

# APN Science Bulletin

Asia-Pacific Network for Global Change Research

Issue 4 | March 2014



**Past Trends and Future Projections of Climate and Hydrology over Asia including 18 Demonstration Basins in Asian Water Cycle Initiative (AWCI) Countries**

**Strategic Rice Cultivation for Sustainable Low Carbon Society Development in Southeast Asia**

**Coastal Marine Biodiversity of Viet Nam: State and Current Problems**

**Reconstruction of Sea Level Change in Southeast Asia Waters Using Combined Coastal Sea Level Data and Satellite Altimetry Data**

**Socio-Economic Vulnerability of the Mangrove Ecosystems to Climate Change in South Asia: A Case Study of the Indus and Ganges Deltas**

**Capacity Building Assessment for Integrated Marine Biogeochemistry and Ecosystem Research in the Asia-Pacific Region**

**Building Capacity on Access and Benefit-Sharing in Southeast Asia**

**Marine Invasive Species in the Northwest Pacific Region of China**

**Conservation Farming Village (CFV) Programme for Protecting Uplands and Building Resilient Communities**

Global Environmental Change





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**Citation:** Sterin, A., Stevenson, L. A., & Tupas, L. (Eds.). (2014). APN Science Bulletin (4). Asia-Pacific Network for Global Change Research. ISSN 2185-761X.

**Design and layout:** Xiaojun Deng and Christmas de Guzman/APN

**Cover images:** South Asian Forum for Environment (front), Taniya Koswatta/APN (back)

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ARCP2013-18NMY-PRABHAKAR

# Scaling up Risk Insurance in the Asia-Pacific Region: Issues and Way Forward

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Natural and man-made hazards have historically undermined the developmental gains across the world and the Asia-Pacific region is no exception. The Asia-Pacific region is one of the most vulnerable regions to a range of primary hydro-meteorological natural hazards such as storms, floods, and droughts. The data from The International Disaster Database (EM-DAT) suggest that the number of hydro-meteorological natural disasters has been increasing at an average annual rate of 217% over the past 40 years in the Asia-Pacific region (Centre for Research on the Epidemiology of Disasters, 2012). As a result, an increase in the number of catastrophic natural disasters and related losses was also reported by Munich Re (2010), according to which both insured and uninsured losses have been increasing over the years (Figure 1).

Climate change has brought an additional dimension to disaster risk in the Asia-Pacific region as it is projected to exacerbate the intensity and magnitude of various

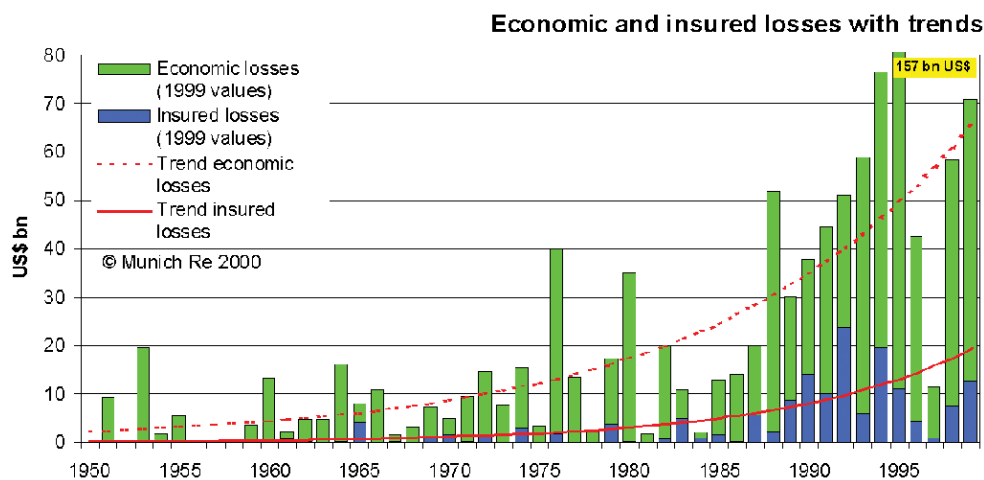
natural hazards such as storms, high-intensity rainfall events, heat waves, floods and droughts. Especially, the projections suggest high probability for an increasing trend in the high-intensity and low probability events (IPCC, 2007; Kunreuther and Michel-Kerjan, 2007). These increased catastrophic risks will further undermine the developmental gains already made in the Asia-Pacific region.

