implements GAP for new cultivation areas (established 3 demoplots as learning center)

Adapt

- Sentinel is implementing the business model and are expanding their area development to West Sumba and Kupang (specifically for GAP and GHP implementation) and has approached Seaweed Vocational Schools to collaborate
- Mazu Seaweed has joined in the establishment of a new factory in Batu Licin, South Kalimantan, and is responsible for securing its supply by adapting the existing business model in NTT. The factory is scheduled to open in Q2 2018.

Respond

- The local government of Sabu Regency provides PPL (field staff) for GAP and GHP training to all farmers in Sabu and Raijua regions.

- Bank NTT has responded to the needs of CV. Sentinel and ISPs on financial credit (KUR – Kredit Usaha Rakyat), adjusted to seaweed crop.

15.2 Seaweed WP/P

In Papua and West Papua, the seaweed commodity has the potential to become a significant source of income for coastal communities with prevalent poverty. The area is well known for its giant cottonii variety, which grows twice larger than the average cottonii found in other parts of the country. There is a total of about 900 existing smallholder farmers, producing about 100-120 MT per annum in West Papua, and 15-20 MT per annum in Papua (2017 survey). Though RDS prices have soared across nation, it has yet to enter Papua, with its limited access to market – the current average price is at IDR 6,000 per kg. Due to this market limitation and the lack of any market access, farmers are discouraged to continue cultivating, as they are not able to channel their produce. PRISMA has identified this opportunity and took the initiative to work together to maximize and popularize the potential of seaweed cultivation on the coastal lines of Papua & West Papua.

Challenges and constraints

- Limited access to information and knowledge on seaweed's good agricultural practice, as well as post-harvest handling.
- Lack of access to market; limited number of market players, relationship gap, as well as geographical gap between farmers and end markets, causing high transportation and distribution costs.
- Limited access to quality seedlings and related supporting functions to cultivate seaweed
- Lack of access to finance
- Interrupted source of income due to the effects of current weather anomalies, and geographical constraint

Intervention areas

- Promoting application of GAP and GHP
- Providing access to market and feedback mechanism on quality from industry level to farmers, while promoting fair profit distribution between the industry, its collectors, and farmers.
- Facilitating access to finance through strengthening partners by collaborating with financial institutions
- Providing access to seedlings and equipment
- Facilitating the access of information for environmental impact research

Progress and signs of systemic change

Adopt

- The district government of Fakfak conducted quality seed procurement and equipment from the Special Allocation Fund of the Ministry of Marine & Fisheries (KKP) and had distributed quality seeds and equipment via farmer groups / BUMKamp
- PPL had conducted training to farmers groups about GAP and post harvest practices
- Bank Papua had provided BUMKamp financial management training and provides an explanation of Credit Scheme

Adapt

- The regency of Biak and Yapen had provided incentives in the form of additional operational for PPL in charge of seaweed.
- Bank Papua had provided KUR credit schemes for BUMKamp, small collectors and seaweed farmers and will apply credit scheme for seaweed sector to other sectors.
- DKP Biak has implemented support around 500 kg seeds from Takalar to support the seaweed farmers in Nusi Babaruk.

Expand

- District government of Nabire and Supiori will develop seaweed cultivation

Respond

- The Centre of Cultivation Department (BPBL Ambon) is committed to production of seedlings.
- Government at Provincial Level (Marine and Fisheries Department) prepares and supports budgeting program in seaweed sector.
- Ministry of Fishery and Marine will support mapping potential varieties of seaweed in Biak district.

16. SHALLOT

Shallot Sector Summary

Shallot is one of the seven major commodities to become priorities of the Government of Indonesia, as volatility in market prices has a significant impact on food price inflation. Indonesia is accounted as the 16th largest shallot and onion producer in the world. In the past five years, Government of Indonesia has focused to increase the shallot production and develop new shallot planting area. As a result, Indonesia has growth around 9.82% in term of production area and the production also boosted by 10.13% from 2011 to 2016. By 2016 Indonesia has achieved self-sufficiency in shallot crop with zero import at that year, however shallot sector still become the major issue in Indonesia because the price is still fluctuated especially in the harvest time.

Quick facts:



Total production
1.4 million MT



Total population
149,635 Ha



Productivity
9.67 MT/Ha



Female participation*
11%



Demand
6.07% (increase)



East Java

- ✔ Total harvested area : 36,173 Ha
- ✔ Total farm households : 45,722
- ✔ Total production : 304,521 MT

Indicator	Total
Outreach Plan S1 2018	1,159 HHs
Outreach Actual S1 2018	512 HHs
Cumulative outreach Plan S1 2018	1,622 HHs
Cumulative outreach up to S1 2018	1,454 HHs
Total Outreach Projection to Dec 2018	1,732 HHs
NAIC actual Cumulative S1 2018	IDR 57,105,359,826
Total Projected NAIC to Dec 2018	IDR 58,307,258,857



NTB

- ✔ Total harvested area : 19,275 Ha
- ✔ Total farm households : 17,438
- ✔ Total production : 211,804 MT

Indicator	Total
Outreach Plan S1 2018	1,096 HHs
Outreach Actual S1 2018	4,701 HHs
Cumulative outreach Plan S1 2018	3,140 HHs
Cumulative outreach up to S1 2018	7,466 HHs
Total Outreach Projection to Dec 2018	8,552 HHs
NAIC actual Cumulative S1 2018	IDR 46,603,394,024
Total Projected NAIC to Dec 2018	IDR 53,702,375,254



Shallot OVERALL

Indicator	Total
Outreach Plan S1 2018	3,155 HHs
Outreach Actual S1 2018	5,213 HHs
Cumulative outreach Plan S1 2018	4,762 HHs
Cumulative outreach up to S1 2018	9,068 HHs
Total Outreach Projection to Dec 2018	10,284 HHs
NAIC actual Cumulative S1 2018	IDR 103,708,753,850
Total Projected NAIC to Dec 2018	IDR 112,009,834,112

Value For Money (VFM)	Shallot Overall
Investment leverage:	1.30
Investment per HH:	AUD 37.69
Social return:	34.88

Subsector Profiles

16.1 Shallot EJ

East Java is the second largest shallot producing province in Indonesia, contributing around 20.9% of national production in 2016¹². Most of the farmers in East Java cultivate shallot in the dry season during mid-year using retained bulbs and have to face the challenge of pest attacks mainly from caterpillars. While some farmers also cultivate shallot in the wet season, they are more susceptible to threats from fungi attacks and adverse weather conditions. Nganjuk and Probolinggo are the main areas in East Java where shallot is produced, with around 25,000 farmers involved in the production process.

Challenges and constraints

The key challenge which prevents smallholder shallot farmers from taking advantage of this market opportunity are:

- **Lack of knowledge of pest and disease management.** Farmers are unaware of the technologies available to combat disease and pest attacks. Crop losses from fungi disease attack (*Fusarium Oxysporum*) and pest (in particular *Spodoptera exigua* caterpillars) can range from 10% to 90% of the entire crop and have a significant impact on the volume of shallot available for sale.
- **Large amounts of money spent on chemical inputs by farmers to combat the high incidence of pest and disease.** This further reduces their income by keeping average production costs high.
- **Lack of advanced storage technology.** Farmers cannot store their crops long term due to the high shrinkage rate of the crops. They have to sell the product immediately to prevent loss in weight even though the price is low. The other main reason for selling immediately is they have to pay the debt for the input or chemical cost to the retailer immediately after they harvest crops.
- **Low productivity due to low quality of planting materials.** Farmers are used to planting shallots with retained bulbs, which carry tuber borne disease. Retained bulbs with tuber borne disease have lower yield, less than 10 ton/ha, while bulbs without tuber borne disease can have approximately 15 ton/ha yield.
- **Limited availability of quality planting materials.** The government of Indonesia has recognized and recommended farmers to plant using TSS (True Shallot Seeds) instead of using retained bulbs. In addition to having a better productivity, TSS is significantly cheaper compared to retained bulbs, and shallot price fluctuation won't affect the planting material price. The constraint of planting TSS is the limited availability of the TSS itself.

Intervention areas

To address the challenges above, PRISMA works with partners to:

- Promote the use of IPDM through private partnerships and social marketing campaigns.
- Promote production of TSS.
- Promote the use of TSS in shallot cultivation
- Establish farmer access to appropriate financial products.
- Promote good post-harvest technologies to farmers.

Progress and signs of systemic change

The following progress was achieved in the last semester:

Adopt

¹² Produksi Bawang Merah Menurut Provinsi, 2012-2016, www.pertanian.go.id

- PRISMA's partners (CropLife Indonesia Association and PT Nufarm) are promoting IPDM technology and knowledge through social marketing campaigns, marketing events and promotional tools.

Adapt

- PT EWINDO is successfully selling TSS to Indonesian shallot farmers and expanding its TSS production nationally and internationally.
- PT Nufarm has expressed an interest in expanding its IPDM product line to other crops and in bringing in other key stakeholders to promote IPDM technology and knowledge.

Expand

- Seed company BISI is exploring the possibility of adding TSS to its product line.
- Bejo has now entered the TSS market through Agrosid as its distributor

Respond

- In 2017, in response to increased awareness of its benefits, the Ministry of Agriculture mandated Balitsa (Balai Penelitian Sayuran, or Vegetable Crops Research Institute) to produce 2 MT of TSS.

16.2 Shallot NTB

After Central Java and East Java, NTB is the third largest shallot producer in Indonesia — producing 2,020,267 MT of shallots or almost 14% of national production in 2016. The district of Bima and Sumbawa Besar in Sumbawa Island and Lombok Timur are the main NTB's shallots production area. PRISMA has identified an opportunity for local farmers in NTB to increase productivity through the availability and use of higher quality planting materials with embedded GAP services and quality assurance.

Challenges and constraints

The major challenges to the shallot sector in NTB are:

- **Farmer productivity is low** because of their use of poor quality planting materials. Most of the smallholder farmers use retained bulbs sourced from their own farms, neighbouring farms or shallot traders as seeds used for planting material. The study of Vegetable Crops Research Institute in Lembang, Indonesia¹³ shows that nearly 90% of Shallots in Indonesia have been infected by the tuber borne disease and its impact has been a decline in shallots productivity. Shallot production in Indonesia is based on crops grown from seed bulbs. The introduction of True Seed Shallot (TSS) could be an option to improve competitiveness of Indonesian shallot production.
- **Production costs, crop failure and losses are high because of pest and disease.** Farmers lack knowledge of GAP and are unaware of more affordable technologies (including those suitable for rainy season production) to combat disease and pest. Crop losses from *Fusarium* and pest attack (in particular the *Spodoptera exigua* caterpillar) range from 10-90%. Farmers spend large amounts on chemical inputs, further reducing income by keeping average production costs high.
- **Farmers are unable to benefit from higher prices during the off-season.** They tend sell their entire crop immediately after harvest (when prices are low) because of no access to storage facilities. While farmers need sufficient cash flow for household needs and inputs for the next planting season, this can usually be fulfilled by selling part of the harvest; the remainder of the crop could be stored and sold when

¹³ "In the period 2007 till 2010 a research project was conducted to improve growing techniques of TSS. Seed emergence in the nursery was improved if the seed was sown in furrows 0.5-1.5 cm deep and by closing the furrow after sowing with soil instead of burned rice husks. Compared to traditional seed bulb crops productivity of TSS was much higher, up to twice as high in some experiments, while the growing period of TSS was two to three weeks longer. A recently developed cultivar, 'Sanren', which is an improvement in productivity, earliness, quality for the local market and which can be grown at a lower plant density than the older cultivar 'Tuktuk', has increased feasibility of TSS in Indonesia. Optimal plant density of 'Tuktuk' was 175 plants per m²; optimal plant density of 'Sanren' was about 75-100 plants per m², depending on the costs of seedlings. Optimal nitrogen fertilization of 'Tuktuk' was 180 kg N/ha; optimal nitrogen fertilization of 'Sanren' was 240 kg N/ha." L. van den Brink, R.S. Basuki (PRODUCTION OF TRUE SEED SHALLOTS IN INDONESIA)

price conditions are more favourable. Traditional storage practices are not suitable for extended periods of time. The lack of mechanisms to control humidity and to ensure that the shallot harvest stays dry can result in a significant deterioration in quality.

Intervention areas

To address the challenges above, PRISMA works with partners to:

- Promote the use of IPDM through private partnerships and social marketing campaigns.
- Promote the use of TSS.
- Promote post-harvest technology to farmers.

Progress and signs of systemic change

The following progress was achieved in the last semester:

Adopt

- PRISMA's partners Croplife Indonesia Association and PT Nufarm are now promoting IPDM technology and knowledge through social marketing campaigns, marketing events and promotional tools.
- PT EWINDO tried multiple business models to sell TSS and was successful with the seedling nurseries business model.

Adapt

- PT EWINDO has treated TSS as a business development product in the past; due to the success of the partnership it moved TSS to its commercial section and scaled up the business model to sell TSS throughout Indonesia.
- PT EWINDO has increased its TSS sales targets to 5.5 MTs for 2017, 10 MTs for 2019 and 40 MTs for the next five years, and has added more TSS varieties (Lokananta and Sanren) to its product line.

Expand

- Bejo has now entered the TSS market through Agrosid as its distributor

Respond

- The MoA mandated Balitsa to produce two tons of TSS in 2017 in response to the increased awareness of the benefits of TSS.

17. SOYBEAN

Soybean Sector Summary

The national demand for soybean in Indonesia is growing at an average of 6.4% annually. However, a sharp decrease in the country's national soybean production in 1998 triggered a significant increase in soybean imports. Average annual production is currently at 0.9 million MT; Indonesia also imports 1.9 million MT every year to meet domestic consumption demand, making it one of the world's major soybean importers. Although productivity is increasing, the country's total harvested acreage has been experiencing a downward trend of -7.7% per year (particularly after 2009).

Quick facts:



Total production
542,000 MT



Total harvested area
357,000 Ha
(-35% from 2013-2017)



Productivity
1.5 MT/Ha



Female participation*
38%



Demand
6.4% (increase)



East Java

- ✓ Total harvested area : 141,602 Ha
- ✓ Total farmers : 170,000
- ✓ Total production : 226,418 MT

Indicator	Total
Outreach Plan S1 2018	1,053 HHs
Outreach Actual S1 2018	-
Cumulative outreach Plan S1 2018	14,727 HHs
Cumulative outreach up to S1 2018	13,674 HHs
Total Outreach Projection to Dec 2018	13,674 HHs
NAIC actual Cumulative S1 2018	IDR 11,739,332,206
Total Projected NAIC to Dec 2018	IDR 11,739,332,206



NTB

- ✓ Total harvested area : 42,321 Ha
- ✓ Total farmers : 26,000
- ✓ Total production : 51,365 MT

Indicator	Total
Outreach Plan S1 2018	880 HHs
Outreach Actual S1 2018	319 HHs
Cumulative outreach Plan S1 2018	3,085 HHs
Cumulative outreach up to S1 2018	2,514 HHs
Total Outreach Projection to Dec 2018	3,597 HHs
NAIC actual Cumulative S1 2018	IDR 4,747,888,089
Total Projected NAIC to Dec 2018	IDR 7,549,039,157



Soybean OVERALL

Indicator	Total
Outreach Last Semester	2,778 HHs
Cumulative Outreach Up to Dec 2017	15,889 HHs
Total Outreach Projection to Dec 2018	25,064 HHs
NAIC Actual Cumulative Dec 2017	IDR 15,795,827,989
Total Projected NAIC to Dec 2018	IDR 24,984,312,515

Value For Money (VFM)

Soybean

Investment leverage	: Total Intervention Cost (0.26)
	Direct Intervention Cost (0.18)
Investment per HH	: Total Intervention Cost (AUD 686.165)
	Direct Intervention Cost (AUD 22.54)
Social return	: Total Intervention Cost (4.58)
	Direct Intervention Cost (291.79)

17.1 Soybean EJ & NTB

The national demand for soybean in Indonesia is growing at an average of 6.4% annually. However, the majority of Soybean supply in Indonesia comes from import. Average annual production is currently 0.9 million MT; Indonesia also imports 1.9 million MT every year to meet domestic consumption, making it one of the world's major soybean importers. East Java and NTB are among the country's largest soybean producing regions, contributing an estimated 48% to national production. In East Java, around 30% of soybean farmers are poor or near-poor; the province has the highest productivity per ha in Indonesia (1.6 MT/Ha) but not all of its districts are able to reach this level. The scenario in NTB is similar. Compared to the average national productivity rate of 1.6 MT/Ha, some soybean farmers in NTB experience relatively low productivity (an average of 1.1 MT/Ha or less).¹⁴

Challenges and constraints

The inability of farmers in EJ and NTB to increase production can mainly be attributed to:

- **Low productivity of soybean.** Farmers use poor quality input and apply poor agriculture practices which results in lower productivity. This is caused by a) the limited availability of good quality seed, b) a lack of access to information on GAP, c) improper use of agro-chemical inputs.
- **Lack of new and highly productive soybean seed varieties** available in the market. Even though government R&D such as BATAN and BALITKABI have developed highly productive varieties, the availability is very low in the market due a to lack of coordination with other government institutions to disseminate the new varieties. On the other hand, private seed producers who have capacity and good distribution channels have not committed to enter this market.
- **Loss of soybean in the post-harvest process.** Soybean farmers lose about 5% of their harvest and the loss rate increases during the rainy season because of their reliance on inefficient traditional harvesting methods and lack of post-harvest knowhow and technology.
- **Low price of locally produced soybean.** Soybean price is also becoming one of the main issues as farmers are demotivated to plant soybean because the market price is too low. This is caused by low quality of locally produced soybean as a result of improper practices mentioned above.

Intervention areas

To address the challenges above, PRISMA works with partners to:

- Develop new nurseries to produce certified soybean seed.
- Develop the commercial market for certified soybean seed.
- Promote GAP and crop protection through extension service workers (PPLs) in Lombok Tengah, NTB.

Progress and signs of systemic change

Progress in soybean sector is slow and below expectation. The soybean production and harvested area in Indonesia is decreasing every year due to the government's strong support for maize sector. Government provides free seed and subsidized fertilizer to maize farmers as part of the self-sufficiency program. In addition, government imposed zero import policy for maize, which resulted into higher maize price compared to other commodities like soybean. These have made soybean farming a least profitable option for the farmers. and farmers are switching to maize from soybean. On the other hand, procuring soybean from USA and Brazil is cheaper due to the huge subsidy in those countries.

On top of the low profitability, government's intervention on soybean has made the sector unattractive for private seed producers and other input producers. PT. EWINDO, for example, has already pulled out from the soybean sector due to unfavourable business environment.

The following progress was achieved in the last semester:

Adopt

¹⁴ BPS, 2013; BPS, 2012; PRISMA calculations, 2014.

- BASF is conducting internal research to develop preservatives for soybean seed in order to increase seed shelf-life
- BISI in NTB continues to disseminate information and promote the use of proper input to farmers

Adapt

- BISI applied the same model to PPL in Lombok Barat and have conducted promotional event to engage with PPL in Lombok Barat
- BATAN is currently conducting a trial for a new Mung bean variety (Muri) with EWINDO

18. VEGETABLE

Vegetable Sector Summary

Indonesian consumers' expense on vegetable grew by 9.2% compound annual growth rate (CAGR) from 2010 to 2015. Despite being the 14th largest vegetable producer in the world and the largest producer in Southeast Asia, Indonesia's vegetable import volume continues to grow faster than exports. As Indonesia's domestic horticulture sector has suffered declining competitiveness, the government has taken steps towards more protective and restrictive trade policies. Thirty-three provinces in Indonesia produce over 20 types of vegetable, although 85% of all vegetables produced are grown on the islands of Java and Sumatra.

Quick facts:



Total production
9.1 million MT
(BPS, 2017, all seasonal veg)



Total harvested area
0.5 million Ha
(SP2013, web, 13 veg)



Female participation*
43%



Demand
9.2%
(grow of consumers' expense from 2010 to 2015, CAGR)



East Java

- ✔ Total harvested area : 137,853 Ha
- ✔ Total farm households : 625,950
- ✔ Total production : 1,323,023 MT

Indicator	Total
Outreach Plan S1 2018	5,249 HHs
Outreach Actual S1 2018	11,019 HHs
Cumulative outreach Plan S1 2018	10,863 HHs
Cumulative outreach up to S1 2018	16,633 HHs
Total Outreach Projection to Dec 2018	30,866 HHs
NAIC actual Cumulative S1 2018	IDR 124,562,978,398
Total Projected NAIC to Dec 2018	IDR 187,898,886,276



NTB

- ✔ Total harvested area : 8,286 Ha
- ✔ Total farm households : 58,398
- ✔ Total production : 251,128 MT

Indicator	Total
Outreach Plan S1 2018	515 HHs
Outreach Actual S1 2018	7,143 HHs
Cumulative outreach Plan S1 2018	1,440 HHs
Cumulative outreach up to S1 2018	8,068 HHs
Total Outreach Projection to Dec 2018	11,336 HHs
NAIC actual Cumulative S1 2018	IDR 75,760,325,369
Total Projected NAIC to Dec 2018	IDR 89,139,284,015



NTT

- ✔ Total harvested area : 2,926 Ha (SP2013, web, 13 veg)
- ✔ Total farm households : 92,633 (SP2013, M drive, all seasonal veg)
- ✔ Total production : 60,032 MT (BPS 2017 13 veg)

Indicator	Total
Outreach Plan S1 2018	808 HHs
Outreach Actual S1 2018	2,938 HHs
Cumulative outreach Plan S1 2018	1,063 HHs
Cumulative outreach up to S1 2018	3,193 HHs
Total Outreach Projection to Dec 2018	5,558 HHs
NAIC actual Cumulative S1 2018	IDR 32,143,518,132
Total Projected NAIC to Dec 2018	IDR 36,525,483,872



PAPUA

- ✔ Total harvested area : 3,513 Ha (SP 2013, web, 13 veg)
- ✔ Total farm households : 199,702 (SP2013, web, all seasonal veg)
- ✔ Total production : 63,211 Ton (BPS 2017, 13 veg)

Indicator	Total
Outreach Plan S1 2018	257 HHs
Outreach Actual S1 2018	1,857 HHs
Cumulative outreach Plan S1 2018	671 HHs
Cumulative outreach up to S1 2018	2,271 HHs
Total Outreach Projection to Dec 2018	3,526 HHs
NAIC actual Cumulative S1 2018	IDR 7,921,991,348
Total Projected NAIC to Dec 2018	IDR 11,016,284,141



Subsector Profiles

18.1 Vegetable EJ, NTB & NTT

East Java (EJ) is one of the main vegetable producing regions, contributing more than 12% of national production and growing by 4% each year. The top three vegetables produced are small chilli, cabbage and potato. Despite being the third largest vegetables producing region in Indonesia, EJ has lower productivity compared to provinces in West of the country. Compared to the national average, productivity of potato and cabbage of EJ are slightly higher. However, chili and tomato produced in EJ has lower productivity than the national average¹⁵. The vegetables sector in EJ is dominated by multi-layer distribution system where the transfer of harvested crops from farmers to end customers takes place through multiple market actors. The long distribution chain implies to poor information flow and information asymmetry among players within the chain. Input suppliers and government extension workers generally have limited awareness of good agricultural practises (GAP) of vegetables, while farmer's poor knowledge and application of GAP is evident.

In NTB there are 58,400 vegetable farmers households (SP2013). While shallot is mainly produced in Bima, other vegetables production in NTB is mainly centralized in East Lombok. Sembalun is the main centre for high land vegetables (eg: potato, tomato, carrot) and low land vegetables (eg: chili) are mainly produced in Suralaga and Wanasaba. While some products (potato and chili) are absorbed by processing companies through contract farming scenario, vegetable products are mainly distributed within the province through traditional market. Vegetable products from Bali and East Java are also influencing NTB market. For some vegetables (eg: paprika, broccoli), NTB is still dependent on supply from these 2 provinces. While those involved in contract farming scenario are assisted with input products, smallholder farmers are still facing limited options and inconsistent availability of input products as well as limited access to GAP information and knowledge.

NTT contributes 1% of the total national vegetable production in 2016 (MoA data 2016), which main production are chinese cabbage and water spinach based on the cultivation area. There are 92,633

¹⁵ Calculated based on Ministry of Agriculture, 2014. http://www.pertanian.go.id/ap_pages/mod/datahorti

households, which is around 9% of the total NTT Households, who are doing vegetable farming (SP2013 data). Main vegetable producing districts are Sikka and TTS, which made up to 55% of total NTT's vegetable production. For the top 5 main vegetable productions in NTT, which are chayote, eggplant, chinese cabbage, water spinach, and tomato, the productivity is very low (less than 50% of national productivity for each commodities). In addition to the low productivity, total vegetable production in NTT is also not enough to cater the demand (estimated vegetable consumption is 182,331 tonnes while total production is 64,789 tonnes, based on BPS Susenas and MoA data in 2016).

Challenges and constraints

The major challenges to the vegetable sector are:

- **Farmer productivity is low** due to unfavourable environmental and climatic conditions, limited practice of soil management, poor farming practices, and poor application of quality inputs and integrated pest management techniques. Vegetable farmers in NTB and NTT also have limited options and inconsistent availability of inputs.
- **Farmers have limited access to information on vegetable market, prices, and weather.** On the ground, actors who channel this information are also limited, this has hampered knowledge sharing and transfer down the value chain to the farmers.
- **Price of harvested vegetable is low due to crop oversupply during certain period, and farmer's low bargaining power.** Planting decision among farmers and across region are not well managed, and therefore, oversupply is inevitably avoided and lead to falling of commodity price in market. Farmers have low bargaining power due to limited market channel options, and poor quality of harvested crop.
- **Farmers have high production cost due to overuse of inputs.** Vegetable farmers in EJ rely heavily on chemical pesticides to control pest and disease. In attempt to increase effectiveness of pesticides, farmers generally improperly mix and increase pesticides applications from the suggested dosage.

Intervention areas

To address the challenges above, PRISMA works with partners to:

- Improving access to quality inputs and good agricultural practices (GAP)

Further, other intervention areas PRISMA may wish to explore in the future including:

- Improving alternative market options for vegetables, post-harvest and storage practices

Progress and signs of systemic change

The following progress was achieved in the last semester:

Adopt

- NASA, EWINDO, Danken, and Agrosid have built the capacity of key stakeholders to introduce good quality inputs and GAP, and supported them to actively introduce good quality inputs to farmers (in particular for crop protection) with embedded services on GAP (for example, by providing in-kind products and promotion materials).
- NASA and EWINDO have launched and socialised their apps through their communication platforms. NASA socialised the NASA-Agro app for android phone through several channels: its annual anniversary event, a SMS blasts, WhatsApp groups and regular training events.
- NASA assigns a staff to further maintain and regularly update NASA Agro App content
- Distributors independently learn agriculture from NASA App and utilize the App as one of the promotion tools

- Distributors in EJ and NTT get new customer base in Kediri, Tulungagung, Blitar, and Lembata
- PT Agricon has started to use educational video on good vegetable farming practices and proper product application in their mass promotional activities (big expo) in Malang and Probolinggo.

Adapt

- PT NASA and PT EWINDO have each broadened their sales area and built the capacity of key stakeholders in that area (for example, by conducting training and initiating technical visits).
- Each private sector organisation has improved the reach of PT EWINDO and PT NASA through their own internal capacity, PT EWINDO through a performance review scheme of their field staff, and PT NASA through the bundling package in the app's starter kit for its expanded distribution channel network. New partnerships are also being made to add to the app's functionality (for example, with *Pusdatin Kementan*).
- As part of organization learning from impact assessment in the second semester of 2017, NASA has initiated unbudgeted meeting to encourage distributors in EJ to increase frequency of training events
- NASA distributor in NTT adopt & continue to conduct market storm promotion approach

Expand

- PT Danken has established *Duta Danken* to disseminate the product knowledge and GAP, and by helping retailers to promote and sell their products
- Another startup agriculture company, Crowde, approached PT EWINDO to establish a partnership, with a view to increasing the capability of the app to disseminate information and provide access to finance.

Respond

- A number of Agriculture Office staff members have become NASA distributors.
- Responding to the high quality of NASA's products and rapid market penetration in Sikka, local village business units (BUMDES) have become part of NASA's new distribution network.

18.2 Vegetable Papua & West Papua

Vegetable farming in Papua and West Papua is broadly split into two categories: lowland farming and highland farming. Lowland farming is mostly done by trans migrants and indigenous farmers; highland farming is only done by indigenous farmers. For highland vegetables, the additional factors of infrastructure and transportation are major issues, leading to high transportation costs which increases the price of goods, including knock-on effects for other agricultural products.

The total Population of Papua and West Papua is 4 million, 1,4 million people or 35% of those work in the agriculture sector. 31% of the total population in Papua and 27% of the total population in West Papua are living in poverty. There are 47,940 horticulture farmer households in West Papua and 266,054 farmer households in Papua (2013 data). The opportunity for vegetables farming is widely open, considering Papua and West Papua still import high number of certain vegetables such as Shallot, Chilli, Potato, etc. The productivity level also remains much lower than the national level, resulting from a lack of good quality seed use and low application of good agricultural practices.

