



# Stock-taking of Country Profiles on Crop Insurance in ASEAN



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**Bangkok, August 2019**

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## List of Abbreviations

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<b>ACA</b>	PT Asuransi Central Asia
<b>AMS</b>	ASEAN Member State
<b>ASEAN</b>	Association of South-East Asian Nations
<b>AUTP</b>	Asuransi Usahani Tani Padi
<b>BAAC</b>	Bank of Agriculture and Agricultural Cooperatives
<b>CPI</b>	Cost of Production Input
<b>GIZ</b>	Deutsche Gesellschaft für Internationale Zusammenarbeit
<b>GW</b>	Global World Insurance
<b>ha</b>	hectares
<b>ICT</b>	Information and Communication Technology
<b>IRP</b>	Indonesian Rupees
<b>IRRI</b>	International Rice Research Institute
<b>JICA</b>	Japan International Cooperation Agency
<b>MFI</b>	Micro-Finance Institution
<b>MPCI</b>	Multi-Peril Crop Insurance
<b>NAIPP</b>	National Agricultural Insurance Pilot Program
<b>PCIC</b>	Philippine Crop Insurance Corporation
<b>PHP</b>	Philippine Peso
<b>PPP</b>	Public Private Partnership
<b>PRISM</b>	Philippine Rice Information System
<b>RIICE</b>	Remote-sensing based Information and Insurance for Emerging Economies
<b>RSBSA</b>	Registry System for Basic Sectors in Agriculture
<b>SDC</b>	Swiss Agency for Development Cooperation
<b>THB</b>	Thai Baht
<b>USD</b>	United States Dollar
<b>VND</b>	Vietnamese Dong
<b>WIBI</b>	Weather Index-Based Insurance



## Executive Summary

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Rice is a crucial crop for ASEAN countries, not only from an economic but also from a cultural and food security point of view. Rice crop production in Asia is highly vulnerable to extreme weather events and climate change. In addition to prevention and adaptation, crop insurance is a promising risk management tool, adding to increasing the resilience of farmers. The state of crop – or more general agricultural insurance varies across ASEAN Member States (AMS) and so do the set-up and functioning of the existing schemes. This publication aims to provide an overview and some background on rice crop insurance solutions in place and activities going on in the different AMS.

Crop insurance is still at an early stage and insurance penetration is very low in most AMS. Countries are facing various issues and different challenges in the development and implementation of crop insurance programs at the national and regional levels, e.g. lack of supporting structure and data, limited financial resources, small number of companies offering products, low interest from farmers, trust issues, financial literacy, perceived missing added-value or affordability of services, institutional limitations.

From the ten AMS, only the Philippines and Thailand are currently operating larger-scale crop insurance schemes. The agriculture insurance pilot program in Vietnam has been suspended for a long time and is now under revision after a recent approval (i.e. Decision 22) by the Prime Minister. Indonesia is about to scale up its government-supported pilot program and plans to run it as a full scheme from 2020 onwards. Cambodia, Malaysia and Myanmar have government-approved plans and/or implement pilot crop insurance projects. Brunei Darussalam, Lao PDR and Singapore have no existing crop insurance programs at the moment.

Along with further partners and in close collaboration with national stakeholders, GIZ is supporting ASEAN and its member states in advancing crop insurance. The ASEAN-Sustainable Agrifood Systems (ASEAN-SAS) project, under collaboration with the RIICE project, aims to provide AMS with satellite-based information assisting decision-makers and insurers to better manage rice production and disaster risks. In addition to access to data, GIZ facilitates the establishment of regulatory and policy frameworks for the successful implementation of insurance schemes. In a multi-stakeholder process, challenges and necessities are identified and knowledge exchange is facilitated to create sustainable business models that fit the specific circumstances of individual ASEAN countries.



# 1. Introduction

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Agriculture, especially rice crop production, is a core sector for most ASEAN countries with large parts of the population having their livelihoods and income based on agricultural activities. ASEAN paddy rice production was estimated at 220 million tons in 2017 and agricultural production accounts for ca. 10% of the ASEAN GDP (AFSIS, 2017). In Myanmar for example, the sector generates up to 25% of the national GDP according to ASEAN (2018) whereas in Lao PDR more than 70% of the population is engaging in farming activities (FAO, 2019).

On the other hand, Southeast Asia is one of the regions that is most vulnerable to extreme weather events and natural disasters, including disease and pest outbreaks: Floods, typhoons and periods of drought are the norm and harvests are frequently destroyed. Traditionally, a country's government supports its farmers with emergency assistance when disasters result in widespread yield losses, posing a threat to sufficient food supply. However, ad hoc financial disaster relief is difficult to plan and puts a considerable strain on the national budget. As a result, governments seek long-term risk management approaches. Shifting the financial risk, agriculture insurance can therefore be an important risk management tool that reduces vulnerability of small-holder farmers and enables the sector to become resilient to production risks.

Crop insurance in the ten ASEAN Member States is at different stages, ranging from non-existing to fully-fledged national schemes implemented. This variety in status is not simply due to the importance of the agricultural sector within a specific country, but rather seems to reflect different challenges for each country related to enabling policies, data availability, capacity and awareness of government agencies and further stakeholders or interest from farmers or the private sector.

Therefore, this report shall provide an overview of the status of crop insurance in the different AMS and serve as a base for knowledge exchange and collaboration at national and regional level to further the development of agricultural insurance, especially crop insurance, within the different AMS. Under the Crop Insurance extension of its project ASEAN Sustainable Agri-food Systems (ASEAN-SAS), in collaboration with the public private partnership RIICE (Remote Sensing based Information and Insurance for Emerging Economies), GIZ is mandated by ASEAN to support and facilitate the advancement of crop insurance in the region. Through the RIICE partnership, GIZ contributes to the provision of remote sensing-base information and data which help decision makers and insurers to better manage rice production and disaster risks and promotes the establishment of necessary regulatory and policy frameworks for the implementation of crop insurance schemes in various AMS. Such insurance schemes eventually contribute and can accelerate the development of agriculture sectors in the region.

A draft version of this report was presented to the participants of the Policy Dialogue on Crop Insurance in ASEAN and the Regional Consultation Workshop on Crop Insurance Promotion in ASEAN on 22-23 May 2019 in Jakarta, as well as to the Steering Committee of the ASEAN SAS Project (Extension-Crop Insurance). The current revision accounts for comments and inputs from participants.

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## 2. General Overview of Crop Insurance in ASEAN

From the ten ASEAN Member States (AMS) only two AMS, namely the Philippines and Thailand, run larger-scale crop insurance schemes at the point of publication of this document. A previously existing (pilot) program in Vietnam has been suspended but is scheduled to relaunch in 2019. Indonesia is about to scale up its government supported pilot, which ends in 2019, and thus getting ready to run it as a full scheme from 2020 onwards. Three AMS have government-approved plans and/or implement pilot crop insurance project, i.e. Cambodia, Malaysia and Myanmar. The remaining AMS, i.e. Brunei Darussalam, Lao PDR and Singapore, have no existing crop insurance programs.

