

## **Making use of technology for development: Better information on rice will help to stabilize food security in Asia**

A group of risk transfer experts have joined forces to observe and forecast rice growth in developing countries through satellite technology and link it to insurance solutions to improve food security of more than five million small-holder farmers in developing countries in Asia.

Dubbed “Remote sensing-based information and insurance for crops in emerging economies” (RIICE), the project makes use of remote sensing technology to observe the growth of rice and thereby provides an independent and transparent tool to ascertain rice information in developing countries.

Rice has been chosen as the target crop given its importance as a staple food in Asia where 90% of the world’s rice is produced and consumed but where also 70% of the world’s poor live. The programme will be implemented in Bangladesh, Cambodia, India, Indonesia, Thailand, the Philippines and Vietnam over the next three years.

The parties of the RIICE partnership are Allianz Reinsurance, an arm of the international insurance group; the German development organisation GIZ, working on behalf of the German Federal Ministry for Economic Cooperation and Development; the International Rice Research Institute IRRI, sarmap, a Swiss-based remote sensing company and the Swiss Agency for Development and Cooperation of the Government of Switzerland .

“Agriculture plays an important role in providing food security in developing countries. Therefore, it is important that governments and development organisations have maximum transparency on expected and actual crop yields so that they can make better policy decisions”, explains Martin Dahinden, Director-General of SDC. “RIICE will help governments in Asia to mitigate risks to food security while at the same time, protecting farmers from the financial losses that occur due to natural catastrophes”.

The RIICE partners put emphasis on providing insurance solutions to farmers in developing countries that are particularly affected by the adverse effects of climate change and lack the financial capacities to protect themselves against natural disasters which regularly destroy their crops. Allianz Re CEO Amer Ahmed explains: “We want to transfer the financial risks that small-holder farmers face from natural catastrophes to the formal insurance market. Through the remote sensing technology we have a reliable and unbiased tool to calculate insurance premiums and evaluate the losses”. Allianz Reinsurance will be instrumental in arranging reinsurance cover for crop losses that rice-farmers endure due to natural catastrophes.

The model used to estimate the expected production is based on information that rice researchers at IRRI and remote sensing experts at sarmap are gathering. “Thanks to the data we obtain from the European Space Agency, we can use free imagery of the Earth in very high resolution and starting from 2013 on a weekly basis”, explains Francesco Holecz, CEO and co-founder of sarmap. His colleague at IRRI, Andy Nelson, Head of the GIS group, stresses the value of that information for better transparency on rice production and crop damages: “Working with partners in each country, we can deliver detailed, up to date figures on the area, production and yield of the most important crop in the region. RIICE will provide

critically needed detailed information for advocacy purposes towards better rice sector policies". IRRI and sarmap will work closely with partner institutes in each country to build their capacity to map and monitor rice production.

Governments are an important stakeholder in RIICE due to the strategic economic nature of the rice crop in the target countries. But mastering the last mile in delivering an insurance product to the small-holder farmers is going to be the major challenge of RIICE, explains Michael Roth, a senior insurance expert at GIZ: "In our previous work with Allianz, other insurers and governmental social security programmes, we tried and tested different ways to manage the last mile to rural low income households", he explains. "A concerted effort by different stakeholders of the rice value chain is required to put the puzzle together and organise a risk transfer for the farmer".

By working with governments, RIICE parties aim to establish a public-private partnership model to transfer natural catastrophe risks from farmers and governments to the private insurance sector: "Through timely and transparent information on crop losses due to natural catastrophes, insurers can act quickly and pay out claims immediately", explains Michael Anthony, the Project Coordinator of RIICE from Allianz Re and adds: "By transferring their farmers' financial risks to the private insurance sector, governments can mitigate the financial shocks of natural catastrophes to both their and their farmer's budgets."

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[www.irri.org](http://www.irri.org)

[www.giz.de](http://www.giz.de)

[www.allianzre.com](http://www.allianzre.com)

[www.sarmap.org](http://www.sarmap.org)

[www.sdc.admin.ch](http://www.sdc.admin.ch)