

Legacy Impact Brief

PRISMA

Policy



Kementerian PPN/
Bappenas



Australian Government

The Australia-Indonesia Partnership for Promoting Rural Incomes through Support for Markets in Agriculture (PRISMA) is a development partnership between the Government of Australia (Department of Foreign Affairs and Trade, DFAT) and the Government of Indonesia (Bappenas).

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Introduction

This **Legacy Impact Brief—Policy** presents the outcomes and key achievements of the Australia-Indonesia Partnership for Promoting Rural Incomes through Support for Markets in Agriculture (PRISMA) policy support for the Government of Indonesia and efforts to embed program evidence into academic programs.

P R I S M A is a market systems development program that has significantly improved agricultural productivity across Eastern Indonesia. From 2013 to 2024, PRISMA partnered with 273 private sector partners and the government of Indonesia to address market barriers to growth and open access to productivity-enhancing products and services for smallholder farmers. In 11 years, PRISMA benefited 1.48 million smallholder farming households with productivity and income increases.

A key strength of the MSD approach is support for pragmatic policy reform. PRISMA shared its wealth of evidence, learnings, and experience with policymakers and policy influencers (e.g., universities, think tanks, and associations). This resulted in policies that enable businesses to grow and farmers to continue improving productivity and resilience to climate change.

For example, PRISMA supports reforms to the national standards for concentrate feed to make it

more flexible and business-friendly for MSME feed mills and smallholder farmers. This prompted the Ministry of Agriculture to revise 3 overarching feed regulations, which are expected to be approved and implemented in 2024. These regulations could unlock opportunities for 13.6 million livestock farmers.

PRISMA supports the background studies, indicators and policy studies for the National Development Planning Agency's (Bappenas) National Medium-Term Development Plan (RPJMN) 2025-2029. By incorporating private sector voices, policymakers can better address industry-specific challenges and capitalise on emerging opportunities while crafting more effective and responsive policies to foster economic growth and competitiveness.

Overall, the policy support PRISMA is providing is a vital pathway for scale and growth, and the foundations laid through PRISMA will continue to positively impact sectors for years to come.



This **Legacy Impact Brief—Policy** can be read with PRISMA's **Legacy Impact Brief—Sectors**, a book of farmer stories, climate-smart agriculture case studies, and GEDSI tools, manuals, and guidebooks. Together present PRISMA's legacy across agricultural commodities and farmers' productivity, resilience and well-being.



PRISMA in Numbers



11

Year program
2013-2024



6

Provinces in
Eastern Indonesia



12

Agricultural commodities
(as of 2024)



Impact

Smallholder farming communities

1,485,093

Smallholder farming households benefited with increased incomes



1,375,034

Women smallholder farmers with increased incomes



476

People with disabilities with increased incomes



148%

More than PRISMA's end-of-program of target 1m smallholder farming households



59%*

Women have experienced increased incomes due to inputs and services offered by PRISMA's partners.



901,911

Are youth (aged 18-35 years)



918,648

Farming households in poverty (under USD5.50 purchasing power parity poverty line) with increased incomes



2

Businesses are piloting indigenous-inclusive business models



123%

Increase in income for smallholder farming households



4.01 million

Farming households have access to, or information on, innovations for improved productivity



22%

Of farmers from a PRISMA social impact survey invested increased incomes in children's education



32%*

Women have a more manageable workload



24%*

Women have expanded their leadership and social networks



31% Of farmers from a PRISMA social impact survey invested in economic activities



*From surveys of 2,422 women in 12 sectors since 2020

Sustained investment



273

Private and public sector partners



199

Private sector partners adopted inclusive business models



180

Locally led businesses supporting inclusive business models



105

Non-partners copying innovations



78%

Closed partnerships continued innovations post-collaboration



AUD148 million

Increased revenue for partners



AUD311 million

In private-sector investment leveraged



15,142

Small and medium-sized enterprises with increased revenue



AUD247 million

Increased revenue for small and medium-sized enterprises



#PETANI MAJU
#FUTURE FARMERS

Climate change



139,229 tonnes

Carbon equivalent emission reduction



55.3%

Of interventions included a climate change element, of which 74.8% had a mitigation element, 5.2% had an adaptation element, and 20% had both mitigation and adaptation elements.

Continuing the legacy



179

Policy engagements



2

Universities have incorporated PRISMA evidence into their curriculums



2.68 million

People reached through Petani Maju/Future Farmer campaign promoting innovations



197

Media articles promoting innovations and inclusive businesses



7.9 million

People reached (2022-2024)



A network

Of talented staff ready to enter the private sector with improved knowledge of developing agricultural ecosystems.




Policy initiative

Universities incorporate PRISMA's experience into their academic programs and by serving as a repository for PRISMA's knowledge and lessons

Context

PRISMA identified academia as a key institution to independently promote PRISMA's knowledge and lessons after the program ends. This aligns with the triple helix partnership concept, which promotes collaboration across academic institutions, government, and industry to spur innovation around economic and social development.¹ By incorporating learnings and success stories from industry into educational materials and academic programs, universities can provide students with tangible insights into real-world applications and challenges within the agricultural sector while also addressing the pressing issue around the skills mismatch between university graduates and industry needs.²

Furthermore, there is a particular need for more practical knowledge around inclusive businesses and climate-smart agricultural initiatives in academic programs, as these are emerging focus areas at universities like University of Brawijaya (UB) and University of Nahdlatul Wathan Mataram (UNWM).

