

# Risk Insurance and Adaptation: Managing Urban Risks



Photo: AIDMI.

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## ABOUT THIS ISSUE

Disasters are considered to be great levellers. For they strike without discriminating between the rich and poor or the powerful and plebeian. However, the vulnerability to a hazard is often driven by social, economic, political and cultural conditions. Since, the risk of a disaster is a function of hazard, vulnerability and exposure; therefore it can be summed up that people of lower socio-economic status bear a greater brunt of these risks as compared to their more affluent counterparts. The threat of climate change has further compounded the vulnerability of these marginalized communities.

Such communities are often dependent on small and informal business units to earn their living. Since the majority of such business units do not possess any recovery mechanisms, they invariably fail to recover in post-disaster situations. This issue of Southasiadisasters.net focuses on the concept of disaster microinsurance as an effective risk transfer mechanism for such informal and small scale businesses in urban settings. In the face of the growing threat of climate change, disaster microinsurance can also be viewed as a means of effective adaptation.

Titled 'Risk Insurance and Adaptation: Managing Urban Risk', this issue also highlights the findings and progress of AIDMI's current project funded by HIF which seeks to promote disaster microinsurance for local market recovery. Full of insights from experts from the field of disaster risk reduction and climate change adaptation, this issue is must read for all interested to know more about disaster microinsurance as a risk transfer mechanism for the poor. ■

– Kshitij Gupta, AIDMI

## KEY PIECE

# Effective Risk Transfer and Insurance Solutions and the Sendai Framework for DRR 2015–2030

For many countries, sectors, populations and geographies affected by disasters, risk transfer and insurance are key measures that can be employed to increase resilience in advance of these events and enhance recovery efforts in their aftermath. While these tools enable governments, businesses, and households to protect themselves against the financial losses brought by disasters, there is a growing awareness that these risk sharing systems can deliver wider resilience benefits, and indeed play a more proactive role in curbing the creation of new risk and in nurturing an enabling environment for risk-sensitive public and private investment.

The Sendai Framework for Disaster Risk Reduction 2015 – 2030 (SFDRR) places risk-sensitive private, as well as public, investment at its core, and explicitly calls for the development of effective risk transfer and insurance solutions. However, while the language of Para 30 (b) is of evident relevance to the insurance industry – addressing as it does key issues of access and inclusion – the implications of the SFDRR for the insurance industry go well beyond issues of financial protection.

Undertaken in isolation, ex post risk transfer measures represent incomplete disaster risk management solutions. The shift to investing in reducing the existing stock of risk, preventing and avoiding the creation of new risk,

and building resilience is essential if positive returns and the reduced need for recovery are to be realised. The insurance sector has for example, contributed to an enhanced understanding of risk by translating science and engineering knowledge into financial information that can inform investment and policy options, zoning laws and building codes are exemplars. Insurance schemes can provide incentives for enhanced disaster risk reduction measures and compliance to existing standards, with wider resilience benefits for society at all levels.

However, with almost 70 percent of the world's population not having access to adequate insurance solutions, such contributions are not universally observed – particularly in emerging markets – and given demographic and climate change trends, the greatest vulnerability will be in developing economies where disaster insurance penetration is essentially nonexistent; a scenario that may worsen with a changing climate and evolving exposure.

In order to close these gaps, concerted multi-stakeholder efforts are required. These include a raft of measures including: financial literacy; public-private partnership (PPP); micro-insurance; joint data collection efforts and compulsory insurance<sup>1</sup>. Governments develop and implement policy, regulatory and legal frameworks within which insurers operate and compete. These frameworks are critical to how

<sup>1</sup> The Geneva Association, 2014. The Global Insurance Protection Gap-Assessment and Recommendations. The Geneva Association (The International Association for the Study of Insurance Economics), Geneva/Basel.

effectively and efficiently the insurance industry is able to manage its risk exposures. Regulatory frameworks, incentives and public-private collaboration are also critical to providing vulnerable communities, particularly in developing countries, access to risk management services and risk transfer products offered by insurers. Many of the more innovative policy and technical innovations in developing effective disaster insurance are emanating from low and middle income countries.