Challenges and constraints

The major challenges faced by the vegetable sector in West Papua are:

- **Farmers experience low productivity due to low quality input.** In general, farmers in West Papua, and especially in Greater Manokwari use seed bought from seed kiosks. However, most farmers still do not use good quality seed. There are different types and brands of seed in the market. In certain crops, farmers are unaware of the damage using low quality retained seeds to cut cost. There is, however, little or no information for farmers on how to use good quality seed to increase crop yields.

- **Farmers lack knowledge of supply management, contributing to high vegetable distribution costs.** Farmers have no access to information about demand for different types of vegetable. Instead, the majority take their harvest directly to the market place and sell it to big collectors. Indigenous farmers sell directly to the consumers in the market place, it can take up to three days for them to sell their produce.
- **For highland farmers, transportation can be a barrier;** especially in Arfak Mountain District, high transportation costs render their vegetable prices uncompetitive, particularly in comparison to similar, imported vegetables.
- **Farmers lack information on Good Agricultural Practices.** Most farmers use traditional farming techniques. Even though many transmigrant farmers have used branded seeds, transmigrant farmers are lacking knowledge on vegetables GAP. Hence, it leads to pest, diseases, and fungi problems which in turn reduces productivity or harvest failure.
- **Insufficient post-harvest handling practice of harvested vegetables** is one of the constraints to obtaining a better selling price in the modern market. Farmers usually do not pre-sort or package the harvested crop due to limited awareness, knowledge or skills, or the resources needed to invest in these activities. The lack of up-to-date harvest and post-harvest know-how leads to many putting minimal effort into maintaining their vegetable crops, resulting in low quality of produce.

Intervention areas

To address the challenges above, PRISMA works with partners to:

- Promote use of good quality seed and application of GAP.
- Encourage nurseries to supply quality seedlings.

Progress and signs of systemic change

The following progress was achieved in the last semester:

Adopt

- EWINDO and its foundation Yayasan Bina Tani Sejahtera have adopted the previous business model to expand and add additional field staff in Manokwari, Timika, Jayapura and Arfak.

Expand

- Pesticide producer BASF has adopted EWINDO's business model. It has hired a product promotor and is now PRISMA's partner.

Respond

- Bank Indonesia has decided to promote the use of true shallot seed (TSS) produced by EWINDO in preference to growing shallot from bulbs as part of its program designed to control the volatility of the national shallot price.
- The Department of Agriculture, guided by EWINDO's product promoter, as a result of PRISMA's intervention now uses high quality seed (especially EWINDO's own) for its programs such as CPCL (Calon Petani, Calon Lahan). Local government will also assign public extension workers to be trained by EWINDO to enable it to deliver improved extension services to farmers.

Annex 2 – SAFIRA private sector partners

Partner	Type	Activities	Target group/entity	Participants
Bank Andara/ BPR Pesisir Akbar	Wholesale bank	Hiring and briefing consultant for credit scoring and loan monitoring	International consulting company	5
		Piloting of and training on Credit Scoring System	BPR Pesisir Akbar	6
		Agreement on input supply for farmers	SMEs / Syngenta retailer	3
		VCF training	Bank Andara staff and 7 BPRs	25
Bank Sinarmas	Private bank	VCF training	Sinarmas staff	75
		Hiring and briefing consultant	International consulting company based in Indonesia	1
		Training on product knowledge and SOP of loan for cattle fattening	Sinarmas staff	20
		Agreement on cattle fattening with intermediary service providers in Tuban area	SMEs	3
		Promotion on loan for cattle fattening	Farmer	48
		Agreement on VCF implementation outside Tuban	SMEs	7
Bank BRI	State-owned commercial bank	VCF Training	Staff	30
		VCF Technical Assistance	Staff	30
		Link with ISP	ISP (input provider/off-taker)	2
CU Sawiran	Credit Union	Hiring consultant on building loan monitoring dashboard and mobile apps for officers and members of CU Sawiran	national consulting company	1
Bank NTB	Provincial Development Bank (state owned bank)	Conducting socialization on GAP and loan Bank NTB	Farmers	1423
Syngenta	Agribusiness	Hiring a consultant to conduct market analysis for rice EJ	National consulting company	1
PT BISI International	Agribusiness	Hiring consultant for YARO financing model	National individual consultant	1
		Training on YARO module	BISI staff	3
		Training on loan administration tool	BISI staff	2
		Training on YARO potential agent	Retailers, Farmers group representation, Individual investors, Individual agents	117
		Conducting YARO promotional events	Farmers	588
		Conducting socialization events on GAP to promote YARO scheme	Farmers	3517
Bank NTT	Provincial Development Bank (state owned bank)	MoU has been agreed but activities has yet to implement		
BPR Arta Kencana	Rural Bank	1 st VCF Training	BPR Arta Kencana staff, NuFarm	18

Bank BTPN	State-owned commercial bank	VCF training	BTPN staff	22
Bank Jawa Barat	Provincial Development Bank	VCF training	Bank staff	29
Cooperative Association of Maumere (Puskopdit Maumere)	Secondary cooperative	VCF training	Association members (credit unions)	41
Cooperative Association of Ruteng (Puskopdit Ruteng)	Secondary cooperative	VCF training	Association members (credit unions)	33
BPR Central Pitoby	Rural Bank	VCF Training	BPR Staff	18
		VCF Technical Assistance	BPR Staff	18
		Promotion events	Farmers/SMEs	2050
		Link with ISP	ISP	2
Tanaoba Laismanekat (TLM)	Financial Group	VCF Training	TLM Staff	30
		VCF Technical Assistance	TLM Staff	30
		Promotion events	Farmers	4000
		Link with ISP	ISP	2
Bank BNI	State-owned commercial bank	Link with Off-taker	Off-taker	1
		Market event	Staff	12
		Develop SOP and Flowchart	Input provider, ISP, Farmer groups, off-taker	N/A

Annex 3 – SAFIRA Financial Reports

SAFIRA Quarterly Forecast

Basis of Payment Budget Category	Actual to Dec 2017	Calendar Year 2018 Jan - Dec 2018 (AUD)					Grand Total
		Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Grand Total	
		Q1	Q2	Q1	Q2		
		<i>Actual</i>	<i>Actual</i>	<i>Forecast</i>	<i>Forecast</i>		
Long-Term Adviser, Personnel and Support Cost	969,678	142,405	121,333	133,208	228,863	625,809	
Travel and Operations	218,420	36,820	31,578	39,600	34,350	142,348	
Implementation Activities	659,208	17,405	182,619	319,940	137,104	657,067	
Direct Reimbursable Management Costs	56,437	5,541	7,521	24,330	20,479	57,871	
Grand Total	1,903,744	202,171	343,051	517,078	420,795	1,483,096	

SAFIRA January – June 2017 Variances

Basis of Payment Budget Category	Jan-Jun 2018			
	Forecast	Actual	Variance	
Long-Term Adviser, Personnel and Support Cost	236,298	263,738	27,570	12%
Travel and Operations	57,420	68,398	10,978	19%
Implementation Activities	310,191	200,023	(110,168)	(36%)
Direct Reimbursable Management Costs	16,870	13,063	(3,808)	(23%)
Grand Total	620,649	545,222	(75,427)	(12 %)

Annex 4 – SAFIRA and PRISMA risk matrix

Annex 5 – PRISMA QMT results July 2018



Annex 6 – PRISMA portfolio development plan

PF	Sub-Sector	Actual Cumulative Per 2018S1				Actual - semester		
		Number of ICN - actual	Number of IP finalized - actual	Number of interventions with contract - actual	New & existing interventions	Portfolio development Y18S1 (new interventions)		
					Targeting Outreach Up to 2018	ICN actual	IP actual	Interventions with contract Actual
PF2	Anggur Merah-NTT	1	1	3	-			
PF4	Beef-EJ	4	4	4	12,903			
PF4	Beef-NTB	2	2	2	1,706		1	1
PF4	Beef-NTT	2	1	1	338			
PF5	Cashew-NTB	1	1	2	1,387			1
PF5	Cashew-NTT	6	2	4	5,449			2
PF4	Cassava-EJ	3	3	3	643			
PF4	Cassava-NTT	2	1	1	-			
PF4	Cassava-PA	1	0	0	-			
PF2	Cocoa-PA	5	2	2	471			
PF2	Cocoa-WP	1	1	0	-	1	1	
PF4	Coconut-EJ	2	2	2	917		1	1
PF4	Coconut-NTB	2	1	1	-			
PF4	Coconut-NTT	5	2	2	571		1	1
PF5	Coffee-EJ	2	2	1	-			
PF5	Coffee-NTT	3	3	3	6,810			
PF2	Dana Desa-EJ	0	0	0	-			
PF2	Dana Desa-NTT	0	0	0	-			
PF2	Extension Services-EJ	3	1	1	-	1		
PF2	Extension Services-NTB	1	1	1	-			
PF2	Extension Services-NTT	0	0	0	-			
PF4	Feed-NTT	1	1	1	-			
PF4	Fertilizer-EJ	1	1	1	-	1	1	1
PF4	Fertilizer-NTB	2	2	3	840	2	2	3
PF4	Fertilizer-NTT	1	1	1	-	1	1	1
PF1	Fish-EJ	2	2	2	6			
PF2	GOI-EJ	0	7	3	2,534		4	1
PF2	GOI-NTB	0	2	2	1,356			
PF2	GOI-NTT	0	4	4	3,220		2	2
PF2	GOI-PA	0	1	0	-		1	

PF2	GOI-WP	0	1	0	-		1	
PF2	Irrigation-EJ	1	1	1	-			
PF3	Maize-EJ	4	4	5	47,622	1	1	
PF3	Maize-NTB	2	2	3	6,050			1
PF3	Maize-NTT	8	7	6	35,108			
PF1	Mango-EJ	4	3	4	6,701			
PF1	Mango-NTB	3	3	3	2,268			
PF3	Mungbean-EJ	4	4	4	2,722			
PF3	Mungbean-NTB	1	1	1	-			
PF3	Mungbean-NTT	1	2	2	-			
N/A	Nutmeg-P	1	0	0	-			
PF3	Peanut-EJ	4	4	4	2,958	1	1	2
PF3	Peanut-NTT	4	2	2	616			
PF4	Pig-NTT	4	3	3	82,028			
PF4	Pig-P	0	0	0	-			
PF1	Potato-EJ	0	0	0	-			
PF1	Rice-EJ	3	3	2	3,003	2	2	1
PF2	Rice-P	0	1	1	934			
PF2	Rice-WP	0	1	1	400			
PF5	Seaweed-NTT	2	2	4	1,892			1
PF5	Seaweed-P	0	0	1	-			
PF5	Seaweed-WP	1	1	1	-			
PF1	Shallots-EJ	4	5	5	1,488		1	1
PF1	Shallots-NTB	1	2	4	8,127		1	1
PF3	Soybean-EJ	7	6	6	13,674			
PF3	Soybean-NTB	2	3	5	3,598	0	1	1
N/A	Tomato-EJ	1	0	0	-			
PF2	Vanilla-PA	1	0	0	-			
PF1	Vegetable-EJ	7	7	6	29,714			
PF1	Vegetable-NTB	4	4	4	11,104			
PF1	Vegetable-NTT	5	6	4	5,406			
PF1	Vegetable-P	4	4	4	3,520			2
PF1	Vegetable-WP	7	7	6	3,591			3
Total		143	140	142	311,675	10	23	27

Annex 7 – PRISMA projections until December 2018 (excluding pipeline)

Projection 2018 S2 (Jul-Dec 2018) - incremental									
Row Labels	Semester access (all farmer) Dec-18	Semester use (all farmer) Dec-18	Semester outreach (all farmer) Dec-18	Semester income (all farmer) Dec-18	Semester outreach (< \$2 PPP) Dec-18	Semester income (< \$2 PPP) Dec-18	Semester outreach (< \$2.5 PPP) Dec-18	Semester income (< \$2.5 PPP) Dec-18	Semester income (< \$2.5 PPP) Dec-18
Anggur Merah-NTT	-	-	-	-	-	-	-	-	-
Beef-EJ	9,045	9,771	6,776	109,131,197,784	2,261	36,730,240,073	4,487	72,649,943,549	
Beef-NTB	1,600	1,515	1,061	8,046,818,182	286	2,172,640,909	658	4,989,027,273	
Beef-NTT	550	550	275	277,647,700	164	165,811,206	238	240,776,085	
Cashew-NTB	-	-	-	-	-	-	-	-	-
Cashew-NTT	1,200	-	419	592,328,987	173	245,046,502	285	402,487,547	
Cassava-EJ	-	-	-	-	-	-	-	-	-
Cassava-NTT	-	-	-	-	-	-	-	-	-
Cocoa-PA	100	345	173	146,667,500	106	89,467,175	140	118,800,675	
Coconut-EJ	1,350	810	486	619,650,000	219	278,842,500	384	489,523,500	
Coconut-NTB	-	-	-	-	-	-	-	-	-
Coconut-NTT	1,600	480	480	639,138,240	182	242,872,531	312	415,439,856	
Coffee-EJ	1,440	-	-	-	-	-	-	-	-
Coffee-NTT	-	-	-	13,034,678,824	-	6,029,612,810	-	9,193,950,406	
Extension Services-EJ	-	-	-	-	-	-	-	-	-
Extension Services-NTB	-	-	-	-	-	-	-	-	-
Feed-NTT	-	-	-	-	-	-	-	-	-
Fertilizer-EJ	2,275	1,365	-	-	-	-	-	-	-
Fertilizer-NTB	4,860	1,716	840	1,626,660,000	336	650,664,000	554	1,073,595,600	
Fertilizer-NTT	630	378	-	-	-	-	-	-	-
Fish-EJ	-	-	-	-	-	-	-	-	-
GOI-EJ	2,125	1,564	1,074	1,649,739,753	502	860,618,752	816	1,352,135,049	
GOI-NTB	1,500	1,000	1,356	201,340,160	521	68,435,046	893	131,371,878	
GOI-NTT	7,220	4,154	3,220	4,330,015,200	1,315	1,824,049,440	2,208	2,981,195,460	
Irrigation-EJ	-	-	-	-	-	-	-	-	-
Maize-EJ	5,680	12,177	11,109	10,441,092,745	5,229	5,301,976,010	8,708	8,507,741,333	
Maize-NTB	5,433	5,033	2,683	7,523,445,556	1,376	3,110,067,333	1,846	4,990,646,345	
Maize-NTT	29,611	28,176	15,987	22,113,696,416	7,840	10,844,598,662	11,794	16,320,746,752	
Mango-EJ	-	-	-	-	-	-	-	-	-
Mango-NTB	-	-	-	-	-	-	-	-	-
Mungbean-EJ	4,600	3,370	2,696	2,630,834,800	1,321	1,235,012,148	2,202	2,166,547,388	
Mungbean-NTB	-	-	-	-	-	-	-	-	-
Mungbean-NTT	-	-	-	-	-	-	-	-	-
Peanut-EJ	9,190	4,506	2,857	5,714,400,000	1,172	2,342,904,000	2,028	4,057,224,000	
Peanut-NTT	2,955	2,171	793	456,549,263	584	336,476,807	745	428,699,758	
Pig-NTT	10,396	15,993	15,993	534,121,687,030	6,161	203,552,825,262	10,556	352,520,313,440	
Rice-EJ	6,300	4,290	3,003	12,536,998,950	1,081	4,513,319,622	931	3,886,469,675	
Rice-P	1,453	1,167	934	6,938,515,200	439	3,261,102,144	663	4,926,345,792	
Rice-WP	808	500	400	3,734,985,600	232	2,166,291,648	308	2,875,938,912	
Seaweed-NTT	1,060	397	412	1,230,700,000	209	904,147,000	303	1,098,202,000	
Seaweed-P	-	-	-	-	-	-	-	-	-
Seaweed-WP	-	-	-	-	-	-	-	-	-
Shallots-EJ	2,940	265	67	1,201,899,032	41	733,158,410	45	805,272,352	
Shallots-NTB	3,815	1,112	661	7,098,981,230	277	2,981,572,117	450	4,827,307,237	
Soybean-EJ	-	2,250	-	-	-	-	-	-	-
Soybean-NTB	3,763	3,455	1,084	2,801,151,069	336	882,332,299	580	1,454,360,173	
Vegetable-EJ	33,865	35,039	14,233	63,335,907,880	4,712	20,596,552,911	9,477	41,825,868,451	
Vegetable-NTB	2,146	8,267	3,268	13,378,958,646	1,659	7,005,501,291	2,186	9,115,441,916	
Vegetable-NTT	2,855	5,666	2,365	4,381,965,741	1,089	1,988,496,380	1,691	3,106,767,375	
Vegetable-P	868	1,404	1,255	3,094,292,794	649	1,482,034,229	907	2,151,582,325	
Vegetable-WP	1,034	914	811	843,194,403	516	649,112,618	664	764,801,132	
Total	164,267	159,800	96,771	843,875,138,684	40,988	323,245,781,837	67,059	559,868,523,233	

Annex 8 – PRISMA semester outreach breakdown (July 2018)

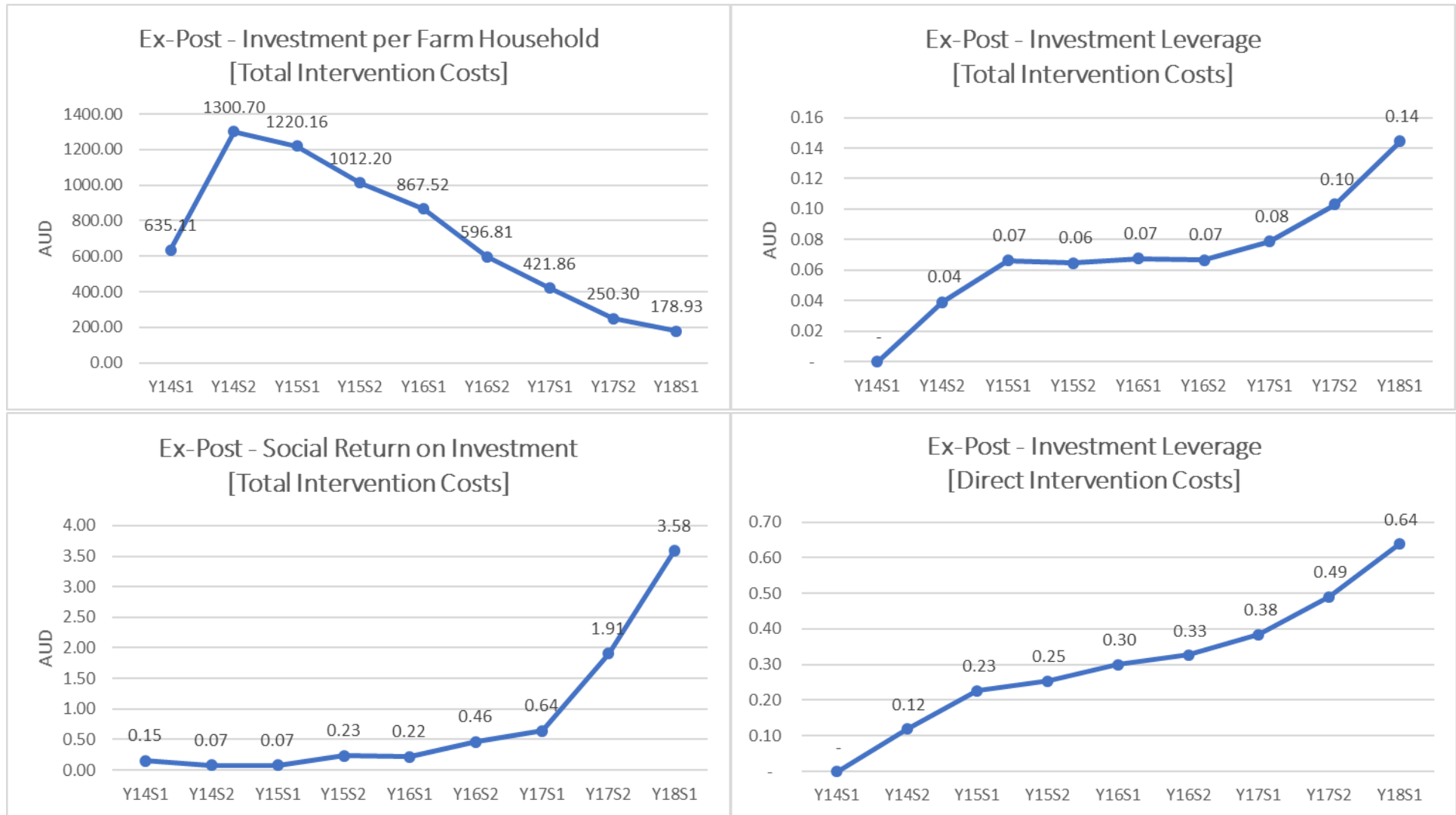
No	Intervention Code	Intervention Name	Cumulative Actual	Y18S1 Actual	Y18S2 Projection
1	1MEA	Maize AHSTI	14,517	6,033	-
2	1CAA	Access to GAP and Fertilizer	663	-	-
3	1SNB	Certification and Nurseries	4,035	-	-
4	1SNA	Developing Commercial Market	9,639	-	-
5	2CWA	Pest Control and GAP Services	1,387	-	-
6	1CTA	Organic Certif - Coconut Sugar	431	-	-
7	1FHA	Fish Cage Farming	6	-	-
8	1MOA	Mango EJ Syngenta	5,580	-	-
9	2MOA	Mango NTB Syngenta	1,372	-	-
10	3PGA	Pig Rearing	1,118	-	-
11	1PTA	Good Quality Seed	101	-	-
12	3SDA	Seaweed UD Alga	630	-	-
13	3CEA	Coffee GAP	4,907	-	-
14	3CEB	Decentralized Processing	3,000	-	-
15	2STA	Shallots EWINDO	6,452	3,539	520
16	2BFA	Commercial Feed	657	-	-
17	3CWA	Cashew Peduli Kasih	423	-	-
18	1BFA	Beef Feed WU	834	-	-
19	1BFB	Beef Feed PKM	1,131	-	1,057
20	3PTA	Good Quality Peanut Seeds	155	-	793
21	4COA	Cocoa YPPWP	298	-	-
22	3MEC	Maize Storing	243	182	-
23	3MEB	Maize Nurseries	10,012	-	618
24	3MEA	Maize YMTM	5,165	-	2,428
25	1STA	Shallots SPILT	325	-	-
26	2SNA	BASF Soy Doctor Program	1,609	-	-
27	3MED	Stimulating market of OPV Seed	4,081	-	-
28	3BFA	Beef Lamtoro	65	-	275
29	1MEB	Expansion of Hybrid Market	18,887	18,887	7,344
30	3CWB	Quality Inputs and Tools	4,612	1,075	419

31	5VEB	Highland Vegetables	176	-	-
32	3PGB	Decentralized feed for pig	37,656	12,879	8,392
33	3AHB	Anggur Merah for Pig Sector	55	-	-
34	1MNC	Commercializing Quality Mung Bean Seed	-	-	896
35	2SNC	ACCESS	905	319	539
36	4VEA	Promotion of Good Quality Seed and GAP Provision	2,271	1,857	-
37	5VEC	Promotion of Good Quality Seed and GAP Provision	2,604	339	-
38	1MEC	Maize Syngenta	1,621	-	-
39	1BFC	Beef Nutrifed	4,275	-	3,430
40	1ITA	Vegetable ICT EWINDO (SIPINDO)	3,283	3,283	1,917
41	2ITA	Vegetable ICT EWINDO (SIPINDO)	794	794	441
42	3ITA	Vegetable ICT EWINDO (SIPINDO)	892	892	524
43	2ITB	ICT NASA	2,757	2,661	2,827
44	3ITB	ICT NASA	1,725	1,470	1,841
45	1ITB	ICT NASA	12,141	7,193	10,465
46	1MED	Maize-DuPont	12,777	3,850	1,485
47	1MOB	Mango EJ Scale up Syngenta	1,094	1,094	-
48	3PGC	Promoting Improved Feed and Good Rearing Practices in Timor	35,380	13,316	7,601
49	1MEE	Maize BISI	9,504	5,760	2,280
50	1VEA	Rainbow - Vegetable EJ	930	264	-
51	2VEA	Rainbow - Vegetable NTB	4,517	3,688	-
52	2MOB	Mango NTB Scale Up Syngenta	896	896	-
53	1MOD	Pazole EJ Rainbow	228	228	-
54	3VEA	Sumber Tani and Sahabat Tani - Vegetable NTT	576	576	-
55	2MEB	GAP and GHP with YARO	3,764	3,764	1,513
56	1STB	Social Marketing CropLife	409	409	24
57	2STB	Social Marketing CropLife	385	385	1
58	1STC	IPDM Nufarm	720	103	43
59	2STC	IPDM Nufarm	777	777	140
60	4COB	Cocoa ECOM	-	-	173
61	1MND	Promoting certified mung bean seeds	289	289	1,800

62	3SDB	Seaweed RKN	-	-	50
63	3MEE	Maize OPV Nurseries	-	-	9,801
64	1VEB	Agrosid Soil Treatment GAP	279	279	630
65	1GIA	M4P Maize Pamekasan	1,950	1,950	490
66	3MEF	Promoting Hybrid Maize Cultivation	-	-	3,140
67	1BFD	Beef Japfa	-	-	2,289
68	1GIC	PPC Promoting Small Veg Seed Package to Rural Area of Pamekasan	-	-	377
69	2SND	Promoting GAP and Crop Protection through Extension Service Worker	-	-	545
70	3SDC	Seaweed Sabu ATC	-	-	47
71	4REA	Crop Protection in Papua with BASF	-	-	934
72	5REA	Crop Protection in West Papua with BASF	-	-	400
73	2GIA	Promoting small package quality vegetable seed for rural Home Garden in Lombok Utara	-	-	1,089
74	3GIA	Promoting small package quality vegetable seed for rural Home Garden in Kupang	-	-	1,039
75	3GIB	Promoting small package quality vegetable seed for rural Home Garden in TTS	-	-	420
76	1REA	Rice EJ FMC	-	-	3,003
77	1VED	Danken-Pest and Disease Management	-	-	1,016
78	4VEB	Vegetable YBTS	-	-	191
79	1VEE	Vegetable Agricon EJ	-	-	205
80	2MEC	Promoting Quality Maize Hybrid Seed and Good Cultivation Practices	-	-	1,170
81	3GIC	PPC Maize Matim	-	-	311
82	3GID	PPC GHP and Improving Access to Maize Market MABAR	-	-	1,450
83	5VED	Ewindo Scale up West Papua	-	-	426
84	4VEC	Ewindo Scale up Papua	-	-	828
85	1PTC	Peanut EJ Syngenta	-	-	1,782
86	3CTB	Better Value Market for CCO Farmers	91	91	480
87	1CTB	Promoting coconut parent trees registration in EJ	-	-	486
88	1PTD	Promoting Quality Input to Peanut Farmers	-	-	1,075

89	2FRB	Fertilizer (NTB)	-	-	840
90	5VEE	YBTS Fak-Fak	-	-	295
91	5VEF	YBTS Arfak-highland Vegetable	-	-	90
92	4VED	YBTS Biak	-	-	236
93	2BFB	Commercial Feed and Pharma Products	-	-	1,061
94	1GID	PPC- GAP TSS Shallot for farmers and local nurseries	-	-	207
95	3SDD	Seaweed Mazu	850	850	315
Total			248,906	99,972	96,504

Annex 9 – PRISMA value for money ex-post until July 2018



Annex 10 – PRISMA private sector partner details

PRISMA partner details

Partners' Details		
Soybean EJ and NTB	Intervention 1	Promoting commercially certified seed
	Partners 1	Mr. Sugito (UD Karya Tani)
	Description	Mr Sugito currently runs a nursery business and has certificate from BLPP. He currently has 260 ha with 1,000 nursery farmers supplying seeds that he sells to government agencies and also to farmers.
	Partners' Rationale	He would like to expand his nursery business to 1,000 ha with 4,000 contract nursery farmers because demand remains high. Farmers on a 0.25 ha farm can only obtain 2kg of subsidized seed compared to the 10 kg needed. Hence, there is a substantial demand for soybean seed in the commercial market. Mr. Sugito will work with farmers currently working on rice nursery cultivation. These farmers will be his marketing and distribution channels.
	Partnership Roles	PRISMA will help Mr. Sugito with the marketing of non-subsidized soybeans seeds in the commercial market. PRISMA will also help create distribution channels for Mr. Sugito by identifying the ISP (nursery contract farmers) and/or seed retailers and also prepare marketing tools for the ISPs.
	Intervention 2	Improve certification procedures for soybean seed
	Partners 2	East Java Local Government Agencies
	Description	The local government of East Java has a mandate to provide certified soybean seed. Several institutions are involved, such as BBI (a provincial government nursery) producing foundation seed, Balitkabi (a national agency) that produces breeder seed/ basic seeds, BPSB (a provincial agency) that issues certification, BPPP (a national agency) that trains farmers in nursery skills. The certification process needs to improve to increase efficiency and reduce waiting periods.
	Partners' Rationale	Due to the lack of nursery facilities in Sampang, the Sampang Department of Agriculture (<i>Dinas Pertanian</i>) has taken the lead to establish new nurseries. The target is 6-22 nurseries, depending on the season.
	Partnership Roles	PRISMA will help facilitate the Sampang and Trenggalek Department of Agriculture to coordinate the relevant agencies and develop capacity for PPL (extension).
	Intervention 3	Improve dissemination of new soybean varieties
	Partner 1	Badan Tenaga Nuklir Nasional (BATAN)

Descriptions	BATAN is a government research agency that has mandate to carry out government duties in the field of research, development and utilization of nuclear science and technology in accordance with the provisions of legislation. The research, development and utilization of nuclear science and technology in Indonesia is directed as much as possible for the welfare of the Indonesian people.
Partners' rationale	One of the tasks of BATAN is to develop agricultural varieties that have competitiveness and can improve agricultural productivity in Indonesia. One of the commodities developed by BATAN is soybean. However, BATAN has limitations in producing and disseminating their products in large scale, resulting to only small number of soybean farmer benefited from this technology There is no private sector involvement in dissemination of commercial and labelled soybean seed and government R & D has limited capacity in dissemination and production of new soybean seed varieties. BATAN has capacity to produce new and high yield soybean seed and EWINDO has capacity and network to produce/multiply new soybean seed and promote it to farmers.
Partnership Roles	PRISMA's role is to support BATAN to scale up the production and dissemination of their product by connecting BATAN to seed producers so that many soybean farmers can benefit from this intervention
Partner 2	PT East West Seed Indonesia (EWINDO)
Descriptions	EWINDO is an integrated vegetable seed company in Indonesia which produces its seeds through plant breeding, and market its products for Indonesian farmers with the brand CAP PANAHERAH, since more than two decades ago.
Partners' rationale	EWINDO is highly interested to venture out their business to soybean seed production and distribution. Their mission to provide better seeds for smallholder farmers and increase their income, is in line with PRISMA's goals. EWINDO also has a well-established distribution channel in Indonesia, which will aid PRISMA in reaching thousands of soybean farmers, particularly in Eastern Indonesia.
Partnership Roles	PRISMA's role is connecting EWINDO to seed resource institutions to identify existing and potential new high yielding soybean varieties. PRISMA will support EWINDO in conducting a market research in order to identify customer segmentation, area focus, and varieties to produce. PRISMA will also support EWINDO with experts in production, promotion and storage of soybean seed.
Intervention 4	Increase productivity by promoting GAP information through soy doctor
Partners 1	PT. BASF Indonesia

Descriptions	PT. BASF INDONESIA is a chemical company with broad portfolio including crop protection. The portfolio also includes products for turf and ornamental plants, pest control and public health. PT. BASF INDONESIA Crop Protection division is a leading innovator in partnership with farmers to protect and improve crop yields, enabling them to produce high quality food more efficiency.
Partners' rationale	BASF saw potential market in soybean and has soybean pilot program in Banyuwangi in 2014. From these pilot, farmers are able to increase income until 45%. Meanwhile, BASF has a program called MTA (Mitra Tani Agri-Aexcellent) for other crops to reach farmers through cooperation with lead farmers or head of group farmers. BASF aims to reach as many farmer as possible with minimum operational spending. MTA program did not work well due to lack of planning and management.
Partners Roles	PRISMA support BASF to improve their program and be the first agro-input company focuses on soybean market by introducing new program called "soy doctor". PRISMA support for soy doctor implementation include: <ol style="list-style-type: none"> 1. Support BASF in developing better program management including soy doctor selection criteria, proper incentive and reward scheme, training plan, and monitoring plan 2. Support capacity building for soy doctor and BASF staffs to be able to deliver GAP information to farmer Support BASF to identify location for intervention where there is significant number of user
Intervention 5	Alternative Channel of Certified Soybean Seeds (ACCESS) in East Java
Partners 1	PT. Karisma Indoagro Universal
Descriptions	PT. Karisma Indoagro Universal is a company working in distribution of wide range of agriculture products, including seeds, fertilizer, and pesticides. The company has been working with numerous chemical companies, suppliers, and R1 and R2 (retailers) all over districts in East Java.
Partners' rationale	Partner saw potential market in soybean seed which involve 600,000 of farmers in East Java. Currently most farmers use retained seeds with low and declining yields, and more farmers seek to find commercial good quality seeds in store. This condition encourages PT. KIU to become the first distributor selling commercial certified seeds in East Java.