Thus, the status of crop insurance in the ten AMS is as follows:

- **No program:** Brunei Darussalam, Lao PDR, Singapore
- **Preparation phase (pilot or national scheme):** Malaysia (legislation for national scheme), Myanmar (one study and legislation for a national scheme in preparation), Vietnam (pilot program was suspended and is now under revision)
- **Pilot ongoing:** Cambodia, Myanmar (2 pilot projects have become operational in 2019), Indonesia (transitioning to full scheme at the end of 2019)
- **Implementing an established crop insurance program:** Philippines, Thailand (Indonesia from 2020 onwards, Vietnamese scheme under revision after approval of Decision 22 in 2019)

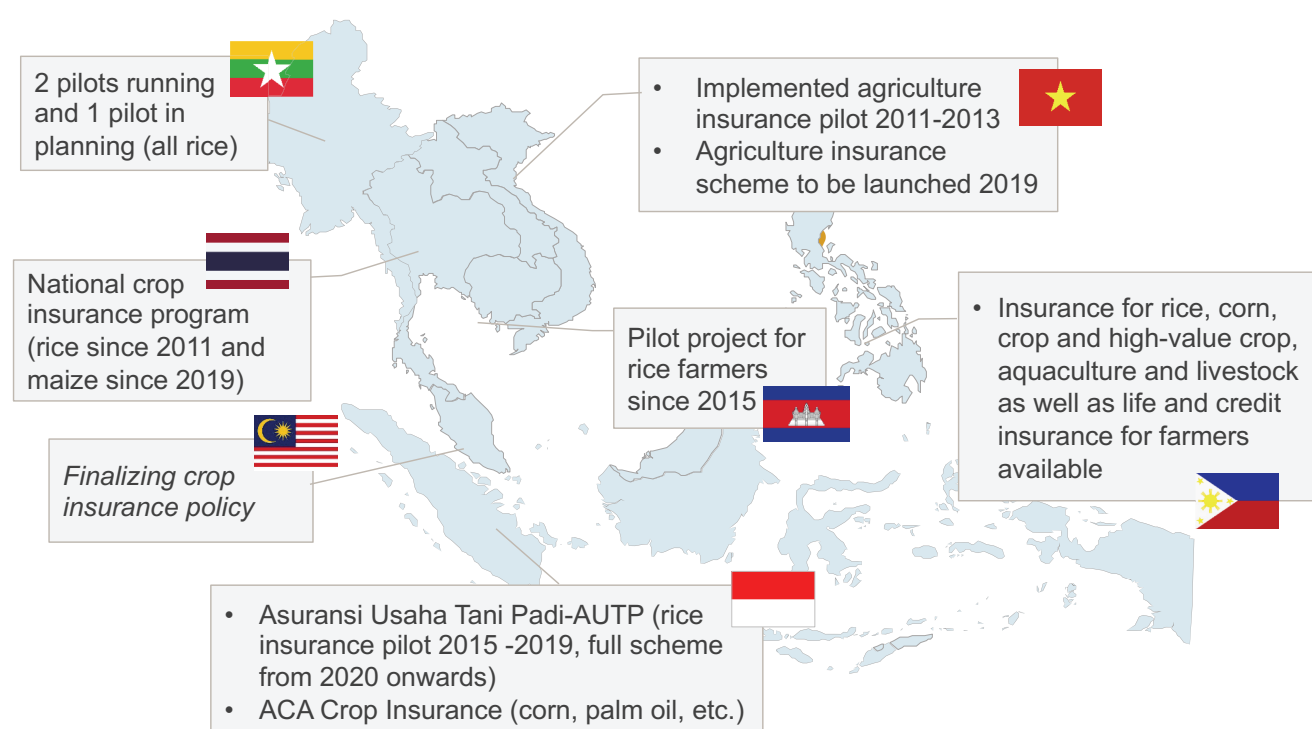


Figure 1: Overview of Crop Insurance in ASEAN. (source: GIZ, 2019).



Among the four AMS with developed crop insurance programs, the Philippines has the greatest number of crop and agricultural insurance products. Thailand's national scheme currently covers rice and maize (since 2019) with plans to expand the product range in the future (potentially including fruits). Vietnam's rice insurance program is currently under further revision after the Prime Minister's approval of a Decision on the implementation of agriculture insurance policy (Decision No. 22/2019/QĐ-TTg). Indonesia, in addition to rice insurance, is also providing insurance coverage for maize and oil palms. The Philippines are providing crop insurance coverage for rice as well as maize, high-value crops (84 high-value crops other than rice and maize) and also non-crop agricultural assets, credit and life term insurance for farmers and fisherfolk (Cajucom, 2018).

In most AMS, crop insurance is still at an early stage and insurance penetration is very low. Countries are facing various issues and challenges in the development and implementation of crop insurance programs at the national and regional levels (e.g. lack of supporting infrastructure and data, limited financial resources, small number of companies offering products, low interest from farmers due to trust, awareness or perceived missing added-value). The RIICE project, respectively ASEAN-SAS Crop Insurance Extension, works towards facilitating the implementation of state of the art remote-sensing technologies for monitoring and insurance purposes at different national and regional governments in Southeast Asia. In this respect, the aim is to support the offering of cost-efficient and effective crop insurance solutions on the supply side. Furthermore, RIICE also provides insurance literacy activities to farmers, agricultural agents and authorities, thus raising awareness about agriculture insurance and facilitating an increase in penetration therefor. RIICE is a public private partnership between the Swiss Agency for Development and Cooperation (SDC), Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), the International Rice Research Institute (IRRI), the tech company sarmap and global reinsurer Swiss Re. Since 2011, RIICE has supported governments in Cambodia, Indonesia, Philippines, Thailand, Vietnam and India to strengthen food security and reduce the vulnerability of small-holder farmers engaged in rice production. RIICE supports crop insurance solutions by using satellite data to identify rice growing area, forecast and estimate harvest as well as to determine rice crop failure.

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GIZ. (2019). *Overall lessons learned and direction to strengthen crop insurance in ASEAN*. Presentation for the Policy Dialogue on Crop Insurance in ASEA, 22 May 2019 in Jakarta.

**Table 1: Overview of Crop Insurance Programs in ASEAN**

The table provides an overview of crop insurance program available in 10 ASEAN Member States.

Country	Insurance Products Availability			Risk(s) Covered	Target Beneficiaries	Source of Premium	Implementing Agency
	Indemnity-based	Index-based	Target Crop(s)				
<b>Brunei Darussalam</b>	-	-	-	-	-	-	-
<b>Cambodia</b>	-	✓	rice (rubber, cassava, maize )	Excessive rain, drought, dry days	smallholder farmers, individual farmers	non-subsidized	private company
<b>Indonesia</b>	✓	✓	rice, maize, oil palm	flood, drought, named pests and diseases, rainfall, windstorm	smallholder, farmer groups, individual farmers	subsidize and non-subsidize programs	government and private companies
<b>Lao PDR</b>	-	-	-	-	-	-	-
<b>Malaysia</b>	-	-	-	-	-	-	-
<b>Myanmar</b>	-	✓	paddy rice	weather-related disasters	paddy rice farmers	-	government in cooperation with international donors and private companies
<b>Philippines</b>	✓	-	rice, maize, high-value crops	natural calamities, pest and disease, other perils insured	smallholder farmers, other stakeholders in agriculture, fisheries and forestry sectors	subsidized and non-subsidized programs	government institutions (PCIC and others) and private sector
<b>Thailand</b>	✓	-	rice	flood, drought, frost, windstorm/ typhoon, fire, hail, pests and diseases, elephant damage	rice and maize farmers	subsidize	government in cooperation with private companies
<b>Singapore</b>	-	-	-	-	-	-	-
<b>Vietnam</b>	-	-	(rice)	-	farmers	-	(government in cooperation with private companies)

*Note: Information shown on table were based on inputs provided for and during the 10th Steering Committee of ASEAN SAS Project (Extension – Crop Insurance) on 15 December 2017, Bangkok, Thailand. Updated inputs were provided during the ASEAN Policy Dialogue on Crop Insurance on 22 May 2019 and information was received from Myanmar in June 2019.*



### 3. Cambodia



Crop failure due to natural disasters such as flooding is a severe and recurring issue in Cambodia: Floods have cost Cambodia USD 356 million in 2013, with the agricultural sector taking a significant part of the losses (Phnom Penh Post, 2019). Crop insurance is therefore an important topic both from an economic as well as from a social resilience perspective.

