



# Boosting resilience: Insurance pay-outs facilitated by RIICE in India

## BACKGROUND

Rice is one of the most important crops for millions of smallholders in India, from both an economic and a food security perspective. Agriculture insurance is an opportunity to reduce vulnerabilities by transferring some of the farmer's risk or promising compensation for loss of crops. However, it comes with several challenges, including the availability of transparent and timely information on disaster impact. The state of Tamil Nadu in India has decided to use RIICE remote-sensing services for loss assessment purposes within their implementation of India's flagship crop insurance scheme PMFBY (Pradhan Mantri Fasal Bima Yojana also known as Prime Minister's Crop Insurance Scheme). Launched in 2016 as an area yield index insurance programme, PMFBY is a collaboration between the federal and state governments of India to compensate farmers for crop loss or failure. While the federal government provides policy guidance and half of the premium subsidy, the operational responsibilities and remaining 50% of the premium subsidy lie with the state governments, including Tamil Nadu. The implementation

of PMFBY in Tamil Nadu is overseen by the State Level Coordination Committee on Crop Insurance (SLCCCI) which is convened by the Department of Agriculture and comprises participating insurance companies as well as further line departments. SLCCCI's approval of RIICE for enhancing PMFBY in Tamil Nadu was the result of long-standing, active collaborations with the state government and the insurance industry, which established a successful business model and created the right policy environment.



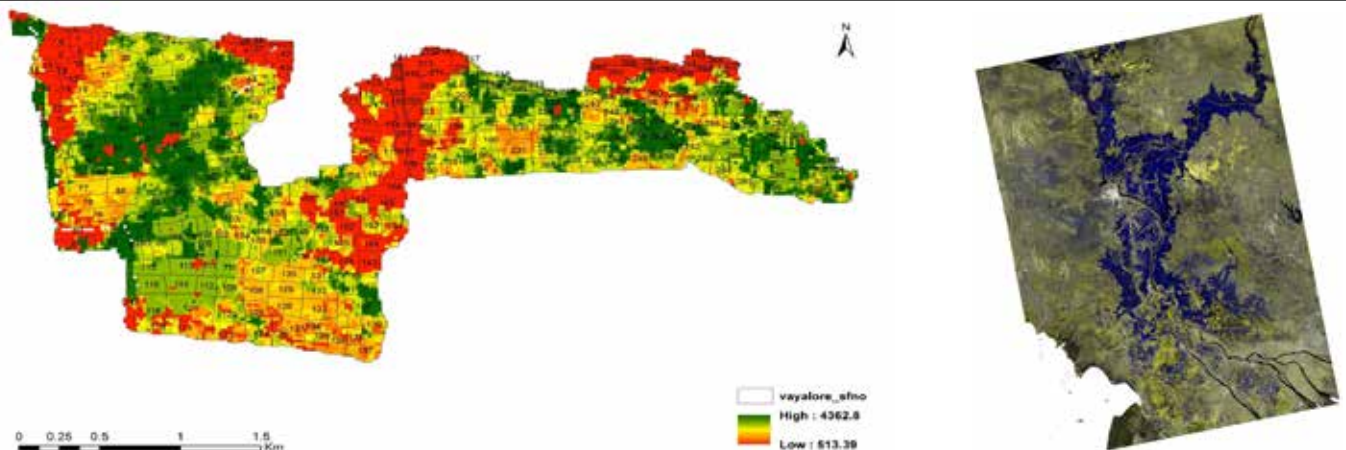




## How does RIICE technology add value to PMFBY in Tamil Nadu?

In the 2016-2017 crop season, Tamil Nadu suffered one of the worst droughts documented in the past 140 years. The failure of the Northeast Monsoon along with a lack of adequate water supply from reservoirs in a neighbouring state prevented paddy farmers in both irrigated and rain-fed areas of Tamil Nadu from sowing or transplanting new crops, while the already sown crop failed to germinate. RIICE successfully supplied the necessary information on cropping area lost due to drought in a timely manner, enabling its partner the Agriculture Insurance Company of India (AICI) to pay out claims for prevented or failed sowing to about 22,500 affected farmers timely after the calamity. This marked a turning point in how governments and insurance companies view and value remote sensing-based, timely, accurate and transparent

information. Thus, in 2017 RIICE became one of the earliest examples of direct application of remote-sensing technology for providing crop insurance compensation to farmers in India. The application of RIICE technology under PMFBY showcases how remote sensing can improve the implementation and enhance operational efficiency and farmer experience of crop insurance schemes. At the time of writing, RIICE data allows farmers to use evidence to claim when, due to adverse climatic conditions, they are prevented from sowing or transplanting of crops or the crop fails to germinate. Future possible applications for RIICE data include other remote-sensing supported PMFBY features such as mid-season yield estimate for invoking on-account payments and for smart sampling of crop-cutting experiments.





## What we did

Multi-stakeholder collaborations were initiated in 2012 and four years later resulted in the state government of Tamil Nadu's official approval to pilot the RIICE technology within PMFPY, their public agriculture insurance scheme. The following cropping season saw the worst drought in Tamil Nadu in 140 years and RIICE was able to immediately measure lost yields and therefore facilitated quick pay-outs to farmers.

RIICE successes in Tamil Nadu:

- ◆ Tamil Nadu is the first state that applied RIICE remote sensing technology under PMFBY, India's flagship crop insurance scheme.
- ◆ RIICE measured the rice area damaged across a sown area of about 1 million hectares.

- ◆ RIICE facilitated payouts to 22,500 farmers in 2017.
- ◆ Eligible farmers received pay-outs to compensate for prevented sowing within three months, payouts which would otherwise take up to a year.
- ◆ RIICE monitoring currently covers about 1 million smallholder rice farmers collectively cultivating over 1 million hectares.

Government officials have stated that RIICE technology allowed for more transparent and timely loss assessment. It was particularly useful to identify villages hit by the drought. Farmers benefited by seeing their claims under the prevented-sowing feature of PMFBY settled in record time.





## Lessons learned

- ◆ RIICE enabled rapid loss assessment, improved decision making and processed fast payouts. Thanks to the information based on the high-resolution radar images of disaster areas and predictive risks maps provided by RIICE, the governments were able to make appropriate decision and take immediate action when disaster struck.
- ◆ Collaborations with both academia and the insurance industry allowed for efficiency improvements within the public crop insurance scheme. Based on the readily available information, faster payouts to affected farmers were possible. Thanks to such fast reimbursements, farmers were still able to grow rice in the same crop season. Thus, the disaster left only a minor impact on their income and livelihoods.
- ◆ It can be challenging to negotiate with various parties, sometimes with different perspectives, and find an adequate remuneration model for a sustainable, long-term institutionalization of a technology solution. Focusing on the big picture, being realistic but open to discuss options and other viable technology solutions, can be a constructive approach to find common ground