Partnership Roles	In this intervention, PRISMA links soybean nurseries with limited access to market to be the supplier of good quality certified soybean seeds to PT. Karisma Indoagro Universal that will distribute it to the agriinput stores R1/R2 (retailers) in district level in East Java. 1. PRISMA supports the partner in determining the location of potential district to sell the soybean seeds, based on the seasonality. 2. PRISMA supports the nurseries by upgrading their capacities to be able to sell their seeds commercially, in term of packaging. PRISMA also supports the promotion of certified seeds to the farmers.
Intervention 6	Alternative Channel of Certified Soybean Seeds (ACCESS) in NTB
Partners 1	CV. Agro Makmur Mandiri
Descriptions	CV. Agro Makmur Mandiri is a company working in distribution of wide range of agriculture products, including seeds, fertilizer, and pesticides. The company has been working with numerous chemical companies, suppliers, and R1 and R2 (retailers) all over districts in Bima and Dompu, NTB.
Partners' rationale	Partner saw potential market in soybean seed which involve 27,000 of farmers in NTB. Currently most farmers use retained seeds with low and declining yields, and more farmers seek to find commercial good quality seeds in store. This condition encourages CV. AMM to become the first distributor selling commercial certified seeds in NTB.
Partnership Roles	In this intervention, PRISMA links soybean nurseries with limited access to market to be the supplier of good quality certified soybean seeds to CV. Agro Makmur Mandiri that will distribute it to the agri input stores R1/R2 (retailers) in district level in NTB. 1. PRISMA supports the partner in determining the location of potential district to sell the soybean seeds, based on the seasonality. 2. PRISMA supports the nurseries by upgrading their capacities to be able to sell their seeds commercially, in term of packaging. PRISMA also supports the promotion of certified seeds to the farmers.
Partners 2	UD. Pemuda Kreatif

Descriptions	UD. Pemuda Kreatif is a soybean nursery in Bima with production capacity 250 ton per year. The main market is to supply subsidy seed program from Dinas (local and outside Bima)
Partners' rationale	Partner saw potential market in soybean seed. Currently most farmers use retained seeds with low and declining yields, and more farmers seek to find commercial good quality seeds in store. This condition encourages UD. Pemuda Kreatif to sell soybean seed commercially
Partnership Roles	PRISMA support UD. Pemuda Kreatif on market assessment for commercial market in Bima, improve brand awareness, and identification potential retailers
Intervention 7	GAP Through Rainbow Ambassadors (Laskar Pelangi)
Partners	PT. Rainbow Agrosience Indonesia
Descriptions	PT. Rainbow Agrosience Indonesia (RAID) is a multinational company started in 2012 in Indonesia. Their Core Values are formulation development of Agrochemicals. RAID owns 100 registrations of chemicals that are repackaged and sold by BASF, Syngenta, Bayer etc in Indonesia. Currently RAID has just started their commercial business in 2015 where they are aiming to be a one stop chemical solution from seed to harvest. Rainbows commercial area in Indonesia are divided into 3 Areas – Sumatera, Jawa and East Indonesia

Partners' rationale	RAID has an existing project called Pelangi Farmers Group (PFG) where they design and deliver curriculums solely to help farmers increase their yields. Currently they have one for Shallots but they do not have one for soybeans which PRISMA can provide. In addition, since RAID is relatively new in the commercial market, specifically within the East Java province, they saw that entering the market through soybean commodity is a great opportunity to establish their brand name and products in the province.
Partnership Roles	PRISMA support RAID to improve their "Pelangi Farmer Group" program under the name "Laskar Pelangi". PRISMA support for Laskar Pelangi by: <ol style="list-style-type: none"> 1. Support partner in developing better program management including Laskar Pelangi selection criteria, proper incentive and reward scheme, training plan, and monitoring plan 2. Support capacity building for Laskar Pelangi to be able to deliver GAP information to their peer farmers Support RAID to identify location for intervention where there is significant number of users
Intervention 8	Promoting GAP and Crop Protection through Extension Service Worker (PPL)
Partners	PT. BISI International
Descriptions	PT. BISI has been in Indonesia since 1983 focusing Seeds distribution. They also have own an array of agro-chemical products under the name of Tanindo. Their main mission is the provision of innovative products, technology and support to help farmers increase productivity through both seeds and agrochemicals.
Partners' rationale	PT. BISI has agrochemical products under the name of Tanindo, market share in Lombok Tengah before intervention mainly comes from horticulture and currently looking to expand their business focusing on Paddy, Maize, and Soybean. BISI has good reward and incentive scheme for their retailers and inviting PPL with the same scheme will increase PPL's interest to disseminate GAP information particularly on pest and disease management with additional incentives.
Partnership Roles	PRISMA support BISI to engage with Local Dinas and get access to all PPL in Lombok Tengah, support in training to PPL for pest and disease management, improving reward scheme, and support in promotional activity.

Maize EJ	Intervention	Promoting hybrid seeds
	Partner 1	PT Asian Hybrid Seed Technologies Indonesia (PT AHSTI)
	Description	PT AHSTI has developed seed stock for dry conditions and piloted cultivation in Gunung Kidul, Yogyakarta. The company is experienced in selling hybrid seed in Sumatra and Sulawesi.
	Partners' Rationale	The company wants to expand their seed market beyond mainland Java island to neighbouring Madura island. To realize this vision, they are willing to invest in demonstration plots and good agricultural practices (GAP) capacity building for maize farmers in Madura.
	Partnership Roles	PRISMA supports PT AHSTI develop distribution channels (sales agents/retailers) in Madura and promote and distribute their seeds among target groups.
	Partnership Roles	PRISMA supports PT AHSTI develop distribution channels (sales agents/retailers) in Madura and promote and distribute their seeds among target groups.
	Partner 2	Dinas Pertanian Tanaman Pangan Kabupaten Sumenep (District Agriculture Office/DAGRIO) of Sumenep
	Description	DAGRIO is one of Sumenep District Government Agencies that have authority to plan, implement and evaluate any activities to increase agriculture production and productivity. The agency is operating based on Regional Regulation Number 16/2008 on the Establishment of Regional Agencies Organization. DAGRIO is an implementing unit of regional autonomy in the area of agriculture and staple crops within the territory of Sumenep District. The agency is led by a Head of Agency which is selected, work and responsible to Head of District (Bupati). Basically, the Head of DAGRIO receives mandate from Bupati to implement District Government's authority in the field of agriculture and staple crops through planning, implementation and evaluation activities.

Partners' Rationale	The company has responsibility to support national government in achieving agriculture commodities production and productivity targets, including maize. However, the role of DAGRIO in poverty reduction is limited and they are willing to improve their hybrid maize promotion approach to better serve the poor farmers while strengthening hybrid maize system in Madura. On the other hand, the DAGRIO also has a vision to increase the percentage of maize farmers who using the hybrid seed to 60% at least that can leverage the local economic development.
Partnership Roles	PRISMA support DAGRIO to improve coordination with private sector to avoid negative impact of annual hybrid maize subsidy to the existing hybrid maize market system in Madura, particularly in Sumenep as well as conducting massive social media campaign to change the mindset of the farmers
Partner 3	PT BISI International Tbk
Description	PT BISI International, Tbk is the largest producer of hybrid seeds in Indonesia, and a major Indonesian producer of pesticides and a distributor of fertilizer. The Company was founded by the Charoen Pokphand Group, the largest producer of feed in Indonesia. Today, BISI maintains a nationwide operational footprint for research and development, production, marketing, distribution and sales.
Partners' Rationale	The company wants to expand their market to maize farmers who still use local seeds, and improve their promotional activities, including the capacity building to farmers in Madura. The company also wants to cooperate for conducting research.
Partnership Roles	PRISMA support BISI re-vitalize their BISI Club (lead farmer organization consisting of 10-15 lead farmer which important to disseminate the information, knowledge and information of Hybrid Maize Seed and its GAP), and conduct plot research. PRISMA also support BISI promote hybrid maize seed and GAP in Madura.
Partner 4	PT Syngenta Indonesia
Description	Syngenta is one of the world's leading companies that raise up their purpose in "Bringing Plant Potential to Life". Through product development with world-class science, Syngenta has an aim for increasing customer's productivity, protect the environment and improve health and quality of life. Syngenta has wide ranging agro-input products including hybrid maize seed.

	Partners' Rationale	Syngenta is aiming to increase its hybrid maize product penetration in Madura. Business Development team in Syngenta envision to have an improvement in its marketing strategy for Madura market and do some research regarding the impact of the strategy.
	Partnership Roles	Syngenta need a fresh-eye to take a look and measure the impact of their improved marketing strategy. It also need a better understanding about Madura market as the basis for them in the future strategy improvement. This is where PRISMA came in to give a support, particularly in providing essential information through market research and program evaluation.
	Partner 5	PT Du Pont Indonesia
	Description	DuPont is a science company dedicated to solving challenging global problems, meeting urgent needs in agriculture, nutrition and health, bio-based industrials, electronics and communications, advanced materials, and safety and protection. In the agriculture business line, one of their biggest business is hybrid seed.
	Partners' Rationale	They have an objective to improve the quality of maize farmers in Indonesia with a program name "Indonesia Panen Melimpah" and they realize that could not get a fast return in their investment in Madura (and other local maize farmers).
	Partnership Roles	PRISMA supports Du Pont mainly to re-enter Madura hybrid maize market, through portion in promotional activities and capacity building of their sales agents (Front Liners) and lead farmers partners (MAP). In addition, PRISMA also presents gender aspect internalization through support in hiring female Front Liners to target the female maize farmers market.
Maize NTB	Intervention 1	Introducing better maize cultivation practices through YARO model
	Partner 1	PT. BISI International

Description	PT. Bright Indonesia Seed Industry (PT. BISI International) is a subsidiary company of Charoen Pokphand Group, a Thai feed mill company. PT BISI International mainly sell maize, paddy, and vegetable seeds along with pesticides and herbicides products in Indonesia and to other countries since 1983. BISI has one of the largest maize seed market share in Indonesia.
Partners' Rationale	A commitment has been stated by the partner that they agreed to reach 3,000 farmers with PRISMA's facilitation and to expand the upcoming intervention in other provinces. BISI also stated that they are willing to hire more resources (if needed) to support the intervention.
Partnership Roles	PRISMA, along with SAFIRA, supports PT. BISI to develop a new system of in-kind credit to farmers, as well as developing capacity building modules and events to reach more farmers in North Lombok, West Lombok, East Lombok, Central Lombok.
Intervention 2	Promoting Quality Maize Hybrid Seed and Good Cultivation Practices
Partner 1	PT. BISI International
Description	PT. Bright Indonesia Seed Industry (PT. BISI International) is a subsidiary company of Charoen Pokphand Group, a Thai feed mill company. PT BISI International mainly sell maize, paddy, and vegetable seeds along with pesticides and herbicides products in Indonesia and to other countries since 1983. BISI has one of the largest maize seed market share in Indonesia.
Partners' Rationale	As West Sumbawa is relatively new to Hybrid Maize cultivation, and within the trend in NTB, BISI sees opportunities for growing their free market sales in NTB. As an action towards this plan, BISI is currently willing to invest additional field staffs, to intensify their market penetration plan
Partnership Roles	PRISMA is collaborating with BISI to introduce good cultivation practices by promoting good quality hybrid seeds. As maize are considered relatively new in West Sumbawa, information of GAP is not widely distributed, even to government extension service workers. Together with BISI, PRISMA is maximising the possibility of

		working with government extension service channel, to disseminate information to the market
Maize NTT	Intervention	Promoting composite seeds
	Partner 1	CV INTAN
	Description	CV INTAN has produced composite seed and stock for dry conditions and piloted cultivation in Kupang District, West Timor-NTT. Since 2008, CV INTAN had engaged in paddy and maize seed. Seed producing effort is made to meet the demand of local government. Since 2013, began to expand its business through the free market. Composite maize seed varieties produced are LAMURU purple and blue label.
	Partners' Rationale	The company wants to expand their seed market around NTT province. To realize this vision, they are willing to invest in promotion include demonstration plots and good agricultural practices (GAP) capacity building for maize growers in Timor island.
	Partnership Roles	PRISMA supports CV INTAN in production of composite seed and develop sales and distribution channels (sales agents/retailers) in TTS and Kupang District and promote and distribute their seeds among target groups.
	Partner 2	Kokdale
	Description	Kokdale has produced composite seed and stock for dry conditions and piloted cultivation in Kupang District, West Timor-NTT. Since 2005, Kokdale has engaged in paddy and maize seed. Seed producing effort is made to meet the demand of local government. Since 2014, began to expand its business through the free market. Composite maize seed varieties produced are LAMURU Purple and Blue label.
	Partners' Rationale	The company wants to expand their seed market around NTT province. To realize this vision, they are willing to invest in promotion include demonstration plots and good agricultural practices (GAP) capacity building for maize growers in Timor island.
	Partnership Roles	PRISMA supports Kokdale in production of composite seed and develop sales and distribution channels (sales agents/retailers) in TTS and Kupang District and promote and distribute their seeds among target groups.
	Partner 3	CV Tiga Putri Mandiri

Description	CV Tiga Putri Mandiri has produced composite seed and stock for dry conditions and piloted cultivation in Kupang District, West Timor-NTT. Since 2005, CV Tiga Putri Mandiri had engaged in paddy and maize seed. Seed producing effort is made to meet the demand of local government. Start on 2015, began to expand its business through the free market. Composite maize seed varieties produced are LAMURU Purple and Blue label.
Partners' Rationale	The company wants to expand their seed market around NTT province. To realize this vision, they are willing to invest in promotion include demonstration plots and good agricultural practices (GAP) capacity building for maize growers in Timor island.
Partnership Roles	PRISMA supports CV Tiga Putri Mandiri in production of composite seed and develop sales and distribution channels (sales agents/retailers) in Belu and Malaka District and promote and distribute their seeds among target groups.
Partner 4	Yayasan Mitra Tani Mandiri (YMTM)
Description	Yayasan Mitra Tani Mandiri (The Foundation for Partnership with Independent Farmers) was found in 1997 with the aims to help communities to expand its local capacity for economic development by increasing competitiveness, farm productivity and providing alternative source of households' income on sustainable agricultural systems. It has two main activities: 1) project development/ implementer for donors or as co-facilitators, 2) business unit/partner for the intervention or market actor include service provider;
Partners' Rationale	The business unit of YMTM wants to develop their seed market around NTT province. To realize this vision, they are willing to invest in production and promotion include demonstration plots and good agricultural practices (GAP) capacity building.
Partnership Roles	PRISMA will support YMTM business unit to produce and distribute quality maize seeds in the region and also conduct promotional activities for the farmers so that the farmers get proper knowledge on maize cultivation. For seed production, YMTM depends on a number of seed growers who produces maize as well in addition to seed production using their retained OPV seeds. YMTM engages a number of seed distributors and retailers for distributing the seeds in those areas and utilize farmer groups for dissemination.
Partner 5	Tunas Harapan

Description	Tunas Harapan is a farmers group consisting of 12 farmers, located in Bipolo village, Kupang. Since 2014, Tunas Harapan farmers group has started its seed nursery business. They started by producing paddy and maize seed to fulfill local government subsidized seed procurement. In 2015, Tunas Harapan sold their maize OPV seed to Flores and Sumba for the government market. They also started to sell maize OPV seed for free market although still in limited amount. The nursery average seed production is 2.5 – 3 MT/Ha.
Partners' Rationale	Tunas Harapan wants to develop their maize seed business market around NTT province. To realize this vision, they are willing to invest in production and promotion include demonstration plots and good agricultural practices (GAP) capacity building for farmers.
Partnership Roles	PRISMA supports Tunas Harapan to improve the quantity and quality in producing maize OPV seed. The intervention also supports partners to develop their sales channels (sales agents/retailers) in Kupang, promote the use of OPV seed along with good cultivation practice knowledge dissemination.
Partner 6	Gaspar Bao
Description	Gaspar Bao owns a maize seed nursery and the leader of Karya Bersama Farmer Group in Kolisia village, Sikka district, Flores. In 2014, he started to produce composite maize seed. He has his own land around 2.5 Ha. Gaspar Bao initially supplied composite maize seed for government seed subsidy procurement. Since 2016, Gaspar Bao started to produce more varieties of composite maize seed (Srikandi Kuning, Lamuru, Provit A-I, Purple Pulut and White Pulut). His nursery also supervised by BPTP NTT to produce hybrid variety – Bima URI-20.
Partners' Rationale	The nursery wants to increase their production and improve quality of their seed. They are interested to expand their seed market around NTT province for both government subsidy procurement and free market. To realize this vision, Gaspar Bao is willing to invest in increasing his seed production by engaging contract seed growers, promoting the benefit of good quality seed and disseminating good agricultural practices to maize farmers.

Partnership Roles	PRISMA supports Gaspar Bao to improve the nursery's quantity and quality in producing maize OPV seed. The intervention also supports partners to develop new sales channel in NTT (especially Sikka and East Flores district), and promote the use of OPV seed along with good cultivation practice knowledge dissemination to farmers.
Partner 7	Dominggus Benggu
Description	Dominggus Benggu owns a maize seed nursery at Batu Putih Sub District, Timor Tengah Selatan (TTS) District. In 2009 he obtained nursery permission to become a producer of composite maize seeds. His initial production capacity is around 6-8 MT. Now the nursery will try to increase production up to 16 MT.
Partners' Rationale	The nursery wants to increase their production and improve quality of their seed. They are interested to expand their seed market around NTT province for both government subsidy procurement and free market. To realize this vision, Dominggus Benggu is willing to invest in increasing his seed production by engaging contract seed growers, promoting the benefit of good quality seed and disseminating good agricultural practices to maize farmers.
Partnership Roles	PRISMA supports Dominggus Benggu to improve the nursery's quantity and quality in producing maize OPV seed. The intervention also supports partners to develop new sales channel in NTT (especially Sikka and East Flores district), and promote the use of OPV seed along with good cultivation practice knowledge dissemination to farmers.
Partner 8	Pancratius Padji
Description	Pancratius Padji owns a maize seed nursery and the leader of farmer group Sinar Ilimodo located at Sikka district, NTT. He has started his nursery since 2005. Currently the nursery can produce maize up to 40 MT. In 2016, Pancaratius Padji sold 1 MT of seed to free market.

Partners' Rationale	The nursery wants to increase their production and improve quality of their seed. They are interested to expand their seed market around NTT province for both government subsidy procurement and free market. To realize this vision, Pancratius Padji is willing to invest in increasing his seed production by engaging contract seed growers, promoting the benefit of good quality seed and disseminating good agricultural practices to maize farmers.
Partnership Roles	PRISMA supports Pancratius Padji to improve the nursery's quantity and quality in producing maize OPV seed. The intervention also supports partners to develop new sales channel in NTT (especially Sikka and East Flores district), and promote the use of OPV seed along with good cultivation practice knowledge dissemination to farmers.
Partner 9	Dinas Pertanian Provinsi Nusa Tenggara Timur
Description	Dinas Pertanian Provinsi NTT is Governmental Agency who have authority to plan, implement and evaluate programs and policies to increase agriculture production and productivity in NTT. In the year 2017, Dinas Pertanian NTT has a target to implement UPSUS program of 70,000 Ha hybrid seed and 14,000 Ha OPV seed.
Partners' Rationale	Dinas Pertanian Provinsi NTT is targeting to increase production and productivity of maize in NTT. The Head of Dinas Pertanian wants to change farmers behaviour in using retained seed and raise farmers awareness that they need to use good quality seed to increase maize production. Dinas Pertanian Provinsi NTT also aiming local nurseries in NTT can fulfill all OPV seed demand for government seed subsidy procurement. Therefore, Dinas Pertanian NTT will collaborate with private sector (hybrid and OPV seed companies) to use PPL to help campaigning the use of good quality seed to farmers and disseminate maize GAP information.
Partnership Roles	This partnership is complementary to both OPV and hybrid maize intervention to reach more farmers using public Extension Service Workers. Dinas Pertanian Provinsi NTT also provide maize GAP information through demo plots managed by extension service workers. PRISMA and seed companies collaborate to develop capacity of PPL in providing maize GAP information. PRISMA also supports Dinas Pertanian NTT to design an information system to manage demand and supply information of maize seed of local nurseries in NTT.
Intervention 2	Promoting Hybrid Maize Cultivation

	Partners	PT. BISI International
	Description	PT. BISI International is a subsidiary company of Charoen Pokphand Group, a Thai feed mill company. PT BISI International mainly sell maize, paddy, and vegetable seeds along with pesticides and herbicides products in Indonesia and to other countries since 1983. BISI has one of the largest hybrid maize seed market share in Indonesia.
	Partners' Rationale	In 2017, PT. BISI started to invest more in NTT to promote their products in NTT, not just in Timor island but also in Flores and Sumba island. PT. BISI is the biggest supplier of hybrid maize seed for government UPSUS program in NTT. However PT. BISI wants to increase hybrid seed sales in NTT, promote other products such as agro-chemicals and secondary fertilizer to increase hybrid maize farmers productivity in NTT.
	Partnership Roles	PRISMA supports PT. BISI to reach more farmers in NTT and networking with local stakeholders in NTT (local government officers, civil society, retailers, farmers group, etc.) to promote BISI's products and achieve sales target. PRISMA also supports PT. BISI to engage farmers with local maize off-takers to market farmer's hybrid maize grain production.
Mungbean EJ	Intervention 1	Production and Distribution of Certified Mung Bean Seeds
	Partner 1	PT. East West Seed Indonesia (EWINDO)
	Description	PT. EWINDO is an integrated vegetable seed company in Indonesia which produces its seeds through plant breeding, and market its products for Indonesian farmers with the brand CAP PANAHA MERAH, since more than two decades ago. PT. EWINDO is a

Partners' Rationale	PT. EWINDO is highly interested to venture out their business to mung bean seed production and distribution. Their mission to provide better seeds for smallholder farmers and increase their income, is in line with PRISMA's goals. PT. EWINDO also has a well-established distribution channel in Indonesia, which will aid PRISMA in reaching thousands of mung bean farmers, particularly in Eastern Indonesia.
Partnership Roles	PRISMA will support PT. EWINDO in conducting a market research in order to identify customer segmentation, area focus, and varieties to produce. PRISMA will also facilitate PT. EWINDO in meeting seed resource institutions, such as BALITKABI and BATAN, to obtain the rights to distribute the foundation seeds.
Partner 2	BALITKABI
Description	BALITKABI (Research Institutes for Various Legumes) is Technical Implementation for R&D field under Head of Center for Food Crops Research and Development which produces foundation seeds.
Partners' Rationale	In nursery-related interventions, foundation seed (FS) scarcity in mung bean and peanut has become a major problem that hinders higher production by nurseries. BALITKABI is the major part of supporting function of peanut and mung bean seed markets. BPATP (Indonesian Agency for Agricultural Technology Transfer), which is the parent institution for BALITKABI, provides good supporting environment for new seed companies aiming to acquire license to multiply government-owned varieties.
Partnership Roles	PRISMA will support BALITKABI with a market study identifying the demand gap of FS suffered by nurseries in EJ and facilitate a strategic intervention creating SOPs/contracts between nurseries and BALITKABI, thus more certified seeds are available for poor farmers. Along in the partnership, nurseries will also obtain training from BALITKABI on seed quality-enhancing factors, such as seed production, packaging, and storing.
Intervention 2	Promoting Certified Mung Bean Seeds
Partner 1	CV. Semi

	Description	CV. Semi is a Purwodadi-based paddy, maize, and vegetable nursery and agri-input products distributor.
	Partners' Rationale	CV. Semi is highly enthusiastic to enter the mung bean market, seeing the potentials and demand in the market.
	Partnership Roles	PRISMA supports CV Semi suppliers to produce, distribute, and promote quality mung bean seeds through: <ul style="list-style-type: none"> • Connecting CV Semi Purwodadi to BALITKABI in order to gain technical knowledge of mung bean seed production • PRISMA also supports CV. Semi in identifying the right distributors for them (e.g female cooperatives, farmer groups and retailers) to promote mung bean seeds to farmers in East Java.
	Partner 2	CV. Luwes Tani
	Description	CV. Luwes Tani initially is a paddy and shallot nursery and agri-input products distributor based in Kendal, Central Java. Now CV Luwes Tani is expanding their business to mung bean seeds production.
	Partners' Rationale	Looking at the market potential in both East Java and Central Java, CV Luwes Tani show their enthusiast to produce mung bean seeds for the first time. In addition, CV Luwes Tani has high capacity, proven by 24 MT mung bean seeds produced for their first trial.
	Partnership Roles	PRISMA assists CV Luwes Tani to map the potential market in East Java and Central Java, both for government program and free market. PRISMA also supports CV Luwes Tani to conduct promotional event/socialization in East Java, and connecting CV Luwes Tani to potential ISPs/retailers.
Mungbean NTT	Intervention 1	Provision of Foundation Seeds
	Partner	BALITKABI
	Description	BALITKABI (Research Institutes for Various Legumes) is Technical Implementation for R&D field under Head of Center for Food Crops Research and Development which produces foundation seeds.