#### Forte's crop insurance pilots

A pilot crop insurance for rice, the main crop in Cambodia, was initiated in 2015 by the private insurer Forte. The pilot product was based on a weather index, which is relying on data from local weather stations, and covered the three components excessive rainfall, deficit rainfall and dry days. There was no subsidy from the government but rather Forte itself provided premium subsidies (i.e. final premium of USD 17/ha) to make the product more accessible (Khmer Times, 2015).

In 2017, Forte conducted a second pilot in which they switched to the use of a soil-moisture index, partnering with a Dutch-based company that provided the necessary data. This new pilot was designed completely without subsidies. Instead, Forte introduced a minimal premium and insurance training for farmers to the new concept (Cajucum, 2018). Nevertheless, uptake by farmers remained quite low: It slightly increased from 60 farmers in the first pilot to up to 200 farmers in the second pilot in the provinces of Banteay Meanchey, Battambang, Kampong Thom, Pursat and Siem Reap (Phnom Penh Post, 2019). Operations have not been profitable yet compared to similar pilots that have managed to break even, mainly due to subsidies from governments however (Forte in Phnom Penh Post, 2019).



## Cambodia Micro Agriculture Insurance Scheme

Besides the Forte pilot, another pilot was conducted in 2015/2016: The Cambodian Center for Study and Development in Agriculture (CEDAC) implemented a two-year pilot project called the Cambodia Micro Agriculture Insurance Schemew (CAMAIS), which supported local smallholder farmers by providing insurance payouts to those affected by severe weather-related events. The pilot eventually stopped due to lack of funding and lack of consumer awareness (i.e. understanding of crop insurance was limited). Participating rice farmers paid a premium at the start of the growing season based on the size of their farm, type of crop and technical tools used. Then, they received consultation on farming techniques and an insurance payout if their crop was damaged by flood or drought. During the project's two-year operation, 48 farmers out of a total 157 members (i.e. 30%) made claims. The scheme was launched with USD 96'000 of funding from the Achmea Foundation and implemented in nine districts across Kampong Chhnang, Takeo and Kampong Speu provinces (Phnom Penh Post, 2019).

## Recent Developments

The RIICE partnership has been in discussions with Forte, providing expertise on remote sensing and proposing an insurance product based on RIICE technology. The RIICE partnership has been instrumental in delivering insurance training, facilitating knowledge exchange and promoting policy development through submitting a concept note on a national agricultural insurance program in Cambodia. The Ministry of Agriculture, Forestry and Fisheries (MAFF), together with related departments, is in charge of regulatory and policy processes. Progress has been made in this respect as crop insurance is now part of the government's policy program on agricultural promotion (Phnom Penh Post, 2019).



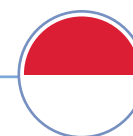
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## 4. Indonesia



In Indonesia, there are currently two programs operational that insure crop farmers, one is the government-initiated Asuransi Usaha Tani Padi (AUTP) program and the other one is the private sector's crop insurance program led by PT Asuransi Central Asia (ACA).

**Table 2: Snapshot of Asuransi Usaha Tani Padi**

Asuransi Usaha Tani Padi (AUTP)	
<b>Inception Date</b>	2013, pilot phase 2015-2019, scale up from 2020 onwards
<b>Reach</b>	> 1 million farmers insured in 2018
<b>Insurance Type</b>	Indemnity-based Multi-Peril Insurance
<b>Crops covered</b>	Rice
<b>Perils covered</b>	Drought, Flood, named Pest and named Diseases
<b>Premium rate</b>	3% flat national premium rate, e.g. USD 18 per hectare
<b>Sum Insured</b>	Cost of Production, max. of USD 600 per hectare
<b>Subsidy</b>	80% of Premium paid by the Government
<b>Target beneficiaries</b>	All rice farmers (belonging to farmers groups)
<b>Parties involved</b>	Government (Ministry of Agriculture, Ministry of National Development Planning – BAPPENAS, Ministry of Finance, Meteorological Agency - BMKG) PT Asuransi Jasindo (state-owned insurance company)
<b>Financial set-up</b>	Government support: 80% premium subsidy Farmer: 20%
<b>Distribution</b>	Farmer groups at the village level (Kelompok Tani or in short is called "Poktan")
<b>Loss adjustment and compensation</b>	In the occurrence of puso (crops failure; subject to a damage intensity of > 75%), the farmers are entitled to compensation up to IRP 6m/ha. Farmers claim via their farmer group (fill in claims form) which informs Jasindo about the loss. Jasindo sends a loss adjuster to the field, issues a claims confirmation and transfers the compensation to the farmer's bank account.

### Overview

Asuransi Usaha Tani Padi (AUTP, Rice Farming Insurance) is a micro insurance Public Privat Partnership (PPP) aimed to increase smallholder farmers' resilience and to improve their livelihoods. It is a key element in the government's aim for rice self-sufficiency, protecting farmers against great losses in the wake of global climate change while promoting production growth (Pasaribu 2010). Launched in 2015, it builds on two years of Multi-Perils Crop Insurance pilots undertaken by the Ministry of Agriculture, the Japan International Cooperation Agency (JICA), local insurer PT Jasindo, and reinsurers, with PT Protata acting as a consultant. In 2015, with the signing and issuance of the General Guidance of Premium Aid, the AUTP entered an extended pilot phase (2015-2019) intended to scale up to reach 15 million smallholder rice farmers, already reaching 600,000 in 2016 with crop loss insurance (Johnson Blaire & Schrevel, 2017). As a part of the PPP arrangement, the Government of Indonesia provides regulatory support, premium subsidy through the Ministry of Finance, and technical guidance and implementation through the Ministry of Agriculture and PT Jasindo (a state-owned insurance company,

underwriter). The government set the premium rate at 3% of the production value insured; initially a variable rate was proposed based on the risk in each target province, but this was changed for ease of administration. The government provides an 80% subsidy for eligible farmers with the goal to phase this out over time. Jasindo collaborates with local government units in farmer awareness creation about agricultural insurance, marketing, registration and selling the product to farmers in farmer groups. Loss assessment is done at the field level through Jasindo loss adjustors and extension representatives, with a loss of over 75% required to trigger the 100% payout. Jasindo is exploring other distribution channels (loan linked, bundled with inputs) and technology (satellite imagery) to aid the distribution and loss adjustment (Johnson Blaire & Schrevel, 2017). The government targets 1 million ha of land to be covered by insurance rice farming, and so far, has not been achieved (Adhitya, 2016). With currently only 3.8% of rice field covered by AUP, the insurance penetration remains low (Jatmiko, 2017). This might indicate low awareness or attractiveness of the current scheme (Adhitya, 2016).