 *After observing the development process of this outcome-based education (OBE) curriculum [at UNWM], which incorporates the Market Systems Development approach, I have confirmed that this is the only university within the LLDIKTI VIII working areas that adheres to the guidelines set by the Ministry of Education and Culture. This is achieved by involving stakeholders from the government, alumni, and industry throughout the process.*

Dr. Yeyen Komalasari, SE., MM., CHRA,
Curriculum Facilitator of Higher Education Service Region VIII (LLDIKTI VIII)



Acting Rector of Universitas Nahdhatul Wathan (UNW) Mataram, Prof. Agil Al-Idrus, hands out the textbooks of Agrotechno Business to Director of Food and Agriculture, Jarot Indarto, SP, MT, MSc, Ph.D.



PRISMA's support

Since PRISMA has previously collaborated with UB on several policy briefs and trials for innovative climate-smart cattle feeding technologies, such as Emission Control Blocks (ECB), and UNWM on an inclusive business incubator program, PRISMA is capitalising on these existing relationships and focusing its support on UB and UNWM. The goal is to archive and share PRISMA's knowledge more widely and to ensure that UB and UNWM enhance their educational materials and academic curricula by embedding PRISMA's lessons on inclusive business and climate-smart agriculture and by having additional resources to continue developing and implementing improved academic programs.

PRISMA is doing this by (a) sharing its knowledge products (e.g. learning briefs, market watch, market briefs) through the online UB library; (b) assisting UB in developing and testing climate-smart livestock protocols, which will be used as a benchmark when university researchers or students conduct future climate-smart trials; and (c) assisting UNWM in revising its curriculum by enriching its entrepreneurship course with the market systems development (MSD) approach and insights from the inclusive business incubator program.



Key Achievements

PRISMA's support is leading UB and UNWM to incorporate PRISMA's experiences, especially related to climate-smart practices and inclusive business, into their academic programs and UB to make PRISMA's knowledge products more widely available. The universities perceive learning from PRISMA as essential to accelerating their efforts to improve and update their teaching materials, research references, and course design

UB is in the process of storing and uploading PRISMA's knowledge products into the university's repository and expects to make them publicly available from August 2024 onwards. To maximise the benefits and accessibility of the knowledge products, the UB library team is generating metadata for each document, establishing keywords that align with existing subject courses at several faculties and not just the agriculture and animal science faculty. As a result, students and faculty from various departments will be able to more easily access and search these documents.

UB has also spurred efforts to integrate climate-smart practices into its academic programs. The result of an on-going ECB trial and a completed closed-house pen trials for cattle are feeding into the development of protocols for climate-smart trials, which will be completed in July 2024. UB is preparing a workshop for August 2024 where its lecturers and researchers will discuss how to integrate the protocols and climate-smart practices into UB's classes and research.

The animal husbandry faculty of UNWM is making significant changes to its entrepreneurship course, which has been renamed as Agrotechno Business. The course will incorporate PRISMA's MSD approach, learnings from the UNWM business incubator program, and insights from multiple discussions and workshops with a broad range of stakeholders, including the government and private sector. During a workshop in June 2024, the UNWM rector and Higher Education Service Institution (LLDIKTI) Region VIII representative commended the process of developing the Agrotechno Business curriculum, calling it a best practice for other universities to continuously improve their curriculum and ensure better alignment with industry needs. The course will officially be launched in August 2024 and will be accepting its first cohort of students for the upcoming 2024/2025 academic year.

Reflections/Key Learnings



Engaging with universities significantly speeds up the process of scaling up knowledge and disseminating learnings to broader audiences. PRISMA conducted market studies and research in collaboration with universities and helped its university partners understand how these were relevant to their institution's mission. This led to increased ownership and greater incentives from university partners to share the knowledge from these market studies and research through their platforms, thereby making it accessible to a wider audience.



Launching of the Agrotechno Business curriculum which adopt MSD approach between UNW - PRISMA - DFAT.

Sources of Evidence

1. Stanford University Triple Helix Research Group. (2011). *The Triple Helix Concept*.
2. Anatan, L. (2008). Kolaborasi universitas-industri: *Tinjauan konseptual mekanisme transfer pengetahuan dari universitas ke industri*. *Jurnal Manajemen*, 8(1), 1-12.

Policy initiative

Bappenas formulates the RPJMN's 2025-2029 food and agriculture development agenda based on robust policy evidence

Context

The National Development Planning Agency (Bappenas) is currently formulating the National Medium-Term Development Plan (RPJMN) 2025-2029. The RPJMN 2025-2029 outlines Indonesia's development path and priorities for the next 5 years and aligns with the broader National Long-Term Development Plan (RPJPN) 2025-2045 towards achieving a Golden Indonesia (*Indonesia Emas*) 2045.¹ RPJMN 2025-2029 is putting special emphasis on optimising the role and participation of non-state actors, including private sector, in the formulation and implementation of policies.² As a comprehensive national strategy, the RPJMN encompasses all strategic development sectors, including food and agriculture, and Bappenas is actively coordinating with Ministries/Institutions to develop the RPJMN.³ The RPJMN's food and agriculture development agenda will steer the Ministry of Agriculture (MoA) when it formulates its strategic plan (*Renstra*) for 2025-2029.⁴

The RPJMN drafting process for the food and agriculture development agenda begins with a background study, which is prepared by Bappenas's Directorate of Food and Agriculture and used to support the technocratic draft of the RPJMN.⁵ In the past, background studies were developed mainly through discussions with public officials and a few experts.