	Partners' Rationale	In nursery-related interventions, foundation seed (FS) scarcity in mung bean and peanut has become a major problem that hinders higher production by nurseries. BALITKABI is the major part of supporting function of peanut and mung bean seed markets. BPATP (Indonesian Agency for Agricultural Technology Transfer), which is the parent institution for BALITKABI, provides good supporting environment for new seed companies aiming to acquire license to multiply government-owned varieties.
	Partnership Roles	PRISMA will support BALITKABI by mapping potential market/identifying the demand gap of FS suffered by nurseries in NTT and facilitate a strategic intervention creating SOPs/contracts between nurseries and BALITKABI, thus more certified seeds are available for poor farmers. Along in the partnership, nurseries will also obtain training from BALITKABI on seed quality-enhancing factors, such as seed production, packaging, and storing.
Coffee NTT	Intervention 1	Improving Market Access and Increasing the Productivity of Arabica Coffee in Flores
	Partner 1	PT Indokom Citra Persada (Indokom)
	Description	Indokom is a coffee exporting company founded in 1996. The company has offices in Lampung province and Sidoarjo, East Java province. In 2012, the company exported 70,000 MT to markets in the European Union, Japan, the Middle East and the USA. They have bought coffee from Flores from 2005 and started to buy high quality from 2006. They still sort fro
	Partners' Rationale	In order to increase turnover, the company aims to increase sales of specialty coffee and for that it needs a continuous supply of quality coffee from farmers and reliable management systems.

Partnership Possibilities	Indokom are concerned to improve the welfare of coffee farmers in Indonesia through providing better price of the good quality coffee, giving technical assistance at post-harvest and in processing. PRISMA will help Indokom develop a scale up cooperation model based with processor.
Partner 2	UPK Karya Kasih (Coffee Processor in Ngada)
Description	UPK karya kasih started their coffee processing unit in 2000 with a non-specialty processing. In 2016, they have sold 100 MT of grade 2 green bean and around 100,000 litre wet parchment to Indokom. They understand that there is a high demand of good quality Arabica coffee and they are keen to cater to i
Partners' Rationale	In order to increase turnover, the company aims to increase its coffee and improve its quality and market segment of specialty coffee and for that it needs a continuous supply of quality coffee from his farmers member.
Partnership Possibilities	UPK Karya Kasih is concerned to improve the welfare of coffee farmers in Ngada through providing better price of the good quality coffee, giving technical assistance at post-harvest and in processing. PRISMA will help UPK Karya Kasih to go to broaden market access for good quality coffee.
Partner 3	UD Karunia (Coffee Processor in East Manggarai)

Description	<p>Kios Karunia is a small-enterprise developed by Mr. Gaspar Hasan in Golonderu village. He has been trading coffee commodity since 1994. In 2004, with a support from a committed buyer, Komodo Jaya, he started to trade good quality coffee with full-washed method. On the same year, he started to make a business collaboration with Mr. Karolus and Mr. Kornelis.</p> <p>Seeing the prospect of coffee business, Mr. Gaspar bought his own huller machine to produce good quality coffee in 2016. His current capacity reach 200 ton green bean coffee per year.</p> <p>Kios Karunia is a small-enterprise developed by Mr. Gaspar Hasan in Golonderu village. He has been trading coffee commodity since 1994. In 2004, with a support from a committed buyer, Komodo Jaya, he started to trade good quality coffee with full-washed method. On the same year, he started to make a business collaboration with Mr. Karolus and Mr. Kornelis.</p> <p>Seeing the prospect of coffee business, Mr. Gaspar bought his own huller machine to produce good quality coffee in 2016. His current capacity reach 200 ton green bean coffee per year.</p>
Partners' Rationale	<p>In order to increase its turn over, Kios Karunia aims to go to broaden market for high quality coffee and for that they need to improve its quality as well as its good quality coffee supply from their farmers.</p>
Partnership Possibilities	<p>Kios Karunia is concerned to improve the welfare of coffee farmers in East Manggarai through providing better price of the good quality coffee, giving technical assistance at post-harvest and in processing. PRISMA will help Kios Karunia to go to broaden market access for good quality coffee.</p>
Partner 4	<p>Agriculture Department of Ngada</p>
Description	<p>Ngada has become one of famous single origin coffee with its Arabica Flores Bajawa patent name. More than 90% of their coffee are Arabica coffee and now become the star commodity.</p>
Partners' Rationale	<p>Agricultural department of Ngada has seen PRISMA work in Flores from 2015-2016 and become more interested in the coffee sector. Currently, coffee is one of their main commodity. They put more resources and want to improve coffee productivity and quality. Ngada coffee productivity is around 300kg green bean/HA and target to increase to minimum 700kg green bean/HA.</p>

	Partnership Possibilities	The partnership between PRISMA and the Agricultural Department of Ngada is intended to enhance the effectiveness of government funding with the overall development of the coffee industry. The government fund will be used to support the PRISMA strategy to develop the smallholder's coffee farmers.
Coffee EJ	Intervention 1	Promoting commercial fertilizer
	Partner	PT Hextar Fertilizer Indonesia
	Description	PT Hextar Fertilizer Indonesia (PT HFI) is a subsidiary of PT Dharma Guna Wibawa due to a joint venture with Hextar Chemicals Sdn. Bhd. Malaysia. They produce various fertilizer and soil treatment products. Its current main market is horticulture farmers. It is currently developing a manufacturing plant in Gresik, East Java which has 250,000MT production capacity each year. The current sales volume is 40,000MT/year and they have a big target starting in 2019.
	Partners' Rationale	PT Hextar Fertilizer Indonesia (PT HFI) targets an increase of 525% from their current sales volume in 2019 due to its new manufacturing plant. To achieve this target, PT HFI partners with PRISMA to expand its market into new commodities and areas. Its current main commodity is horticulture and now expanding to coffee.
	Partnership Roles	PRISMA assesses the new possibilities in coffee commodity, cost-shares with PT HFI to promote their products to new areas and commodities. PT HFI will ensure the availability of the fertilizers in the market as well as agronomists (field staff).
Peanut NTT	Intervention 1	Empowering Female Farmers through PKK Group
	Partners	CV Dirgajaya Teknik
	Description	CV Dirgajaya Teknik works in various sector such as construction, distribution. and agriculture. In agriculture sector, CV Dirgajaya Teknik serve as distributor of seeds, fertilizers, and other agricultural products. The main geographical focus area of CV Dirgajaya Teknik business includes Sikka and East Flores. It decides to produce peanut seeds partnering with PRISMA in 2017. Although CV Dirgajaya Teknik is considered new in peanut seeds business, it partners with experienced plasma farmers
	Partners' Rationale	This is the first time for CV. Dirgajaya Teknik to enter peanut seeds market. Previously, it mainly distribute products from other producers. However, it works together with experienced plasma farmers. The partner has high willingness to invest and develop the peanut seed business. The partner also sees a great business potential as no other private sector is entering the same market. The partner is independently building relationships with seed institutions such as BALITKABI and Dinas in Sikka District.

	Partnership Roles	PRISMA supports CV Dirga Jaya Teknik in production of Takar 2 seeds and develop sales and distribution channels (sales agents/retailers) in Sikka district and promote and distribute their seeds among target groups.
	Partner	Pius Botu
	Description	Pius Botu is a peanut nursery based in Sikka District. His main production was peanut and now he's expanding his business to mung bean seeds production.
	Partners' Rationale	Pius Botu has both capacity and willingness to develop/expand their business to other crops. Pius Botu currently producing peanut and mung bean seeds. His commitment shown by his willingness to invest to produce mung bean seeds as the demand of mung bean seeds around Flores are high.
	Partnership Roles	PRISMA supports Pius Botu in production of Vima variety (mung bean seeds) and Hypoma 2 variety (peanut seeds) and develop sales and distribution channels (sales agents/retailers) in Sikka district and promote and distribute their seeds among target groups.
	Partner	Gaspar Bao
	Description	Gaspar Bao is a peanut and maize nursery based in Sikka District. He produce maize and peanut seeds for both government program and free market.
	Partners' Rationale	Since 2014, Gaspar Bao has started a business as a seed grower for maize composite seed varieties, with a productivity of 3-4 MT/Ha. As a partner of BPTP NTT, in 2016, he expanded his production to more composite maize varieties such as Srikandi Kuning, Lamuru, Provit A-I, Purple Pulut and White Pulut, and hybrid – Bima URI-20. Gaspar bao, who is also a member of maize seed nurseries association, is committed to expand his line of business to peanut seed production starting in 2018. He has farming facilities to support this expansion, which are tractors, peeling machines, water pumps, and a warehouse. PRISMA sees an opportunity to facilitate the individual in order to increase poor farmers' access to quality peanut seeds in Sikka.
Partnership Roles	PRISMA supports Gaspar Bao in production of Hypoma variety (peanut seeds) and develop sales and distribution channels (sales agents/retailers) in Sikka district and promote and distribute their seeds among target groups.	
Peanut EJ	Intervention 1	Provision of Foundation Seeds
	Partner	PT Buana Ika Syahputra (PT BIS)
	Description	PT BIS produces plastic products such as plastic bottles and plastic containers mostly for packaging. They have enough capacity and equipment to create and produce new product based on customer needs.
	Partners' Rationale	PT BIS is interested to expand their market area and entering eastern Indonesia/NTT. They willing to create new product model and invest in the innovation that will be match with the farmer/customer needs.
	Partnership Roles	PRISMA supports PT BIS in identifying the distribution channels, conducting promotion activities, and supporting in product designing as well as marketing strategy to promote technology on good drying practice using jerrycan (they call "Silo Jinjing") to farmers in Timor island, NTT.

Intervention 2	Provision of Foundation Seeds
Partner	BALITKABI
Description	BALITKABI (Research Institutes for Various Legumes) is Technical Implementation for R&D field under Head of Center for Food Crops Research and Development which produces foundation seeds.
Partners' Rationale	In nursery-related interventions, foundation seed (FS) scarcity in mung bean and peanut has become a major problem that hinders higher production by nurseries. BALITKABI is the major part of supporting function of peanut and mung bean seed markets. BPATP (Indonesian Agency for Agricultural Technology Transfer), which is the parent institution for BALITKABI, provides good supporting environment for new seed companies aiming to acquire license to multiply government-owned varieties.
Partnership Roles	PRISMA will support BALITKABI with a market study identifying the demand gap of FS suffered by nurseries in EJ and facilitate a strategic intervention creating SOPs/contracts between nurseries and BALITKABI, thus more certified seeds are available for poor farmers. Along in the partnership, nurseries will also obtain training from BALITKABI on seed quality-enhancing factors, such as seed production, packaging, and storing.
Intervention 3	Peanut EJ Syngenta
Partner	PT Syngenta Indonesia
Description	Syngenta is one of market leader of crop protection product nationally. Through product development with world-class science, Syngenta has an aim for increasing customer's productivity, protect the environment and improve health and quality of life. Syngenta has wide ranging agro-input products including crop protection products which registered for peanut cultivation purpose
Partners' Rationale	PRISMA is engaging Syngenta to expand their sales portfolio as an alternative to saturated rice and maize crop production market. Syngenta is willing to explore the possibilities of promoting their product specifically to peanut farmers and investing in additional personnel
Partnership Roles	PRISMA is supporting Syngenta in exploring the new market of crop protection product, co-investing in field promotional activities, and also delivering capacity development to Syngenta internal field staffs.
Intervention 4	Promoting Quality Input to Peanut Farmers
Partner	PT. BASF Indonesia
Description	PT. BASF Indonesia is a chemical company with broad portfolio including crop protection. The portfolio also includes products for turf and ornamental plants, pest control and public health. PT. BASF INDONESIA Crop Protection division is a leading innovator in partnership with farmers to protect and improve crop yields, enabling them to produce high quality food more efficiency.

	Partners' Rationale	BASF is exploring the possibilities of diversifying its portfolio of sales. As BASF has registered product on Peanut, and planning peanut in their strategy pipeline.
	Partnership Roles	PRISMA support BASF to develop their market entry activities on Peanut Farmers market and capacity building for their team and farmers network. For field activities, PRISMA is co-investing with BASF to multiply and reduce the risk of the market.
Shallots NTB	Intervention	Shallot EWINDO
	Partners	PT East West Seed Indonesia (EWINDO)
	Description	In order to promote higher quality planting materials in NTB, PRISMA has been working with EWINDO to promote the use of true shallot seed and to develop a market for TSS derivative products such as the Improved Bulbs and Branded Seedlings. The True Shallot Seed, Bulb and Seedling can help farmers to get better yields than the low quality retained Bulb.
	Partners' Rationale	The success of the previous program establishing nurseries using the EWINDO seeds can be strengthened and up-scaled to benefit more male and female small-holder farmers in NTB, and it give more and better options for the farmers. The incentives for EWINDO are, among others, increased market share for seeds in a sustainable way, increased brand awareness (especially in NTB's shallot-producing areas of Bima and Lombok) and the potential to expand to other eastern districts.

	Partnership Roles	<p>Partnership Roles PRISMA's roles in this intervention are:</p> <ol style="list-style-type: none"> 1. Nursery development Newly-established and existing nurseries will buy EWINDO-supplied seed to produce higher quality planting bulbs and seedlings sell them to shallot farmers, either directly or through traders. The incentives for nurseries include improved skills and knowledge, and the assurance and certainty of income. These will increase sales of EWINDO's true shallot seed (TSS), as well as the sale of TSS through input retailers. EWINDO expect through the Nurseries, more farmers will learn how to grow shallots from TSS. PRISMA supports EWINDO with agronomists, training and promotion activities. 2. Promote Improved bulbs and Seedlings to traders and retailers. Demonstrate the profitability of the business to traders and retailers, to encourage them to buy better quality planting bulbs and seedlings then sell them to shallot farmers. Work has already started on this: <ol style="list-style-type: none"> a. PRISMA supports studies to identify key areas in which to work to develop G0 bulbs. b. PRISMA has selected certain traders and linked them with EWINDO and the nurseries. EWINDO collaborates with these traders and retailers on distributing bulbs and seedlings to farmers. c. Traders are incentivised by the potential of increased income to be obtained by selling improved quality planting bulbs and seedlings at a higher price, creating a price differentiation for good quality planting materials. 3. Develop a partnership model. <ul style="list-style-type: none"> • Support EWINDO to find a system which works with its distribution channel to sell the planting bulb and seedlings obtained from the company's seed. This could be a franchise model, a trader system, a nursery model or a model otherwise appropriate to the needs of EWINDO. • Support EWINDO to develop a branded bulb and a branded seedling franchise, trader system, and/or another partnership scheme, by providing consultants a) on post-harvest handling, and b) to carry out a trader study to find potential traders.
Mango EJ	Intervention	Mango EJ-NTB Scale up Syngenta
	Partners	PT Syngenta Indonesia
	Description	Syngenta is an internationally renowned agricultural company that produces and promotes seeds, crop protection products and agricultural solutions in many countries.

Partners' Rationale	The early flowering technology for mango requires a combination of chemicals: <i>Cultar</i> , <i>Amistartop</i> , and <i>Actara</i> . Syngenta is the supplier of <i>Amistartop</i> and <i>Actara</i> in Indonesia under patent. <i>Amistartop</i> is widely available, as it is used in rice production. <i>Actara</i> is used to control insects in mango crops and improve fruit quality. Although <i>paclobutrazol</i> is available from many suppliers, Syngenta with its <i>Cultar</i> was the original patent owner and its product is proven to give the best result.
Partnership Roles	<ul style="list-style-type: none"> · Even though these products have been available in the marketplace, the combination had not been piloted in Indonesia. Syngenta took on a significant financial risk getting into this market. PRISMA supported Syngenta in piloting their products, primarily through supporting the collectors who tested the combination of chemicals in small-scale trials to see which combinations worked best. Now that the products and the business model are proven, PRISMA will support Syngenta to expand its distribution and promotion. · After working with the pilot for 1.5 years, PRISMA and Syngenta decided to take the intervention to the next level by improving the field practices, such as removing the free samples, and decreasing PRISMA's contribution
Intervention	Mango EJ Scale up Rainbow
Partners	PT Rainbow Agrosciences
Description	Rainbow is an internationally renowned agricultural company that produces and promotes crop protection products and agricultural solutions in many countries.
Partners' Rationale	Rainbow has just started its operation in Indonesia with a wide range of products. They started as a manufacturer that serves other agro-chemical companies, but has now decided to enter the retail business on its own. They have the necessary chemicals for early flowering technology, which includes <i>Pazole</i> , <i>Fivestar</i> , <i>Raincozeb</i> , <i>Puntoxtra</i> , and <i>Nanofos</i> . They offer cheaper alternative to the market with wide range of selection under patent.

	Partnership Roles	After working with Syngenta for 1.5 years, PRISMA decided to work with Rainbow who is assessed to have more buy-in, clearer strategy, and more aggressive in penetrating the market for mango.
	Intervention	Mango EJ-NTB Social Marketing
	Partners	PISAgro (Partnership for Indonesia's Sustainable Agriculture)
	Description	The Partnership for Indonesia's Sustainable Agriculture (PISAgro) was created in 2011 under the World Economic Forum (WEF).
	Partners' Rationale	The Partnership for Indonesia's Sustainable Agriculture (PISAgro) is one of the most established Country Partnerships, which has strong technical engagement on value chain initiatives from over 30 participating stakeholders across government, international agencies, civil society, and farmer organizations. PISAgro has ten value chain Working Groups, one of them is horticulture, which include pineapple and mango as sub-working group. Working with PISAgro as an association, other working groups or other companies can copy the model for other crops after the intervention is successful.
	Partnership Roles	Private input companies such as Syngenta and Rainbow are on-board with the campaign, as they are the product owner. PISAgro Mango Sub-Working Group is leading the campaign, in which PRISMA, Syngenta, and Rainbow are members. Once farmers will have increased knowledge on EFT, and private input suppliers will recognize the potential profit in the sector, there will be no need for further support from the project.
Shallot EJ	Intervention 1	Shallot SPILT
	Partner	PT Solusi Bioteknologi Indonesia (Solbi)

Description	Solbi is a business unit of the SoeGee Group which aims to be a leader in innovative solutions in organic agriculture and as a biotechnology provider. In line with their vision, Solbi is willing to promote pest control technologies to shallot farmers.
Partners' Rationale	Solbi is willing to invest in the production of pest lamps and provide technical assistance in the form of embedded services, including lamp maintenance, through commercial distribution channels and farmer groups.
Partnership Roles	PRISMA's roles in this intervention are: <ul style="list-style-type: none"> • Short assessment for selection of distribution channels • Support in developing an effective business plan Development of a module for distribution channel training.
Intervention 2	Shallot Social Marketing EJ/NTB
Partner	CropLife Indonesia
Description	CropLife is an association that consist of several multinational chemical pesticide and seed companies in agriculture industry. CropLife has been known for their activities especially in stewardship. They main target is to create awareness of the farmers and change the farmers' behaviour towards the use of agriculture pesticides

Partners' Rationale	Partner has experience to disseminate information on pest management. They are very interested to spread the Integrated Pest and Disease Management to the shallot farmers, because they found a lot of case of abusing pesticide use which impact to the farmers' health and also affecting the quality of the products. If this case happen a lot, public will starting to blame chemical company, because of that CropLife want to prevent that by conducting IPDM social marketing campaign.
Partnership Roles	PRISMA's roles in this intervention are: <ul style="list-style-type: none"> • Provide expert to develop IPDM module • Support in developing the campaign by hiring public relation agency • Support in conducting training to build capacity on IPDM
Intervention 3	Shallot Nufarm EJ/NTB
Partner	PT Nufarm
Description	PT Nufarm Indonesia is a subsidiary of the Australian company, Nufarm Ltd. This company is one of the world's leading crop protection and specialist seeds company. Their manufacturing and marketing operations are located in Australia, New Zealand, Asia, Europe, and Americas.
Partners' Rationale	PT Nufarm Indonesia has been concerned about inappropriate use of pesticide that leads to pest resistance. They have one innovative product that targeting a specific pest (caterpillar) in shallot crop named "Dipel" with active ingredients: Bacillus Thuriensis. This products is an IPM compatible product and highly recommended for shallot crop.
Partnership Roles	PRISMA and Nufarm with the support from IPM experts from Australia develop an IPM scheme and strategy for the shallot farmers. This partnership also encourage farmers to use IPM compatible products by disseminating IPM method through the demo plot, farmers meeting and other promotional event.
Intervention 4	Shallot Trial Production EWINDO

Partner	PT East West Seed Indonesia (EWINDO)
Description	EWINDO is the first vegetable seed company, including shallot seeds (TSS), in Indonesia. The products are marketed in Indonesia under the brand “CAP PANAHA MERAH”.
Partners' Rationale	The success of the previous intervention between PRISMA and EWINDO in West Nusa Tenggara (NTB) to promote quality shallot seeds (TSS) to shallot farmers, the demand for TSS has increased nationally. Currently, TSS is all imported, with no local production capacity. The demand for TSS has overcome the supply, hence EWINDO is exploring ways to increase their supply by having TSS production trial at several locations in Indonesia and outside Indonesia.
Partnership Roles	PRISMA supports EWINDO in doing TSS production trial in East Java. This production trial aims to proof the feasibility of locally producing TSS in Indonesia and fulfilling the national demand of TSS. If the production trial proves that locally producing TSS is not feasible, from cost and quality perspective, EWINDO aims to have formal paper of how the trial goes to justify their TSS import volume.
Intervention 5	Shallot Bejo
Partner	Bejo Zaden BV
Description	In order to boost farmers' productivity in shallot cultivation, PRISMA is working together with Bejo to promote the use of True Shallot Seed (TSS) as a high-quality planting material. This will be done through several promotional activities, both offline and online. To monitor the implementation of such activities by partner's field staff, PRISMA will help partner in advancing their current reporting system by developing a reporting application for internal monitoring purpose.

	Partners' Rationale	The success of previous partnership between PRISMA and EWINDO has led to increased demand for TSS that is beyond EWINDO's ability to supply. Acknowledging this opportunity, Bejo Zaden BV has now officially entered the TSS market through its distributor, PT Agrosid Manunggal Sentosa.
	Partnership Roles	<p>PRISMA's contributions to this partnership can be divided into three categories:</p> <ol style="list-style-type: none"> Promotional activities To increase farmers' awareness of another TSS variety aside from the ones offered by EWINDO, PRISMA supports Bejo through a series of offline and online promotional activities. Offline activities will include the usual activities such as demoplot, Farmers Meeting, Farmers Field Day while the online ones will result in website and informational video. These activities will not only promote Bejo's TSS, but also educate farmers on the different technique required when planting shallot using TSS. Reporting system To monitor the implementation of the offline activities, PRISMA also helps Bejo in advancing their reporting system through the development of a reporting application. Capacity development Bejo, with the support from PRISMA, will also conduct training on TSS cultivation to key stakeholders such as key farmers, government, field staff, etc.
Vegetable EJ / NTB / NTT	Intervention 1	Vegetable Apps EWINDO
	Partner	PT East West Seed Indonesia (EWINDO)
	Description	EWINDO is the first vegetable seed company in Indonesia. The products are marketed in Indonesia under the brand "CAP PANAH MERAH".
	Partners' Rationale	EWINDO already has the strong position in the vegetable seed market across Indonesia. To maintain their strong position in the market, they need to know their customers more. Hence, with the application, it will enable EWINDO to collect their customers' data to craft their sales and promotion strategies.
	Partnership Roles	Mobile app is a new for EWINDO and they don't have the capabilities to develop the app by themselves. PRISMA supported EWINDO by hiring developer and data scientist STA to develop the app, while EWINDO is focusing on the content of the app. EWINDO is also

		focusing on the marketing activities for the app throughout their channels.
Intervention 2	Vegetable Apps NASA	
Partner	PT Natural Nusantara (NASA)	
Description	NASA is a national agricultural input company with multi-level marketing sales channel. NASA's product is an organic product ranging from fertilizer, crop protection, and livestock support products.	
Partners' Rationale	With the multi-level marketing business model, everyone can be agents for NASA's products. This enables someone with non-agriculture background to join the network. The mobile app developed will be utilized as educational platform to improve agents' knowledge on agricultural practice.	
Partnership Roles	PRISMA's roles in this intervention are:	
	<ul style="list-style-type: none"> · Mobile app development to disseminate information on good agricultural practice · Accelerating bio-inputs introduction to smallholder farmers in the new districts 	
Intervention 3	Vegetable Rainbow	
Partner	PT Rainbow Agrosiences	
Description	Rainbow is an internationally renowned agricultural company that produces and promotes crop protection products and agricultural solutions in many countries.	
Partners' Rationale	Rainbow has just started its operation in Indonesia with a wide range of products. They started as a manufacturer that serves other agro-chemical companies, but has now decided to enter the retail business on its own. They have the necessary chemicals for early flowering technology, which includes <i>Pazole</i> , <i>Fivestar</i> , <i>Raincozeb</i> , <i>Puntoxtra</i> , and <i>Nanofos</i> . They offer cheaper alternative to the market with wide range of selection under patent.	

Partnership Roles	<p>PRISMA's roles in this intervention are:</p> <ul style="list-style-type: none"> · Mobile app development to disseminate information on good agricultural practice · Accelerating bio-inputs introduction to smallholder farmers in the new districts
Intervention 4	Vegetable Agricon
Partner	PT Agricon Indonesia
Description	Agricon is a leading national agrochemical company. Agricon has expanded its business portfolios to agrochemicals, greenhouse fabricator, irrigation system, pest control operator, coconut-derived products, and seeds.
Partners' Rationale	Agricon is one of the national market leader in crop protection market. They have their own RND and production facility. They want to expand their business in EJ and NTB.
Partnership Roles	<p>PRISMA's roles in this intervention are:</p> <ul style="list-style-type: none"> · Contributing in Promotion materials and event · Supporting in Training · Supporting the evaluation of the effectiveness of promotional activities and materials
Intervention 5	AGROSID Vegetable Soil Treatment GAP
Partner	PT Agrosid Manunggal Sentosa

Description	AGROSID is the importer and producer of high quality vegetable seeds with more than 10 varieties of vegetables and non-seed products for soil and insecticides
Partners' Rationale	High quality seeds with poor soil treatment will reduce the number of seeds successfully grown into healthy seedling and seedling to produce good vegetables. Soil as the fundamental aspects in planting is important to be carefully handled. Nutrient contained in the soil should be maintained to let the plant grow healthy and free from tuber borne disease. Therefore, PRISMA work with Agrosid as producers of Seeds and non-seeds, include soil treatment to promote their product as well as promoting soil treatment GAP to the farmers and nursery.
Partnership Roles	PRISMA intended to work with Agrosid to promote the use of bundled soil treatment product with high quality vegetable seeds. PRISMA is supporting AGROSID to train their Trainer and agronomist on Soil Treatment GAP, and how to conduct soil sampling. With this activity, Agrosid are expected to train their field staff and other agronomist so they can give information and recommendation to farmers about their current soil condition. PRISMA also help Agrosid to develop tools kit to make the field staff easier on giving recommendation to the farmers and nursery. In addition, PRISMA are also support Agrosid to promote their agricultural input on several event.
Intervention 6	Danken Pest and Disease Management
Partner	PT Danken Indonesia
Description	Lack of awareness in good pesticide practice among farmers and limited information and knowledge disseminated and applied by farmers invoke Prisma through PT Danken Indonesia to collaborate through Pest and Disease Management intervention for promoting Good Pesticide Practice and Good Agricultural Practices. In the beginning the intervention will be located in East Java with potency to be escalated in different area by Danken.

Partners' Rationale	<p>PT Danken Indonesia is a subsidiary company of Danken International (Zongshan Group) in importing and providing wide range of crop protection products of pesticide (insecticide, herbicide and fungicide). As the new and growing business Danken products offer good quality with competitive price products as an additional option for Indonesian farmers, especially vegetable farmers. As a new entrance, established in Jakarta 30 April 2013, PT Danken Indonesia have a strong willingness to collaborate with PRISMA in penetrating their product and disseminating GPP and GAP to smallholder farmers. Danken products DK Fenzo, DK Mektin, DK Fostrin, DK Staronil Mix, and DK Duopro are qualified to be used for crop protection in vegetable crops.</p>
Partnership Roles	<p>PRISMA's roles in this intervention are:</p> <ul style="list-style-type: none"> • Capacity building in multilevel of stakeholder during intervention: field assistance, key leading farmers, shop assistance, retailers, and farmers. • Support in fostering company vision to be big five local crop protection company in Indonesia, survive penetrating market among MNC and other local crop protection company by having different strategy in empowering women and female farmers during the intervention to expand market opportunity.