**Table 3: Snapshot of ACA Crop Insurance Program**

ACA Crop Insurance	
<b>Inception Date</b>	2015 (maize), 2017 (rice)
<b>Reach</b>	> 1'200 farmers in 2017
<b>Insurance Type</b>	Index-based insurance: weather index for rice and area yield index for maize
<b>Crops covered</b>	Maize, rice
<b>Perils covered</b>	Rainfall (drought, windstorm)
<b>Premium rate</b>	5% (maize) respectively 4-12% (rice) of Sum Insured
<b>Sum Insured</b>	Production Cost, max. USD 600 per hectare
<b>Subsidy</b>	None, 100% of premium paid by farmer
<b>Target beneficiaries</b>	Smallholder farmers, low income farmers
<b>Parties involved</b>	<u>Private sector</u> (Asuransi Central Asia (ACA), various Indonesian Banks, fertilizer companies)
<b>Financial set-up</b>	Government support: none Farmer: 100%
<b>Distribution</b>	Through Micro Finance Institutions
<b>Loss adjustment and compensation</b>	Claims surveys are done with the help of mobile apps by MFI account officers and field extension workers (agronomists). If needed, claim documents (pictures, papers from local head of village) are collected.

Besides the indemnity-based AUP scheme by state-owned Jasindo, the private insurer ACA offers crop insurance on index basis. In cooperation with PT Sampo, climate index insurance has been developed for maize and rice. A pilot project including multiple stakeholder (agricultural banks such as Bank Andara, Rural Bank Pesisir Akbar, Syngenta, fertilizer companies, ACA, farmers groups, grain traders, IT start ups etc.) under the lead of Mercy Corps Indonesia has been carried out since 2015. The private scheme does not include any premium subsidies and distribution is organized via Micro Finance Institutes (Nugraha, 2017). Data collection and claims administration is facilitated by mobile apps and handled through account officers or extension officers. The goal of the joint venture is to ease access to finance and good agricultural practice for non-bankable poor farmers (Nugraha, 2017).



## Objectives and Structure

The wider objectives of these insurance schemes include food security and sovereignty in the light of climate change, securing and increasing farmer income and livelihoods as well as increasing welfare and sustainability of farming businesses (JICA, 2016). Furthermore, both aim at promoting access to finance for low income farmers and awareness of risk management solution (Adhitya, 2016).

Regarding the AUDP scheme, farmers need to be part of a farmers group which needs to be approved by the local government) to register for the program (GIZ, 2016). Registration is jointly administered by the regional office of agriculture (through extension workers) and insurance agents and happens latest 30 days before the start of sowing season (Pasaribu, 2010). The premium is subsidized by the government (80%, from state budget) and Jasindo collects the remaining 20% from the farmer when issuing the insurance policy. The department of agriculture is involved in data collection and verification of participants as well as oversight of payments to the latter (Jatmiko, 2017). Furthermore, local representatives of the department are responsible for participant's socialization. The 4-years pilot will end in 2019 and stakeholders are currently revising and improving the program set up and conditions for the next phase (Ika, 29.04.2019, personal communication).

## Policy and Regulatory Framework

Since 2011, the Government of Indonesia has allocated a budget to cover rice farmers' losses that occurred due to total harvest failure. The fund aid is allocated in accordance with Act No. 12/1992 on Crops Farming and Presidential Instruction No. 5/2011 on Securing National Rice Production in dealing with Extreme Climate (JICA, 2016). The legal basis for agriculture insurance activities is governed by the Farmer Protection and Empowerment Act or FPE Act (Law No. 19/2013). The law stipulates that national and local government are obliged to protect farming activities through Insurance (GIZ, 2016).

## Access to Public Good: Data and Insurance literacy

Creating the right institutional set up for efficient data management and sharing information as well as access to new technologies and innovations are a key priority for the next program period 2020-2024 (Avianto, 29.04.2019, personal communication). Therefore, building up the right capacities and setting up the appropriate (ICT) infrastructure within the governmental and private actors involved in the program is crucial. The responsible scheme representatives have been studying similar programs in the region (Thailand, Vietnam, India) and are well aware of both best practice as well as pitfalls. Besides facilitation of learnings on best practices and access to innovative data such as for example remote sensing products, the international community can assist in increasing customer's awareness about agricultural insurance through insurance literacy.



## Sustainable Business Model

Increasing insurance penetration by improving product offerings and customer's awareness about and trust in the insurance scheme is a crucial step towards a sustainable business model. Public sector agricultural insurance is relatively new to the Indonesian insurance sector (Ika, 29.04.2019, personal communication). Building on the results of the pilot, the next program period will focus on improving the business model to successfully scale up the scheme. Reliable and cost-efficient good-quality data that covers the vast territory of Indonesia as well as the right management infrastructure and a sound policy framework will be as important as a well-designed risk transfer mechanism for the long-term success and sustainment of the program. The government and Jasindo are investigating the potential of innovative technologies, remote sensing and digital tools with respect to data collection, verification, monitoring and support in claims handling. Through study visits and knowledge exchange, they are looking into best practice examples from other (ASEAN) countries when it comes to the use of ICTs for improved registration and claims handling, models of institutionalization and capacity development as well as extending distribution channels and increasing socialization with farmers.

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## 5. Malaysia



In Malaysia, fire insurance for plantations has been available for a long time; however, insurance for other types of perils or other crops is still missing (Briones, 2019). The government of Malaysia is now planning to introduce a crop insurance program. Preparations have been undertaken including consultations with farmers and other stakeholders, such as governments agencies and private insurers, structuring of the insurance products and study of feasibility. The program's initial target is to reach 200'000 farmers. Currently the responsible implementing agencies at the Ministry of Agriculture are finalizing a crop insurance policy and preparing the legal and regulatory basis for pilots as well as a fully-fledged national scheme (Sulaiman, 2018). The government is considering to also offer Takaful crop insurance (George Karung, 2019, personal communication). Further details on the set up, operation and specific products under the program are not yet available.



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## 6. Myanmar



In Myanmar, three pilot crop insurance products have been prepared, of which two have recently become operational. All three pilots focus on rice paddy crops and products feature index-based payout schemes (e.g. yield, weather), initially covering rainfall-related events (Cajucum, 2018).

### Approach on Crop Insurance

Consultations on crop insurance in Myanmar, in preparation of a future national crop insurance scheme, were conducted on November 8<sup>th</sup>, 2018 with the permission of the Union Minister of the Ministry of Agriculture, Livestock and Irrigation (MOALI). The consultation workshop was organized by the Department of Agriculture in cooperation with the Myanmar Rice Federation (MRF) and the Myanmar Agriculture Network (MAN) under the Grow Asia Country Partnership (Dr. Khin Myo Nyein, 2019, personal communication).

#### The current crop insurance projects promoted in Myanmar included the following:

- I. **Yield index-based project** (status: operational) in collaboration with Global World Insurance (GWI): A two-years pilot project has been approved by the Ministry of Planning and Finance in January 2018. The premium rate is 2% of the market-value of rice produced on 1 acre of farmland (Myanmar Times, 2019). The insurance product is offered in the provinces of Ayeyarwady, Mandalay, and Yangon and prices vary across regions.
- II. **Weather index-based project** (status: operational) in collaboration with Myanmar Agricultural Development Bank (MADB), Myanmar Insurance and Sompo Japan Insurance. The product launch was intended for February-April 2019 (Cajucum, 2018) and the premium rate is 2% of the per-acre loan for paddy rice from MADB. The pilot project will cover Pyay Township in Bago Region and Shwebo Township in Sagaing Region (Dr. Khin Myo Nyein, 2019, personal communication). The insurance will cover the losses suffered by paddy farmers due to weather-based disaster such as drought.
- III. **Feasibility survey** for a weather index-based project in collaboration with Mitsui-Sumitomo Insurance Company and Japan International Cooperation Agency - JICA (Cajucum, 2018).