This [background study] is not the end, but only the beginning of the policy process for modernising agriculture.

Jarot Indarto,
Director of Food and Agriculture,
Bappenas in the closing speech at the
Modernising Agriculture RPJMN policy
discussion on 14 September 2023.



The steps that we have taken in the multi-stakeholder workshops have formed a solid foundation for formulating the RPJMN.

Jarot Indarto,
in the preface of the Background Study for
the RPJMN 2025-2029.

As of July 2024, Bappenas had already completed the technocratic draft and is in the process of finalising the initial draft of the RPJMN, which will be delivered in October 2024. Once the initial draft of the RPJMN is completed, it will be presented to the new president to integrate his vision, and the final RPJMN will be enacted in January 2025.⁶ As part of the initial draft, the RPJMN 2025-2029 also involves developing indicators around agricultural modernisation. To ensure more relevant indicators and better alignment between the RPJMN and MoA's Renstra, there is a need to enhance the coordination between Bappenas and the MoA during the development of the RPJMN indicators.



PRISMA's support

Bappenas's Directorate of Food and Agriculture is directly responsible for developing RPJMN's food and agriculture development agenda, PRISMA is well-positioned to support the directorate with a wealth of learning and knowledge to inform and strengthen the new agriculture agenda. The goal is to provide Bappenas with robust policy evidence based on market insights and public policy dialogue to shape RPJMN's food and agriculture development agenda, ensuring it effectively addresses Indonesia's diverse needs and challenges.

PRISMA is doing this by (a) supporting Bappenas with a background study on agriculture modernisation and resilience in Indonesia, which identifies key constraints and priority interventions to accelerate the modernisation of Indonesia's agriculture sector; (b) developing indicators on the modernisation of agriculture for the RPJMN and ensuring alignment between RPJMN and MoA Renstra indicators; and (c) developing comprehensive policy studies in key thematic areas. These areas of support are based on specific requests from Bappenas. The studies and recommendations incorporate PRISMA's knowledge and insights while also bringing in additional perspectives through multi-stakeholder consultations, particularly with the private sector and academics.



Key Achievements

The background study was developed through 3 multi-stakeholder consultation workshops in 2023, including one at the national level and 2 regional workshops in Indonesia's eastern and western regions in order to integrate perspectives from both developed and developing markets. The findings and recommendations from the regional workshops were discussed and summarised at a national-level plenary workshop in September 2023 and used to inform the final draft of the background study for Bappenas, which was completed in January 2024. The workshops fostered interactive and intensive discussions among a range of stakeholders, including government officials, academics, agricultural associations, researchers, international organisations, financial institutions, and private sector representatives.

The background study was well-received by Bappenas, prompting Bappenas to request additional support from PRISMA on developing agricultural modernisation indicators for RPJMN. To develop the indicators, 2 workshops have been held with Bappenas and the indicators are expected to be finalised in August 2024. While the background study covered overarching priority areas in agriculture, Bappenas required further insights into specific topics to complement the initial draft of the RPJMN. As a result, PRISMA is in the process of developing 4 in-depth policy studies in key thematic areas (i.e. availability of quality food crop seeds, young farmer regeneration, agriculture digitalisation, and climate-smart agriculture) which emerged from the background study and PRISMA's areas of expertise. These studies, which will generate policy recommendations to further support the initial draft of the RPJMN, will also be completed in August 2024.

Reflections/Key Learnings



Given the private sector's deep knowledge of market dynamics and operational realities, their perspective offers invaluable insights when developing policies. By incorporating private sector voices, policymakers can better address industry-specific challenges and capitalise on emerging opportunities while also crafting more effective and responsive policies to foster economic growth and competitiveness. For example, by consulting with private seed companies, the government became more aware of the potential to use commercial channels to deliver quality seeds and is now interested in partnering with more private seed companies.

Sources of Evidence

1. Law of the Republic of Indonesia Number 25 of 2004 on the National Development Planning System. (2004).
2. Ministry of National Development Planning. (2023, December 28). *Bappenas Kumpulkan Masukan untuk RPJMN 2025-2029 dan RKP 2025 Lebih Berkualitas*. Bappenas.
3. Ministry of National Development Planning/National Development Planning Agency of the Republic of Indonesia. (2023). *Regulation of the Minister of National Development Planning/Head of National Development Planning Agency Number 5 of 2023 concerning Procedures for the Preparation of the National Medium-Term Development Plan for 2025-2029*, Article 7, paragraphs 1–4.
4. Ministry of National Development Planning/National Development Planning Agency of the Republic of Indonesia. (2023). *Regulation of the Minister of National Development Planning/Head of National Development Planning Agency Number 5 of 2023 concerning Procedures for the Preparation of the National Medium-Term Development Plan for 2025-2029*, Articles 10, 12, and 13.
5. Ministry of National Development Planning/National Development Planning Agency of the Republic of Indonesia. (2023). *Regulation of the Minister of National Development Planning/Head of National Development Planning Agency Number 5 of 2023 concerning Procedures for the Preparation of the National Medium-Term Development Plan for 2025-2029*, Articles 8 and 9.
6. Ministry of National Development Planning/National Development Planning Agency of the Republic of Indonesia. (2023). *Regulation of the Minister of National Development Planning/Head of National Development Planning Agency Number 5 of 2023 concerning Procedures for the Preparation of the National Medium-Term Development Plan for 2025-2029*, Articles 17 and 18.



