CAMBODIA

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BACKGROUND

About 70% of the Cambodian population engages in agriculture, mostly as smallholder rice farmers. Agricultural production is mainly rain-fed and highly dependent on climatic conditions. Paddy rice production accounts for ca. 75% of the cultivated land and rice contributes around 15% of the total agricultural value added according to a study by the International Finance Corporation (IFC) from 2015. Both rice-planted area and rice production have been growing at rates of around 2% respectively ca. 5% per year since 2015. On the other hand, in the past decade, Cambodia has witnessed more frequent severe floods, droughts and windstorms, which have caused devastating impacts to the infrastructure and economy. The risks around climate change have become unpredictable, and smallholder farmers have limited capacity to respond to such adverse conditions.

In Cambodia, the RIICE public-private partnership has been collaborating with the Ministry of Agriculture, Forestry and Fisheries (MAFF) and other stakeholders on various topics. For example, RIICE supports the strengthening of the national rice monitoring and statistical system by including remote sensing data, contributes to flood and drought assessments and helped initiate a dialogue on setting up a nationwide scheme for crop monitoring and insurance. Such a monitoring and risk management measure can help the country to better cope with natural disasters and climate hazards and to reduce the vulnerability of smallholder farmers to weather-related production risks. It also contributes to economic development and national and regional food security.

APPROACHES

- Once tested and calibrated to the specific conditions and rice practices in Cambodia, RIICE technology was presented to officers and representatives of MAFF. Decision makers got the opportunity to experiment with RIICE technology and experience its benefits for statistical purposes as well as crop damage assessment. Consequently, RIICE parties trained staff from MAFF, DPS and CARDI on the use of RIICE technology and thus **built the necessary capacities and foundations for these institutions to produce and work with RIICE data**
- The project **strategically engages with both government and private stakeholders** to further up-scale the adoption of RIICE technology and raise awareness of it. The target is MAFF's official statistical reporting system. This system is used for monitoring, for ad hoc assessments when natural disasters such as floods or droughts affect rice production, and could also be used for the potential crop insurance scheme in the future.
- To facilitate the **institutionalization of RIICE set-up in Cambodia,** MAFF signed an agreement with the Swiss Agency for Development and Cooperation (SDC) and a service agreement with sarmap/IRRI services in 2019 for technical support for the period July 2019 – June 2021. MAFF's Department of Agricultural Land Resource Management, General Directorate of Agriculture as well as DPS are the implementing partners. The future project aims at **integrating RIICE into MAFF's official statistical reporting system and uses it to manage natural disasters that affect rice production, and to pilot a crop insurance scheme.**
- **Knowledge enhancement and awareness raising have been conducted, targeting public and private national stakeholders on the benefits of crop insurance and the relevance of remote-sensing data.** Delegates from the MAFF, the Ministry of Economics and Finance (MEF) and micro-insurance company Forte participated in a series of seminar and workshop sessions including a study tour on crop insurance in India.
- Through the national dialogues, the project has supported **the set-up of crop insurance in Cambodia and the development of a relevant crop insurance policy framework.** As part of this, a Concept Note for the implementation of a national agricultural insurance programme was developed to provide guidance to MAFF for the set-up of a publicly supported crop insurance in the country. In these processes, the public-private partnership approach and importance of having sound data was emphasized and the potential of remotely sensed data such as RIICE data was highlighted.
- **Capacity development was carried out for smallholder rice farmers** on crop insurance. First, farmers participated in skill training and training-of-trainers (ToT) sessions. The project developed and published the ToT training manual on crop insurance literacy and other educational materials on crop insurance in both Khmer and English. MAFF will use these materials in their future training and dissemination activities.

ACHIEVEMENTS

- In Phase 1 the pilot mapped 150,000 hectares of rice cultivation areas in the southern province of Takeo, with an overall 85% accuracy rate based on 100 ground observations. In Phase 2, the project expanded the coverage to the entire country, with field data collection conducted in 38 districts across 14 provinces.
- Through several trainings and technical support for MAFF respectively DPS, a dedicated team at DPS is capable of autonomously produce and work with RIICE technology.
- Phase 2 was set to run from May 2015 to April 2017, but was extended until February 2018. Highlights included the creation of maps displaying the seasonal rice area maps including information on the planting dates (start of season), yield forecasts and end-of-season yield estimates, flood or drought damage forecast, and the rice ecosystem map. The overall accuracy rate, based on 1,056 ground observations, was at 92.9% during the wet season of 2017. Data was available more quickly and to a finer resolution than previously, and was made part of the regular statistical reporting to the agriculture minister.
- RIICE produced an updated 'Rice Ecosystem Map' in 2018, covering all of Cambodia. This Map is important tool for MAFF and other actors in managing the overall rice production system.
- Thanks to the initiatives to enhance knowledge and raise awareness of crop insurance, the national counterparts have improved their abilities to and understanding of designing a national crop insurance scheme, including: subsidies; supportive regulatory frameworks; institutional set-up; product development; data availability and role of remote-sensing technology; and field implementation experience. They have become capable of developing implementation strategies as well as clarifying interlinkages and roles of the involved national agencies and the private sector in a future national crop insurance scheme. As a result the concept note for the Implementation of a National Insurance Programme is used as an advocacy tool for consultations with MAFF and relevant line ministries, including the Ministry of Economic and Finance to drive the RIICE-based crop insurance.

LESSONS LEARNED AND CHALLENGES

- **Multi-stakeholder collaboration and consultation** for developing and promoting crop insurance requires **building understanding and trust** among the involved stakeholders. This has to happen in a participatory and transparent manner. A better, mutual understanding of roles and responsibilities improves collaboration among key stakeholders and allows them to fine-tune their operations and processes. For this reason, the establishment of implementation mechanism and enforcement is critical to ensure the project sustainability.

- **Historical data** is important to most insurance company to understand the risk profiles and price fluctuation over previous years. Companies use this data type to develop agricultural insurance products for farmers. However, the data needed is often dispersed and comes from different sources (i.e. ministries, inter-/national organizations or companies, etc.) and obtaining datasets can take a substantial amount of time. Insurance companies needs to address this issue by communicating and convincing various actors to jointly improve information sharing, which will take time and effort. Remote sensing data has the potential to solve some of these issues in the future.

- Engagement between the insurance companies the local government, and the committee of the local agricultural cooperatives is key to instil **farmers' confidence in crop insurance**. This is because the farmers trust these organizations more than any external organizations or individuals, of which they have little knowledge.

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