THE PHILIPPINES

BACKGROUND

Rice provides livelihoods to more than 2 million households in the Philippines. In 2018, the total paddy production amounted to 19 million tonnes, harvested from 4.8 million hectares of land. Rice consumption per capita is 114kg per year and nearly 90% of this demand is met by domestic production. However, the country's rice production is exposed to the Philippines' vulnerability to climate change, one of the highest in the world. . More frequent and devastating floods, droughts, heat stress as well as pest infestations threaten to reduce rice yields. This increases dependence on imports and intensifies hardship, with the poor and marginalized being most vulnerable.

Timely, accurate and location-specific information on rice production is crucial for rapid decision-making in emergency situations and early assessment of potential shortfalls in food production, and is shaping policies towards achieving rice security in the Philippines. The Government of the Philippines is heavily subsidising the existing crop insurance programme, however, the insurance uptake rates remain low in most areas. Some of the main causes for this lack of demand include insufficient financial literacy among farmers and the cumbersome distribution of insurance services.

APPROACHES

The RIICE public-private partnership was active in the Philippines in RIICE Phase I only, between December 2012 and April 2015. RIICE operated in four pilot sites, namely Nueva Ecija, Agusan Del Norte, Leyte East, and Leyte West, covering a total of 471,000 hectares of rice cultivation area[1]. RIICE mapped and estimated rice area, seasonality and yields for four seasons starting in the 2013 wet season and ending in the 2014-15 dry season. The project trained the Philippine Rice

Research Institute (PhilRice) under the Department of Agriculture on the use of RIICE technology including MAPscape-RICE, Rice-YES software, ORYZA yield model and field work protocols. The RIICE project in the Philippines ended after Phase I. However, RIICE-related technology is still used for rice crop monitoring by the Department of Agriculture (DA) under the Philippines Rice Information System (PRISM)[2].

ACHIEVEMENTS

In the Philippines, RIICE played a key role in demonstrating the value of remote sensing-based information for local food security.

◆ In RIICE Phase I, the project managed to demonstrate the technological viability of remote sensing for rice monitoring in the Philippines by generating outputs such as rice area, seasonality and yield estimates by season in the four different project sites. Accuracy rates for detection of rice cultivated area ranged from 85%-93%[3].

◆ When Typhoon Haiyan, locally called Yolanda and one of the most powerful tropical cyclones ever recorded, devastated parts of the country in November 2013, particularly Leyte province, the RIICE project provided the DA with flood assessment reports of Leyte.

◆ Progress of RIICE influenced the DA to invest in a remote sensing-based rice monitoring system for the country. In October 2013, the DA established and fully funded the PRISM research and development project, with the aim to set up a sustainable national rice monitoring system.

◆ Using RIICE's technology, PRISM also includes a crop health monitoring component to provide timely information on rice growth and the pest situation to the DA Central and Regional Offices.

◆ Since August 2018, PRISM has been a fully operational standard system within the DA, with PhilRice as the main implementing agency for generating rice crop monitoring products.

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1   (Nelson et al., 2014).

2   https://prism.philrice.gov.ph/

3   Nelson et al., 2014).

LESSONS LEARNED AND CHALLENGES

◆ Actively involve key national partners such as the DA to ensure progress and success.

◆ Identify key stakeholders, plan how to engage them, and involve them early.

◆ Secure the local buy-in by adapting to local needs, for example by adding the crop health monitoring component.

◆ Foster regular discussions, open and effective communication, and joint-decision making with the key project partners.

◆ Clarify and manage expectations on deliverables and commitments from all parties.

◆ Keep innovating and exploring additional uses of RIICE products and the remote-sensing data.

◆ On capacity building: Provide regular training on product generation, maintain core staff to build up in-house expertise, train on using the products and sustaining the system, identify the required human and technical resources in the operational phase and secure the necessary funding for all of this.

Project:
ASEAN Sustainable Agrifood Systems

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