The regulatory framework in many countries for instance, can be developed such that the poorest can benefit. Regulation in the Philippines for example, was developed so that inclusive (disaster related) insurance solutions could flourish. Other states are examining specific risk transfer solutions that are designed to offer inclusive insurance solutions for the poorest – micro-insurance<sup>2</sup> and mutual-insurance<sup>3</sup> for example. For the poorest, it is critical that insurance solutions are both affordable, and fair, particularly with regard to possible payouts – stark mismatches between expected and realized protection are currently common.

Effective risk transfer mechanisms are those that reflect the type and scale of risks to which each individual, country, region is exposed, and which are aligned with prevailing policy objectives. The range of measures available to further disaster risk reduction are diverse – from tailored regulatory measures, to stress tests for extreme events, to advanced PPPs – and improvements are possible across the board. ■

– **Marc Gordon**, UNISDR – UN Office for Disaster Risk Reduction

2 IAIS, 2007: "Issues in the regulation and supervision of micro-insurance", June, Basel.

3 IAIS, 2010: "Issues Paper on the Regulation and Supervision of Mutuals, Cooperatives and other Community-based Organisations in increasing access to Insurance Markets", October, Basel.

## DEMAND SURVEY

# The Demand for Disaster Microinsurance: Designing Demand Survey for Urban Informal Small Businesses



Photo: AIDMI.

*For more than a decade Mrs. and Mr. Sahoo have been involved in the small business of selling vegetables in the city of Puri. They operate their business from a kiosk which is a non-permanent structure. Due to this, their business income losses during 2013 cyclone phailin. They are gradually recovering by using their savings.*

AIDMI along with Stanford University and HIF are working in a project titled 'Innovating Disaster Microinsurance for Local Market Recovery' under this project a demand survey for developing a suitable microinsurance product was initiated in the Puri district of Odisha state of India in February 2015. A similar demand survey will take place in the other two sites – Assam and Tamil Nadu. Both of these states have different baseline hazards from Puri. The site in Tamil Nadu is a coast line city prone to floods and cyclones whereas Guwahati, in Assam, is a higher density area prone to earthquakes, flash floods and landslides.

The demand survey is targeting around 1500 small businesses from each urban site. This demand survey will help define the insurance requirements related to the protection of small businesses from hazards, primarily climatic-related hazards.

The initial demand survey in the Puri city of Odisha revealed the following physical structures of small businesses.

1. Permanent fixed shops (brick and cement material)
2. Fixed stalls, but wooden or makeshift material
3. Temporary stalls that are arranged and removed everyday
4. Mobile (like cycle and Trolleys)
5. Home based manufacturing
6. Workshops.

Economic growth, urbanization and climate change are transforming the global risk landscape, and thus the markets for insurance. Some of these changes are contributing to an increase in the demand for disaster insurance. The demand survey analysis will reveal how insurance is perceived. The approach to education and incentives will be designed based on this analysis. ■

for more information: [www.elrha.org/hif-blog/demand-survey-on-disaster-microinsurance-for-small-businesses-in-urban-areas/](http://www.elrha.org/hif-blog/demand-survey-on-disaster-microinsurance-for-small-businesses-in-urban-areas/)

# The Importance of Data and the Complexity of Getting It

For too long humanitarians have been trapped in a cycle of reaction and post-hoc analysis of those efforts to improve practice. A crisis would call for intervention and humanitarians respond based on prior experience and best practices. Then, after the intervention has been completed, a retrospective analysis would be done on any information collected as part of the work to determine the effectiveness of the approaches taken. This form of analysis, while easy and inexpensive to conduct, leads to imperfect data. From a methodological perspective, there is inherent bias in the groups that receive the intervention and those that don't. Also, retrospective review doesn't allow collection of the outcome data that would best measure impact. These outcome measures are developed after the project is complete.

Fortunately, funding bodies are beginning to support proactive research to develop a body of evidence based on scientific experimentation. The majority of evaluations in the humanitarian field rely on case control studies in which the intervention is applied to one group (case) and not another (control) based on a *priori* selection. This method allows researchers to pre-determine the outcome measures and thus ensure collection of usable data for analysis rather than taking what is available and missing important information that was not collected as part of the intervention. These case control studies still don't ensure equal case and control groups and thus there may be inherent bias. The best evidence comes from random selection in randomized controlled trials. This allows the two groups to



A small business owner being surveyed in Puri, Odisha.

be similar and have an equal chance at receiving the intervention to study its impact.