		<ul style="list-style-type: none"> • Support in fostering company vision to be big five local crop protection company in Indonesia, survive penetrating market among MNC and other local crop protection company by having different strategy in empowering women and female farmers during the intervention to expand market opportunity.
Vegetables NTT	Intervention 1	Vegetable Sumber Tani
	Partners	UD SUMBER TANI
	Description	<p>UD Sumber Tani, a new input retailer has been built with the support and idea from PRISMA team. The purposes of this intervention are:</p> <ol style="list-style-type: none"> 1. Establishment of a new agro-input shop that could cover the farmers around district of East Manggarai and neighbouring districts. 2. Availability of extension services of GAP on vegetable production in the served areas. 3. Increase the number of farmer who has knowledge of GAP on vegetable production 4. Information tools of GAP on vegetable production will be available for the vegetable farmers 5. Farm shop / Inputs retailers will have sustain business plan which engages more ISP to optimize the benefits for the farmers' income
	Partners' Rationale	The owner is one of the biggest inter island trader for coffee, cashew, vanilla, tamarind, candlenut, eggs etc and one of the biggest contractor in the area. She sees a big opportunity since currently there is no Input shop in the East Manggarai.
	Partnership Roles	<p>PRISMA's roles in this intervention are:</p> <ul style="list-style-type: none"> · Developing the business idea and business model · Contributing in Promotion materials and event · Supporting in Training · Linking with Inputs companies

	Intervention 2	Vegetable Sahabat Tani
	Partners	UD SAHABAT TANI
	Description	<ol style="list-style-type: none"> 1. Sahabat Tani situated in Ende Flores island NTT and its business coverage reached Sikka, Lembata, Ende and Ngada districts 2. Sahabat Tani basically is the Distributor / retailer of agri-chemical
	Partners' Rationale	<ol style="list-style-type: none"> 1. Sahabat Tani is the authorized dealer of EWINDO for seed and DGW for pesticides 2. Potential to boost the outreach for the farmers in Flores Island in the Semester 2 of 2017
Partnership Roles	<p>PRISMA's roles in this intervention are:</p> <ul style="list-style-type: none"> · Developing the business idea and business model · Contributing in Promotion materials and event · Supporting in Training · Linking with Inputs companies 	
Beef EJ	Intervention 1	Promoting supplementary feed (crop residues) for cattle fattening
	Partner 1	UD Pangestune Utama or Wahyu Utama
	Description	UD Pangestune Utama or Wahyu Utama, is a Feedlotter, established in 2003 in Tuban, running business on cattle breeding, fattening, live cattle trading, and beef marketing. The company also produces and sells feed for cattle fattening (concentrate, crop residues, and molasses). However, the company only serves a limited number of farmers who are doing cattle fattening under a contract farming relationship model.
	Partners' Rationale	In order to expand the model and serving to a larger farmers outside current contract farming model, the Wahyu Utama is willing to provide benefits to the farmers through promoting the supplementary feed (crop residues) through development of demo plots and involving the retailers into the system to develop distribution channels.

Partnership Roles	<p>Prisma will support the company in:</p> <ul style="list-style-type: none"> · Mapping out local sourced feedstuffs/fodders to make a cheaper cattle feed composition • Development of cattle feed composition formula using local sourced feedstuffs/fodders • Demo plots development model at selected Lead Farmers to promote crop residues usage for cattle fattening • Bring retailers into the system so that farmers have better access: <ul style="list-style-type: none"> • Looking for a wide and larger cattle feed market - serving and benefiting larger cattle farmers' population beyond its current market. • Development of a hard evidence based market promotion - using the success story business of demplots that shows commercial benefit of using appropriate feed to farmers in order to change their mindset and behaviors towards such investments.
Intervention 2	Promoting concentrated feed for cattle fattening
Partner 1	Community Business Centre (Pusat Kegiatan Masyarakat)
Description	Holcim is one of the largest international cement producers in the world and has a plant in Tuban district. As part of its commitment to CSR, Holcim along with local leaders founded a local People's Activity Centre (<i>Pusat Kegiatan Masyarakat</i> - PKM). Holcim invests in community economic development through the PKM. One of its programs supports a cooperative of producers of concentrate feed for cattle farming.
Partners' Rationale	<p>In order to develop the CSR program in the community, especially with cattle farmers, PKM is willing to provide benefits to the farmers through the development of concentrate feed.</p> <p>In addition to supporting production, the program supports the selling of the concentrate feed, which should enable it to be sustainable in future.</p>
Partnership Roles	PRISMA brings a commercial orientation and a focus on sustainability to the established CSR program. The program has a built-in component and can benefit a larger population beyond the current operational area. PRISMA supports the development of a business model to promote and distribute the concentrate feed product to more farmer groups by establishing distribution channels (agents/ lead farmers/ retailers).

Intervention 3	Promoting Concentrate Feed in Eastern East Java
Partner 1	KJUB Puspetasari or Nutrifeed
Description	Established in 1995, KJUB Puspetasari or more known as Nutrifeed, is a large secondary cooperative with main business in livestock feed industry. The organisation produce feed for dairy and beef cattle and is the 3 rd largest feed companies in East Java. Currently 90% of Nutrifeed's concentrate feed sales are for dairy cattle while 10% are for beef cattle
Partner's Rationale	As a growing company, Nutrifeed have great desire to expand their feed business, especially on beef cattle feed business. Although they have invested further to expand feed business (e.g. purchasing new machine, procuring raw materials), they are still struggling in market penetration, especially on farmers' level as most of their sales at the moment is intended for dairy cattle and government order.
Partnership Roles	PRISMA will support the company in promoting concentrate feed to increase cattle productivity through establishment of demoplots and attractive promotional strategy, as well as support the company in developing distribution channel, especially in Eastern part of East Java. Nutrifeed will invest in product samples, technical sales, VET assistant and delivery services.
Intervention 4	Promoting Concentrate Feed for Cattle Fattening
Partner 1	PT Japfa Comfeed Indonesia Tbk
Description	PT Japfa Comfeed Indonesia Tbk is one of the largest and most integrated agri-food companies in Indonesia. Its core business activities include animal feed manufacturing, chicken breeding, poultry processing as well as aquaculture farming.

	Partner's Rationale	Japfa Comfeed holds the second biggest market share for poultry feed in East Java. However, as the market for poultry feed is getting saturated, Japfa Comfeed wants to expand its market for other livestock feed. Considering that cattle feed market has big potential and PRISMA has prior experience in facilitating cattle feed producers to expand their market, Japfa Comfeed is interested in expanding its cattle feed market with assistance from PRISMA. Japfa Comfeed has been selling beef cattle feed under the name of "Gemuk A" with monthly sales of 500 ton/month, and Japfa wants to increase the sales at least by 2,000 kg/month on the first phase of expanding its market. East Java is chosen as the target market since it has 16 million cattle and 26% of it are for fattening. Japfa Comfeed is willing to invest in activities like farmers education, establishing the distribution channel to reach more farmers, and market storm in East Java to expand the cattle feed market with PRISMA's assistance as these activities are relatively new to Japfa Comfeed.
	Partnership Roles	Japfa Comfeed will promote the benefit of using concentrate feed through demo plot, demo event, market storm, and training to its retailer. In addition to that, Japfa Comfeed will expand the distribution channel of cattle feed in East Java by working with local cattle trader to promote cattle feed.
Beef NTT	Intervention	Promoting Lamtoro as a premium forage for cattle fattening
	Partner	PUSKUD

	Description	<p>A study of the feed sector done by PRISMA and PUSKUD in July – October 2015 concluded that <i>Leucaena leucocephala</i> (Lamtoro) is a ‘key’ forage that is available all year round that can help farmers achieve an optimum Average Daily Gain (ADG) of cattle. Lamtoro has been proven to increase growth rate of Bali cattle under prevailing feeding management from 100-200 gram/day to 400-600 gram/day. However, this study also found that farmers do not widely use Lamtoro for cattle feed and they plant Lamtoro haphazardly in their farm so it is not easy to calculate forage production and the feeding capacity of each plot for their cattle.</p> <p>In addition, it was observed that farmers did not have sufficient Lamtoro to supply to their cattle in the dry season. Consequently, it is predicted that farmers only offered one-half to two-third of the recommended Lamtoro requirement per day. Therefore, the optimum ADG is not achieved. Even worse, the farmers suffer from loss of their cattle weight in the dry season. Farmers also have poor knowledge and skills on good rearing practices, good feeding practices, and animal health control practices. These further exacerbate the low ADG of cattle.</p> <p>To address these problems, we plan to expand farmers’ Lamtoro production and increase their knowledge and skills on Lamtoro cultivation (including seeds/seedlings selection, planting arrangement, cutting techniques, maintenance). Many farmers have idle land to expand Lamtoro plantation. Through the activities in this intervention, PRISMA will support PUSKUD to increase the awareness, knowledge, and skills of farmers through training on Good Agriculture Practices of Lamtoro cultivation, Good Cattle Feeding Management and Practices, Good Rearing Practices as well as Good Cattle Health Control Practices.</p>
	Partners' Rationale	<ul style="list-style-type: none"> • PUSKUD is one of the key and big player of cattle fattening in NTT • There are 45 Livestock Cooperatives under PUSKUD (consists of 139 farmer groups), with member around 9000 farmers

		<ul style="list-style-type: none"> • Experienced > 30 years in cattle fattening and sustain in their business ventures • Responsive and progressive to adopt innovations • Willing to share cost for intervention and invest to expand their business • Willing to invest to improve capacity of its staff <p>Have resources: 1 veterinary, 20 field staff.</p>
	Partnership Roles	PRISMA provides an expert to support PUSKUD in the capacity building (PUSKUD level, Nursery level, farmer level), demo plot design, study demand of Lamtoro, promotional & education tools, and facilitation for conduct event (training, launching, visit study)
Anggur Merah	Intervention 1	Synergy of Anggur Merah Program & PRISMA for Beef Sector NTT - Effective Use of Lamtoro as a Premium Forage for Cattle Fattening (closed)

Partner	<p>Public partner: Provincial Government of NTT through the Secretariat of Program Anggur Merah (AM). A letter of acknowledgement has been prepared by the Prov. Govt for this partnership.</p> <p>Private partner: PUSKUD (the partner of Sub-Sector Beef NTT, where this AM Intervention will join the partnership)</p>
Description	<p>This intervention will take advantage of existing AM Program being implemented by the NTT Govt. The AM program provides stimulant grants to a village that majority uses the grants for financing community's cattle fattening. Common problems faced by cattle farmers are low productivity due to feed scarcity and low skills on managing cattle fattening, which impact on low income earned by cattle farmers.</p>
Partners' Rationale	<p>Prov. Govt. of NTT: to provide stimulant grants (AM funds) to each receiver village (including the location of this intervention); to hire village facilitators (PKM) who supervise the AM activities in each target villages (including the village targeted by this intervention); to establish and monitor the cooperatives at villages level (including those in the targeted villages of this intervention).</p> <p>PUSKUD: to do feed test; to produce and sell processed feeds through AM cooperatives; to sell input (chemical) through AM cooperatives for producing cattle feeds using local forages; to support in increasing the capacity of AM cooperatives in order to act as the ISP and a business entity.</p>
PRISMA's Roles	<p>PRISMA: to support PUSKUD to provide technical assistance and capacity building to AM cooperatives; to link AM cooperatives to other market actors for cattle fattening business</p>

Intervention 2	Synergy of Anggur Merah Program & PRISMA for Pig Sector NTT – Support the Development and Promotion of Quality Feed Supply in NTT (closed)
Partner	SIERAD Produce (the partner of Sub-Sector Pig NTT, where this AM intervention will join the partnership between HIVOS as co-facilitator PRISMA
Description	This intervention will take advantage of existing AM Program being implemented by the NTT Govt. The AM program provides stimulant grants to a village that majority uses the grants for financing community’s cattle fattening and pig fattening. Common problems faced by pig farmers are access information of better quality feed and lack of good feeding practice which have influenced low productivity and longer pig fattening period which have impacted on low income earned by pig farmers.
Partner’s rationale	Prov. Govt. of NTT: to provide stimulant grants (AM funds) to each receiver village (including the location of this intervention); to hire village facilitators (PKM) who supervise the AM activities in each target villages (including the village targeted by this intervention); to establish and monitor the cooperatives at villages level (including those in the targeted villages of this intervention). SIERAD: to sell pig feed through Input shops and provides technical services through agronomist related with good feeding practice; to distribute promotion tools to farmers to increase access of information related with feed product knowledge and good feeding practice; to support in increasing capacity of AM cooperatives in order to act as the ISP and a business entity

PRISMA roles	PRISMA: to support SIERAD (including ISP – input shops) to provide technical assistance and capacity building to AM cooperatives; to link AM cooperatives to other market actors for pig fattening business; Expand target market area for SIERAD product
Intervention 3	Synergy of Anggur Merah Program & PRISMA for Maize Sector NTT – Promoting the use of composite (OPV) Seed (closed)
Partner	CV TIGA PUTRI MANDIRI (TPM) – maize composite nurseries in Atambua, NTT (the partner of Sub-Sector Maize NTT, where this AM intervention will join the partnership between Maize NTT PRISMA team.
Description	<p>This intervention will take advantage of existing AM program being implemented by the NTT Government. The AM program provides stimulant grants to villages that use the grants mostly for financing maize of smallholder farmers. Common problems faced by maize farmers are access to better quality maize seeds. Those problems lead to low productivity and implicate on low income earned by maize farmers.</p> <p>AM cooperatives currently are not using their fund to finance productive sector such as maize business. the cooperatives and their member only earn small benefit from the cooperative annual surplus by targeting maize business, cooperatives can grow its portfolio & turnover. Besides, farmers will have access to finance through AM cooperatives so they can get in-kind loan especially for maize purple composite seeds. This access allows farmers to run maize business & gain profits too due to as contract farmers, and private partner can continue provide maize purple seeds to AM cooperatives and sell more maize blue seeds to other farmers</p>
Partner's rationale	<p>Prov. Govt. of NTT: to provide stimulant grants (AM funds) to each receiver village (including the location of this intervention); to hire village facilitators (PKM) who supervise the AM activities in each target villages (including the village targeted by this intervention); to establish and monitor the cooperatives at villages level (including those in the targeted villages of this intervention).</p> <p>CV TPM: to maize composite seeds (blue label) through AM Cooperative and provides technical services through agronomist related with good agriculture practice; to distribute promotion tools to farmers to increase access of information related with maize composite good agriculture practice; to support in increasing capacity of AM cooperatives in order to act as the ISP and a business entity</p>

	PRISMA roles	PRISMA: to link AM cooperatives to CV TPM for maize contract farming system; to support CV TPM to provide technical assistance and capacity building to AM cooperatives as a partner for contract farming; Expand target market area for maize composite seeds from CV TPM.
Vegetable West Papua	Intervention 1	Increase Productivity through Promoting the Provision of GAP Knowledge and the Use of Good Quality Seed
	Partners	EWINDO & Yayasan Bina Tani Sejahtera (YBTS)
	Description	EWINDO is the first integrated vegetable seeds company in Indonesia which produces vegetable seeds through plant breeding. EWINDO aims to provide high quality seeds to increase farmer's income and promote vegetable consumption. EWINDO has been producing more productive seeds and expanding their business in West Papua. Bina Tani Sejahtera Foundation established 2009 (based on establishment statute) is length-arm of PT Ewindo who produces and supplies vegetable seeds. Bina Tani aims to advance farmer's prosperity by providing extension, advisory and training services to farmers. Bina Tani also acts a development agency towards markets in introducing and training of better vegetable cultivation and good agriculture practices to farmers before Ewindo enters to the market commercially.
	Partners' Rationale	PRISMA partnered with EWINDO to increase the productivity of vegetables by providing assistance and information on good agricultural practices and promoting the use of good quality seeds. EWINDO has Product Promoters who are located in various location to give assistances and promote GAP & quality seed to vegetable farmers. EWINDO has plan to expand their area of operation in West Papua. Bina Tani Sejahtera Foundation has capacity to undertake the tasks since Bina Tani has been doing similar activities/interventions with several international organizations.

	Partnership Roles	<p>The role of partnership is to accelerate the provision on GAP and good quality seed and its application at farmer level. EWINDO will provide extension service through their Product Promoters (PP). PP delivers extension services to farmers through socialization, exchange visit, and demoplot activities to demonstrate correct horticultural practices.</p> <p>Meanwhile, YBTS will provides support in the form of training modules development and delivery training on those modules basis to EW, seed retailers and farmers. YBTS will equips EW with sufficient knowledge and management of extension service.</p>
Vegetables Papua	Intervention 1	Increase Productivity through Promote Good Quality Seed and GAP Provision
	Partner 1	EWINDO
	Description	EWINDO is the first integrated vegetable seeds company in Indonesia which produces vegetable seeds through plant breeding. EWINDO aims to provide high quality seeds to increase farmer's income and promote vegetable consumption. EWINDO has been producing more productive seeds and expanding their business in Papua.
	Partners' Rationale	PRISMA partnered with EWINDO to increase the productivity of vegetables by providing assistance and information on good agricultural practices and promoting the use of good quality seeds. EWINDO has Product Promotor who is located in various location to give assistances and promote GAP & quality seed to vegetable farmers. EWINDO has plan to expand their area of operation in Papua.
	Partnership Roles	EWINDO provide extension service through their Product Promoters (PP). PP delivers extension services to farmers through socialization, exchange visit, demoplot activities, and other promotional event to demonstrate correct horticultural practices.
Extension Services	Intervention 1	Pest and Disease Identification through Smartphone Application (NTB) 2ESA
	Partner 1	PT. 8Villages Indonesia

Description	8Villages was founded in 2011 with the intent to change the way information flows from private and public sectors to rural populations. Today, 8Villages combines experienced marketers, agronomists as well as software and telecommunications engineers.
Partners' Rationale	A starting point for further collaboration with Government's Agricultural Extension Department. In the future 8Villages want to collaboration with ministry of agriculture, they will show that they have good Application for farmers. Moreover 8Villages would like to Market intelligence and Brand exposure from this intervention. Gaining new extension service workers (and potentially lead farmers) customers in NTB.
Partnership Roles	8Villages create smartphone application for identification pest and disease, conduct training of trainer for extension worker, follow up extension worker and monitoring app usage from server.
Partner 2	Government's Agricultural Extension Department (BP4K)
Description	BP4K is a Government's Agricultural Extension Department that conduct Extension of Agriculture, Fisheries and Forestry Effective. BP4K coordination with extension worker in level Sub district. We collaborate with BP4K in 3 district level (Lombok Timur, Sumbawa, and Bima).

Partners' Rationale	This intervention match with Government's Agricultural Extension Department strategic plan. With this intervention BP4K have the new methodology for extension services and will increase in the level of technological innovation to extension workers.
Partnership Roles	BP4K will identify and appoint personals to attend the training of trainer 'Dokter Tanaman' application, BP4K conduct training for broader extension workers (level sub district) in pest and disease identification through the 'dokter tanaman' application. Coordination and monitoring activities at the sub district level interventions.
Intervention 2	Crop Protection Call Center (EJ) 1ESA
Partner	PT. BASF Indonesia
Description	PT. BASF INDONESIA is a chemical company with broad portfolio including crop protection. The portfolio also includes products for turf and ornamental plants, pest control and public health. PT. BASF INDONESIA Crop Protection division is a leading innovator in partnership with farmers to protect and improve crop yields, enabling them to produce high quality food more efficiency.
Partners' Rationale	BASF has an existing call-center to engage their lead farmers and also provide product consultation to their customers. They can expand their market share through educating farmers on proper crop-protection. PRISMA and BASF will collaborate to promote the Call center for farmers and be expected farmers will call the call center to crop consultation and BASF will Provide Crops' Pest & Disease Consultation so they can promote their products by phone and ensure that their products are available in the intervention areas.
Partnership Roles	BASF will be contact center / call center capacity building, promotion of the pest and disease consultation call center, Ensure the availability of the Partner products that are recommended by the call center in the retail shop near the farmer. To direct agronomist or BC (Business Consultant) to follow up escalation cases by visiting the farmer's field. To ensure the pest and disease consultation call center provides a relevant and good quality information so that it can be a trustworthy information source for farmers.

Action Research 1	Introducing productive use of smartphone and provision of information for farmers in Java (1ESB) (New)
Partner 1	PT.EHR INDONESIA
Description	Karsa is an informative farming application that aims to increase farmers access to the latest and most up-to-date agriculture information. Supported by the increased penetration of smartphone and broadband internet in villages, Karsa will equip and enhance the way farmers, extension workers, traders, and product owners work by delivering the information that they need.
Partners' Rationale	PT.EHR INDONESIA has KARSA agricultural applications. They strive to spread the benefits of this application to farmers and also strive to always add features to better help meet the needs of farmers. with so many farmers who use KARSA application then KARSA will benefit from the business that he developed.
Partnership Roles	PT.EHR INDONESIA is developing several new features or business models (e.g. information dissemination, financing, offtaking, price information) while at the same time moving aggressively to acquire new customers and grow the application platform
Action Research 2	Agriculture Intelligent Platform (2ESB)
Partner	PT Mediatrac Sistem Komunikasi (Dattabot)
Description	Dattabot is a company that engaged in technology and one of their focus is to deliver intelligent and integrated agriculture management support. By integrating Big Data analytics and smart sensing, Dattabot develop solution to help Indonesian farmers become more effective and efficient in farming

Partners' Rationale	A cooperation between Partner and PRISMA would mean a synergy between deep understanding of the issues holding farmers back and the potentials of technology to address those issues. The expected end result is a faster emergence of agriculture-specific technology solutions which can increase Indonesian farmers' income and improve the agriculture sector in general.
Partnership Roles	The partners will commit to deliver several things including: <ul style="list-style-type: none"> - Design software product which benefits farmer and gives solution to their problem on the field. - Conduct collaboration meeting & workshop with other partner(s) introduced by PRISMA. - Operate software developed by Partner in the field.
Action Research 3	Scaling up Off Taker, GAP and Agriculture Platform (EJ, NTB, NTT)
Partner	PT Eragano Agritech Indonesia
Description	Eragano is a provider of end-to-end farming solution for farmers through easy to use android application. The goal is to make farmers more productive and to enable them to have a fair market price when they sell their harvest. Main activities of Eragano are connecting farmers with off-takers and/or financial institutions and providing GAP to farmers.
Partners' Rationale	PRISMA and Eragano agrees to work together for the benefits of smallholder farmers in East Java, NTT and NTB.

●The idea is by expanding Eragano’s reach to include more farmers, more crops, more buyers, and more areas. PRISMA will support Eragano by providing business consultancy and connect Eragano to relevant stakeholders within PRISMA’s network.

● Eragano is focusing on offtaking of maize, chilli, shallot, and potatoes. Helping farmers with post-harvest processing knowledge so they can enjoy better price through technology.

Eragano agrees to:

	Partnership Roles	<ul style="list-style-type: none"> a. Provide PRISMA access to Eragano’s Application and Platform, which includes user information and data analytics from areas related to the program. b. Work together with PRISMA to develop, test, and pilot solution(s) to reach more smallholder farmers in East Java, NTT and NTB. c. Create technology tools needed to support the program/collaboration. d. Keep all related data in this program in confidential manner and use/give data to other parties with PRISMA's consent. e. Provide sufficient manpower to plan, manage, and implement the agreed activities.
	Intervention 3	Crop Protection (4ESA & 5ESA)
	Partner	PT BASF Indonesia
	Description	<p>PT. BASF INDONESIA is a chemical company with broad portfolio including crop protection. The portfolio also includes products for turf and ornamental plants, pest control and public health. PT. BASF INDONESIA Crop Protection division is a leading innovator in partnership with farmers to protect and improve crop yields, enabling them to produce high quality food more efficiency</p>

	Partners' Rationale	Partners see the potential for expanding their business to Papua and West Papua. Therefore, the partner establishes cooperation with several local distributors and provides field workers to carry out promotional activities thus creating demand for products. In addition to promotional activities, to increase their sales, Partners will also provide technical assistance and provide information on product knowledge, Good Agricultural Practices and pest and disease management to relevant stakeholders, especially Farmers.
		PRISMA and Partners cooperation will create mutually supportive synergy to bring the solution to farmers especially related to plant pests and diseases. With the cooperation, it is hoped that Farmers will acquire more knowledge related to Good Agricultural Practices and pest and disease management to ultimately increase productivity
	Partnership Roles	<p>By having partnership with PRISMA, BASF commit to:</p> <ul style="list-style-type: none"> (a) Establish Distribution Channel in Papua and West Papua (b) Provide field staff to provide technical assistance and give information about product knowledge, Good Agriculture Practices, and Pest and Disease Management (c) Develop promotional tools and establish promotional activities (d) Conduct demoplots <p>The estimate budget for having those kind of activity mentioned above is around IDR 940 mio</p>
	Intervention 1	Promoting Small Package Vegetable Qualified Seeds for Homestead Gardening in Kupang District (3GIA)

Homestead Gardening NTT	Partners	<p><u>Private partner:</u> PT. BISI International Tbk; a local established company in Indonesia, in 1983. PT. BISI is a producer of hybrid seeds of maize, paddy and horticulture, as well as the main producer and distributor of pesticides and fertilizers in Indonesia. Its head quarter is in Sidoarjo, East Java. While in East Nusa Tenggara Province, PT. BISI has a Marketing Executive who is based in Kupang, and acts on behalf of the company for this partnership, <u>Public partner:</u> Agriculture, Food Crops & Horticulture Office of Kupang District or Dinas Pertanian, Tanaman Pangan & Hortikultura (DISTAN-Kupang).</p>
	Partners' Rationale	<p><u>PT. BISI International Tbk</u> is one of the two main vegetable-seeds producers who are expanding the sale of their products in the area of East Nusa Tenggara Province. PT. BISI in Kupang (NTT) is more responsive and interested to have partnership with PRISMA and also involving related local government offices, in promoting vegetable qualified seeds for homestead gardening.</p> <p><u>DISTAN-Kupang</u> is a District Govt. Office that implementas some programs focusing on homestead gardening by using APBN or APBD budgets. For this partnership, the PPL (govt. extension service) from the BP4K Office will be involved; while the BP4K (District Government's Agricultural Extension Unit) is in the preparation tobe 'merged' under DISTAN-Kupang, as common in the whole distritcs in NTT Province.</p>
	Partnership Roles	<p><u>DISTAN-Kupang:</u> to identify and mobilize the PPL and women's farmer groups (KWT) to participate in the agreed activities in the field; to coordinate with KWT and the village administratives for preparing lands for demoplot; to procure vegetable seeds and polybags to be distributed to all KWTs in the targeted locations; to coordinate PPLs to assist KWT during field activities.</p> <p><u>PT.BISI:</u> to facilitate (conduct) the trainings (ToT) and to develop training materials; to assign agronomists or spot-workers (SW) to assist KWT and PPLs in executing field activities; to provide sample-seeds (mini-pack) for demoplot and other promotional activities; agronomists or SW to do monitoring to demoplots and to provide technical assistance for KWT.</p> <p><u>Role of PRISMA:</u> to identify and to negotiate with private partners for the intervention; to facilitate all promotional activities, such as farmer's meetings, EXPO.</p>

	Partners' Contribution	PT. BISI: to provide sample-seeds for 8 demoplot locations in Kupang District; to assign agronomists and/or spot-workers for supporting activities in 8 demoplots, as well as in 64 women-groups' sites. DISTAN-Kupang: to procure vegetable-seeds and polybags to be distributed to 64 KWT (total members: 1,432 people).
	Intervention 2	Promoting Small Package Vegetable Qualified Seeds for Homestead Gardening in TTS District (3GIB)
	Partners	<p><u>Private partner</u>: a local established company in Indonesia, in 1983. PT. BISI is a producer of hybrid seeds of maize, paddy and horticulture, as well as the main producer and distributor of pesticides and fertilizers in Indonesia. Its head quarter is in Sidoarjo, East Jawa. While in East Nusa Tenggara Province, PT. BISI has a Marketing Executive who is based in Kupang, and acts on behalf of the company for this partnership.</p> <p><u>Public partner</u>: Food Security Office of South Central Timor District or Dinas Ketahanan Pangan (DKP-TTS).</p>
	Partners' Rationale	<p>PT. BISI International Tbk is one of the two main vegetable-seeds producers who are expanding the sale of their products in the area of East Nusa Tenggara Province. PT. BISI in Kupang (NTT) is more responsive and interested to have partnership with PRISMA and also involving related local government offices, in promoting vegetable qualified seeds for homestead gardening.</p> <p>Food Security Office of South Central Timor District (DKP-TTS) has some programs focusing on homestead gardening by using APBN or APBD budgets. For this partnership, the PPL (govt. extension service) from the BP4K Office will be involved. While BP4K has just been merged under DISTAN (Agriculture Office) of TTS District. This means there should be a good coordination between DKP-TTS and DISTAN TTS in ensuring the support of PPL in this partnership</p>

	Partnership Roles	<p>DKP-TTS: to identify and mobilize the PPL and women's farmer groups (KWT) to participate in the agreed activities in the field; to coordinate with KWT and the village administratives for preparing lands for demoplot; to procure vegetable seeds to be distributed to all KWTs in the targeted locations; to coordinate PPLs to assist KWT during field activities.</p> <p>PT.BISI: to facilitate (conduct) the trainings (ToT) and to develop training materials; to assign agronomists or spot-workers (SW) to assist KWT and PPLs in executing field activities; to provide sample-seeds (mini-pack) for demoplot and other promotional activities; agronomists or SW to do monitoring to demoplots and to provide technical assistance for KWT.</p> <p>Role of PRISMA: Role of PRISMA: to identify and to negotiate with private partners for the intervention; to facilitate all promotional activities, such as farmer's meetings, EXPO.</p>
	Partners' Contribution	<p>PT.BISI: to provide sample-seeds for 2 demoplot locations in TTS District; to assign agronomists and/or spot-workers for supporting activities in the 2 demoplots, as well as in 20 women-groups' sites.</p>
Homestead Gardening NTB	Intervention 1	Promoting Small Package Vegetable Qualified Seeds for Homestead Gardening in Sumbawa District (2GIB)
	Partners	<p><u>Private partner:</u> PT. BISI International Tbk; a local established company in Indonesia, in 1983. PT. BISI is a producer of hybrid seeds of maize, paddy and horticulture, as well as the main producer and distributor of pesticides and fertilizers in Indonesia. Its head quarter is in Sidoarjo, East Jawa. PT BISI in West Nusa Tenggara is a regional office whose working areas cover the provinces of NTB and NTT. The chairman of this office is served by a Manager Area.</p> <p><u>Public partner:</u> In Sumbawa district the partner is the Food Department (Dinas Pangan)</p>

	Partners' Rationale	<p>PT. BISI International Tbk is one of the two major vegetable seed producers currently expanding its product sales in the Nusa Tenggara region. PT. BISI in Sumbawa district (NTB) is currently willing to cooperate and interested to partner with PRISMA and also involves the Sumbawa Regency Food Office, in an effort to promote quality hortory plant seeds for home garden.</p> <p>The Food Department of Sumbawa District is the agency responsible for food security especially in the provision of food and how to ensure the distribution of food evenly to the community. The financing comes from APBD 1-2 and APBN. For this partnership, government and private PPL (government counseling) will be involved, as well as the Village Government and BUMDes or community groups in the village.</p>
	Partnership Roles	<p>The Food Department of Sumbawa District: Identify and mobilize PPL and female farmer groups (KWT) to participate in activities agreed on the ground; coordinate with KWT and village officials to prepare land for demoplot; to get vegetable seeds and polybags to be distributed to all KWTs in the targeted location; coordinate PPL to assist KWT during field activities.</p> <p>PT.BISI: to facilitate (conduct) training (ToT) and to develop training materials; to provide asign agronomists or spot-workers (SWs) to assist KWT and PPL in conducting field activities; to provide sample seeds (mini packages) for demoplot and other promotional activities; agronomist or SW to conduct demoplot monitoring and provide technical assistance to KWT.</p> <p>The role of PRISMA: to identify and negotiate with private partners for intervention; facilitate all promotional activities, such as farmer meetings, EXPO.</p>
	Partners' Contribution	<p>PT. BISI: Provide sample seeds for 10 demoplot locations / villages in 3 sub-districts of Sumbawa Regency; to establish agronomists and / or spot workers for support activities at 10 demoplot sites, as well as at women's group sites.</p> <p>THE FOOD DEPARTMENT of Sumbawa District: to get vegetable seeds and polybags to be distributed to several Groups (number of members: 2,021 people).</p>
	Intervention 2	Promoting Small Package Vegetable Qualified Seeds for Homestead Gardening in Lombok Utara District (2GIA)

Partners	<p><u>Private partner:</u> PT. BISI International Tbk; a local established company in Indonesia, in 1983. PT. BISI is a producer of hybrid seeds of maize, paddy and horticulture, as well as the main producer and distributor of pesticides and fertilizers in Indonesia. Its head quarter is in Sidoarjo, East Jawa. PT BISI in West Nusa Tenggara is a regional office whose working areas cover the provinces of NTB and NTT. The chairman of this office is served by a Manager Area.</p> <p>Public partners: The Food and Agriculture Security Department of Lombok Utara District (Kabupaten Lombok Utara).</p>
Partners' Rationale	<p>PT. BISI International Tbk is one of the two major vegetable seed producers currently expanding its product sales in the Nusa Tenggara region. PT. BISI in Lombok Utara district (NTB) is currently willing to cooperate and interested to partner with PRISMA and also involves the Food and Agriculture Security Department of Lombok Utara District in an effort to promote quality horty plant seeds for home garden.</p> <p>The Food and Agricultural Security Department of North Lombok District is the agency responsible for agriculture and food security especially in maintaining the production and productivity of agricultural products, the provision of food and how to ensure the distribution of food equally to the community. The financing comes from APBD 1-2 and APBN. For this partnership, government and private PPL (government counseling) will be involved, as well as the Village Government and BUMDes or community groups in the village.</p>
Partnership Roles	<p>The Food and Agricultural Security Department of North Lombok District: Identify and mobilize PPL and female farmer groups (KWT) to participate in activities agreed on the ground; coordinate with KWT and village officials to prepare land for demoplot; to get vegetable seeds and polybags to be distributed to all KWTs in the targeted location; coordinate PPL to assist KWT during field activities. Also coordination with BAPPEDA Lombok Utara.</p> <p>PT.BISI: to facilitate (conduct) training (ToT) and to develop training materials; to provide asign agronomists or spot-workers (SWs) to assist KWT and PPL in conducting field activities; to provide sample seeds (mini packages) for demoplot and other promotional activities; agronomist or SW to conduct demoplot monitoring and provide technical assistance to KWT.</p> <p>The role of PRISMA: to identify and negotiate with private partners for intervention; facilitate all promotional activities, such as farmer meetings, EXPO.</p>

	Partners' Contribution	<p>PT. BISI: Provide sample seeds for 29 group locations / villages in 4 sub-districts of Lombok Utara District; to establish agronomists and / or spot workers for support activities at demoplot sites, as well as at women's group sites.</p> <p>The Food and Agriculture Security Department of District: to get vegetable seeds and polybags to be distributed to several Groups (number of 29 groups).</p>
Homestead Gardening East Java	Intervention 1	PPC Promoting Small Veg Seed Package to Rural Area of Pamekasan (1GIC)
	Partners	<p>Public partner: Dinas Ketahanan Pangan dan Peternakan, Kabupaten Pamekasan, Madura</p> <p>Private partner: EWINDO</p>
	Partners' Rationale	<p>Dinas Peternakan dan Ketahanan Pangan Pamekasan is implementing Kawasan Rumah Pangan Lestari (KRPL) program to empower women in the rural area. This program aims at improving the nutrition by giving access to quality vegetable to the household.</p> <p>EWINDO not only has strong presence in Madurese market but also has produced vegetable seeds in small package under its Panah Merah brand. Before this intervention is introduced, farmers and women in Pamekasan already planted vegetable at home and some of them use Panah Merah seeds. Partnering with EWINDO will give an advantage to PRISMA in a way that we could identify users earlier.</p>
	Partners' Roles	<p>Engaging in this intervention, EWINDO acts as an input supplier, in this case, small package vegetable seeds. It will provide GAP for vegetable planting to female farmer groups while also promoting its seeds. Working with PPL as its ISP, EWINDO runs a business model where farmers order the seed from the company with PPLs acting as a distributor.</p>
	PRISMA's Roles	<p>PRISMA arranges activities that aim to introduce farmers to GAP for vegetable, especially the kinds they could plant at home. At the same time, PRISMA organizes a home garden competition among female farmer groups in Pamekasan to encourage and motivate them in planting.</p>
	Intervention 2	

		PPC Promoting Small Vegetable Seed Package to Rural Area of Bondowoso (1GID)
	Partners	Dinas Ketahanan Pangan dan Perikanan, Kabupaten Bondowoso Private partner: EWINDO
	Partners' Rationale	Dinas Ketahanan Pangan dan Perikanan Bondowoso is implementing Kawasan Rumah Pangan Lestari (KRPL) program to empower women in the rural area. This program aims at improving the nutrition by giving access to quality vegetable to the household.
	Partners' Roles	While it has become an established brand in Pamekasan, Panah Merah by EWINDO still needs to better build its presence in Bondowoso. That said, EWINDO believes Bondowoso could be another good market for its small package vegetable seeds
	PRISMA's Roles	PRISMA arranges activities that aim to introduce farmers to GAP for vegetable, especially the kinds they could plant at home. At the same time, PRISMA organizes a home garden competition among female farmer groups in Bondowoso to encourage and motivate them in planting.
Home Gardening Papua and Papua Barat	Intervention 1	Promoting Quality Vegetable Seeds for Home Gardening in Merauke (4GI0)
	Partners	Private partner: PT. East West Seed Indonesia (EWINDO) Public partner: Food Security, Livestock and Animal Health Agency (Dinas Ketahanan Pangan, Peternakan dan Kesehatan Hewan) Kabupaten Merauke
	Partners' Rationale	PT. East West Seed Indonesia/EWINDO is a producer of vegetable seeds with human resource capacity in Merauke. It has broad distributors and extension networks throughout Indonesia. With its extensive knowledge of farming techniques and willingness to make a demo plot, EWINDO became a suitable partner for this. Food Security, Livestock and Animal Health Agency in Merauke district is the agency responsible for food security, especially in the provision of food and how to ensure the distribution of food evenly to the community. The financing comes from APBD I, APBD II, and APBN. Public extension staff (PPL) is also involved in this intervention.

Partnership Roles	<p>Food Security, Livestock and Animal Health Agency in Merauke district : Identify and mobilize PPL and female farmer groups (KWT) to participate in activities agreed on the ground; coordinate with KWT and PPL to prepare land for demo plot; provide recommendation of vegetables seed and its provider to KWTs via PPL in the targeted location; coordinate PPL to assist KWT during field activities.</p> <p>PT EWINDO: develop training materials; provide assign Product Promotor (PP) to assist KWT and PPL in conducting field activities; provide sample seeds (mini packages) for demo plot and other promotional activities; conduct demo plot monitoring and provide technical assistance to KWT.</p> <p>Role of PRISMA: Identify and negotiate with private partners for intervention; facilitate all promotional activities, such as farmer meeting (GAP training), farmers field day, EXPO.</p>
Partners' Contribution	<p>PT. EWINDO: Provide sample seeds for 8 demo plot locations, provide training material, assign product promotor for support activities at all demo plot sites as well as at women's group sites, conduct promotional activities (farmers meeting, farmers field day and EXPO)</p> <p>Food Security, Livestock and Animal Health Agency in Merauke district: Provide sample seed for 14 demo plot; distribute budget and provide recommendation for vegetable seeds, fertilizer, material for nursery and demo plot to 14 female groups, coordinate PPL to assist KWT on preparation during field activities and for monitoring and evaluation, and provide data of female groups to private sector partner.</p>
Intervention 2	<i>Promoting Quality Vegetable Seeds for Home Gardening in Manokwari (5GI0)</i>
Partners	<p>Private partner: PT. East West Seed Indonesia (EWINDO)</p> <p>Public partner: Public partner: Agriculture and Food Security Agency (Dinas Pertanian dan Ketahanan Pangan) Kabupaten Manokwari</p>

	Partners' Rationale	PT. East West Seed Indonesia/EWINDO is a provider of vegetable seed with human resource capacity in Merauke. It has broad distributors and extension networks throughout Indonesia. With its extensive knowledge of farming techniques and willingness to make The Agriculture and Food Security Agency in Manokwari is the agency responsible for food security especially in the provision of food and how to ensure the distribution of food evenly to the community. The financing comes from APBN. Public extension staff (PPL) will be involved in this intervention
	Partnership Roles	The Agriculture and Food Security Agency in Manokwari: Identify and mobilize PPL and female farmer groups (KWT) to participate in activities agreed on the ground; coordinate with KWT and PPL to prepare land for demo plot; provide recommendation of vegetables seed and its provider to KWTs via PPL in the targeted location; coordinate PPL to assist KWT during field activities. PT EWINDO: develop training materials; provide assign Product Promotor (PP) to assist KWT and PPL in conducting field activities; provide sample seeds (mini packages) for demo plot and other promotional activities; conduct demo plot monitoring and provide technical assistance to KWT. PRISMA: Identify and negotiate with private partners for intervention; facilitate all promotional activities, such as farmer meeting (GAP training), farmers field day, EXPO.
	Partners' Contribution	PT. EWINDO: Provide sample seeds for 4 demo plot locations, provide training material, assign product promotor for support activities at all demo plot sites as well as at women's group sites, conduct promotional activities (farmers meeting, farmers field day and EXPO) The Agriculture and Food Security Agency of Manokwari district: Provide sample seed for 6 demo plot; distribute budget and provide recommendation for vegetable seeds, fertilizer, material for nursery and demo plot to 6 female groups, coordinate PPL to assist KWT on preparation, during field activities and for monitoring and evaluation, provide data of female group to private sector partner.
M4P Training to GOI	Intervention 1	M4P Maize Pamekasan (1GIC)
	Partner	Public partner: Dinas Pertanian dan Ketahanan Pangan Kabupaten Pamekasan, Madura Private partner: DuPont Pioneer Indonesia

Partners' Rationale	Under its 'food sovereignty' agenda, GoI also claim right and authority to mitigate risk of population nutrition-related problem due to food & nutrition scarcity at household level, through food diversification promotion. One of the promotion agenda is to implement homestead gardening program. Ministry of Agriculture, every governor and Head of Districts are requested to allocate fund and distribute it through District Food Security Offices to different female farmer groups to establish fruit & vegetable seedling nurseries, green houses, demoplot, and GAP training, every years. The District Food Security Offices is also encouraged by the national government to manage and scale up the homestead gardening program (KRPL) in collaboration with private sector. With support from PRISMA, EWINDO has identified a clear opportunity to increase vegetable seed sales in rural area while promoting PANAHA MERAH seed through collaboration with the District Food Security Offices. EWINDO is interested to reach more rural farmers, deliver GAP and sell more vegetable seed through collaboration with District Food Security Offices in East Java, started from Pamekasan.
PRISMA's Roles	Upon the M4P training, PRISMA contributes in conducting a series of FFD in five subdistricts (40 FFDs in total). The main purpose of the FFD is to train and socialize farmers on good maize farming practices. This is to create awareness of GAP and hybrid maize seeds among Madurese farmers as some of the targeted districts have not been penetrated with GAP and hybrid maize seeds. Farmers are allowed to observe successful maize field during the FFD while DuPont also sold its seeds.
Intervention 2	Private Public Collaboration for Good Quality Chili Seed Promotion in Sampang - Madura (1GIB)
Partner	Public partner: District Government of Sampang through Bappelitbanda and District Agriculture Office of Sampang Private partner: Because BISI has stepped back from this intervention, PRISMA and LG are approaching alternative partner
Description	This intervention is to utilise market opportunities and address specific constraints in private public collaboration for good quality vegetable seed and specific chili seed promotion in Sampang dan Madura that will benefit rural poor farmers
Partners' Rationale	District Govt. of Sampang: to provide stimulant program for at least 25 spots in the form of sample seed, some other inputs and extension workers who are going to provide assistance and extension services

	PRISMA's Roles	PRISMA: to contribute in TOT for public EWs and Taruna Cabe, farmers field visits and identify retail channel
PPC Maize Manggarai Barat and Manggarai Timur	Intervention 1	Increasing Productivity (GAP) and Access to Market (GHP) of Maize Trough Public Private Collaboration in Manggarai Barat (3GIC) & Manggarai Timur (3GID)
	Partners	Private partner: PT. BISI Internasional Tbk. Public partner: Dinas Pertanian in District Manggarai Timur and Dinas Pertanian of Manggarai Barat
	Partners' Rationale	<p>PT. BISI International Tbk is one of the major maize seed producers in Indonesia and is currently expanding its product sales in the Nusa Tenggara region. PT. BISI is one of the companies that has been selected by the Provincial government of Nusa Tenggara Timur for procuring the subsidized maize seed program in the province.</p> <p>The GOI has been running program to support the maize farmers by providing subsidized seed for years. In 2018 the program named PATB Program (Perluasan Areal Tanam Baru), in the previous years it was called UPSUS Program (Upaya Khusus). The financing comes from APBN, and at the local level, the procurement process is conducted by the provincial government of NTT, however, the program executed by the district government and the executing agency is the Dinas Pertanian, in this case, Distan Manggarai Timur & Manggarai Barat. The total planting area for Mabar is 1615 ha and for Matim is 1000 ha</p>

Partnership Roles	<p>Distan provides data of farmers (CPCL) and conducts field assesment to identify and see the potential area and its feasibility. This process of identification is conducted by the extension services staff (PPL) on the field. Distan also ensures the distribution of the subsidized seed is secured to all group of farmers and the socialization of the program is conducted. With the collaboration of the agronomist and field staff of BISI, the knowledge of GAP is also socialized to all group of farmers receiving the program.</p> <p>PT.BISI: conduct training (ToT) and staged socialization program to ensure product knowledge and GAP is disseminated to all PATB program area; asign agronomists or spot-workers (SWs) to monitor and support PPL in conducting field activities; provide sample seeds for demoplot and other promotional activities; agronomist or SW conduct demoplot monitoring and provide technical assistance to group of farmers</p> <p>Roles of PRISMA: connect the public and private partner, assist private partner in scaling up its promotion activitis in the form of adding the following events: benchmarking visit, farmers meetings, and FFD</p>
Partners' Contribution	<p>The role of PRISMA: facilitate meetings and egagement process both with private partners and public partners; identify and negotiate with public and private partners for the intervention; support promotional activities, i.e. FFD, Expos as well as support promotional tools for partners.</p> <p>Distan of Mabar and Matim: provide subsidized seeds as well as fertilizers, and all other supports necesarry for farmers, and mobilize PPL to monitor the progress of the maize crops planted by farmers.</p>
Intervention 2	PPC Promoting GAP of TSS/Vegetable to Rural Farmers and Nurseries in Situbondo (1GID)
Partners	<p>Private partner: PT. East West Seed Indonesia (EWINDO)</p> <p>Public partner: Dinas Pertahanan Pangan, Holtikultura, dan Perkebunan Situbondo (DISPERTAHORTIBUN)</p>

	Partners' Rationale	<p>EWINDO is one of the producers of true shallot seeds. Its strength is in its existing broad distributors and extension networks throughout Indonesia. Apart from that, EWINDO also has extensive knowledge of farming techniques and field staff to cover the area of East Java, including Situbondo.</p> <p>DISPERTAHORTIBUN is one of the M4P Training participants able to develop its intervention plan and expect PRISMA to assist them in exercising an intervention program in collaboration with private partner. DISPERTAHORTIBUN has extension service workers who have data on potential farmers for private sector to target. In parallel, DISPERTAHORTIBUN has already received target from the Head of District to make Situbondo as new shallot market in East Java</p>
	Partnership Roles	<p>Roles of public partner in this intervention: develop CPCL and provide the CPCL data to private sector, allocate public fund to cover TSS, fertilizer and pesticide costs for 7 demoplot, organize kick-off meeting to introduce TSS, deploy ESW to organize farmers meeting and invite private partner to deliver information on GAP</p> <p>Roles of private partner in this intervention: one-on-one visit to each demoplot, organize benchmarking visit to potential & demoplot farmers, provide training to local nursery and female farmers, organize FFD</p>
		<p>Roles of PRISMA: connect the public and private partner, assist private partner in scaling up its promotion activities in the form of adding the following events: benchmarking visit, farmers meetings, and FFD</p>
	Partners' Contribution	<p>Public partner's contribution: cost coverage for 7 demoplot which includes TSS, fertilizer and pesticide, transport cost coverage for ESWs to organize several 21 times farmers meeting</p> <p>Private partner's contribution: GAP delivery</p>
Fertilizer EJ, NTB & NTT	Intervention 1	Promoting Blaukorn Fertilizer Technology and Comprehensive Crop Protection (EJ, NTB & NTT)
	Partner	Behn Meyer
	Description	<p>The core business of Behn Meyer AgriCare is in the production, marketing and distribution of fertilizers, specialty fertilizers and agrochemicals as well as related advisory services in the ASEAN region. With many internationally renowned fertilizer and agrochemical producers such as Eurochem Agro, K+S Kali, COMPO, Canpotex, APC, BASF and Mitsui as Behn Meyer principals, for more than 60 years Behn Meyer have contributed significantly to the growth and vitality of the Asian agricultural sector. BM market a wide and comprehensive range of products with various availabilities from country to country. Behn Meyer network covers more than 14 countries and is supported by 28 offices, 38 warehouses and several manufacturing plants in Asia, Europe and the USA.</p>
	Partners' Rationale	<p>BM has a very good technology on Fertilizer and has a vision to increase knowledge of Indonesian farmers, however they are lack of internal capacity and marketing system.</p>

Partnership Roles	The goal of this intervention is to help farmers have access to Blaukorn Fertilizer Technology and Comprehensive Crop Protection and understand how to apply it in proper way by following the GAP on vegetable cultivation to ensure they get an increase in productivity thus help them generate greater income. These services are provided by Behn Meyer staff. With our support, Behn Meyer staff will be able to conduct more promotional activities such as Farmers' Meeting, Farmers' Field Day, and Demo Farm to reach more farmers in EJ, NTB, NTT.
Intervention 2	Promoting High Quality Commercial Fertilizer and GFP in NTB
Partner	CV Saprotan Utama
Description	CV Saprotan Utama is a family owned business, working in the agriculture sector as a distributor and manufacturer of fertilizers, pesticides, rice seeds and corn seeds. The company has been working in the industry for at least 40 years and have grown to reaching IDR 1.2 trillion sales value from fertilizer & pesticide, the main products of the company's business. CV. Saprotan Utama is committed to become the most advanced company in fertilizer and pesticide industry in Indonesia by always putting customer satisfaction first through high quality and consistent services.
Partners' Rationale	Utilizing existing distribution channel in Lombok and strengthening their distributor and agents, CV Saprotan plans to promote Argontain. Argontain also known as Argon is a new product in Lombok, which is a nitrogen stabilizer that protects urea against loss of nitrogen through ammonia volatilization. This products has the potential to increase yield up to 25%, while also lowering the cost spent by farmers. This is one solution to solving the fertilizer shortage farmers face during certain time of the year. By collaborating with PRISMA, CV Saprotan sees this partnership as an opportunity to promote the product more extensively.
Partnership Roles	Intervention works in strengthening distribution channel, product promotion, and strengthening farmers' knowledge and capacity on GFP, which will lead to farmers increase their income as a result of higher productivity after using high quality fertilizer. In doing this intervention, together with PRISMA, CV. Saprotan Utama as the authorized distributor of Agrotain in Indonesia, will provide capacity building to farmers and retailers, develop demo plot, and extension services to farmers. This intervention will also involve lead farmers to conduct demo events and provide information to farmers, and retailers as intermediate service providers (ISPs) will sell fertilizer to farmers, provide market information and promotion as embedded services.
Intervention 3	Promoting High Quality Fertilizer to Farmers in NTB
Partner	PT Pupuk Kaltim
Description	PT Pupuk Kaltim is a subsidiary of the state-owned PT Pupuk Indonesia which was established on December 7 1977 and is located in Bontang, East Kalimantan. With a total of 3.43 million tons/year Urea production capacity, it is the biggest Urea producer in Indonesia. In addition, they also produce as many as 2.74 million tons of Ammonia and 350,000 tons of NPK per year. The main business of the company is producing and selling Urea, Ammonia, and NPK fertilizer to both local and international market. Its subsidized fertilizer

		marketing area covers 2/3 of Indonesia, including Eastern Indonesia and most of East Java.
	Partners' Rationale	As one of the biggest fertilizer companies in Indonesia, PT Pupuk Kaltim already has many distribution channels in Eastern Indonesia, including NTB, to sell their subsidized fertilizer. They are now starting to focus on selling high quality commercial fertilizer in NTB, however, their distributors and agents are still not equipped with enough skills and knowledge to promote the products. In addition to that, PT Pupuk Kaltim still needs to convince the farmers that using high quality commercial fertilizer will give them more benefits and encourage them to slowly shift from using subsidized fertilizer.
	Partnership Roles	PT Pupuk Kaltim, supported by PRISMA, will promote high quality commercial fertilizer to farmers in NTB through demo plot, demo event, market storm, and trainings to its retailers. PRISMA will also support PT Pupuk Kaltim in strengthening its distribution channel, designing customer loyalty scheme, as well as developing other marketing strategies to expand their market in NTB.
Rice EJ	Intervention 1	Rice EJ FMC
	Partner	PT Bina Guna Kimia (FMC)
	Description	FMC is a multi-national agro-chemical company from America. In Indonesia, they have been around since the 1990s. Currently, they are introducing a new product line which is mineral based Soil Treatment products.
	Partners' Rationale	PRISMA partner with FMC to increase crop productivity by introducing their new product line in Soil Treatment, providing technical assistance on soil testing and GAP. This is to tackle farmer's problem in soil quality due to acidity and salinity, which can be caused by overuse of pesticide, overuse of fertilizer, lack of soil resting period, lack of crop rotation, or soil characteristics.
	Partnership Roles	PRISMA's role in this intervention is by accelerating introduction of soil treatment products by Expo and Soil Clinic activities in East Java, from original plan of Central Java and Central Sulawesi.
	Intervention 2	Rice EJ SHF Bayer
	Partners	PT Bayer Indonesia
	Description	Bayer is a multinational life science company based in German with a more than 150-year history and core competencies in the areas of health care and agriculture. In Indonesia, the headquarter is located in Jakarta and the chemical plant for its crop science products is located in Surabaya.

	Partners' Rationale	Bayer is a well-established company with 150-year history. It has the complete product portfolio for pest and disease protection in rice farming and it has the capability of reaching large number of farmers. Aside from that, it also has an initiative to develop rice farming among smallholder farmers.
	Partnership Roles	PRISMA's role in this partnership is facilitating Bayer to scale up its Smallholder Farming Initiative (SHF) in rice farming in EJ.
Cashew NTB/NTT	Intervention 4	PT. Comextra Majora
	Partner	PT. Comextra Majora
	Description	PT. Comextra Majora is a major cashew processors that leads Indonesia's Raw Cashew Nuts (RCN) market share by approximately 56% which has been operated since 1988. PT. Comextra Majora joint ventures with Barry Callebout Ltd in 2004 to accommodate high demand of cocoa in Asia.
	Partners' Rationale	PT Comextra Majora concerns regarding the decline of cashew supply in Indonesia. Thus, they begin the campaign of increasing cashew productivity through their networks across Indonesia by increasing farmers capacity by developing field school that create sustainable and independent cashew farmers.
	Partnership Roles	PRISMA will support PT. Comextra Majora activity in NTT and NTB. PT. Comextra Majora will provide capacity building to farmers, collectors, and nurseries through their network and create sustainable relation between farmers, collectors, and nurseries.

Co-facilitators 1 – partner details

Partners' Details		
Coffee	Intervention 1	Development of ICCRI franchise
	Partner	ICCRI
	Description	ICCRI was founded on the 1st January 1911 and holds a national mandate to conduct research and development activities into coffee and cocoa as well as provide data and information to smallholders, private and estate companies, national and regional government agencies, associations and other stakeholders. The institution supports locations for on-farm Robusta coffee experiments. Since 2011, two of ICCRI's units have been awarded accreditation - its certification body and testing laboratory. ICCRI has a library with a vast collection of reference materials. The institute has 36 researchers comprising 12 PhD holders, seven Masters graduates and 17 Bachelors holders.

Partners' Rationale	ICCRI wishes to disseminate knowledge and skills but does not have the capacity to develop branches in many areas of Indonesia. ICCRI branches enable farmers and related stakeholders to better access ICCRI products and services.
Partnership Possibilities	ICCRI support can help increase the productivity and quality of coffee. PRISMA will help ICCRI expand their services through the franchise model in project locations.
Partner 2	Cooperatives
Description	Cooperatives is one of main player in coffee sector. Farmers who are in the cooperatives can get a better price as their product will be sold as certificate product, information, and access to finance.
Partners' Rationale	Each cooperatives has at least 100 to more than 1000 coffee's farmers member. All of the member of the cooperatives will send their product through cooperatives, getting finance access recommendation, and information sources.
Partnership Possibilities	Cooperatives seek to increase their quality of coffee with certificate, coffee supply from its coffee farmer's member, and their member number but doesn't have proper knowledge and management capacity yet. PRISMA will linkage them with Bank to increase their financial capacity and ICCRI to increase their knowledge capacity.
Intervention 2	Development of decentralized processing facilities for specialty coffee through cooperatives
Partner 1	PT Indokom Citra Persada (Indokom)
Description	Indokom is a coffee exporting company founded in 1996. The company has offices in Lampung province and Sidoarjo, East Java province. In 2012, the company exported 70,000 MT to markets in the European Union, Japan, the Middle East and the USA. Most sales are done under long-term contract with an average price of around USD 4,000 per MT. While for the spot market is only 10% of total volume.
Partners' Rationale	In order to increase turnover, the company aims to increase sales of specialty coffee and for that it needs a continuous supply of quality coffee from farmers and reliable management systems.
Partnership Possibilities	Indokom are concerned to improve the welfare of coffee farmers in Indonesia through providing technical assistance at post-harvest and in processing. PRISMA will help Indokom develop a cooperation model based on harvest cooperatives for processing coffee in pilot project areas.
Partner 2	Bank NTT

	Description	Bank NTT is a development regional bank based in NTT (Eastern Nusa Tenggara). It has been established since 17 July 1962 and become limited liability company on 22 April 1999 with current IDR 9.5 Trillion. Inspired by service spirit to the society, Bank NTT does not only serve in urban area but also spread across remote area in East Nusa Tenggara Province. Within this spirit, Bank NTT has existed in 22 Municipals/Cities in East Nusa Tenggara and Surabaya – East Java area.
	Partners' Rationale	Bank NTT has an organization target to improve regional business through access to finance in all over NTT areas.
	Partnership Possibilities	Bank NTT seeks to new credit areas in NTT but doesn't yet have proper understanding on the beneficiary capacity. PRISMA will linkage them with potential cooperatives who need to improve their financial capacity. The multi-stakeholder agreement will be used as one of the guarantee for the Bank to give finance.
Cashew	Intervention 1	Cashew GNE
	Partner	PT Gerbang NTB Emas (PT GNE)
	Description	PT GNE is a state-owned enterprise (SOE) of the West Nusa Tenggara (NTB) provincial government. The company was established on 5 April 2007 and has several business units, including construction and agriculture equipment production. The company's goal is to generate profit for the local government. As an SOE, PT GNE also has a mandate to support the economic potential of the local area and increase social welfare through productive activities.
	Partners' Rationale	PT GNE wishes to increase their business income and is planning to re-establish the currently idle agro-business unit. The unit will provide technical assistance and mentoring to service providers at PT GNE's own cost. PT. GNE will also develop partnerships with input producers and suppliers and will become their main distributor in NTB.
	Partnership Roles	PT GNE has a mandate to support the development of local economic potential in NTB. The cashew sector in Bima and Dompu is the target area for their products and services. PRISMA will help PT GNE develop the agro-business unit, mainly in business planning and marketing.
Seaweed	Intervention 1	Seaweed UD Alga
	Partner 1	CV EVADIAN (IMTA MUZE Indonesia)
	Description	CV EVADIAN was established by Iain C. Neish (PhD), an international seaweed expert involved in supplying dried seaweed to export and domestic markets. The company is based in South Sulawesi.
	Partners' Rationale	CV EVADIAN is interested in establishing a Seaweed Support Centre (SSC) to work in two districts of the eastern Flores Islands, with investment in warehousing, drying and packaging facilities.

