INTRODUCTION

This policy brief addresses rice crop insurance as a means to reduce rural poverty in Indonesia. Rice farming enjoys a central role as a source of livelihoods within the agricultural sector and is a major food source for domestic and export consumption. Although national policies stabilize prices and subsidize inputs, policy solutions to minimize the impact of rice farming’s inherent risks, and resulting crop loss and failure, are presently lacking.

Policy analysis findings and recommendations from a study conducted under the auspices of a “Pro-poor Policy Formulation, Dialogue and Implementation at the Country Level” project inform this brief. Between 2007 and 2010, the Food and Agriculture Organization–Regional Office for Asia and the Pacific (FAO-RAP), with support from the International Fund for Agricultural Development (IFAD), implemented this project in partnership with governmental and non-governmental organizations in eight Asian countries. The project goal was to enhance institutional capacity to conduct policy analysis, formulate and implement pro-poor agricultural and rural development policies. In total, twenty-three policy studies examined issues identified at national level dialogues in all project countries.

CONTEXT

Poverty has been declining in Indonesia since the late 1970s. If the $1/day indicator is used, the country has already attained its first Millennium Development Goal. However, the effectiveness of development initiatives is judged against the national $2/day poverty line. And here, work remains to be done (Figure 1).

Policies and programs in support of rural agriculture and livelihoods promise to effectively reduce poverty in Indonesia since nearly 82 percent of poor people live in rural areas and more than three-quarters of the rural poor are farmer households (Warr, 2005; NSES, 2004).

Rice, in particular, is a major crop and food staple, occupying around 60 percent of Indonesia’s total arable land and providing nearly half of average citizens’ daily energy requirements (FAO, 2007). More than one-third of rural households are rice farmers and almost one-quarter of all Indonesian households are

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1 Sahat M. Pasaribu, Handewi P. Saliem, and Ening Ariningsih (Indonesian Center for Agriculture, Socioeconomic and Policy Studies) authored the study on which this brief was based. Study methods included an assessment of rice farming risks in North Sumatra and Bali provinces, a literature review on Indonesia’s and other countries’ agricultural insurance experience, and a qualitative inquiry on stakeholder impressions of insurance. The original study can be accessed by contacting INFORMATION.

2 The other selected policy issues for Indonesia include Empowerment of Indigenous Communities and Integrated Support Services for Agriculture.
engaged in rice cultivation, mostly on small-scale plots (McCulloch, 2008). The figures below illustrate the extent to which the risk of floods, droughts, pests and disease impacts rice production and incomes in Indonesia. In 2008, approximately 5% of annual rice production was lost to these causes.

*Figures 2 & 3. Agricultural production loss in Indonesia by cause (2000-2008)*

**PROBLEM STATEMENT**

The increasing frequency of flood and drought and uncertainties related to climate change sound a strong warning about the types of risks farmers face, both now and in the future. Although existing subsidies and price policies improve access to inputs and markets and improve farmers’ terms of trade, policies responding to the risks farmers face are clearly lacking in Indonesia³.

For years, producers have practiced traditional risk management mechanisms such diversification, mixed farming and cropping, intercropping, and crop rotation. Unfortunately, such strategies can be costly in terms of forgone income and limited capacity to spread covariate risks (Hazell, 1992).

Indonesia can therefore mitigate the impact of future crop losses by seizing the opportunity to proactively protect farmers from such unpredictable events. Global experience has demonstrated that crop insurance programs both cushion farmers against the income shock of crop losses by spreading such losses over space and time, as well as facilitate continued production activities after crop failure or a bad crop year (citation). A committed policy response supporting rice crop insurance in Indonesia can provide a safety net which reduces farmer vulnerability to income shocks, thereby securing an important source of livelihoods.