### Demand for crop insurance

In Myanmar, there is no prior benchmark for setting premium rates and capacity for financial support from government and the private sectors in respect of subsidies or discounts is limited (Cajucum, 2018). Nevertheless, government officials and insurance actors are well aware of the need for crop insurance and thus a supporting framework was established, including a national crop insurance committee, crop insurance laws as well as risk transfer to re-insurance (Myanmar Times, 2019). A relevant partner in this respect is the Insurance Business Regulatory Board (IBRB) under the Ministry of Planning and Finance. Despite support from senior government officials, progress has been slow due to difficulties in data acquisition and provision (Myanmar Times, 2019). Farmers seem interested in crop insurance and market demand exists: When a scholar from the Department of Agriculture conducted a research to investigate the interest in crop insurance of pulses farmers from Yangon, Bago, Mandalay and Magway Regions, the result showed high demand (82-87%) for weather index crop insurance (Dr. Khin Myo Nyein, 2019, personal communication). Currently, GWI and the Myanmar Rice Federation have agreed to provide crop insurance to the contract farming operations run by private companies (Myanmar Times, 2019).

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## 7. Philippines



The Philippines currently run one comprehensive agriculture insurance program in which the government-owned Philippine Crop Insurance Corporation (PCIC) offers different crop insurance options (e.g. rice, maize, high-value commercial crops) to Philippine farmers. Besides crops, the scheme also provides livestock, fishery, non-crop agricultural assets and credit and life insurances.

**Table 4: Snapshot of the Philippines National Crop Insurance Program**

The Philippines National Crop Insurance Program by the Philippine Crop Insurance Corporation (PCIC)	
<b>Inception Date</b>	1981
<b>Reach</b>	1'698'000 (2017) farmers through regular PCIC 13'516'337 (2017) farmers and fisherfolk enrolled via RSBSA (Registry System for Basic Sectors in Agriculture) program
<b>Insurance Type</b>	Indemnity-based MPCl (Multi-Peril Crop Insurance), additionally Term Life, Credit, Casualty
<b>Crops &amp; agriculture products covered</b>	Rice, Maize; High-Value Commercial Crop (84 crops); Livestock, Fisheries; Non-Crop Agricultural Asset (i.e. machinery, equipment, property); Credit and Life Insurance (Producer Protection Plan (PPP), Loan Repayment Protection Plan (LRP), Accident and Dismemberment Security Scheme (ADSS))
<b>Perils covered</b>	Crops: Natural Calamities (Drought, Flood, Typhoon, Storm Surge, Volcanic Eruption, Earthquake, Tsunami, Frost), Pests & Diseases, Accidental Fire for high-value crops; Livestock: Accidental Death or Disease; Fisheries/Aquaculture: Natural Calamities, Fortuitous Events; Non-Crop Agricultural Assets: Fire, Lightening, Explosion, Typhoon, Flood, Theft Credit and Life Term: Death due to accident or natural causes, murder or assault (PPP); Death or total permanent disability (LRP); Death or dismemberment or disability due to accident (ADSS)
<b>Premium rate</b>	Variable rates depending on region, season, perils and risk profile of farmer. Rice example (medium risk): 10.81% (Pest and Disease) + 7.95% (Natural Disaster)
<b>Sum Insured</b>	Crops: Cost of Production Input (CPI) + up to max 20% of CPI for expected yield (optional) Rice: max. between 760-1'230 USD/ha depending on variety Maize: max. between 1'290-1'440 USD/ha depending on variety
<b>Subsidy</b>	Partially subsidized premiums for subsistence farmers for rice and maize; fully subsidized premiums for poor farmers and fisherfolk listed under the RSBSA and subsistence farmers participating in other agricultural development programs by the Department of Agriculture or Department of Agrarian Reform; Market-based premiums for all other stakeholders.
<b>Target beneficiaries</b>	Smallholder farmers, farmers and agricultural stakeholders/producers
<b>Parties involved</b>	<u>Government</u> (Department of Agriculture, Department of Agrarian Reform, Agricultural Credit Policy Council, Department of Budget and Management, Bureau of Animal Industry, National Dairy Authority, Philippine Carabao Center, Philippine Coconut Authority, etc.), PCIC, Landbank of Philippines (LBP) & <u>private sector</u> (lenders, re-/insurers, microfinance institutions, cooperatives, farmers organizations)

<b>Financial set-up</b>	Government support: 53% of the premium for regular rice and maize farmer; 100% of premium smallholder farmers Lending institutions/LBP (for clients): 19% of premium for clients (regular farmers) Rice and maize farmers: 0 %-28% of premium (bank clients), 0%-47% (non-clients) Others: 100% of premium
<b>Distribution</b>	Lending Institutions, local government units, agricultural cooperatives and others
<b>Loss adjustment and compensation</b>	In the event of a loss, a written claim for indemnity needs to be sent to PCIC (latest 20 days after occurrence). Loss adjusters (1 PCIC and 1 other agency such as DA/DAR etc.) verify the claim (no, partial or total loss of more than 90% damage) and determine the payout.

## Overview

The Philippines National Crop Insurance Program is the longest continuously running agricultural insurance program in Southeast Asia, launched in 1981 (Johnson Blaire & Schrevel, 2017). The program was initiated by the Government of the Philippines (GoP) with the Philippine Crop Insurance Corporation (PCIC), a government owned insurance company specializing in providing agricultural insurance solutions and program implementation through a public-private partnership. PCIC has expanded from just covering rice and maize to now supporting farmers in their other activities, including cash crops, agricultural credit, agricultural property, industrial risk, fisheries, and livestock. GoP subsidizes 54% of the premium for rice and maize insurance, with an additional 18% subsidy paid by the lending institution when the insurance is bundled with agricultural credit.

The PCIC markets directly to farmers, largely through lending institutions, local government units, agricultural cooperatives to ease distribution and then handle the registration process. Farmers can insure their Cost of Production/Production Loan +20%, within the ceiling established by PCIC. The applying farmer must submit their Farmer Plan Budget when applying for the insurance. Premium rates are based on risk level per region, per season and per risk classification (Cajucum 2016). The claim processing is done through field assessment by loss adjusters from PCIC and the Department of Agriculture (GoP, 2019).

## Objectives and Structure

The mission of PCIC is to stabilize the income of farmers and agricultural producers and promote credit flow to rural areas by providing insurance and extending financial services. A special focus is given to subsistence farmers to realize a vibrant and progressive rural economy (PCIC, 2018).

Besides the regular PCIC insurance program open to all farmers and agricultural agents, there are special programs for smallholder farmers only, which offers full premium subsidy (PCIC, 2019). Under the regular programs, only paddy rice and corn are partially subsidized. With regards to the crop segment of the insurance scheme, eligible farmers have several options of cover - depending on rice variety, perils to be included, etc. Farm eligibility criteria apply (e.g. exclusion of near water locations, conflict areas and health hazards, etc.) including accessibility and application of good agricultural practice and adherence to the Farm Plan and Budget is a condition for insurance (deviations from the Plan shall be notified). Coverage is the cost of production inputs up to a ceiling amount per ha. The premium is a percentage of the cover, adjusted based on the perils covered and risk profile of the farm; for medium risk rice farms under natural disaster cover, the premium is 7.95 percent, of which the government pays 4.2 percent, while the farmer pays 3.73 percent (53 percent subsidy). For borrowing farmers whose creditors require insurance (most commonly, Land Bank of the Philippines), PCIC charges 1.5 percent to the lending institution, bringing the farmer share down to 2.23 percent. Meanwhile special programs involve 100 percent subsidies, of which the largest by far is the Registry System for Basic Sectors in Agriculture (RSBSA). The RSBSA program is targeted at subsistence farmers and fisherfolk listed in the registry; for crop farmers, no beneficiary can have more than 3 ha landholding, and priority is given to farmers cultivating 1.5ha or less. In 2017, PCIC paid claims of PHP 1'791'976'000 for rice and corn combined, which corresponds to a loss ratio of 74%. The damage ratio (total claims paid vs. amount of cover or sum insured) was at 7.67%.