	Partnership Roles	Through the SSC, CV EVADIAN will provide technical assistance in the form of good agriculture practice (GAP) development, post-harvest handling, marketing, logistics and market information. PRISMA will support networking in local communities, facilitation of capacity building for SSC staff and facilitate technical know-how and capacity building by SSC staff to seaweed farmers.
	Partner 2	UD. ALGA
	Description	UD. Alga was established by Kevin Suhaili as a seaweed trading company. UD. Alga based at Jl. Raya Ba'a Basalangga, West Rote-Rote Ndao, East Nusa Tenggara. It has seaweed cultivation area in Dodaek of Southern Rote. Since February 2015 UD. Alga has initiated to develop seaweed cultivation of variety "SAKOL" together with local community.
	Partners' Rationale	UD. ALGA is interested in establishing a Seaweed Support Centre (SSC) to work in two districts of the Kupang and Rote with investment in warehousing, drying and provide the training of Good Agriculture Practice (GAP) on Seaweed.
	Partnership Roles	Through the SSC, UD. ALGA will provide technical assistance in the form of good agriculture practice (GAP) development, post-harvest handling, marketing, logistics and market information. PRISMA will support networking in local communities, facilitation of capacity building for SSC staff and facilitate technical know-how and capacity building by SSC staff to seaweed farmers.
Fishery	Intervention 1	Developing fish cage farming (already closed)
	Partner	PT Trimitra Anugerah Segara (TAS) (formerly CV Berill Jaya Marine)
	Description	TAS is a <i>kerapu</i> (grouper) fish exporter based in Bali.
	Partners' Rationale	The business is rapidly expanding and faces constant demand.
	Partnership Possibilities	TAS will support <i>kerapu</i> production units to improve their productivity and product quality in return for access to an improved and consistent supply of fish. This will be achieved through developing apprenticeships and ToT programs, with the support of the project. TAS will support the apprenticeships and technical assistance providers. TAS will facilitate farmer group directly to export the fish to abroad markets and apply commission for this new role.
	Intervention 2	Developing innovative financial products for fish cage farming (already closed)
	Partner	Bank Pembangunan Daerah Jawa Timur (Bank Jatim)
	Description	Bank Jatim, established in 1961, is a local government-owned development bank with 40 branches throughout East Java and Jakarta.
	Partners' Rationale	Bank Jatim has a loan scheme focusing on the fisheries and agriculture sectors but the financial products are not specific to fish cage farming.

	Partnership Possibilities	Bank Jatim will develop financial products and promote them to kerapu production units through the Kerapu Producers' Association. Bank Jatim will provide finance and develop a training program to improve the financial literacy and management skills of the kerapu production units and the Kerapu Producers' Association.
Cassava	Intervention 1	Promoting rewarding system and GAP to increase the quantity and regularity of fresh cassava supply for starch processing (CLOSED)
	Partner 1	Pak Amir (Large Cassava Supplier)
	Description	Pak Amir started his business in cassava since 1998. He began as supplier of chips for local home industry in Sumenep- Madura. Currently, Mr. Amir supplies cassava to big tapioca factories in East Java * Malang, Kediri and Ponorogo. Pak Amir purchase cassava from farmers through local collectors. Pak Amir has 75 local collectors spread across Java and Madura. During the peak season Pak Amir can supply cassava to big factories between 14-25 tons per day
	Partners' Rationale	The company wishes to expand their sourcing base and consistent supply of cassava from farmers in order to meet expanding production needs.
	Partnership Possibilities	Pak Amir has some experience in purchasing cassava from Madura. PRISMA will help Pak Amir develop a cassava collection model as well as provide support in the form of technical mentoring services for good agricultural and post-harvest handling practices, which will be given to farmers through the collectors. This will ensure farmers have better market access and at the same time Pak Amir will be able to get consistent supply of quality cassava.
	Intervention 2	Increasing access to good agricultural practices (GAP) and fertilizer
	Partner 1	PT Natural Nusantara (NASA)
	Description	PT NASA is a liquid organic fertilizer company located in Yogyakarta that has much experience in researching their product. Product development activities began in 1985 and the company was formed in 2002. Many farmers in Java and Sumatra have used products from PT NASA for more than 15 years. PT NASA has a production capacity of 1 million litres per year.
	Partners' Rationale	PT NASA is eager to expand their market for liquid organic fertilizer products through cooperation with local agents and distributors in cassava-producing areas of East Java. For each additional one hectare of land, PT NASA expects additional sales of around IDR 1.2 million (for the use of three products, namely POC NASA, Supernasa and Homonik).
Partnership Possibilities	PT NASA has the ability and experience to produce liquid organic fertilizer and to deliver technical assistance on product application in the field through their team of experts. PRISMA will help PT NASA	

		develop the market for its products and connect the company with fertilizer distributors.
	Intervention 3	Developing a consistent supply of cassava chips for Animal Feed (CLOSED)
	Partner	Unit Pengembangan Sosial Ekonomi (PSE) Keuskupan Atambua
	Description	PSE Keuskupan Atambua consists of 60 Pariko with around 12.000 farmers as members; substantial number of these farmers are also involved in pig rearing. PSE has several production unit including briks, tile, and paving production, furniture production, truck rent, ect,
	Partners' Rationale	PSE is interested to develop animal feed miller business because of the opportunity arising out of limited animal feed availability in the market and growing animal population in NTT especially pig. There are local raw materials available including cassava, which is a major ingredient. The local animal feed thus produced can be competitive in the market due to high transportation cost of bringing feed from outside the island.
	Partnership Possibilities	The company is quite new in this business and needs support to establish feed miller company, feed testing, marketing, and collaborating with collectors. PRISMA will help PSE develop cooperative agreements with collectors in the project area as well as deliver capacity building to PSE about developing the feed production, testing, marketing,. PSE will provide capacity building of GAP and post harvesting knowhow to farmer through the collector.
Pigs	Intervention 1	Introducing improved pig breed and promotion of commercial pig rearing (CLOSED)
	Partner 1	Yayasan Bintang Firdaus (YBF)
	Description	YBF is a Pig Breeding Company and Key Service Provider. The company has invested in developing pig business in Ende since 2008.
	Partners' Rationale	YBF has interest to expand their piglets business in in Flores and other islands by upgrading their sows and piglet rearing management.
	Partnership Possibilities	YBF will supply piglets and knowledge on good rearing practice to farmers that are interested to improve their pig rearing. PRISMA will provide capacity building support to YBF and link YBF to other market actors to promote their piglets, and to source fodder, other necessary inputs for piglets breeding company.
	Partner 2	Kebun Misi Bhoanawa (KMB)
	Description	KMB is a Pig Breeding Company and Key Service Provider. The company has invested in developing pig business in Ende since 2010.

Partners' Rationale	KBM has interest to expand their piglets business in in Flores and other islands by upgrading their sows and piglet management.
Partnership Possibilities	KMB will supply piglets and knowledge on good rearing practice to farmers that are interested to improve their pig rearing. PRISMA will provide capacity building support to KMB and link KMB to other market actors to promote their piglets, and to source fodder, other necessary inputs for piglets breeding company.
Partner 3	Biara Bruder (BB)
Description	BB is a Pig Breeding Company and Key Service Provider. The company has invested in developing pig business in Ende since 2000.
Partners' Rationale	BB has interest to expand their piglets business in in Flores and other islands by upgrading their sows and piglet management.
Partnership Possibilities	BB will supply piglets and knowledge on good rearing practice to farmers that are interested to improve their pig rearing. PRISMA will provide capacity building support to BB and link BB to other market actors to promote their piglets, and to source fodder, other necessary inputs for piglets breeding company.
Partner 4	St Aloysiu (SA)
Description	SA is a Pig Breeding Company and Key Service Provider. The company has invested in developing pig business in Ruteng since 2012.
Partners' Rationale	SA has interest to expand their piglets business in in Flores and other islands by upgrading their sows and piglet management.
Partnership Possibilities	SA will supply piglets and knowledge on good rearing practice to farmers that are interested to improve their pig rearing. PRISMA will provide capacity building support to SA and link SA to other market actors to promote their piglets, and to source fodder, other necessary inputs for piglets breeding company.
Partner 5	Convasionis
Description	Convasionis is a Pig Breeding Company and Key Service Provider. The company has invested in developing pig business in Ruteng since 2013.
Partners' Rationale	Convasionis has interest to expand their piglet business in in Flores and other islands by upgrading their sows and piglet management.
Partnership Possibilities	CONVASIONIS will supply piglets and knowledge on good rearing practice to farmers that are interested to improve their pig rearing. PRISMA will provide capacity building support to CONVASIONIS and link CONVASIONIS to other market actors to promote their piglets, and to source fodder, other necessary inputs for piglets breeding company.
Partner 6	Ordo SVD
Description	Ordo SVD is a Pig Breeding Company and Key Service Provider. The company has invested in developing pig business in Labuan Bajo since 2005.

Partners' Rationale	Ordo SVD has interest to expand their piglet business in in Flores and other islands by upgrading their sows and piglet management.
Partnership Possibilities	ORDO SVD will supply piglets and knowledge on good rearing practice to farmers that are interested to improve their pig rearing. PRISMA will provide capacity building support to ORDO SVD and link ORDO SVD to other market actors to promote their piglets, and to source fodder, other necessary inputs for piglets breeding company.
Partner 7	Clements
Description	Clements is a Pig Breeding Company and Key Service Provider. The company has invested in developing pig business in Bajawa since 2013.
Partners' Rationale	Clements has interest to expand their piglet business in in Flores and other islands by upgrading their sows and piglet management.
Partnership Possibilities	CLEMENTS will supply piglets and knowledge on good rearing practice to farmers that are interested to improve their pig rearing. PRISMA will provide capacity building support to CLEMENTS and link CLEMENTS to other market actors to promote their piglets, and to source fodder, other necessary inputs for piglets breeding company.
Partner 8	Pati Ahu

Description	Pati Ahu is a Pig Breeding Company and Key Service Provider. The company has invested in developing pig business in Maumere since 1995.
Partners' Rationale	Pati Ahu has interest to expand their piglet business in Flores and other islands by upgrading their sows and piglet management.
Partnership Possibilities	PATI Ahu will supply piglets and knowledge on good rearing practice to farmers that are interested to improve their pig rearing. PRISMA will provide capacity building support to PATI Ahu and link PATI Ahu to other market actors to promote their piglets, and to source fodder, other necessary inputs for piglets breeding company.
Partner 9	PT Charoen Pokphand (CP)
Description	PT Charoen Pokphand Indonesia is Indonesia's largest producer of poultry feed, Day Old Chicks and processed chickens. The Company was established in 1972 as the first high-volume feed mill in Jakarta manufacturing premium quality poultry feed.

Partners' Rationale	PT CP already worked in Flores and marketed around 50MT pigs feed per month recently. The company aims to increase the pigs feed market in Flores but farmers have limited access to good piglets and are not knowledgeable about the benefit and use of quality feed. Given the size of the pig market in Flores, this is a very high potential area for CP feed and therefore the company is willing to invest in educating the farmers.
Partnership Possibilities	PT CP with support from PRISMA will train and use distribution and other channel members such as traders, input sellers, credit union etc. to educate farmer by providing embedded service on GRP and promote use of quality fodder.
Intervention 2	Support the Development and Promotion of Quality Feed Supply and its Distribution Channel in Flores and Sumba, East Nusa Tenggara (NTT)
Partner 1	PT Sierad Produce Tbk
Description	Sierad Produce is an integrated poultry-based food company in Indonesia. Its core businesses include the production of primary processed and poultry feed; breeding and hatchery; commercial chicken farms; slaughtering and production of further processed and value added chicken products; and pig feed. Sierad is one of the largest player in the Indonesian feed industries. Sierad Produce manufactures and markets its processed chicken products under the Belfoods brand. Belfoods products are available at its retail outlets and in supermarkets and hypermarkets across Indonesia. Sierad Produce was established in 1985. The company has been listed on the Jakarta Stock Exchange since 1997 and became part of by Gunung

	Sewu in 2015 through acquisition by Great Giant Pineapple.
Partners' Rationale	Sierad is a new pig feed player in Flores NTT. The company entered into Flores market was influenced by PRISMA. They started selling their pig feed products in Flores since November 2015. In Dec 2016, their feed sale reaching up to 100 MT and will be growing further. The company aims to increase the pigs feed market in NTT, particularly in Flores but farmers have limited access to good quality feed and are not knowledgeable about the benefit and use of quality feed for pigs. Given the size of the pig market in NTT this is a very high potential area for the company's feed products to penetrate in and therefore the company is willing to invest in educating the farmers and developing distribution channel to remote areas so that farmers in the remote areas will have a better access.
Partnership Possibilities	PT Sierad Produce with the support from PRISMA will train and use feed distribution and other channel members such as input sellers, credit union, retailers, etc. to educate farmer by providing embedded service on GRP and promote use of good quality feed as well as animal welfare.
Partner 2	PT Japfa Comfeed Indonesia Tbk
Description	PT Japfa Comfeed Indonesia Tbk is one of the largest and most integrated agri-food companies in Indonesia. Its core business activities include animal feed manufacturing, chicken breeding, poultry processing as well as aquaculture farming.

Partners' Rationale	<p>Japfa Comfeed a new pig feed player in Flores NTT. The company entered Flores market was influenced by PRISMA and just started selling their pig feed products in Flores since January 2016. In Dec 2016, their feed sale reaching up to 50 MT and will be growing further. The company aims to increase the pigs feed market in NTT, particularly in Flores but farmers have limited access to good quality feed and are not knowledgeable about the benefit and use of quality feed for pigs. Given the size of the pig market in NTT this is a very high potential area for the company's feed products to penetrate in and therefore the company is willing to invest in educating the farmers and developing distribution channel to remote areas so that farmers in the remote areas will have a better access.</p>
Partnership Possibilities	<p>PT Japfa Comfeed with the support from PRISMA will train and use feed distribution and other channel members such as input sellers, credit union, retailers, etc. to educate farmer by providing embedded service on GRP and promote use of good quality feed as well as animal welfare.</p>
Partner 3	<p>Rembu Tedeng</p>

Description	Rembu Tedeng, is a small sized local feedmiller in Ruteng, Manggarai District, Flores. The company was established in 2015 and started producing pig feed products in May 2016. The monthly feed production is more less 30 MT.
Partners' Rationale	Rembu Tedeng is a small sized and "the first local player of pig feed in Flores and even NTT. Given the growing demand for compound feed for pig in Flores, the company aims to take the benefit from the day-to-day increased demand of the pigs feed market in Flores but farmers have limited access to good quality feed and are not knowledgeable about the benefit and use of quality feed for pigs. The company is willing to invest in educating the farmers and developing distribution channel to remote areas so that farmers in the remote areas will have a better access.
Partnership Possibilities	Rembu Tedeng with the support from PRISMA will train and use feed distribution and other channel members such as input sellers, credit union, retailers, etc. to educate farmer by providing embedded service on GRP and promote use of good quality feed as well as animal welfare.
Partner 4	PT Malindo Feedmill Tbk

Description	PT Malindo Feedmill Tbk, is one of the largest feed players in Indonesia, ranked 3rd (after Charoen Pokphand and Japfa Comfeed). The company was established in 1997 and has grown to have a wide range of products in animal feed, breeding farm, broiler farm and food processing. The continuous development is also demonstrated by the establishment of a breeding farm and feedmill in several regions in Indonesia such as Sumatra, Java, Kalimantan and Sulawesi.
Partners' Rationale	PT Malindo Feedmill Tbk is a big feed producer in Indonesia and has been producing in Indonesia for 20 years. The company has entered market in Sumatra, Java, Kalimantan, Sulawesi and is looking for new places to expand their market. They were convinced by PRISMA on the potential NTT pig market and were interested to enter the market, specifically starting in Sumba. The company is willing to invest in educating and developing distribution channel reaching farmers in remote areas.
Partnership Possibilities	PT Malindo Feedmill Tbk with the support from PRISMA will train and develop feed distribution also other channels such as input sellers, credit union, retailers, etc. to educate farmer on good rearing practices and provide embedded service to promote the use of good quality feed as well to encourage animal welfare.
Intervention 2	Promoting Improved Feed, Good Rearing Practices and Weighing Scale
	Practices in Timor Island, East Nusa Tenggara (NTT)
Partner 1	PT Malindo Feedmill Tbk
Description	PT Malindo Feedmill Tbk, is one of the largest feed players in Indonesia, ranked 3rd (after Charoen Pokphand and Japfa Comfeed). The company was established in 1997 and has grown to have a wide range of products in animal feed, breeding farm, broiler farm and food processing. The continuous development is also demonstrated by the establishment of a breeding farm and feedmill in several regions in Indonesia such as Sumatra, Java, Kalimantan and Sulawesi.
Partners' Rationale	PT Malindo Feedmill Tbk is a big feed producer in Indonesia and has been producing in Indonesia for 20 years. The company has entered market in Sumatra, Java, Kalimantan, Sulawesi and is looking for new places to expand their market. They were convinced by PRISMA on the potential NTT pig market and were interested to enter the market, specifically in Timor. The company is willing to invest in educating and developing distribution channel reaching farmers in remote areas.
Partnership Possibilities	

		PT Malindo Feedmill Tbk with the support from PRISMA will train and develop feed distribution also other channels such as input sellers, credit union, retailers, etc. to educate farmer on good rearing practices and provide embedded service to promote the use of good quality feed as well to encourage animal welfare.
	Partner 2	PT. Sinar Terang Madani
	Description	PT. Sinar Terang Madani is established in 2012 as the first feedmill in Barru, South Sulawesi, producing premium animal feed. It has also opened another feedmill facility in Makassar, South Sulawesi.
	Partners' Rationale	PT Sinar Terang Madani has visions on becoming an integrated company for agribusiness in Indonesia, particularly in South Sulawesi and expand to Eastern Indonesia. After meeting with PRISMA and seeing the potential business for pig feed in NTT market, PT Sinar Terang Madani was convinced to enter NTT market, specifically Timor Island. The company is willing to increase the farmers' knowledge through training and/or demo plot also provide embed service to support farmers on good quality feed and establishing distribution channel to reach smallholder farmers in rural areas.
	Partnership Possibilities	PT Sinar Terang Madani with the support from PRISMA will conduct a series of educational activities, such as training of trainers, training for farmers, demo plot, also promotional activities, such as market storm, to promote information on good rearing practices and encourage animal welfare in rearing activities.
Coconut	Intervention 1	Promotion of organic coconut sugar certification (COMPLETED)
	Partner	PT Big Tree Farms (BTF)
	Description	BTF specialises in sourcing and marketing food products and has developed an innovative range of coconut sugar products.
	Partners' Rationale	BTF already works with 7,000 coconut sugar producers, mainly in Central Java. The company aims to establish new linkages with producers in East Java but lacks experience and have limited access in East Java market.
	Partnership Possibilities	BTF have been taking the lead in developing supply chain and covering the cost of organic certification for the first batch of farmers in Pacitan district. PRISMA have been supporting BTF for initial awareness-raising with farmers and developing the training materials. PRISMA will explore the potential market for innovative climbing tool that can increase the farmers' productivity, developing the business model in coordination with BTF. Note: the partnership with the co-facilitator has ended since End Jun'16. Currently PRISMA seek possibility to continue the partnership directly with BTF and with other potential partner in coconut sugar

	Intervention 2	Establishment of aggregation point/Increasing productivity through GAP and fertilizer (CLOSED)
	Partner	PT Kai Sun
	Description	PT Kai Sun is a locally registered company and its activities are backed by US-based company EcoEnviro Corp., which supports PT Kai Sun in marketing, technology and finance. EcoEnviro Corp is the sole distributor of all PT Kai Sun's products.
	Partners' Rationale	PT Kai Sun is looking to source sustainable exported quality coconut, which has a high demand in the exported market especially China, but has no experience in promoting good agriculture practice in their supply chain which can ensure such supply.
	Partnership Possibilities	PT Kai Sun, with support from PRISMA, will establish and develops commercially-operated coconut aggregation points. Aggregation will be under the management of local actors (such as collectors, traders and lead farmers) and PT Kai Sun will establish supply agreement.
		PT Kai Sun will provide all supports for promoting good agriculture practice in coconut, including surveys, capacity building for farmers and collectors, for establishing and operating aggregation point. PT Kai Sun will buy all coconut produced by their supply chain at agreed premium price.
		Note: partnership with PT Kai Sun has ended as the intervention proves not bringing significant impact at farmers (refer to sub-sector briefs)
	Partner	PT Arya Supra Nugraha (ASN) (CLOSED)
	Description	PT ASN, a group company of Saraswanti cooperation, specializes in agro-input trading and marketing.
	Partners' Rationale	PT ASN aims to expand its B2C market for fertilizer products but have limited access and experience in Lombok area. In particular, the company intends to broaden its palma fertilizer market.
Partnership Possibilities	The changing direction of coconut intervention in Lombok results in the productivity increase focus. PT ASN, with support from PRISMA, has been introducing PALMO fertilizer for coconut crops. The company has been establishing 100 coconut demo plots showcasing the fertilizer's effect that aims to increase at least 30% of the coconut productivity. PRISMA has assessed the market linkages among the coconut suppliers and buyers and results shows adequate market capacity that can absorb the rising coconut production from the use of fertilizer, as well as to prevent price falls with the increased of coconut supply. New partnership possibility is currently taking place between PT ASN and PRISMA through the co-facilitator	
Maize NTT	Intervention 1	Good Drying & Storing Practice
	Partner	PT Buana Ika Syahputra (PT BIS)

	Description	PT BIS produces plastic products such as plastic bottles and plastic containers mostly for packaging. They have enough capacity and equipment to create and produce new product based on customer needs.
	Partners' Rationale	PT BIS is interested to expand their market area and entering eastern Indonesia/NTT. They willing to create new product model and invest in the innovation that will be match with the farmer/customer needs.
	Partnership Roles	PRISMA supports PT BIS in identifying the distribution channels, conducting promotion activities, and supporting in product designing as well as marketing strategy to promote technology on good drying practice using jerrycan (they call "Silo Jinjing") to farmers in Timor island, NTT.
Peanut NTT	Intervention 1	Production & Supply of Quality Seed
	Partner	CV Tiga Putri Mandiri
	Description	CV Tiga Putri Mandiri has produced high quality peanut seed, namely Hypoma 2 and Streep. In addition, improved local seed is also produced as a high quality commercial product. Peanut sector is a new business for CV Tiga Putri Mandiri as an expansion after having quite mature experience in nursery business for maize and also rice since 2005. It starts expanding to peanut business since 2015 in a partnership with YMTM. For peanut, CV Tiga Putri Mandiri has three focus area, which are TTU, Belu, and Malaka districts.
	Partners' Rationale	The company wants to expand their business portfolio by trying out another nursery development for new commodity. It has seen the potential of this market because there are still limited commercial peanut producer available. For the expansion, CV Tiga Putri Mandiri is ready to invest in promotion include demonstration plots, good agricultural practices (GAP), and harvest simple technology capacity building for peanut nursery farmers in their area of business.
	Partnership Roles	PRISMA supports CV Tiga Putri Mandiri in production of Hypoma 2, Streep, and improved local seed seed and develop sales and distribution channels (sales agents/retailers) in TTU, Belu, and Malaka districts and promote and distribute their seeds among target groups.
	Partner	CV Sinar Tunbeis Makmur
	Description	CV Sinar Tunbeis Makmur has produced high quality peanut seeds, namely Hypoma 2 and Lurik. In addition, it produces high productivity local seeds as high quality commercial products. Peanut sector is a new business for CV Sinar Tunbeis Makmur since mid-2016. In marketing its products, CV. STM focuses on Kupang and TTS districts.

Partners' Rationale	<p>CV. STM is a new partner who tries to produce peanut seed after discussing with YMTM. Previously, Mr. Otniel (the owner of CV. STM) was a plasma farmer for CV. Intan in producing Composite Maize seeds. Mr. Otniel also has experience in planting peanuts, as well as being a collector in his area to sell peanut consumption to the market.</p> <p>He is interested in entering peanut nursery business because peanut seed producer is scarce in NTT. To embrace this business, CV. STM has invested in producing seeds primarily: promoting good quality seeds, making demo plot, organizing peanut farmers meeting, and conducting assistance related to good and proper peanut cultivation and handling practices to peanut farmers in Kupang and TTS district. In the time of agreement, CV. Sinar Tunbeis Makmur already has a permit as a peanut seed nursery.</p>
Partnership Roles	PRISMA supports CV Sinar Tunbeis Makmur (STM) in production of Hypoma 2, Lurik, and improved local seed and develop sales and distribution channels (sales agents/retailers) in Kupang and TTS districts, and promote their seeds among target groups.
Partner	CV Anjas
Description	CV. Anjas has produced high quality peanut seeds, namely Hypoma 2 and Lurik. They also produce high productivity local seeds as high-quality commercial products. The peanut sector is a new venture for CV. Anjas. Every year, CV. Anjas produces peanuts twice, i.e. on cycle-1 (rainy season) and cycle-2 (dry season) to meet local market demand. In mid-2016, they try to grow the business as a producer of peanut seeds for sale to Nagekeo and Ngada district.
Partners' Rationale	<p>CV. Anjas is a new partner in Boawae, Nagekeo district who is interested to develop a peanut seed business. Their commitment to enter the business was raised after a discussion with YMTM. Previously, Mr. Makarius was a peanut farmer in his area. He produces peanuts and sells to the local market. To meet the demands of the local market, Mr. Makarius and his wife bought peanuts from other farmers around the area. He is interested in the business due to the fact that peanut seed producers do not yet exist NTT, especially in Flores. Farmers usually only use local seeds with low productivity.</p> <p>To develop this business, CV. Anjas has undertaken the following activities: producing seeds, promoting seed excellence, making demo plot, organizing peanut farmers' meetings, and conducting assistance on how to cultivate and handling good and true peanut yields to peanut farmers in Nagekeo and Ngada district.</p>
Partnership Roles	PRISMA supports CV Anjas in production of Hypoma 2, Lurik, and improved local seed and develop sales and distribution channels (sales agents/retailers) in

		Nagekeo and Ngada districts and promote and distribute their seeds among target groups.
Mung Bean EJ	Intervention 1	Promoting Certified Seeds
	Partner	UD. Sumber Rejeki
	Description	UD. Sumber Rejeki, which is located in Gresik, East Java, has been a certified nursery of BALITKABI, and has been operating since 1987. This nursery mainly breeds seeds for paddy, peanut, and mung bean, mostly to support government's demand. Currently, mung bean varieties produced are Vima 1, Vima 3, and Walet.
	Partners' Rationale	UD. Sumber Rejeki is interested to expand their production and distribution of Vima 1 variety mung bean seeds to Madura. They are willing to produce a smaller unit packaging (5 kg) to match smallholder farmers' needs. The packaging will also be supported with an added information on the seed planting methods.
	Partnership Roles	PRISMA supports UD. Sumber Rejeki in identifying the distribution channels as well as promotional activities such as demo plots and farmers' meeting.
	Intervention 2	Promoting the Use of Organic Fertilizer for Mung Bean Fertilizer
	Partner	PT. Indo Acidatama
	Description	PT. Indo Acidatama is a company that produces agri-chemical products such as organic fertilizers. The company is located in Solo and has been operating in chemical and fertilizer industry since 1983
	Partners' Rationale	PT. Indo Acidatama is interested in distributing their organic fertilizer to mung bean farmers in Madura. They agreed to provide their agronomists for research plot, demo plots, and farmers meeting in order to give capacity building on organic fertilizer usage for mung bean.
Partnership Roles	PRISMA facilitates PT. Indo Acidatama in identifying the distribution channels as well as promotional activities such as demo plots and farmers' meeting.	
Cashew NTT	Intervention 1	CV Peduli Kasih
	Partner	CV Peduli Kasih
	Description	CV. Peduli Kasih is the major player for agri-inputs trade in Sumba that owned by Ny. Feni. The company is based in Waingapu, East Sumba, NTT.
	Partners' Rationale	CV Peduli Kasih id interested to enter the Cashew sector for selling the product as its new business line. By investing through the demoplot and promotion CV. Peduli kasih spread the market in two district initially which are East Sumba and Southwest Sumba.