Policy initiative

Ministry of Agriculture reforms and implements the revised cattle feed standards

Context

Indonesia relies on 4.8 million smallholder beef farmers to produce beef for the country's food security and economic development. To support these farmers, PRISMA works with feed companies to produce and sell good-quality feed at affordable rates while educating farmers on good farming practices. However, Indonesia's National Feed Standards (SNI) can be a barrier for feed mills, particularly micro, small, and medium-sized (MSME) mills which account for the majority of feed producers, to legally sell more affordable, good-quality cattle feed. The existing SNI was a set of criteria that allowed for a premium grade of feed. Only large feed mills could afford the base ingredients to meet the standard, and the resulting feed was often out of smallholder farmer's price range. This policy bottleneck not only impedes the growth of feed companies but also undermines the potential for smallholder farmers to enhance cattle productivity and income.

I would like to thank PRISMA. What we have done together so far is extraordinary, although it hasn't been very long, only since 2021...we finished the SNI grading last December. We have also completed the CPPB 2-class grading system. And 3 MoA regulations are being streamlined into one to ensure they work even better.

drh. Nur Saptahidayat,
Director of Feed, MoA Republic Indonesia.



Presentation of plaque and certificate from the MoA Director of Feed acknowledging PRISMA's support on 28 May 2024.

PRISMA's support

PRISMA supports the Ministry of Agriculture's (MoA) Feed Directorate in reforming the 2017 cattle concentrate feed SNI to make it more flexible and business-friendly for MSME feed mills and smallholder farmers. The goal is not only to reform the standards but to also ensure that the MoA has the necessary resources to implement and revisit the new standards and regulations and that MSME feed mills have improved capacity to comply with the new SNIs.

PRISMA is doing this by (a) developing policy briefs and holding policy dialogues to convince the MoA to review the cattle feed SNI and provide the MoA with technical recommendations; (b) facilitating the development of MoA regulations (on feed registration and distribution, good feed manufacturing practices, and mandatory implementation of SNI) and training guidelines through consultation with industry stakeholders and universities; and (c) socialising the revised SNI for beef and dairy and delivering training sessions and materials to support capacity building of feed mills and government feed supervisors based on the new training guidelines.



Key Achievements

PRISMA's advocacy efforts led the MoA and National Standards Body (BSN) to include a review of the cattle feed SNI in the 2022 National Standard Formulation Program. New cattle feed SNIs, integrating PRISMA's recommendations to introduce a feed grading system, were published in December 2022. The implementation of the cattle SNIs, which was delayed by the addition of a new indicator that was not part of the original SNI proposal supported by PRISMA, will begin in August 2024.

Although PRISMA only set out to change the cattle feed SNIs, this spurred MoA to review the SNIs for other livestock feed (chickens, ducks, pigs, and quail) and streamline all feed regulations. As a result, new SNIs for other livestock were also released in December 2022, and these are already being implemented. This also prompted Bappenas to allocate a one-time grant of IDR 111 billion in 2023 to improve government laboratory facilities in Bekasi. MoA revised 3 overarching feed regulations, which are expected to be approved and implemented in 2024. These regulations have the potential to lead to a paradigm shift in Indonesia's livestock sector, unlocking opportunities for 13.6 million livestock farmers.

To equip the government with the knowledge and skills needed to effectively implement the new SNIs, PRISMA supported the development of training guidelines for feed quality supervisors and feed companies, along with the certification of 12 MoA auditors and training of 350 feed quality supervisors. Since May 2024, auditors and feed quality supervisors have been providing technical guidance to feed companies, especially MSMEs, to help them comply with the new SNI and produce certified feed at affordable rates for farmers. This has already led to 27 companies obtaining feed registration numbers (NPPs) as of June 2024, a total of 146 NPPs.



Reflections/Key Learnings



Success with changing sector policies could lead to unlocking broader policy changes beyond the focus sector. PRISMA's success in changing SNIs for cattle feed led MoA to review feed standards for all livestock and streamline all feed regulations for effective implementation (certifications, registrations, licensing time), including addressing capacity gaps within the government and industry. This transformed Indonesia's feed industry and enhanced livestock market resilience.



Policy constraints can arise at different sector development stages, requiring continual assessment. Initially, only 2% of beef farmers used concentrate feed, leading to lax enforcement of NPPs and SNI licenses. As the sector grew and more companies entered the market, fines for lacking NPPs increased, and compliance with existing SNIs became a barrier for MSME feed producers and market growth.



Molasses block trial for cattle in Tulungagung.

Policy initiative

Government and academia build capacity in Market Systems Development (MSD)

Context

Indonesia, which has 25.90 million people living in poverty or 9.36% of its population,¹ has historically relied on government initiatives for poverty reduction. However, in recent years, the government has realised the potential for the private sector to assist in poverty reduction and is interested in collaborating more intentionally with the private sector.² While this has prompted Bappenas's Directorate of Food and Agriculture to integrate the triple helix partnership concept (government, academia, industry) into its National Middle-Term Development Plan (RPJMN) for 2025-2029, collaborating with private sector is still a nascent space for the government and academia.

In this context, the remarkable success story of PRISMA has not only attracted Bappenas's interest in the MSD approach but also instilled confidence that the approach can help the government more effectively achieve its development goals and objectives. PRISMA has shown that working with the private sector in some of Indonesia's poorest provinces can significantly boost agricultural resilience and incomes for poor farming households. Partnering with 273 entities, of which 66% were from the private sector, PRISMA has resulted in 1.45 million smallholder farmers experiencing an average income increase of 145.6%.