**POLICY OPTIONS**

A two-year pilot crop insurance scheme (2010-2012) in the Tabanan Regency of Bali province and the Simalungun Regency of North Sumatra province is therefore proposed with the objective of providing financial stability in the agricultural sector, encouraging increased production by reducing the risks associated with the use of modern technology, institutionalizing government assistance to farmers, and ensuring loan recovery in times of crop failure. The pilot project will also furnish valuable lessons learned for scale-up of similar schemes and crop insurance application to other high value crops.

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³ A farming risk is defined as defined as the probability of the occurrence of an event or condition which may have adverse consequences at any stage of the commodity production and sale chain.
Modalities: Insured sum, premiums, & indemnities

The proposed pilot crop insurance scheme will insure threshold yields based on the preceding five-year average yield measured at the sub-district level. The sub-district level will also establish yield areas and measure actual yields, upon which claims may be based.

The insured sum will be determined on the basis of the planted and harvested area size, yield and cost of production at the sub district level, with the maximum sum insured fixed at 25 percent higher than the cost of purchased inputs or crop loan borrowed. Premium rates shall be fixed at 3.5 percent of the insured sum. Fifty percent of small farmers’ (owning less than or equal to 0.5 hectare rice area) insurance premiums should be subsidized by the government. Eventually, the subsidy will be phased out and premiums will be considered as production cost borne by farmers.

The indemnity will be linked to the deviation of the actual yield from the guaranteed or threshold yield. A full claim can be collected in the event that a farmer can only harvest an equivalent of 25% of his/her planted area. For harvests greater than this, lower claim rates will be applied, based on the size and level of damage and in accordance with the crop age.

Stakeholders

From initial consultations, farmers, local government officials, farmers’ groups, and NGOs are enthusiastic to implement a rice crop insurance program. All stakeholders share the opinion that the national and provincial governments should take a lead, oversee implementation and provide financial support, consistent with the national goal of food security for all Indonesians. According to farmers’ responses, the insurance scheme should be made compulsory to all rice farmers within the village/subak (administrative boundaries).

The program’s success will depend on the continued active participation and involvement of numerous stakeholders, especially farmers, farmers’ organizations, NGOs, regency and district-level government officials (functionaries) and financial institutions.

Process

The first step in implementation of a National Rice Crop Insurance Policy (NRCIP) is establishment of the National Rice Insurance Committee (NRIC). The NRIC, led by the Minister of Agriculture, will provide a forum for members of the Ministry of Finance, Ministry of Home Affairs and BAPPENAS, to examine the suggested policy and propose a final policy package- including insured sums, premium rates, and premium subsidies.

At the central government level, the Ministry of Agriculture is also expected to initiate dialogue and intensive communication with other related institutions (Ministry of Finance and Ministry of Home Affairs) to create a legal foundation for the establishment of an Agricultural Insurance Task Force and for project implementation budget disbursements. Following these

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4 The principle of restoring the insured person to the same state s/he would have had the peril not occurred implies that the insurer pays the market value of the crop the farmer would have been able to produce or sell if the damage had not occurred. Difficulties in ascertaining lost crop value therefore require insuring a pre-defined (threshold) crop yield, from which claims may be based.

Two alternate approaches include insuring prices and insuring incomes. As a buffer stock institution, BULOG already stabilizes prices, setting a floor price that is competitive with intermediate traders’. Income insurance has not been found to be feasible when households have small land holdings as is the case in Indonesia. Moreover, when fields are destroyed, it is difficult to justify the level of income that would have otherwise been acquired.
steps, the Ministry of Agriculture will issue general and technical guidelines to lead pilot insurance scheme implementation at the local level.

Next, the North Sumatra and Bali provincial governors will be sensitized and internalize the policy, through establishing a Provincial Rice Insurance Committees (PRIC) to oversee policy implementation at the provincial level. Provincial level governments, after officially adopting the scheme, should in turn, constitute Regency Rice Insurance Committees (RRIC) for Simalungun and Tabanan Regencies. The RRICs, along with one Regency Level Nodal Officer per regency, will be responsible for regency level policy implementation and day-to-day policy administration, respectively. Both PRIC and RRIC constitutions should be parallel to that of NRIC and must include all relevant stakeholders.