In many cases, a randomized controlled trial is unethical and should be avoided. Denying likely benefits to persons to measure an impact is unjustifiable. In other situations, RCTs are logistically difficult or expensive to implement. The process of creating a registry of potential study subjects, randomly assigning the intervention and collecting systematic data may be too difficult in unfamiliar situations or simply too costly. But in other situations, when the benefits are uncertain, the risks are minimal and there are limited resources to apply an intervention, with proper oversight and ethical review board approval, a randomized control trial is possible and preferred.

The All India Disaster Mitigation Institute (AIDMI) and Stanford University are embarking on such a randomized controlled trial. With funding from the Humanitarian Innovation Fund (HIF) by the Enhancing Learning and Research for Humanitarian Assistance (ELRHA) and ethical review by the Stanford University Human Research Committee, a trial is underway to test the effectiveness and impact of a disaster microinsurance program from local market recover among small and micro enterprises (SMEs) at risk of crisis. Updates and outcomes will be readily available online and you can track the progress of this project with HIF, AIDMI and Stanford University. ■

– Ronak Patel,  
Stanford University,  
United States



# Disaster Insurance, An Effective Risk Transfer Tool for the Most Vulnerable<sup>1</sup>

An abundance of literature already exists around climate change and its impacts for present and future, along with the resultant position of the most vulnerable - the poor, the marginalized, and the excluded. In response, governments around the globe are thinking about strategies for both reducing the causes of climate change and their impact, as well as experimenting with many new tools in this regard. Risk transfer is one such mechanism which enables sharing of risks for the poor. Microinsurance forms a part of risk transfer, but this concept is yet to gain the desired familiarity and importance in most of the climate-vulnerable and developing countries. The reasons for this are manifold, ranging from lack of awareness among populations, unavailability of adequate schemes and suitable products, high transaction costs, and the possibility of adverse selection and the need for initial investment. In India, the situation is also the same, although the importance of such a mechanism was largely realized by National Leaders such as the Prime Minister and apex financial bodies such as the 13th Finance Commission. The current level of insurance penetration is 3.2% (2012-13), with less than 1% in nonlife insurance categories (2012-13) across the country.

All India Disaster Mitigation Institute (AIDMI), being driven by innovation, experimented with the concept of microinsurance in disaster prone areas and was the first agency in India to design a combination of life and non-life disaster (micro) insurance products for disaster

victims through public insurance companies. Through the work undertaken in Odisha, Gujarat, it was felt that the impact of such innovation must be measured in terms of effectiveness and results. With this intent a research study was conducted by AIDMI and the Society for Women Action Development (SWAD), the agency which implemented the scheme in Odisha.

The study was kept simple and short in order to address the basic research question of measuring the impact of the microinsurance scheme in the aftermath of Cyclone *Phailin*. This cyclone which struck Odisha and Andhra Pradesh in 2013 was used as a real-life case study to measure whether such an innovation was effective for the most vulnerable when they faced a disaster. The findings of this study were interesting and eye opening for different stakeholders interested in empowering the poor through risk reduction.

The study broadly had two parameters with the impact of cyclone *Phailin* being one, and insurance coverage post cyclone *Phailin* being the other. As far as the impact of this cyclone, the study brought to light some interesting statistics. It highlighted that 99% of the respondents (n=150) were affected by the Cyclone of which 41% suffered extensive damages to their shelters. On average, they suffered a loss of approximately INR 19,300 (approximately 310 USD) due to this cyclone. The loss of livelihood has been a significant factor, multiplying

the vulnerability of the affected persons. Simultaneously, resources available for recovery were very limited and frequently exploitative in nature. The livelihood activities had also declined post Cyclone *Phailin*, which was agreed upon by all of the respondents. The study reflected that disasters definitely contribute in intensifying the vicious cycle of poverty. However, in this disaster, at least the selected respondents had an option in the form of insurance protection.

In measuring the insurance coverage, it was found that 51% of the respondents made claims post Cyclone *Phailin*, while 82% of those who made claims received their settlements (ranging from 1700 INR to 17000 INR – approx 25 USD to 275 USD) within 3 months – the period when they particularly needed liquidity to overcome the immediate financial requirement for building back their lives. It was interesting to see that 88% of these clients considered the claim process as simple and easy and 99% of them felt that the existing premium under microinsurance was affordable (approximately 170 INR or 3 USD - annually). This study also revealed that the amount received as compensation was useful for the clients to meet their immediate liquidity needs in many ways as they used the money for basic necessities such as repairing of shelter, purchase of seeds, purchase of medicines, repayment of informal loans taken from various sources, amongst other uses.