## Policy and Regulatory Framework

Through its experiences in administering the guarantee funds of the Philippine government, the Land Bank of the Philippines got interested in exploring the use of crop insurance to protect farmers and thus set up an Inter-Agency Committee for the Development of a Philippine Crop Insurance System (IAC-PCIS), including representatives from national and local government agencies (e.g. agriculture, agrarian reforms, budget and finance, insurance commission, community development), the insurance sector (actuarial society, cooperative and private insurance companies), academia and other stakeholders involved in agriculture. The committee aimed at achieving economies of scale in operation and thus suggested to undertake the establishment of a crop insurance system as an inter-agency effort and linking insurance with supervised credit programs. Further goals of the crop insurance system besides protecting farmers include financial stability of lending institutions, farmer's access to credit as well as mobilizing funds for intensified production (for self-sufficiency and export) leading to higher income for the stakeholders in agricultural value chains (Cajucom, 2017).

A legal basis for crop insurance was first enacted in 1978 with the establishment of the Philippines Crop Insurance Corporation under Presidential Decree 1467 (PCIC, 2018). PCIC is a government owned and controlled entity under the Department of Agriculture and the sole provider of traditional crop insurance in the Philippines (Cajucom, 2017). Crop insurance was introduced in 1981, and initially focused on insurance for subsistence rice and corn farmers against losses arising natural calamities, pests and diseases. The legal mandate was strengthened by Republic Act No. 7607 (Magna Carta of Small Farmers) of 1991, which requires crop insurance to expand beyond rice and corn to other crops, livestock, poultry, fishery, and agro-forestry (Aquino et al., 2013). Further amendments to the PCIC charter in 1995 included the expansion of insurance cover to non-crop assets and expected yield, stronger financial support for poor farmers, enhanced claims process as well as improved capitalization and changes in the government structure of PCIC (i.e. representatives from subsistence sector in Board of Directors, State reserve Fund for catastrophic losses, etc.).

In the course of time, further public and private initiatives have been added and helped to shape the crop and agriculture insurance landscape in the Philippines (e.g. private weather index-based insurance (WIBI) by microfinance institutions (MFIs), public insurance programs for victims of Typhoon Yolanda, public disaster assistance programs and programs for subsistence rice farmers affected by climate change, etc.). For a complete overview and list of insurance programs, see Cajucom (2017). Important recent policy developments include the embedding of crop insurance as a means for climate change adaptation and mitigation as well as general disaster risk management and agriculture sector promotion.



The Philippine government has recognized the significant role of agricultural insurance as an effective climate change adaptation measure to cope with losses caused by extreme weather events. Insurance programs as an innovative risk transfer instrument on climate change are also recognized in the Republic Act No. 9729 (RA 9729) or the Climate Change Act of 2009, which mandate the mainstreaming of climate change in planning and decision making. Programs such as the Survival and Recovery (SURE) Assistance Program, backed by the DA's Administrative Order No. 20 in February 2017, aim at providing relief and ensuring agricultural households livelihood capacities in the aftermath of climate calamities (Cajucum, 2017). On the part of the private and financial sector, actors recognize the value of current agricultural insurance scheme as it allows them to recover a portion of their agricultural loan exposures and sustain the flow of credit for agricultural development.

## Access to Public Good: Data and Insurance literacy

Having the International Rice Research Institute (IRRI) headquartered in the Philippines is a strong advantage when it comes to generation of data, information and innovation in the agricultural sector. Together with its international partners and with substantial investments from the Philippine government, IRRI has developed PRISM (Philippine Rice Information System) – a nation scale rice monitoring and information system. Using earth observation technologies (i.e. remote sensing data) coupled with crop growth simulation models, PRISM provides information on crop seasonality, rice area, yield as well as damage from flood and drought or pests. This information has been supporting decision making, action planning and policy formulation but may also serve in agricultural insurance (Lopez de Ddios, 2018).

## Sustainable Business Model

Consistent political and financial support from the different parties involved as well as continued adjustments and improvements of public insurance schemes with major public subsidies are a crucial requirement for the upscaling of such programs. Both PCICs regular program as well as special programs such as the RSBSA-based program have seen substantial growth in number of insured (between 10-20% annually) as well as area under cover in recent years (PCIC, 2018). With the majority (e.g. 70% in 2014) of insured receiving full premium subsidies, adequate budgetary planning – both on the public and private sector side – and adaptation of risk selection mechanism are vital for long-term sustainability and viability of the program (PCIC, 2015). Considering the Philippines exposure to and experience with major Typhoons, such as for example Yolanda (i.e. Haiyan) in 2013, the rationale for Crop Insurance program is clearly given and its impact on farmers income has been studied and found positive (Conrado et al., 2017; Defiesta & Mediodia, 2016). Therefore, adjusting the product offering as well as managing the risks of anti-selection and accumulation will ensure the farmers protection needs are well served in the long run.

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## 8. Thailand



The government of Thailand, in cooperation with the private sector, operates one National Crop Insurance Program respectively Top-Up Disaster Relief Program which currently covers rice and maize farmers.

**Table 5: Snapshot of Thailand's National Crop Insurance Program**

Thailand National Crop Insurance Program / Top-up Disaster Relief	
<b>Inception Date</b>	1978 (various forms), 2009 (Weather Index Pilot), 2011 (Multi-Peril Crop Insurance)
<b>Reach</b>	Ca. 1'900'000 farmers (as of 2018)
<b>Insurance Type</b>	Indemnity-based (additional to government relief program)
<b>Crops covered</b>	Rice; Maize (from 2019 onwards)
<b>Perils covered</b>	Flood, Drought, Frost, Windstorm/Typhoon, Fire, Hail; Pests and Diseases as well as Elephant damage (sub-limited to 50% of SI)
<b>Premium rate</b>	<u>Tier 1 (fundament, subsidized):</u> Rice: Flat single rate of 6.75%, on average USD 16.65 per hectare. Maize: Flat single rate of 9.93%, on average USD 15.40 per hectare <u>Tier 2 (voluntary top-up):</u> Different base premiums depending on risk area + VAT and stamp Range of base premia 2.08-6.25% for Rice and 1.25-9.58% for Maize.
<b>Sum Insured</b>	Based on Cost of Production (covering roughly 30% of estimated actual production costs): USD 246.90 per hectare for Rice (50% sublimit for pests) and USD 391.25 for Maize (50% sublimit for pests). Another 25% of production cost is covered by the government relief program.
<b>Subsidy</b>	Tier1: 60% Subsidy by Government + 40% Subsidy for BAAC loan customer; for non-borrowing farmers, the 40% is borne by the farmer. Tier 2: none
<b>Target beneficiaries</b>	All rice and maize farmers
<b>Parties involved</b>	<u>Government</u> (Ministry of Finance, Ministry of Agriculture, Department of Disaster Prevention and Mitigation, Office of Insurance Commission) <u>and private sector</u> (Bank of Agriculture and Agricultural Cooperatives (BAAC), Thai General Insurance Association, 20 National Insurers and Inter/-national Reinsurers (current lead with Swiss Re))
<b>Financial set-up</b>	Government support: flat rate compensation within the relief program and premium subsidy (60%) for the Top-up insurance program Privat sector: premium subsidy of 40% by bank for loaners Farmer: voluntary top-up and remaining gap to cost of production
<b>Distribution</b>	Mainly bundled to loans of Bank of Agriculture and Agricultural Cooperatives (BAAC); to individual farmers
<b>Loss adjustment and compensation</b>	Event trigger is the declaration of calamity for a certain planted area by the Department of Disaster Prevention and Mitigation (verification of loss/event by local authorities). Farmers claim directly at their local BAAC branch with national ID as verification. The payout is transferred to their account.