	Partnership Roles	CV Peduli Kasih, the major player for agri-inputs trader in Sumba, will have an agreement to collaborate with intermediary service providers to develop technical capacity as maintenance and plant protection services provider, with providing business support via provision of promoting material and supply of input needed - as a part of the business agreement between CV Peduli Kasih and the services providers. This will open a new market (cashew farmer) and increase turnover for CV Peduli Kasih. In the same time, service provider will have a new source of income as well as increasing cashew farmers' productivity and income from better yield. PRISMA supports capacity building and provide networks of ISPs to Peduli Kasih.
	Intervention 2	PT Novelvar
	Partner	PT Novelvar
	Description	PT Novelvar is an agri-inputs producer based in Jakarta. Two of their main products (Terra and Silika) applicability are proven to increase yield of many crops, including cashew.
	Partners' Rationale	PT Novelvar initially enters NTT markets in East Sumba with small scale of demoplots for paddy and cashew. Since their products are applicable to various crops, easily applied by farmers, and affordable compared to other similar products, PT Novelvar through this intervention can expand their market across Sumba and Flores. PT Novelvar also intends to develop farmers' knowledge and financial capacity so farmers can benefit from technology and products they promote.
	Partnership Roles	Through this intervention, PT Novelvar will conduct promotion activities such as establishing demoplot, training, and direct presentation to identified intermediary service providers (ISP), farmers, local government and their extension staffs. ISP were assessed and selected as retailers who will extend cultivation knowledge and promote of Novelvar's technology and products, reaching out farmers within their networks. PRISMA provide networks of ISPs and support promotional activities.
Coconut NTT	Intervention 1	Organic coconuts for Virgin Coconut Oil (VCO) production
	Partners	CV Nusa Permai
	Description	CV Nusa Permai is an exporter of virgin coconut oil sourced from organic coconut
	Partners' Rationale	Demand of VCO in the international market has been continuously increasing. As one of the major VCO exporter, CN Nusa Permai aim to expand their business in order to fulfill such market demand. They aim to strengthen the supply of VCO and to secure the supply of fresh organic coconut as the raw materials. They will do this by developing business partnership with

		potential local VCO producer as the Intermediate Service Provider (ISP), and by giving premium price to organic coconut farmers.
	Partnership Roles	<p>CV Nusa Permai takes the lead in building the capacity of coconut farmers to be registered as organic coconut producers. The company will guide and finance the certification processes which aim to guarantee fresh organic coconut supply from the farmers. As part of a newly developed business, CV Nusa Permai will collaborate with two local ISPs who will establish a commercial VCO production house. The new VCO factories will be set up in Maumere and Adonara and are expected to accommodate production of VCO sourced from fresh organic coconut farmers in the surrounding areas.</p> <p>PRISMA have been supporting CV Nusa Permai in selecting suitable location for organic certification, disseminating the VCO production plan to farmers and facilitating both CV Nusa Permai and the ISPs in developing business partnership.</p>
Beef NTB	Intervention 1	Production and Supply of Commercial Feed to Beef Cattle Farmers
	Partner	PT Bintang Pribumi Tulen; UD. Imama
	Description	<p>PT Bintang Pribumi Tulen is a maize processor, maize trader, and inter-island cattle trader in Lombok. It has been working for years in maize processing and trading business. From the maize business itself, the company has a lot of waste agriculture products and resources. The company has a little experience in cattle feed production using the waste product of maize for his own cattle. By looking at the market potential of concentrate feed business for cattle fattening, as no one sells commercial concentrate for cattle fattening, the company started new business to produce and sell concentrate feed to the market (cattle farmers).</p> <p>UD. Imama is a milling company that mills crops including rice, maize, and soya bean. It has access to raw materials of concentrate feed because of its business as a miller. The company is a supplier of intermediate feed product to PT. Bintang Pribumi Tulen, and has also been commissioned by PT. Bintang Pribumi Tulen to produce cattle feed. UD. Imama has also been a small producer of fish feed for a few years. Looking at the market potential of concentrate feed for beef cattle in Lombok, the company started a new business to produce and sell concentrate feed to cattle farmers.</p>

Partners' Rationale	In order to start the new business of producing and selling concentrate feed to cattle farmers, PT Bintang Pribumi Tulen and UD. Imama are willing to provide benefits to the farmers through promoting concentrate feed through demo plots. And in developing a wider distribution channel, the company will work with inputs shops, cattle traders, and agriculture collectors into the system.
Partnership Roles	PRISMA will support the company in: <ul style="list-style-type: none"> · mapping potential distribution channel · developing training modules and design on use, application and benefit of commercial feed · developing training modules and design on use, application and benefit of commercial feed · delivering training · designing promotion material and promotional activities.
Intervention 2	Promoting Productivity of Smallholder Cattle Farmers in Lombok - NTB through Access to Commercial Feed and Pharma Products
Partner 1	KJUB Puspetasari or Nutrifeed
Description	KJUB Puspetasari or Nutrifeed is secondary cooperative that have 8 primary cooperative members. Their main business is livestock feed industry which currently focuses on concentrate feed for dairy and beef cattle. Their feed brand "Nutrifeed" is well-known among the ruminant feed industry.
Partner's Rationale	KJUB Puspetasari is a growing company on feed business. They have great desire to expand their feed business as this is their core business. Currently 90% of their feed sales are for dairy cattle, while the other 10% for beef cattle but mainly to supply government order. Although they know that there is great potential for beef cattle feed market, they are struggling on market penetration for beef cattle feed since most of their knowledge are on dairy cattle feed market which generally works with cooperatives that is completely different from beef cattle feed market. Having seen successes of working with PRISMA on promoting beef cattle feed in East Java, KJUB Puspetasari is interested in co-investing with PRISMA on effective market penetration for beef cattle feed in Lombok, NTB, to expand their market for beef cattle feed.
Partnership Roles	KJUB Puspetasari will promote the benefit of using commercial feed through demo events, market storms, workshops, and mass media which will assisted by PRISMA. Additionally, KJUB Puspetasari will expand the distribution channel of beef cattle feed in Lombok, NTB, with support from PRISMA in strengtning their agents and sub-agents system.
Partner 2	PT. Sanbe Farma

	Description	Founded in 1975, Sanbe is currently one of Indonesia's largest pharmaceutical manufacturers. Its veterinary division started in 1985 and is currently a leader in the animal health industry.
	Partner's Rationale	While PT. Sanbe Farma's animal health products, such as antibiotics, antiparasites, antiseptics, and disinfectants are currently available in the market in NTB, the usage of these products are very limited among smallholder cattle farmers. Even though most of Sanbe's current sales are from poultry products, the large number of cattle population in NTB is motivating Sanbe to expand their market into cattle in NTB. They have limitation in cattle market knowledge in NTB as well as strategies to penetrate the cattle market, thus they are interested in working with PRISMA.
	Partnership Roles	PT. Sanbe Farma, together with PRISMA, will promote the benefit of animal health products on cattle through seminars, demo plots, demo events, and mass media. Additionally, PT. Sanbe Farma and PRISMA will expand distribution channels through strengthening their agents and sub-agents system.
Cocoa Papua	Intervention 1	Increase productivity of cocoa in Papua
	Partners	CV Kakao Kita & PT Bumi Subur Makmur Abadi
	Description	CV Kakao Kita is an export oriented small local company, mainly export to Japanese market and has focused on natural produced cocoa beans, adopting "People to People" trade approach. PT Bumi Subur Makmur Abadi is established in 2000 and currently is the biggest cocoa trader in Papua.
	Partners' Rationale	CV Kakao Kita has new increased demand therefore is willing to increase the buying volume and has plan to expand their area of operation. PT Bumi Subur Makmur Abadi is interested with the business model that has been developed by PRISMA and YPPWP, and plans to expand and develop its collectors by giving training and credit to selected collectors so that they can promote GAP and give assistance to cocoa farmers in Papua.

	Partnership Roles	<p>The private sector partners will be supported in developing modules (or adjusting existing modules to the local context) that can be used to train the ISPs in setting up a demo plot, provide side grafting services and introduce farmers to technical information in good agriculture practices on maintaining the farm, using or producing the fertilizer as well as post-harvest handling. Also, they will get help in selecting the right ISPs (collectors – most of them cocoa farmers themselves, and others – lead farmers) and developing modules to strengthen the business of ISP.</p> <p>Once this has proven to be successful, the PSP will involve in special activities for creating demand for the side grafting services. Most of the ISPs (mainly those ISPs that have an own cocoa garden) will set up a demo plot to promote and provide their services while at the same time giving information to the farmers on how to best cultivate cocoa. Depending on the demand, the ISPs will also give embedded service on the use of fertilizer - along with buying access information (incl. finance) and post-harvest handling. The PSP will ensure that the ISPs have the skill and knowledge to do so.</p>
	Partner Contribution	CV Kakao Kita has agreed to contribute IDR 270.375.000 and PT Bumi Subur Makmur Abadi has agreed to contribute IDR 160.303.000 - in strengthen the business of ISPs while YPPWP will focus more in develop business model between CV kakao kita, PT Bumi Subur Makmur Abadi, and ISP, hiring consultants/ expert in develop GAP material/ modules, promoting ISP's business.
Seaweed	Intervention 1	Seaweed RKN
	Partner 1	PT. ROTE KARAGINAN NUSANTARA
	Description	PT Rote Karaginan Nusantara (RKN) is a seaweed Alkaline Treated Chip (ATC) processing company, cooperating with Koperasi and local farmers which serves as a provider of quality raw materials collected from cooperative member seaweed farmers in East Nusa Tenggara (NTT).
	Partners' Rationale	PT RKN is interested in securing the quantity and quality of their supply by providing the training of Good Agriculture Practice (GAP) on Seaweed and establish a nursery to provide superior seedlings to their farmers, whilst working together with other partners (CSR, BUMN) to provide farming equipment (rope, nets, etc) as initial support to the farmers
	Partnership Roles	

	PT RKN will provide technical assistance in the form of good agriculture practice (GAP) development and post-harvest handling, as well as creating demoplots, which will provide as nurseries, while providing feedback for quality of RDS received.
Intervention 2	Seaweed Sentinel
Partner 1	CV. SENTINEL PRATAMA
Description	CV. Sentinel Pratama is a Social Enterprise that engages in empowering and eradicating poverty through agricultural development; from providing farming inputs, building the capacity and competence of farmers, through to market access that cuts through the supply chain, finally achieving agricultural productivity increase, farmer welfare, and the ability to buy agricultural produce at affordable prices.
Partners' Rationale	CV Sentinel Pratama is interested ensuring the quality of their supply by providing the training of GAP and GHP on Seaweed, establishing a demoplot to serve as a nursery to their chosen lead farmers, whilst working together with other partners (Bank NTT (MoU pending) to provide a credit scheme for seaweed farmers as initial support.
Partnership Roles	Creating demoplots, which will provide as nurseries, and commercially distributing seeds to farmers. Selling seaweed from farmers to PSP. Providing feedback as well as good agricultural practices (GAP) to farmers based on quality evaluation from PSP (mosturizer content) 36% with a 2% impurity rate.
Partner 2	PT. HYDROCOLLOID INDONESIA
Description	PT. Hydrocolloid Indonesia is a seaweed processing company that produces high quality refined carrageenan (RC) which is used as food mixture. PT HI's vision is to leverage the comparative advantage of seaweed in Indonesia to supply the pure and low-cost carrageenan products made at world-class manufacturing facilities.
Partners' Rationale	PT Hydrocolloid Indonesia is interested in ensuring the quality of their supply by providing information feedback, and securing supply by absorbing quality production from CV Sentinel's farmers
Partnership Roles	Ensure the purchase of seaweed produced by ISP. Ensure competitive purchase value. Provide feedback

	related to product quality to be forwarded to farmers. Communicate and process information transfer related to efforts to maintain and improve quality, market development information, prices and other information relevant to business development and program sustainability.
Intervention 3	Seaweed Mazu
Description	CV. Mazu Seaweed is a private company engaged in the sale and purchase of dried seaweed in Sabu Raijua and surrounding areas. They have also established an Alkali Treated Chip (ATC) processing factory. Purchasing mechanism is done through cooperation with local collectors who serve as providers of quality raw materials collected from seaweed farmers, then purchased by CV. Mazu Seaweed.
Partners' Rationale	CV Mazu Seaweed is interested in ensuring the quality of their supply, and securing supply by absorbing production from Sabu Raijua's farmers by providing the training of GAP and GHP on Seaweed to its ISPs, establishing a demoplot to serve as a nursery to their chosen lead farmers.
Partnership Roles	Plays a role in the dissemination of knowledge (GAP, GHP and feedback on quality) to ISPs and farmers to produce RDS according to quality standards. Conduct demo plot and provide training ISPs. Applying a repurchase guarantee scheme, obtaining products from farmers on an ongoing basis.
Intervention 4	Seaweed Papua/West Papua
Partner 1	BANK PAPUA
Description	PT Bank Papua is active in developing Papua's excellent potentials to grow and expand, thereby strengthening local economic growth. Bank Papua has a strategic role to bring banking institutions closer to local communities in facilitating lending. This credit is effectively utilized to grow and keep the wheels of the local economy.
Partners' Rationale	Bank Papua is interested in providing a credit scheme suitable for farmers and farmer groups, and increase community knowledge on financial governance and financial products.
Partnership Roles	

	Plays a role in the dissemination of knowledge (GAP, GHP and feedback on quality) to ISPs and farmers to produce RDS according to quality standards. Conduct demo plot and provide training ISPs. Applying a repurchase guarantee scheme, obtaining products from farmers on an ongoing basis.
Partner 2	DEPARTEMEN KELAUTAN DAN PERIKANAN
Description	Department of Marine and Fisheries is responsible for developing and maximising potential of the fisheries and marine sector to improve coastal community welfare. Seaweed is one commodity that can be developed by coastal communities. The magnitude of potential areas supported by competent human resources, will add to the point of success of the program.
Partners' Rationale	DKP is interested in leveraging the seaweed sector as a main commodity, by providing seedlings and seaweed cultivation equipment to farmer groups, along with the dissemination of good agriculture and post harvest practices through PPL to farmers.
Partnership Roles	Provide and distribute high quality seedlings to farmers. Give assistance in mentoring farmers through capable Field Extension Officers (PPL), with adequate capacity in terms of seaweed cultivation. Provide formal technical guidance training to PPL personnel on GAP and GHP. Provide facilities (ropes, buoys, drying racks/rafts, boats) for farmers.
Partner 3	DEPARTEMEN PEMBERDAYAAN MASYARAKAT KAMPUNG
Description	The Department of Community Empowerment is responsible for the development, strengthening, and coaching of BUMKamp (Badan Usaha Milik Kampung), in an effort to improve the economic welfare of communities in rural areas. BUMKamp serves as a pillar of economic activity, functioning as social and commercial institutions.
Partners' Rationale	

	DMPK is interested in encouraging cultivation of seaweed through allocating village funds (activity of Community Empowerment). and supporting BUMKamp in running business through the purchase and trade of dried seaweed from its farmers.
Partnership Roles	Encouraging coastal villages to make seaweed commodity as one of the leading commodities, facilitating the procurement of seaweed cultivating facilities through village fund. Encouraging BUMKamp to make a business of purchasing dried seaweed. Assisting in post harvest practice at farmer level, to match market specification. Conducting entrepreneurship training for BUMKamp management in a planned manner, through PPL.
Partner 4	PT YAPEN MANDIRI SEJAHTERA
Description	PT. YAMASE is a regionally owned enterprise (BUMD) built by the local government with the vision in prospering and sustaining Yapen region. Their activities include a) production of qualified seeds and fingerlings, b) assisting the government in minimizing price disparity of basic needs between the city and region, c) establishing adequate housing for civil servants.
Partners' Rationale	Yamase is interested to expand and open a new business unit in seaweed, providing positive economic impact for the accelerated growth of community welfare - they are interested in participating in the dissemination of GAP and GHP knowledge done by the local government to their farmers
Partnership Roles	Trading seaweed and guaranteeing product (RDS) quality. Provide feedback information on quality to farmers based on the evaluation of the factory. Conduct regular training and mentoring process to farmer groups with DKP and PPL. Hold a farmer group meeting for product quality evaluation - FOR KEP. YAPEN
Partner 5	PT INDONUSA ALGAEMAS PRIMA
Description	PT. Indonusa Algaemas Prima is one of the seaweed processing companies to produce high quality ATC, and is experienced in seaweed farming for many years. Initially PT IAP started by developing seaweed cultivation on the island of Bali - providing technical skills as well as farming tools to improve the local community. PT IAP's current product other than ATC Chips is a quality SRC (food grade).

Partners' Rationale	PT Indonusa is interested in ensuring the quality of their supply by providing information feedback, and securing supply by absorbing quality production from Papua's farmers
Partnership Roles	Ensure the purchase of seaweed produced by ISP. Ensure competitive purchase value. Provide feedback related to product quality to be forwarded to farmers. Communicate and process information transfer related to efforts to maintain and improve quality, market development information, prices and other information relevant to business development and program sustainability.
Partner 6	YAYASAN RUNSRAM (KOPERASI WAI FADUREN)
Description	Yayasan Runsrām, also as Koperasi Wai Faduren, is a trader of many local produce. Retained profits from their trading is then used for community development through small projects, as well as programs in alliance to the government.
Partners' Rationale	Runsrām is interested to diversify their products and start seaweed - as they too have the basic knowledge and are able to facilitate in the dissemination of GAP and GHP knowledge which will be done by the local government to their farmers
Partnership Roles	Trading seaweed and guaranteeing product (RDS) quality. Provide feedback information on quality to farmers based on the evaluation of the factory. Conduct regular training and mentoring process to farmer groups with DKP and PPL. Hold a farmer group meeting for product quality evaluation - FOR BIAK NUMFOR
Partner 7	CV KRANDALIT PAPUA INDAH (KRAPI)
Description	CV Krapī is an adverse trader in agricultural, estate crop, and fishery sector, while also providing miscellaneous services such as coldstorage and transportation. They are also active in general contracting, as well as purchasing for various local infrastructure projects.

	Partners' Rationale	Krapi sees seaweed as a sector capable of great potential - they are interested in becoming the largest seaweed trader in Fakfak by their first user advantage. They will be participating in the dissemination of GAP and GHP knowledge done by the local government to their farmers, through creating demoplots and some nurseries to propel seaweed development in the area.
	Partnership Roles	Trading seaweed and guaranteeing product (RDS) quality. Provide feedback information on quality to farmers based on the evaluation of the factory. Conduct regular training and mentoring process to farmer groups with DKP and PPL. Hold a farmer group meeting for product quality evaluation - FOR FAKFAK
Cashew NTT	Intervention 1	Cashew Peduli Kasih
	Partner 1	Dinas Pertanian (Department of Agriculture) of East Sumba
	Description	As a key player in promoting awareness of cashew GAP in the district, Dinas Pertanian of East Sumba role is crucial in creating conducive business enabling environment in cashew sectors, particularly for supporting the dissemination of GAP knowledge and agri-input products for cashew farmers.
	Partners' Rationale	After witnessing the result of activities held by CV Peduli Kasih, Dinas Pertanian is interested to further promoting GAP knowledge (particularly on pruning and land spacing) through their extension services staffs. Promoting the importance of GAP in cashew farming will stimulate better business environment for agri-input products and tools used in the cultivation.
	Partnership Roles	Dinas Pertanian of East Sumba will issue instruction letter for extension services agents to conduct pruning and land spacing program. The instruction letter will also be addressed to the head of villages to encourage and mobilize farmers to join the program. PRISMA will provide GAP training for extension services agents and lead farmers to increase their GAP knowledge. The expected impact of this partnership is business enabling environment related to the provision of cashew agri-inputs and tools, as well as greater awareness and knowledge of GAP technique.
	Partner 2	Dinas Pertanian (Department of Agriculture) of Nagekeo

Description	Dinas Pertanian (Department of Agriculture) of Nagekeo is a key player in promoting the awareness of cashew GAP in Nagekeo, due to their crucial role in creating business enabling environment in cashew sectors, particularly in supporting the distribution of GAP knowledge and agri-input products for cashew farmers.
Partners' Rationale	Dinas Pertanian of Nagekeo is interested to promote pruning and land spacing to cashew farmers, due to the significant impact of these activities on cashew productivity. In addition, Dinas Pertanian also promotes soybean intercropping activity on cashew orchards that are already spaced, due to their goal to increase soybean cultivation area and as soybean has the ability to increase soil nutrients which are suitable for surrounding cashew trees.
Partnership Roles	Dinas Pertanian of Nagekeo will create credit point system to provide incentive for extension services agents to conduct pruning and land spacing program for farmers in their area. Dinas Pertanian will also issue instruction letters for the head of villages to encourage and mobilize farmers to join the program. Dinas Pertanian will also provide free soybean seeds for farmers with cashew orchard that has been properly spaced (10mx10m) to be cultivated as intercrops. PRISMA will provide capacity building for extension services agents and selected farmers to increase their GAP knowledge. The expected impact of this partnership is business enabling environment related to the provision of agri-inputs and tools for cashew GAP, as well as a change in farmers' behavior and knowledge regarding cashew cultivation and intercropping activity.
Partner 3	Dinas Pertanian (Department of Agriculture) of East Flores
Description	District Government is a key player in promoting awareness of cashew GAP to the farmers, and pushing the demands towards cashew GAP services that are available in East Flores districts.
Partners' Rationale	East Flores is the biggest cashew district producers that its farmers rely on cashew production for their annual income. They would like to focus on promoting cashew good farming practice to reduce the possibility of cashew farmers fall below poverty line.
Partnership Roles	PRISMA will assist East Flores District Government to increase their Extension services capacity on Cashew Good Farming Practice (GFP) and Government will promote good farming practice to village level that will

		leads to enable cashew GFP services in East Flores district
Partner 4		Dinas Pertanian (Department of Agriculture) of West Manggarai
Description		Agricultural Department of West Manggarai are responsible for developing and maximising potential of plantation within West Manggarai area. Cashew amongs the potential crop that could lead into poverty alleviation in the south part of west Manggarai where market arenot well-developed.
Partners' Rationale		Department of Agriculture interested to increase their extension services capcity on cashew GFP due to the importance and the needs of GFP knowledge. Governemnt extension services are the major market actor that provides agrocultural knowledge in NTT.
Partnership Roles		PRISMA will assist West Manggarai Distict Government to increase their Extension services capacity on Cashew Good Farming Practice (GFP) and Government will promote good farming practice to village level. PRISMA expect that after the intervention there will be increasing demand of cashew GFP that leads into busiess enabling cashew GFP services
Partner 5		Dinas Pertanian (Department of Agriculture) of Alor
Description		Agricultural Department of Alor is reponsible for the development and sustainability of plantation crop. To accommodate the growing demand and supply of cashew in Alor, Agricultural department play a major role in disseminating good farming practice and enabling GFP service business in the region.
Partners' Rationale		Department of Agriculture interested to increase their extension services capcity on cashew GFP due to the importance and the needs of GFP knowledge. Governemnt extension services are the major market actor that provides agrocultural knowledge in NTT.
Partnership Roles		PRISMA will assist Alor Distict Government to increase their Extension services capacity on Cashew Good Farming Practice (GFP) and Government will promote good farming practice to village level. PRISMA expect that after the intervention there will be increasing demand of cashew GFP that leads into busiess enabling cashew GFP services
Pigs NTT	Promoting Improved Feed, Good Rearing Practices and Weighing Scale, Practices in Timor Island, East Nusa Tenggara (NTT)	
	Partner 3	PT Medion Farma Jaya
	Description	

	<p>PT Medion Farma Jaya has been in the business of producing and marketing pharmaceutical products, vitamins, vaccines, and poultry equipment for 40 years. Through experience and commitment to deliver high quality products and meet the customers' satisfaction, it's known as one of the leading companies in the local market and expanded throughout Asia and Africa. Medion has implemented GMP (Good Manufacturing Practice) in manufacturing processes to ensure the quality and safety of their products. With determination to provide the best service, Medion continuously innovate and keep up with the latest technology.</p>
Partners' Rationale	<p>Nationally, Medion is one of the big players in animal pharmaceutical industry and they continuously seek ways to expand their market to new areas. They also hold the largest market share for poultry pharmaceutical product and eager to increase their market in other livestock, such as pigs, cattle, goats, etc. Medion has entered Timor market, however concentrated in Kupang and mostly on poultry, therefore they are seeking other ways to expand to other districts and for other livestock as they know livestock farming plays a huge role in Timor and that each household would have at least one livestock at their backyard. Therefore, aligning with their plan expanding to new areas also to promote other products, therefore they are eager to enter Flores and Sumba.</p>
Partnership Possibilities	<p>Together with PRISMA, Medion will conduct a series of educational activities such as training of trainers for ISP to provide product knowledge sufficient to promote the products and share knowledge to consumers/farmers. Furthermore, Medion will support existing feed demo plots, for farmers to learn directly and show the results of using certain pharmaceutical products towards the animal's health.</p>
Partner 4	PT Cargill Indonesia
Description	<p>Cargill provides food, agriculture, finance, and industrial products and services globally for over 150 years. Their expansive operations in Indonesia comprise sourcing, processing, handling, shipping and marketing of a wide range of agricultural, food and energy products and related services including animal nutrition (feed), cocoa, grain & oilseeds, industrial specialties, and palm oil. Cargill has started their animal nutrition business in Indonesia since 1974 by establishing a small feed mill in Bogor, West Java. Over the years their business grew substantially and have now serve hundreds of farmers across Indonesia with customized animal nutrition solutions for poultry, pork,</p>

	and aquaculture. They manufacture over 100 different kinds of high quality feed products in six feed mills.
Partners' Rationale	To help livestock and aquaculture farmers improve their productivity, health and welfare of their animals - and ultimately increase their incomes and livelihoods – Cargill initiated a livestock farmer-training program. Since its inception in the year 2000, over 20,000 Indonesian livestock farmers already benefited from this program. Apart from that, Cargill is committed to provide the best services to their farmers, through their animal nutrition consultants, who are experts in their respective fields, will work with farmers to tailor-make performance-oriented feeding programs through which animals receive the right nutrients in the right quantities at the right times. They are certain through innovative feeding solutions will help to deliver optimum development, growth, health and performance of animals, and contribute to the success of farming operations. They are ready to expand their training program and market share to other areas in Indonesia, including Timor as they see the big business potential, specifically for their animal nutrition business.
Partnership Possibilities	Alongside PRISMA, Cargill will enter the Timor market and conduct a series of educational activities including their ongoing training program and establishing demo plot, since Cargill's feed is considered as new for the area therefore farmers would require "testing" to allow farmers to learn directly and show the results of using their feed and other advantages. Furthermore, Cargill will implement promotional activities, such as market storms and other strategic events that could support their sales on the ground.
Partner 5	PT Sierad Produce Tbk
Description	

		<p>Sierad Produce is an integrated poultry-based food company in Indonesia. Its core businesses include the production of primary processed and poultry feed; breeding and hatchery; commercial chicken farms; slaughtering and production of further processed and value added chicken products; and pig feed. Sierad is one of the largest player in the Indonesian feed industries. Sierad Produce manufactures and markets its processed chicken products under the Belfoods brand. Belfoods products are available at its retail outlets and in supermarkets and hypermarkets across Indonesia. Sierad Produce was established in 1985. The company has been listed on the Jakarta Stock Exchange since 1997 and became part of by Gunung Sewu in 2015 through acquisition by Great Giant Pineapple.</p>
	Partners' Rationale	<p>Sierad has already entered the Timor market, specifically in the cities and is looking for ways to expand their market to rural areas working. As an experience from working worked with the project in Flores and Sumba pig intervention, they would like to work in Timor with the project. The company aims to increase the pigs feed market in Timor, considering the size of pig market in Timor that is also high as the demand for se'i (smoked pork) is growing, making Timor highly potential for improved feed.</p>
	Partnership Possibilities	<p>The company will conduct similar business model and activities with the Flores and Sumba intervention, which includes enabling the access for farmers to good quality feed, conducting educational activities to increase the knowledge on the benefit and use of quality feed for pigs. The company will establish and develop distribution channel to remote areas as a strategy in enabling access to good quality feed. The company is willing to invest in promotional activities/tools, trainings, demo plots, and others to provide knowledge and access to information for the farmers.</p>
Coconut NTT	Intervention 2	Coconuts for Crude Coconut Oil (CCO) production
	Partners	PT BARCO
	Description	<p>PT Barco is a leading coconut oil producer in Indonesia. Established in 1950, the company holds 90% market share of coconut oil for cooking under its brand ' Barco'. The company supply to both domestic market (85%) and export market (15%). In addiiton to the cooking oil, Barco also produce coconut oil used for food ingredients, pharmacy and cosmetic products.</p>

	Partners' Rationale	<p>There is unmet demand of coconut oil in both domestic and international market. PT Barco aims to expand their business in NTT to fulfill such demand gap. On the other hand, the company is also facing challenges in obtaining stable supply of coconuts/copra from major producing areas such as Sumatra, Java and Sulawesi as they have become more competitive each day. Entering NTT, particularly in Flores island which has the highest coconut production, would enhance Barco's supply chain as they will be able to get more supply of coconut oil from the local household producers.</p>
	Partnership Roles	<p>PT Barco takes the lead in establishing supply chain of crude coconut oil (CCO) in Flores, particularly in target areas such as Ende, Nagekeo, Ngada and East Flores. The company will purchase the CCO produced by farmers with competitive price, and provide capacity building to farmers on how to produce the oil according to the required standard. Barco will prepare facilities in Ende including warehouse, storage equipment, transportation and recruit local staffs who will be employed in the facility. PRISMA supports Barco in identifying the farmers in potential areas and together with Barco, conducting socialisation and promotional activities in the villages. PRISMA will also facilitate possible partnership between Barco and ISPs who will act as aggregator in the districts farther than Barco's facility.</p>