I hope all participants have learned positive things from PRISMA and the holistic market systems approach. The government needs innovative approaches, and we are expecting all the participants here to contribute to national agriculture development.

Jarot Indarto, SP, MT, MSc, Ph.D.
Director of Food and Agriculture, Bappenas.



Awarding training certificates to participants from the Director of Food and Agriculture, Bappenas (Jarot Indarto, SP, MT, MSc, Ph.D.) and CEO of PRISMA.



PRISMA's support

Recognising PRISMA's expertise and success in the MSD approach, Bappenas's Directorate of Food and Agriculture has requested that PRISMA support it in building MSD capacity in both the government and academia. PRISMA is delivering on this request by (a) developing the national guidelines and training materials for designing and implementing an MSD program as a potential aid modality and (b) conducting MSD training for government officials and academia. These initiatives will provide government and university stakeholders a deeper understanding of the MSD approach, as well as practical tools that can be readily used and applied.



Key Achievements

In November 2023, PRISMA completed the national MSD guideline, *Government and Business Entity Partnership Program in Agricultural Sector Development Based on a Market System Approach*. The MSD training materials, which included guidance on the market assessment process, identifying the root constraints, developing interventions, defining suitable monitoring and evaluation methods, and assessing the signs of market sustainability, were completed in June 2024. Shortly after their completion, these guidelines and training materials were used in an MSD training for government officials and academia. They are also being used by the University of Nahdlatul Wathan (UNW) Mataram as a reference for developing its Agritechno business curriculum, with a scheduled launch in August 2024.

The June 2024 MSD training was a 5-day training program involving 23 participants (18 government officials, 4 university professors, and 1 DFAT representative). It consisted of both classroom sessions and hands-on group assignments. Nearly all participants (95%) reported an improved understanding of the MSD approach. Moreover, all participants indicated that they understood the value of partnerships between the government and private sector. In the closing ceremony, Mr. Jarot Indarto, Head of the Food and Agriculture Directorate of the Ministry of National Planning/Bappenas, awarded participants with training certificates and commended the outcome of PRISMA's training. He also encouraged participants to work together to implement MSD principles in Indonesia.

While it is too early to assess the impact of the training on government programs and triple helix partnerships, half of the graduates from the training have already developed post-training action plans. These action plans include integrating the MSD approach into regional development planning, sector planning (e.g. in fisheries and financial sectors), educational curriculum development, and monitoring and evaluation systems. Additionally, a third of the graduates plan to share information about MSD to their office heads, managers, and colleagues. Through these proactive actions, graduates have demonstrated commitment to integrating MSD into their work and sharing the approach more broadly.



Reflections/Key Learnings



It is critical that trainings be followed up with post-training activities, such as the development of action plans. Deeper knowledge about MSD is important, but knowledge without action is futile. Unless graduates apply their newfound knowledge, there is a risk that their understanding will fade over time and the training won't lead to broader impacts.



PRISMA MSD training in Surabaya.

Sources of Evidence

1. Statistics Indonesia (BPS). (2023). *Indonesia Poverty Profile in March 2023*.
2. Ihsanuddin, & Erdianto, K. (2020, March 4). *Jokowi Targetkan Kemiskinan Ekstrem Hilang pada 2024*. Kompas.com.

Policy initiative

Ministry of Agriculture accelerates the adoption of artificial insemination (AI) in the pig sector by improving standards and operating procedures for pig semen and standardising AI training and certification for inseminators

Context

In 2019, African Swine Fever (ASF) hit Indonesia, with the first outbreak in North Sumatra. It spread to 23 out of 34 provinces, including Eastern Nusa Tenggara (NTT) where PRISMA is working on the pig sector.¹ It has led to an estimated 10% loss in Indonesia's pig population, with the impact varying by province.² In NTT alone, ASF decimated the pig population, resulting in a loss of 40-50% of the population. As Indonesia recovers from ASF, there is an urgent need to restock the pig population with ASF-free pigs.³ Artificial insemination (AI) can help accelerate repopulation in the pig sector since AI offers several advantages over natural mating, including faster expansion of herds, minimal risk of disease transmission, and the ability to introduce superior genes into sow herds.⁴

We thank PRISMA for supporting the preparation of the SNI for frozen pig semen because it requires collaboration with all stakeholders to ensure the work is smoother. Our farmers face serious challenges in the pig farming industry from the impact of ASF. Therefore, we must immediately rise up and provide a supportive environment, which includes establishing the SNI for frozen pig semen.

Mr. Agus Susanto,
Head of Centre for Standardisation of Animal Husbandry and Animal Health Instruments, the MoA.



Endorsement of the SKK Khusus by the Secretary of Agricultural Human Resources Extension and Development Agency, Ministry of Agriculture (Ibu Dr. Ir. Siti Munifah, M.Si) on 30 May 2024, witnessed by the Head of the Kupang Animal Husbandry Training Centre, the Head of Batu Malang Animal Husbandry Training Centre, and the CEO of PRISMA.

While AI for pigs exists in Indonesia, it is mainly used for research at universities and government farms or by larger commercial farms for their own operations. Most of the available pig semen tends to be fresh semen, although several large commercial farms in East Java and Bali are also using imported frozen semen. Widespread adoption of AI faces a number of challenges in Indonesia, including the lack of skilled pig inseminators (e.g. in NTT, pig inseminators are only able to serve an estimated 7% of total sows in the province) and the absence of regulatory standards or operating procedures for certain types of pig semen.