## Overview

A first public-private rice insurance scheme, under the supervision of the Crop Insurance Committee, was launched in 1978 and evolved in various forms until paused in 1991 due to enormous loss experience and lack of governmental support (Monthip & Akarapon, 2016). Besides piloting a fully commercial, index-based weather insurance from 2009-2015 in cooperation with the World Bank, the Thai government initiated an indemnity-based, large scale National Rice Insurance Program in 2011. The weather-index product was discontinued due to unfavorable basis risk and ineffective marketing (Johnson Blair & Schrevel, 2018). The scheme covers multiple perils and operates as public-private partnership (PPP) with governmental regulation and budgetary support (Fiscal Policy Office, Ministry of Finance) and implementation by a pool of 20 insurers, led by the Thai General Insurance Association. To aid in distribution and simplify administration processes, the National Rice Insurance Program uses the Bank of Agriculture and Agricultural Cooperation (BAAC) and Local Extension Officers (under the Ministry of Agriculture) as aggregators to reach individual farmers. BAAC handles the insurance product sales - bundled to their credit products - and Local Extension Officers take care of farmer data registration. To file a claim, the area where the farmer lives must be declared as a disaster affected area by the government (Department of Disaster Prevention and Mitigation) and his field must experience a total loss (Johnson Blair & Schrevel, 2018). The terms and conditions of the insurance contract are approved by the Office of Insurance Commission and large parts (currently 80%) of the accumulated risk is ceded to the international reinsurance market (Charupakorn, 2019). The current reinsurance panel is led by Swiss Re. Since 2019, the program also offers coverage for maize crops (Bunyasiri, 2019).

## Objectives and Structure

The National Crop Insurance Program, also called Top-Up Disaster Relief is an insurance structure which is placed on top of a governmental disaster relief program. As such, it acts as a disaster risk management tool supporting farmers to cope with the negative financial impacts of natural disasters. By adding an insurance component on top of the disaster relief program, the government leverages its funds to attract additional private capital and aims for an efficient management of the dedicated budget (Cajucom, 2018).

In case of declaration of natural disaster, the insured rice farmer receives a payout consisting of a relief component by the government (i.e. THB 1'113 or ca. 25% of estimated production costs) as well as an insurance component (max. Sum Insured (SI) is THB 1'260 for all perils except pest/disease/elephant, which have a sublimit of 50% of the SI). As for the subsidized part of the program (Tier 1), the maximum payout covers about 52% of the farmer's estimated input costs, which results in a remaining protection gap of 48% for the farmer's account (Deng, 2019). The farmer can further reduce this gap by voluntarily topping up its cover, paying a risk-based premium depending on the location of its fields (Tier 2, no subsidy). Conditions and product structure for the newly added maize product are similar, slightly higher coverage for maize (Charupakorn, 2019). As for Tier 1, the premium is fully subsidies by the government (60%) and BAAC (40%) for loan-takers of BAAC. The successful scale up of this program can thus partially be explained by the distribution mechanism respectively cooperation with BAAC, which reaches about 90% of all Thai farmers (Praitaweepong, 28.04.2019).

## Policy and Regulatory Framework

The National Crop Insurance Program is a good example of a public private partnership where the involved government agencies provide an enabling policy and regulatory framework (i.e. disaster declarations, farmer registration, legal and regulatory ground for insurance operations, etc.) and private partners – in this case actors from the financial sector – ensure efficient operations and service provision. The strong political support as well as the as an active multi-stakeholder dialogue between ministries, regulator and private sector were crucial in evolution of this scheme (Praitaweepong, 2019). Premium subsidies make the product affordable, especially for low-income farmers, and a simple distribution and claims mechanism through BAAC grants easy access for farmers. The relatively high insurance penetration helps to improve the financial viability of the scheme.

## Access to Public Good: Data and Insurance literacy

Relevant data are provided and shared by scheme partners. The Ministry of Agriculture provides historic statistical data for area risk assessment as well as necessary information for farmer registration (i.e. ID verification, etc.). BAAC provides claims data to TGIA (Thai General Insurance Association) which enables data flow and processing within the re/-insurance sector (Charupakorn, 2019). ITC tools such as apps by BAAC further facilitate distribution and information flow between the bank and the farmer. Future development plans for the Crop Scheme include the use of remote sensing data and expansion of digital applications (Praitaweepong, 2019). Accurate and timely access to good quality data as well as building up necessary capacities (institutional set up and data infrastructure, sharing concept, data processing, risk management, insurance literacy, etc.) with the various stakeholders involved is a pre-condition for a well-functioning scheme (GIZ, 2018). These processes often evolve gradually and take time.

## Sustainable Business Model

Continued engagement of all stakeholder involved as well as a sound concept and financially viable set-up helped to secure the success of the current scheme (GIZ, 2018). Subsidies have been crucial for the start-up of the scheme, but it is yet to see how the current cost-sharing mechanism will evolve with future developments such as the potential use of technologies such as remote sensing and further digitalization of the value chain. Bundling the insurance product to loans and adopting a hybrid business model with a focus on disaster relief and PPP cost- and risk-sharing seemed essential for the current scale up of the scheme (GIZ, 2018). Besides a clear institutional and legal framework which increases trust and reliability, continued adaptation of the protection framework to serve the farmers needs will facilitate the long-term sustainability of the National Crop Insurance Program.

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## 9. Vietnam



Vietnam's national agricultural pilot program (NAIPP) has been suspended for the last 5 years and went under revision. A proposal on the future set up of a national program has been submitted to the Prime Minister who signed and formally approved the Agriculture Insurance Decision on June 26, 2019. At the time of publication of this paper, involved ministries and stakeholders were still in the process of elaborating guidelines on the implementation and no details have been communicated officially. Thus, this paper mainly outlines and refers to the conditions and circumstances of the previous insurance program.