<sup>1</sup> The article draws on the Humanitarian Research and Innovation Grant Programme by the OCHA Policy Development and Studies Branch of UNOCHA (2014-2015).

For improving the insurance product, the respondents had requested an integrated product which covered health too. They also suggested a faster settlement process; more awareness and sensitization actions at the community level; and extension of the product coverage to all, especially for formal and informal small businesses.

The study was useful from many angles. In terms of learning, it was useful for sustenance of a future product as well as for scaling up the coverage. There are opportunities for all involved, including the poorest of the poor in the largest insurance market. However, additional analysis and thinking is required to judge and define how effective products can be nurtured, and how new products can be developed and introduced. There is a need to recognize that the poor have an inherent desire to rise above the poverty line. Any option that is well structured and presented, presuming it addresses a key challenge as determined by the beneficiary, is bound to be a success. This study addressed the primary research question of the impact of microinsurance in post cyclone *Phailin* as successful, and needs to expand and develop particular to small businesses.

The study reflected that for the cyclone *Phailin* affected households, risk transfer decreases the dependency on aid and offers the possibility of self-sufficiency and increased sense of dignity. Considering the damages that resulted from cyclone *Phailin*, it would have been very challenging for limited income groups who had suffered major damage to their shelters to reconstruct. Additionally, relief and recovery measures from state actors take time and may not ensure individual coverage for varied reasons. Thus, the insurance product contributed greatly to building back the lives of the insured clients. This innovation further justifies the fact that a combination of "push" and "pull" factors can be very effective in ensuring mass inclusion to the benefits at the same time ensuring sustainability and profitability of the market.

From the study's conclusion, it can be said that the involvement of government is crucial given its role in providing subsidies to poor households; lawmaking for flood insurance pool; providing subsidies to private insurance companies so that they become affordable to low-income households; providing reinsurance; encouraging insurance

companies to reach out to at risk communities, especially in coastal areas. The government's continued support for this work is cost effective and worthwhile as the burden will be shared among potential actors and victims.

This study recommended specific actions on the part of various stakeholders, including increasing awareness amongst the masses; increasing media coverage of microinsurance schemes; more involvement and coordination between government and non-government actors; improved outreach and collaboration efforts on the part of insurance companies; encouragement and scaling-up of such products on the part of the government; promoting research to assess the need for designing an effective mechanism for encouraging the development of such programmes at a larger scale. As world leaders are in the process of finalising the vision for DRR post-2015 (Post 2015 Framework for DRR/HFA2), the microinsurance mechanism must be positioned as a tool to increase resilience among vulnerable groups. It is time for us to adopt a change to traditional approaches. ■

– Mihir R. Bhatt, AIDMI



A policy holder of Afat Vimo.

## From Sendai to Dhaka: Regional Perspectives on Finding Insurance in Sendai Framework for Disaster Risk Reduction

**H**ow does Sendai Framework for Disaster Risk Reduction (SFDRR) look from a regional perspective? And what is the best way to promote microinsurance within it?

The Institute of Disaster Management and Vulnerability Studies (IDMVS), University of Dhaka; and Duryog Nivaran, the South Asian initiative in Disaster Management organized a Round Table on "From Sendai to Dhaka: Regional Perspectives on Sendai Framework to Disaster Risk Reduction" in Dhaka University on April 2, 2015. IDMVS is a leading center of disaster risk reduction initiatives. Dhaka University is one of the important universities of South Asia.

The keynote speech was given by Mr. Mihir R. Bhatt, All India Disaster Mitigation Institute (AIDMI), India and Chair, Duryog Nivaran. He welcomed the SFDRR as well as thanked Margareta Wahlstrom of ISDR and Government of Japan for World Conference on Disaster Risk Reduction and enlisted areas for developing regional perspectives. This included, the role of new knowledge on risk and the use of science and technology for building resilience in South Asia. Issues of regional economic growth, demography, and city level governance came up in discussion. Moderated by Mr. Muhammad Taher, Member of DN, the panel of discussants included Dr. Mahbuba Nasrin, Director, IDMVS, Dhaka University; Ms. Cathrine Tranberg Haarsaker of UNDP Bangladesh; Ms. Dilruba Haider, Coordinator, Gender and Climate Change, UN Women, Bangladesh; NGO and civil society leaders.



