



VIETNAM



BACKGROUND

In Vietnam, rice is grown on 4 million hectares, up to three times per year, amounting to an annual harvested area of 7.7 million hectares. Vietnam produced an estimated 42 million tons of rice in 2017. Rice is one of Vietnam's major export commodities. The sector not only secures food for the Vietnamese, but also generates livelihoods for a large part of the population.

Climate change presents increasing challenges to the rice sector in Vietnam. Improvement of disaster risk

management and the sector's resilience to climate shocks requires timely and reliable information on crop production and disasters. Such information includes rice area maps, and assessments of yields, crop damages and other factors. RIICE-generated crop data will not only meet the needs of rice farmers but will also directly support the government-sponsored agricultural insurance programme, which was approved in June 2019.





APPROACHES

- ◆ RIICE Phase I, December 2012 – April 2015, tested and calibrated the model using remote-sensing data. Estimates of rice area as well as rice yields over four seasons in Nam Định and Sóc Trăng provinces reached a 92% accuracy rate. These two provinces are Vietnam's two major rice production areas in the Red River Delta and Mekong River Delta regions, respectively.
- ◆ RIICE provided a **capacity-building service to the national partners on the use of RIICE technology**, including software, field work protocol and publication of RIICE data. Participating partners included the Institute of Meteorology, Hydrology and Environment, Can Tho University (CTU), the National Institute of Agricultural Planning and Projection (NIAPP) and other government agencies.
- ◆ RIICE Phase II, May 2015 – October 2017, **scaled up its coverage to monitor the major rice provinces** in the Red River Delta and Mekong River Delta regions, accounting for 30% of the total national rice cultivation areas. RIICE parties' engagement with Vietnamese insurers in an ongoing process over the years resulted in the country's firm buy-in to the project.
- ◆ During RIICE Phase III, November 2017-December 2019, the project increased the **national stakeholders' awareness** and understanding of challenges faced by the insurance sector in up-scaling agriculture insurance. Stakeholders were effectively engaged in the development of the new government-supported programme, provided the feedback necessary for improvement, and started to **develop insurance products** to protect rice farmers.
- ◆ **Crop insurance literacy training** helps farmers to better understand crop insurance, increases their interest in it, and motivates future purchases.
- ◆ In July 2019, SDC and the Ministry of Agriculture and Rural Development (MARD) signed an agreement to continue RIICE Phase III until June 2021 in a bid to **fully institutionalize RIICE** methodology into the government's official rice monitoring system. The project also supports the implementation of the government-sponsored agriculture insurance programme and builds insurance capacity for government officials involved in the programme.

ACHIEVEMENTS

- ◆ Thanks to the capacity-building work in Phase I, **the national partners, notably NIAPP and CTU, were able to independently run the system to produce maps of rice-growing areas, seasonality, and yield estimations twice per season at the commune level** in the 10 provinces during the five main seasons from 2016. This involved the monitoring of approximately 806,000 hectares in each season, equivalent to 47% of the rice-growing areas in the Red River and Mekong Deltas, or 33% of Vietnam's total rice-growing area. The accuracy rate of the commune-level data was 92%. Additionally, the project produced **bulletins generated from the technical results, which** provided a comprehensive analysis for participating agencies including MARD, the provincial departments of agriculture, and insurers.
- ◆ The project **produced additional crop-loss assessments each time a disaster struck. The assessments included** that of the drought in 2015-2016 in the Mekong Delta and the tropical storm Mirinae in the 2016 summer season in the Red River Delta.
- ◆ Effective collaboration with local insurers, namely Bao Viet and Bao Minh, resulted in the government's acceptance of **remote-sensing data as a loss assessment tool under the new government programme** (Agriculture insurance Decree number 58), issued by the Prime Minister in 2018.
- ◆ RIICE parties have assisted the insurance companies and public partners, including the Ministry of MARD and the **Ministry of Finance, with the development of insurance products and RIICE-supported loss assessment solutions** under the new government programme. The information on rice cultivated areas, yield prediction and crop loss are expected to enhance traditional crop insurance. Exposure control, risk accumulation control and loss adjustment will become more efficient and customers will be better served.
- ◆ In 2019 the government stated its support for agricultural insurance under Decision number 22. MARD is in charge of **developing concrete guidelines on agricultural insurance**. RIICE supports this process, for example by facilitating a national consultation workshop for the implementation of agriculture insurance. By engaging stakeholders early in the process, soliciting their inputs and clarifying roles and responsibilities under the scheme, the workshop served as platform to address challenges and to avoid duplication of tasks.
- ◆ The remote sensing solution RIICE offers was able to convince the government as well as the insurance industry in Vietnam with respect to technology. Both MAFF as well as individual insurers are interested and committed to explore and **work with RIICE. However, to demonstrate long-term sustainability**, it is necessary to establish a business case for RIICE that includes a structure for contributions to data cost.
- ◆ RIICE developed **educational material** on agriculture business and insurance, and trained 30 staff members of the An Giang provincial women's union, farmers' union and agriculture officers in this respect. Those staff members then went on to train more than 88 farmers. Based on that success, the material RIICE developed was taken up by MARD's Department of Cooperatives and Rural Development, which intends to use it under the National Agricultural Insurance Programme.



LESSONS LEARNED AND CHALLENGES

- ◆ Rice-monitoring data is one of the key outputs of RIICE that presents an implication for further analysis of rice production at the national and regional levels. It also contributes to the development and implementation of agriculture insurance products. The project highly recommended a database system to store the rice data, that would also be made accessible to public and private stakeholders.
- ◆ Remote sensing is fairly new to many national stakeholders, who tend to assume that it is very expensive, and the results can be generated with a simple click of the mouse. But the reality is quite

the opposite in practice. For any project dealing with novel technology or approaches, it is important to explain the situation, especially to key policy makers, to avoid wrong expectations and establish a realistic understanding as the basis for continued political commitments. This is not a one-off process but requires project representatives to use every opportunity to engage and potentially explain over and over again the various characteristics and scope of the technology.

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Project:
ASEAN Sustainable Agrifood Systems

Contact:
www.asean-agrifood.org