PRISMA's support

PRISMA supports the Ministry of Agriculture (MoA) to accelerate the adoption of AI in the pig sector. The goal is to improve farmers' access to skilled inseminators to support pig sector recovery and to stimulate pig breeding companies to produce high-quality pig semen for farmers.

PRISMA is doing this by facilitating the process of developing (a) a national curriculum and modules for pig inseminator training, as well as operational guidelines for educational and training institutions; (b) specific work competency standards for inseminators (Standard Kompetensi Kerja Khusus-SKK Khusus) which will be used to certify inseminators across Indonesia; and (c) the Indonesian national standard (SNI) for frozen pig semen and standard operating procedures (SOP) to certify chilled pig semen from semen producers.



Key Achievements

The collaborative efforts of PRISMA, BBPP Kupang (Animal Husbandry Training Centre), BPPSDMP (Agricultural Human Resources Extension and Development Agency, MoA), pig industry and veterinary associations, universities, and experts resulted in the development of a national curriculum and modules for the pig inseminator training, operational guidelines for educational and training institutions, and work competency standards for inseminators.

In a multi-stakeholder workshop in July 2023, BBPP Kupang was identified as a government counterpart to lead the development of the AI training materials and operational guidelines for educational and training institutions. After the training curriculum and modules were developed, BBPP Kupang piloted the AI training for 32 inseminators from 10 districts in NTT, a government owned-farm in Kupang, and BIBD (Regional Artificial Insemination Centre) in Bali. The results from the pilot, along with additional consultations with experts, were used to improve the curriculum and modules.

Similarly, the development of the specific work competency standards also went through a rigorous process which involved 4 multi-stakeholder workshops, which culminated into a formulation workshop in March 2024. In June 2024, the Head of BPPSDMP endorsed the SKK Khusus. BPPSDMP is now waiting for the final registration number for the SKK Khusus from the Ministry of Manpower, which is expected to be issued in August 2024. Once the registration number is issued, the training curriculum will also be officially recognised as a national curriculum.

In parallel, with the support of PRISMA, the NTT Provincial Animal Husbandry Office and experts from Bogor Agriculture University (IPB Bogor), Nusa Cendana University, and Udayana University have drafted the SNI for frozen pig semen and the SOP to certify chilled pig semen from semen producers. After completing three stages of conception, technical, and consensus meetings, the final draft of the SNI for frozen pig semen was endorsed by the Head of PSIPKH (Livestock and Animal Health Instrument Certification Agency at MoA) and submitted to BSN (National Standards Agency). The SNI is expected to be issued by BSN in September 2024. The SOP to certify chilled pig semen is expected to be finalised in July 2024 and will be handed over to the Product Certification Agency (LS-Pro) at MoA.

Reflections/Key Learnings



Identifying the correct government agency, understanding its bureaucratic processes, and ensuring transparent communications are crucial for achieving successful outcomes. However, this can take a lot of time. It took PRISMA nearly 1.5 years to identify the relevant government agency despite numerous conversations with the Provincial Animal Husbandry Office, vocational schools, and universities in NTT. It was only during an AI Curriculum workshop in July 2023 that PRISMA finally identified BBPP Kupang as the lead agency in charge of training for inseminators nationwide. In addition to identifying the right government agency, gaining a profound understanding of internal regulations and bureaucratic processes, building networks through experts and consultants, and establishing open and transparent communications with relevant government stakeholders can greatly assist in accelerating the development of policies.



Given the time constraints faced by the program, it is often necessary to weigh the pros and cons of pursuing different policy processes. For the competency certification for inseminators, PRISMA was initially pursuing a national work competency standard (SKKNI). However, it can take up to 1-2 years for a SKKNI to be approved. In contrast, the specific work competency standards (*SKK Khusus*) can be approved within 6 months but it would limit the actors who can actually certify inseminators (i.e. only MoA and its agencies and not universities or vocational schools). Since PRISMA is in its last year and has limited time to push forward these changes, the team opted to switch to the SKK Khusus process even though the standard would not be as broadly applicable.



A piglet is carried by a Happy Farm staff in Kupang, NTT.

Sources of Evidence

1. FAO. (2024, Aug 22). *African swine fever (ASF) situation update in Asia & Pacific*.
2. Kolambani, F. U., Dyanasari, & Gunawan, C. I. (2022). *Impact of African Swine Fever (ASF) on the Pig Population in Indonesia*. Tribhuwana Tungadewi University.
3. FAO. (2022). *Guidelines for African Swine Fever (ASF) prevention and control in smallholder pig farming in Asia: Farm biosecurity, slaughtering and restocking*.
4. Queensland Government. (2022, Nov 22). *Advantages and disadvantages of artificial insemination of pigs*. Business Queensland.

Policy initiative

NTT provincial government formulates the RPJMD 2025-2029 for the agriculture sector using improved policy insights and data, including PRISMA's evidence and market insights

Context

The National Long-Term Development Plan (RPJPN) for 2025-2045 aims for NTT, one of the poorest provinces in Indonesia with a poverty rate of around 20% over the last decade,¹ to become a superhub for international tourism and the creative economy. Agriculture, which contributes up to 29% of gross regional domestic product (GRDP),² is expected to support these goals of regional economic transformation. In the first semester of 2024, the Regional Development Planning, Research, and Innovation Agency (Bapperida) NTT started preparing the NTT Regional Medium-Term Development Plan (RPJMD) for 2025-2029, which lays an important 5-year foundation to reach the RPJPN goals.