Each Regent will also establish an Agricultural Insurance Task Force, comprised of members representing the three main stakeholders’ groups (Figure 4). The Task Force and insurance company will sign a memorandum of understanding stipulating the terms and conditions agreed to by both parties, based on general and technical guidelines. Task Force meetings will further facilitate implementation according to guidelines and close cooperation required for the project.

In the absence of an agricultural bank, microfinance institutions can provide essential support to the rice crop insurance scheme. Along these lines, a possible synergy exists for the current Ministry of Agriculture’s “Rural Agribusiness Development Program” (PUAP) to introduce and empower an agribusiness microfinance institution that would administer project finances.

The pilot project is, by definition, an experiment requiring continuous monitoring and evaluation, reflection and dialogue to correct implementation as necessary. Moreover, lessons learnt from the pilot project inform scale-up, at the end of the two-year cycle. A research organization can therefore be designated as a lead institute for monitoring and evaluation and documenting lessons learned.

**Implications**

Some crop insurance particularities must be kept in mind when a final policy package is developed. First, the farm insurance market, like others, faces the problem of adverse selection and moral hazard. Adverse selection means that only high-risk farmers participate while moral hazard implies that insured individuals take less care in preventing the loss as compared to uninsured farmers. Farmer contribution to insurance premiums and mandatory participation are intended to prevent these unfavourable occurrences.

In addition, the costs and benefits shall be clearly examined. The potential benefits of the rice crop insurance program include (a) rice farmer income stability, (b) improved uptake of new rice technology, (c) higher loan borrowing by rice farmers and (d) increase in loan recovery or decrease in defaults for the financial institutions, banks or government credit schemes. On the other hand, crop insurance program costs will include (i) direct government financial liability, (ii) possible increase in corruption and collusion at lower levels, (iii) increase in rice farmers’ costs due to premium payments and (iv) slow insurance scheme up-take due to
farmers’ inadequate understanding of its benefits and late settlement of previous season
claims (Hadiwigeno, 1987).

More than 30 years experience with conceptualizing and testing agricultural and crop
insurance demonstrate Indonesia’s strong political will and commitment in favour of such
initiatives. Although previous attempts encountered implementation issues, a well-conceived
and feasible program with a detailed action plan can overcome such challenges.

**Resources required**

Substantial government support in the form of premium subsidies, technical guidance,
financial support and reinsurance of risky crops are prerequisite to the success of insurance
schemes. Preliminary cost estimates of 132,000 Indonesian Rupiah/ha/planting season, to
be shared equally between producers and government subsidy, will be verified and revised
as necessary by the National Rice Insurance Committee (NRIC) and subsequently the
Insurance Task Force.

Both regencies’ local governments have allocated the operational cost of the pilot scheme in
their respective annual development budget for 2010 (APBD 2010)\(^5\). The scheme will be
applied by planting season with annually renewable contracts and the option to expand to a
larger area. Going forward, the national and provincial level governments will need to
allocate funds required for policy package implementation, including premium subsidies and
operational costs. Linkages with state-owned enterprises and private sector business houses
or companies are also encouraged to mobilize financial support from Corporate Social
Responsibility (CSR) funds.

**CONCLUSIONS**

Pro-poor policies are essential to helping Indonesia halve poverty by 2015. As more than
three quarters of the poor live in rural areas and are farmers, policies and programs targeting
rural farmers promise to effectively reduce poverty in Indonesia.

The 2010-2012 proposed pilot insurance scheme in Tabanan Regency of Bali province and
Simalungun Regency of North Sumatra province is an applied program to buffer farmers
from the impacts of crop failure by sharing their risk of harvest failure due to natural causes
with other parties. The pilot will provide lessons learned that can inform the scale-up and
use of insurance with other crops in Indonesia.

\(^5\) The government of Simalungun Regency has allocated Rp. 200 million to cover about 510 ha of rice field and
Rp. 150 million for Tabanan Regency to insure around 300 ha.
REFERENCES:


