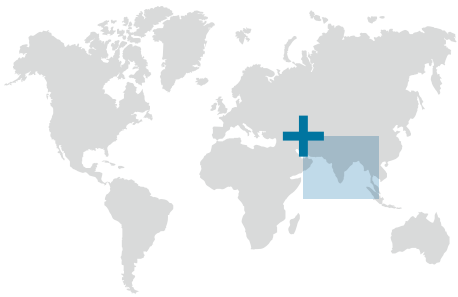
INFOCUS:

INNOVATION & TECHNOLOGY



SUBJECT

The high transaction costs of serving low-income clients in developing and emerging market economies demand innovative approaches and technological advancements. Challenges that inflate operational costs include data collection, processing and management, premium payment mechanisms as well as claims verification and settlement. Index insurance products, mobile payment devices or more accurate weather and agricultural-yield information based on satellite data are examples of innovative approaches that can help to overcome these challenges.

CHALLENGES IN INDIA

To help protect small-holder farmers, the Government of India has been supporting the implementation of both area-yield and weather index insurance. The use of indexes as a proxy to incurred losses in the weather based crop insurance scheme (WBCIS) in 2007, the Modified NAIS (mNAIS) in 2010, and the Pradhan Mantri Fasal Bima Yojana (PMFBY) scheme in 2016 were implemented to replace costly individual loss adjustments that made agricultural insurance for small-scale farmers unviable.

However, challenges continued to exist within both schemes:

- The WBCIS products suffered from spatial basis risk, where the weather station was too far from the farmer's field and the weather measured at the station did not match that experienced on the individual farmers' plots. In addition, idiosyncratic factors, such as production means and risk mitigation measures, were not considered when designing the product. Losses predicted by the index and those actually realized by the farmer thus often differed significantly.

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On behalf of

Federal Ministry for Economic Cooperation and Development

- The mNAIS requires loss assessments using Crop Cutting Experiments (CCE) to determine the average yield for an insurance unit. With the introduction of the PMFBY scheme in 2016, the Government of India has tried to reduce the size of the insurance units. This, however, implies a manifold increase in CCEs, which requires the mobilization of additional manpower and may potentially slow down the claims process.

- The PMFBY also directs insurers to provide coverage against identified localized risks such as hailstorm, landslide, and inundation. This provision, in essence, requires insurers to send loss adjusters to all affected farmers. The use of traditional loss adjustments is costly and administratively cumbersome.

SOLUTIONS

Developing a faster and more accurate claims assessment process

A hybrid product using different loss estimation methodologies. In Karnataka, RISP in partnership with the Agriculture Insurance Company of India Limited (AIC) and Karnataka State Department of Agriculture and Horticulture (KSDA/KSDH) designed a product backed by an end-to-end operational process for mango and grape farmers. This product emphasized the need to 'know your customer' (KYC) well and to continuously monitor the phenological progress of farmers' crops. The product was titled 'weather index plus', as it contained both index elements (for unseasonal rainfall) and elements of indemnity insurance to assess crop damage caused by large-scale weather catastrophes and localized climatic risks.

Risk profiling to 'know your customer (KYC)'. RISP helped in the design of a simple questionnaire for risk profiling. As part of this process, field staff asked potential clients questions on the age of their plants, practices employed, farm pest and nutrition management, access to irrigation, etc. Based on this questionnaire farmers were assigned as having high, medium, or low-risk profiles. In order to avoid moral hazard, high-risk farmers were excluded from insurance. Based on this assessment, insurers would also be able to adjust premium rates according to risk exposure.

In-season monitoring. The process also involved regular farm monitoring during the growing season. For these visits a monitoring protocol was developed. Based on these protocols field staff collected pictures and/or videos of the insured area. Monitoring experts ascertained the progress of the crops based on the photo/video evidence. The visits were intended to enable insurers to provide a better loss assessment at the end of the season while simultaneously strengthening the customer relationship. The field information and pictures were collected using smartphones or tablets to allow for fast and efficient data processing. A cloud-based back-end database was set up to ensure the on-demand retrieval and analysis of information from individual farmer plots.

Claims process through a call centre. At the end of the season, loss adjustment for large-scale weather events or localized calamities was carried out on a demand basis. Farmers were taught to report crop losses through a dedicated toll-free number. In order to ensure service quality and responsiveness of the call centre, supporting IT systems were deployed to ensure that all incoming calls were tracked and responded to within an acceptable turnaround time.

Photo/video-based loss assessment. In areas where losses were reported, field staff was sent out again to collect audio-visual data. The loss assessment was carried out by qualified experts who examined data across risk profiles, in-season monitoring reports as well as pictures taken after farmers reported losses. Through this approach, the assessment process was transparent and objective and resulted in quick decisions; moreover, the cost of deploying highly qualified loss adjusters was avoided.

LESSONS LEARNED

The hybrid product is more labour-intensive than a pure index product. The disadvantage of higher personnel cost, however, is compensated by a lower loss ratio for the insurance company and by higher customer satisfaction, as farmers are adequately compensated for their incurred losses.

During the first year of implementation, investment cost for software applications and variable expenses for field staff were covered by RISP. In the future, such expenses need to be factored into the insurance premiums. This warrants the need for a policy level dialogue between the public sector and the insurance industry to analyse the additional absorption capacity within existing premiums and their impact on the farmer.

A transparent risk profiling and monitoring process help build trust between farmers and the insurance companies. The risk profiling gives farmers confidence that the insurance company is considering each individual farm condition and risk exposure. 84 percent of a sample of 100 mango and grape growers interviewed as part of an impact survey indicated their satisfaction with the enrolment procedure.

In weather index insurance schemes, farmers generally do not need to make a claim as payouts are triggered automatically. With the hybrid product, farmers have to initiate the claims process themselves through the call centre. In interviews, 40 percent of farmers found this process to be cumbersome.

OUTCOME

With the support of RISP, AIC introduced the weather index plus product in Karnataka in 2015. In 2016, the insurance scheme was rolled out to 174 grape and mango growers with a total of 277 acres of area insured. KSDH intends to increase the size of the pilot to cover 10,000 acres of horticultural land under each product (mango and grape) until 2018.

Name of programme:
Rural Insurance Services Programme (RISP)

Duration:
January 2014 – December 2016

Programme area:
India (countrywide)

Focus Regions:
Karnataka and Maharashtra

Cooperation partner:
Ministry of Finance, Department of Financial Services, Insurance Division, of the Government of India

Local partner:
Agriculture Insurance Company of India (AIC), Karnataka State Department of Agriculture (KSDA), Karnataka State Department of Horticulture (KSDH)

Target group:
Rural households and agricultural enterprises in India

Contact person:
Advancing Climate Risk Insurance (**E** acri@giz.de)

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