While the NTT government has significant experience promoting development through subsidy programs, they now recognise the need for a vibrant commercial market to reach its regional development goals. As this is a nascent space for Bapperida, it currently lacks sufficient insights from the private sector and the necessary data to prioritise target areas for growing the commercial market. There is also a need to advocate for support from the national government as national rules and regulations also influence the growth of NTT's commercial markets.



Closing speech by Theresia Maria Florence, Head of Economy & Natural Resources, Bapperida at the Multistakeholder Policy Dialogue on 15-16 May 2024.



This process represents an innovative institutional 'breakthrough' in leveraging technological advancements to support development planning and implementation for future policies in NTT.

Jarot Indarto,
Director of Food and Agriculture,
Bappenas.



With the support for the creation of Power-BI based digital maps by PRISMA, this will really help the NTT Provincial Government to be able to formulate policies in the future.

Theresia Maria Florence,
Head of Economy & Natural Resources,
Bapperida NTT.



PRISMA's support

Since PRISMA has a decade of experience developing the NTT agriculture market, including in strategic commodities such as beef, pigs, and maize, it has a wealth of learning and knowledge to inform and strengthen the provincial agriculture agenda. Based on a request from Bapperida, PRISMA supports Bapperida in preparing the participatory and technocratic planning of RPJMD NTT 2025-2029 for the agriculture sector. The goal is to provide Bapperida with improved policy insights and data, in particular insights and recommendations for a supportive business-enabling environment to encourage private sector investments, market growth, and a shift from subsistence to commercial agriculture.

PRISMA is doing this by (a) developing a planning tool to support the identification of target geographies for growing the commercial market and the development of suitable strategies; (b) conducting a study on how the agriculture sector can support long-term regional goals and holding a multi-stakeholder policy dialogue to gather additional inputs and perspectives; (c) formulating recommendations for strategies, programs, and activities for NTT's agriculture market development from 2025 to 2029; and (d) developing and disseminating policy briefs to advocate for the national government's support for NTT's priorities.



Key Achievements

The study on how the agriculture sector can support NTT's long-term goals commenced in February 2024. It covered 9 commodities with a deep dive on the beef, pig, and maize markets as key drivers of NTT agriculture. A summary of initial findings and potential recommendations were presented at a multi-stakeholder policy dialogue in May 2024. The policy dialogue also gathered additional inputs and perspectives from public and private stakeholders to inform the agricultural agenda in the RPJMD 2025-2029.

During the event, Bapperida NTT also launched the innovative planning tool, which consolidates data from multiple government agencies into visual mappings. Before the launch, PRISMA conducted a training to introduce Bapperida staff to the new tool. This was followed by several coaching sessions where staff learned to update and operationalise the tool using the most recent data. Given the potential for the tool to help Bapperida decide on priority geographies, develop strategies for key agricultural commodities in NTT, and advocate for support from the national government, Bapperida proactively took the lead in coordinating with related agencies, including the Central Bureau of Statistics (BPS), to obtain the data required for the tool.

Building on the initial study findings and inputs from the multi-stakeholder policy dialogue, as well as PRISMA's learnings from working in NTT over the last decade and analysis of results from the planning tool, PRISMA formulated recommendations for RPJMD's agricultural strategies, programs, and activities. A table summarising these recommendations was submitted to Bapperida in July 2024 and complemented with a full report which provides further details around the recommendations. PRISMA is also in the process of developing 3 policy briefs to support Bapperida in advocating for national support, which will be disseminated through national and provincial events by August 2024.



Reflections/Key Learnings



Embedding a program's sector learnings into government planning processes can be an important pathway to ensuring more sustainable sector outcomes. PRISMA was able to do this in NTT because its market development approach is highly relevant for a thin market like NTT, which has an urgent need to grow its economy and reduce poverty. PRISMA also brought a strong understanding of what works and doesn't work in NTT through 10 years of partnerships in 8 sector commodities. Moreover, it was able to identify a champion with strong influence within Bapperida and the NTT provincial government, which was critical for opening doors for stronger collaboration. While this combination of factors enabled PRISMA to feed into NTTs provincial planning processes, such opportunities can be rare. Furthermore, since there is typically a 5-year policy planning cycle, this may not coincide with the program's timeframe, and even if it does, the program needs to be aware that it is unlikely that it will be able to capture the impact at the beneficiary level.



ASF brochure, a collaboration between PRISMA and the NTT regional government.

Sources of Evidence


1. Statistics Indonesia. (2023). *Poverty profile in East Nusa Tenggara Province*, March 2023.
2. Provincial Government of East Nusa Tenggara. (2023). *Regional development plan for East Nusa Tenggara 2024-2026*.

Policy initiative


Central Java provincial government and Dinas Sumenep improve their maize seed subsidy planning systems

Context

While provincial and local governments have promoted hybrid seed through their seed subsidy programs, subsidy planning has been inefficient, often resulting in high overlaps between the subsidy recipients and existing commercial seed users. This is a disincentive for seed companies to add investment and continue serving or expanding into certain geographies. This is a particular concern in areas with emerging hybrid seed adoption (such as Sumenep, the district with up to 85% of all subsidy recipients in Madura). In other regions where the hybrid seed commercial market is stronger (such as Central Java), seed subsidy programs were not contributing to the government's goals of increasing maize production and productivity. At the same time, they were leading to a shrinking of the commercial market as seed companies reduced their production.

 *The database helps to make the seed assistance allocation more precise.*

Chaenur Rasyid,
Head of Sumenep DKPP.