Hence, in order to address additional risks brought by the impact of climate change, there is a need to review and reframe the current risk reduction strategies especially in terms of development and utilisation of risk-spreading instruments within the Asia-Pacific region. Though risk insurance can moderate the impacts of climatic hazards in rural and urban contexts, and several risk insurance initiatives have been implemented at grassroots level over the years for reducing the vulnerability of communities to disasters, the penetration of risk insurance

## HIGHLIGHTS

- » Risk insurance can provide an effective means of catastrophic risk reduction and climate change adaptation in developing countries.
- » Case studies from within and outside the Asia-Pacific region provide valuable lessons, which could be used for promoting risk insurance for future climate regimes.
- » Issues such as high basis risk, lack of qualified historical data for designing and pricing risk insurance, limited knowledge and awareness in designing and utility of insurance, high premium prices, limited reinsurance availability and lack of enabling policies, are the key bottlenecks that limit the spread of risk insurance in the region.
- » This project aims to assess the benefits accrued through community-level risk insurance experiences in the region, evaluate barriers limiting its penetration, and identify interventions for greater risk insurance penetration leading to climate change adaptation and disaster risk reduction.

**Figure 1.** Trends in overall and insured losses due to catastrophic events since 1950.



in the developing Asia-Pacific is poor compared to many developed countries in the region. The limiting factors are poor globalisation of insurance benefits, high insurance costs, poor access and availability of qualified location-specific weather data, poor structural risk mitigation, lack of enabling policies, imperfect information, and technical complexity. The United Nations Framework Convention on Climate Change (UNFCCC) and Hyogo Framework for Action (HFA) are seeking for a global framework for promoting risk insurance but with little clarity on efficacy in addressing issues at the community level.

The poor spread of insurance remains a concern for the Asia-Pacific region especially in the non-health catastrophic risk insurance sector, which is attributed to the following factors:

- **High premium costs:** High residual risks, lack of optimum number of insurers, low competition and low number of insured population all lead to higher premium costs than what they could be in the Asia-Pacific region.
- **Low affordability:** Affordability relates to both the high cost of insurance and the low willingness to subscribe to insurance services which is, in turn, a function of lack of risk awareness.
- **High residual risks:** Residual risks are the risks uncovered by other structural and regulatory risk

mitigation mechanisms, which are poorly developed in the region.

- **Policy environment:** Though risk insurance is a “market instrument” (i.e., its dynamics are determined or governed by the principles of an open market), government policies and regulatory guidelines act as precursors for flourishing of the sector and ensure the effectiveness of the instrument.
- **Poor presence of insurers and reinsurers:** All the above factors act as disincentives for the proliferation of insurers and reinsurers.

It can be seen that most of the above factors are interlinked and provides an example of the “chicken and egg” dilemma. In order to promote risk insurance in the Asia-Pacific region, there is a need to overcome these limitations.

Quantifying risk insurance benefits will help various stakeholders to recognise the value of insurance in risk mitigation and hence will pave the way to greater acceptance of risk insurance as a risk management tool. Surprising enough, there are only few studies that bring out climate change adaptation and disaster risk reduction benefits of risk insurance though insurance has been widely regarded as an effective risk mitigation tool. This project, therefore, aims to assess the benefits accrued through community level risk insurance experiences in the region, evaluate barriers limiting its penetration, and identify

interventions for greater risk insurance penetration leading to climate change adaptation and disaster risk reduction. The specific objectives of the project are as follows:

- To identify technical, socio-economic, institutional and policy barriers limiting penetration of risk insurance: What insurance alternatives can be designed for locations with poor weather data?
- To assess climate change adaptation and disaster risk reduction benefits and costs accrued through risk insurance initiatives: What benefits of risk insurance help it to scale up?
- To identify enabling environments to scale up risk insurance: What policy and institutional processes can help scale up risk insurance?
- To sensitise policy makers and other stakeholders on scaling up risk insurance

This research identifies solutions to issues like poor availability or access to available weather information, identifying alternative innovative risk insurance products where weather information is not available, and exchanging research outcomes through various international and regional policy forums. This research is consistent with the climate change, agriculture and food security (CCAFS) project of the Consultative Group (CG)-alliance as it investigates index-based crop insurance, which plays an important role in climate-related risk reduction in agriculture sector.

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## ARCP2013-18NMY-PRABHAKAR

### PROJECT TITLE

**Assessing Community Risk Insurance Initiatives and Identifying Enabling Policy and Institutional Factors for Maximizing Climate Change Adaptation and Disaster Risk Reduction Benefits of Risk Insurance**

### COUNTRIES INVOLVED

Bangladesh, India, Japan, Malaysia, Philippines, Viet Nam

### PROJECT DURATION

Year 1 of a two-year project

### APN FUNDING

US\$ 80,000

### PROJECT LEADER

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