Table 6: Snapshot of the National Agricultural Insurance Pilot Program

National Agricultural Insurance Pilot Program (NAIPP)	
<b>Inception Date</b>	1982 (Agricultural Insurance); 2011-2014 (NAIPP), currently under revision
<b>Reach</b>	304,016 Clients, cumulative from 2011-2014
<b>Insurance Type</b>	Yield Index + Cost of Re-Transplanting (further: Livestock Indemnity Based, Aquaculture Indemnity Based)
<b>Crops covered</b>	Rice (further: Livestock, Aquaculture)
<b>Perils covered</b>	Storm, Flood, Drought, Cold Weather, Frost, Salinity, Tsunamis, Thunderstorms, Tornadoes, Pest & Disease
<b>Premium rate</b>	Rice: 2.3-5.4% (Livestock: 2.5-4%; Aquaculture: 3.8-9.7%)
<b>Sum Insured</b>	Production value
<b>Subsidy</b>	Poor households 100% subsidy, Near-poor households 80% subsidy, normal households 60% subsidy, 20% others
<b>Target beneficiaries</b>	Farmers, especially low-income farmers.
<b>Parties involved</b>	<u>Government</u> and <u>private sector</u> (Bao Minh and Bao Viet Insurance Companies)
<b>Financial set-up</b>	Government support: 60%-100% premium subsidy depending on income level of the household; 20% to other agricultural organizations Farmers and private institutions: remaining
<b>Distribution</b>	Bao Minh and Bao Viet Insurance Companies employ local agents at the commune level, selling an individual policy holder who represents 2-3 villages
<b>Loss adjustment and compensation</b>	tbd

### Overview

Agricultural insurance was first launched as government-supported pilots in 1982 in Vietnam for rice, livestock and aquaculture. However, the schemes were terminated by 1998 due to major costs and a poor loss record. Due to high demand among farmers, some insurance companies and farmer cooperatives initiated their own pilots from 2005-2010, though they were unable to reach scale due to unaffordable premium rates (Johnson Blair & Schrevel, 2017). In 2011, the Government of Vietnam enacted the National Agricultural Insurance Pilot Program (NAIPP) to develop agricultural insurance in a pilot program from 2011-2014. The NAIPP is a Public Private Partnership (PPP) to deliver micro insurance products, wherein the government facilitates agricultural



insurance products, wherein the government facilitates agricultural insurance products implemented by two quasi-state insurance companies (Bao Minh and Bao Viet) with international reinsurer support (Khoi, 2016). The NAIPP offers three products for smallholder farmers - Rice Yield Index Insurance, Indemnity Livestock Insurance, and Indemnity Aquaculture Insurance. The program eventually reached 304,016 households, of whom over 90% were poor or near-poor. Aggregate coverage was VND 7,744 billion, of which indemnities equaled VND 701.8 billion. Total premiums collected was VND 394 billion, for a loss ratio of 178 percent. This high ratio is due to the non-crop component of the program; for rice, the loss ratio was only 21 percent (Dang et al, 2017). In 2014, this program was suspended as the regulation limited the duration for this pilot project to only three years.

## Objectives and Structure

Agricultural production plays an important economic role in Vietnam and thus agricultural insurance has been a policy priority, mitigating effects of limited risk prevention options that farmers currently have in the light of natural disasters and climate change. The program aims to increase rice farmers coping capacities with the impacts of such adverse events and securing their income and livelihoods (Thang, 2014).

The NAIPP focused on yield index products for crops based on past experience with indemnity products, wherein insurers realized enormous costs for intensive loss assessment. With assistance of SwissRe, the government developed the yield index with national statistical data, calculating a yield baseline from the past three years for each district. Insurance payouts required two triggers – the local government must announce a disaster (weather, pest, disease, etc.) in the area, then the insurers would evaluate district yield data to determine if it fell below the 75% yield threshold. The insurer still conducted field loss assessment to ensure the losses were caused by one of the covered risks.

Vietnam plans to introduce an agriculture insurance scheme that will cover crops, livestock and aquaculture with subsidized schemes (subsidy rates-based on means-test: 90% for poor households and near-poor households, 20% for all others) to be participated in by private insurance companies. Insurance companies are free to design their own products which seem most suitable to their clients. This will be implemented by government and private sector).



## Policy and Regulatory Framework

Following the implementation of the pilot program, agricultural insurance policy was established by law, i.e. Decree No. 58/2018. The Decree established a transparent framework to regulate private sector engagement in agricultural insurance, as well as the policy on government-sponsored agriculture insurance. The government planned to introduce an agricultural insurance scheme in 2018 that will provide subsidized agricultural insurance at ca 90 percent subsidy of poor and near-poor households, and 20 percent subsidy for other farmers and agricultural business. In June 2019, the Prime Minister approved the Decision on Agricultural Insurance (i.e. high-level decision on premium subsidies and provinces to apply the agricultural insurance scheme) and currently involved ministries and stakeholders are establishing processes and guidelines on the implementation of the scheme: Under the mandate of the Ministry of Agriculture and Rural Development (MARD), a Technical Working Groups and Steering Committee is to be set up which will a new Circular guiding the implementation of the Scheme. The Working Group includes representatives from the Ministry of Agriculture, Ministry of Finance, Insurance Association of Vietnam as well as insurance companies and possibly further stakeholders. According to the already existing Circular 5358, Vietnam's Disaster Management Authority continues to be the responsible party for announcing disasters and epidemics (Pham Phuong Mai, 2019, personal communication).

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## 10. Outlook

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Crop insurance and broader agriculture insurance remain a priority topic in ASEAN's agriculture development and resilience strategy. The ASEAN Sectoral Working Group on Crops (ASWGC) acknowledges the important role crop insurance can play not only as a risk management tool but also as a strategic element in the promotion of sustainable agriculture. Thus, ASEAN intends to develop a new regional project, following the ASEAN-SAS project, which will serve as a platform to exchange knowledge and experience on crop insurance and support individual countries in the implementation of their crop insurance schemes and activities. At their 26th Meeting in July 2019, ASWGC suggested to integrate the proposed project into the new Strategic Plan of Action for ASEAN Cooperation (SPA) on Crops (2021 – 2025).

On country level, each nation is at a different stage and faces different challenges in the implementation of their crop insurance strategies. Besides sector related issues such as limited production capacity and thus bargain power of small-scale farmers, water and irrigation management as well as access to markets and finance, policy and process related challenges are often of equal importance. Participants of the Policy Dialogue on Crop Insurance find a need for further capacity building both on farmers as well as on decision-makers side, the necessity of establishing a base of supporting policies and regulation as well as creating sustainable funding for a national scheme, either through subsidies or other means of finance to be elaborated in a business plan. The “10 Phases in Developing a National Crop Insurance Program” is the outcome document of consultations with various stakeholders, adopted by the 39th Meeting of ASEAN Ministers on Agriculture and Forestry (AMAF), and reviews of processes leading to crop insurance schemes. It serves individual countries as an orientation in addressing the latter mentioned challenges.

On a regional level, future efforts shall include the development of a roadmap on crop insurance's contribution to sustainable agriculture, the promotion of PPPs and put more emphasis on data collection and cooperation with other relevant ASEAN bodies as well as using synergies with existing initiatives, e.g. on responsible agriculture investment or gender and agriculture. An informal survey among the participants of the Policy Dialogue on Crop Insurance on May 22 and 23, 2019 identifies the following gaps and areas for improvement: Enhancement of national capacities on crop insurance, availability of viable technology application for crop insurance that meets the farmers' needs, innovative technology and access to data, and finally strengthening farmer's networks and capacity regarding access to finance and risk management. GIZ is committed to work on these topics through its various projects and initiatives in the ASEAN region and RIICE will continue to support to countries such as Vietnam and Cambodia in institutionalizing technology solutions and conduct insurance pilots which can inform the development and improvement of national schemes.

Climate and weather-related insurance solutions are important for sustainable rural development, not only in Southeast Asia but world-wide. There is a variety of insurance initiatives ranging from private to public providers, covering various products and spanning from parametric to indemnity-based options targeted at different client segments. Each country needs to find its own appropriate solution and there is no one blueprint to that, but exchange and regional collaboration are certainly key elements on this pathway.

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