 *The new technical guideline will support the Central Java government in developing areas that need further growth. The lessons learned from implementing in Central Java can be replicated in the seed assistance scheme from the national budget and/or in other areas.*

Supriyanto,
Head of the Central Java Agriculture and Plantation Office.



Socialisation Event for Central Java Guidelines on 6-7 June 2023.

As a result, in Phase 1, PRISMA facilitated a proof of concept pilot from 2016-2018, which was a public-private partnership between the Sumenep Food Security and Agriculture Agency (Dinas Ketahanan Pangan dan Pertanian-DKPP) and seed companies. The pilot, which reduced the overlap of subsidy recipients and commercial farmers from 90% in 2016 to 40% in 2017, proved that smart subsidy planning works. However, without follow-up measures (e.g. guidelines for smart subsidy planning, easy access to key data for decision-making) to institutionalise smart subsidy principles, there is a risk that the government will not continue this practice, especially given the high turnover within government. It is also important to promote this innovation at the national level since the guidelines and budget for seed subsidy programs are ultimately determined by the national government.

PRISMA's support

PRISMA supports the Central Java Provincial Agriculture and Plantation Agency (Dinas Pertanian dan Perkebunan-Distanbun) and the DKPP Sumenep in improving the planning and targeting of their free maize seed programs. The goal is to ensure that the smart subsidy practice is institutionalised, thereby increasing the willingness and capacity of PRISMA's government partners to continue implementing smart subsidy planning.

PRISMA is doing this by: (a) developing databases and analysis tools for Sumenep and Central Java to show the level of hybrid seed adoption in different areas and providing training and coaching for government staff to utilise and regularly update the database; (b) establishing guidelines for Sumenep and Central Java on how to identify target areas for subsidies and how to identify suitable delivery mechanisms based on the analysis of database results; and (c) capturing and promoting the benefits of smart subsidy planning to the national government through a study and policy brief based on the practices adopted in Sumenep and Central Java.



Maize farmer in Sumenep.



Key Achievements

After the Sumenep pilot ended, DKPP Sumenep continued to minimise the overlap between subsidy recipients and commercial farmers. As a result of being exposed to hybrid seeds through the seed subsidy program, farmers were more willing to purchase these seeds, which in turn resulted in more seed companies actively promoting their products in Sumenep. As hybrid seeds expanded to more villages, with PRISMA's support, DKPP Sumenep developed a system to monitor the level of adoption and compile this in a database to support the selection of target areas for seed subsidy allocations. After PRISMA facilitated a sharing session in June 2022 between DKPP Sumenep and the Provincial Government of Central Java to promote wider adoption of the smart subsidy practices, Central Java also developed a database and analysis tools to capture field-level data.

Government staff from both Sumenep and Central Java have been trained and coached on the database and tools, ensuring they have the capacity to independently update the database on an annual basis and analyse the data for subsidy planning. DKPP Sumenep has already piloted using the database to propose its subsidy allocations from the national level budget for the 2024 rainy season. Central Java expects to use the database to allocate its provincial subsidy budget for the 2026 financial year once it completes data collection from its districts.

In parallel, Central Java's Distanbun issued a new operational guideline (JUKNIS) in April 2023 to improve the delivery of the seed subsidy system. Although the JUKNIS has been socialised to 20 districts, implementation has been slower than expected due to the need for the provincial government to collect supporting data from district level governments and the fixed annual cycle of budget allocation. Similarly, DKPP is formalising the processes for updating the database and improving subsidy allocations in a guideline that will be published by end of July 2024. The process of capturing lessons from smart subsidy implementation in Sumenep and Central Java is on-going, with the final study report and policy brief expected to be disseminated by the end of August or early September 2024.

Reflections/Key Learnings



There are benefits and drawbacks from using a bottom-up vs top-down approach to changing subsidy practices and both are viable strategies. In the case of Sumenep, which used a bottom-up approach that started with piloting a proof concept at the district level, the pilot resulted in quicker observable changes at the farm level and valuable field level insights. It is easier administratively to obtain government buy-in for a pilot. The downside is that the government may lack incentives to institutionalise learnings from pilots, especially where pilot activities are easily replicated in the absence of formal guidelines. However, given constant turnover in government, there is a high risk that new practices would be discontinued unless they are formalised. There is also a risk of slower scale-up beyond the initial pilot district. On the other hand, a top-down approach like the one pursued with the provincial government in Central Java has the benefit of cementing the desired change in formal guidelines upfront and reaching a larger geographic area. However, it can also be hampered by slower implementation at the field level as a result of negotiations between the provincial and district level governments, more administrative processes, and the dynamics of competing program priorities.



Sharing positive experiences with other government institutions can increase incentives for government partners to institutionalise good practices. Despite the successful pilot, PRISMA's initial pitch to the Sumenep government to formalise the smart subsidy did not get any traction. When PRISMA shared the smart subsidy experience from Sumenep with Central Java and showed how Central Java developed it further and formalised the concept, this helped the Sumenep government realise the value of its experience in improving the subsidy system. This, in turn, generated internal momentum to formalise its practices, which makes it easier to create lasting improvements in the system and to garner more attention for this positive achievement.




Representatives from the Central Java Provincial Office visit Syngenta for a knowledge-sharing session on maize cultivation and best practices.

Learn more




To learn more about PRISMA and its legacy, you can find the **Legacy Impact Brief – Sectors** and **PRISMA farmer stories** on the PRISMA website: www.aip-prisma.or.id.

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