*Accompanied by the Director of IDMVS, Dr. Mahbuba Nasreen (far left) and Muhammad Taher, (second from right), the Mr. Mihir Bhatt (centre right) met the Vice Chancellor of Dhaka University, Prof. Arefin Siddique (second left) at his office on the 2nd of April 2015. Among other issues discussed, they have underscored the importance of regional cooperation in South Asia particularly to address the challenges caused by climate change and the growing risk of disasters. He has also endorsed the emerging collaboration between the IDMVS and Duryog Nivaran.*

One of the ideas that came up was to look at the private sector and its role in reducing disaster risk and promoting preparedness. The discussion covered the idea of microinsurance as a way to reduce risk as well as a way to be prepared. Four areas for action came up at the end which included preparing pilot projects and programmes in the region; negotiating risk and how it is or is not covered by new economic development, physical or other; new and agile instruments to finance microinsurance sector development; and further integrating DRR and CCA with insurance.

Dr. Mahbuba Nasrin pointed out the potential of women's leadership in the region to reduce risks.

Ms. Cathrine Tranberg built on the work of UNDP and suggested "risk informed" development in the region. Ms. Dilruba Haider argued for attracting new ideas and energies to address the long standing vulnerability of women and their work in South Asia. Dr. Soneji of Oxfam called for greater focus on demographic opportunity to reduce risk in the region.

Discussion focused on microinsurance and its use in SFDRR. Need for skills and services to help design microinsurance projects and programme was discussed.

It was decided to work out an action and research road map based on the discussions. ■



# Disaster Microinsurance for Local Market Recovery

Business enterprises form the backbone of effective disaster recovery and reconstruction. Especially small scale and informal businesses help in restoring the economic fabric of vulnerable communities in post disaster situations. However, due to their informal nature, such business units lack access to disaster risk management mechanisms and are often outside the ambit of government disaster risk management programmes and schemes. This is particularly true of a developing country like India, whose vast informal economy of small scale businesses is rendered highly vulnerable to the debilitating impacts of disasters due to the aforementioned factors. In his inaugural address at the National Summit on Disaster Management,

Mr. M. Shashidhar Reddy (Vice Chairman of National Disaster Management Authority) said that approximately 71 per cent of small industries/ businesses do not have any disaster management plan and 43 per cent of them never reopen after a disaster hits them.<sup>1</sup>

To address the vulnerability of such small scale business units, the All India Disaster Mitigation Institute (AIDMI), University of Stanford and the Humanitarian Innovation Fund (HIF) have collaborated to launch a project on piloting disaster microinsurance for such business enterprises. Titled *Innovating Disaster microinsurance for Local Market Recovery*, this projects aims to pilot an appropriate disaster microinsurance scheme in 3 urban sites of India.

Presently, risk transfer approaches do not find a lot of currency in humanitarian aid contexts and not much is known about the extent to which micro insurance helps small and informal business enterprises in reducing disaster induced economic losses. The rationale behind this project is to create an empirical evidence base for humanitarian agencies, urban authorities and insurance providers to up take risk transfer issues in their policies and practice. This will help in moulding and upscaling risk transfer approaches to better suit the needs of the urban poor. Furthermore, various knowledge products and a toolkit will be devised to facilitate easy replication of this risk transfer approach.

For the purposes of this project, small scale businesses are defined as informal and unregistered businesses operating as street vendors and in-home businesses, by family members or/and a small local group/s established on both residential sites and local market sites. These businesses are often without register in government regulations, lack of protection and insecure from crisis situation. These businesses are often without fixed building structures located on business stands demarcated as such by local government (municipal) town planning regularities. All these features make such business units extremely vulnerable to the impacts of disasters.



Photo: AIDMI.

Mrs. Rupa Rabha, a small food stall owner in GMCH vending zone, Guwahati used a handsome amount from her miger savings to rebuild her make shift stall after storms in 2014.

1 Shri M Shashidhar Reddy, Vice Chairman, National Disaster Management Authority (NDMA) 2012. Press release "Industries draw their subsistence from community and must contribute to community disaster preparedness". NDMA: New Delhi.



Commissioned for a period of 18 months, this project is being rolled out in 3 phases. The process of piloting the innovation will be initiated by a demand survey of the need for disaster insurance with small businesses in the local economies of all sites. This survey will capture the aspirations and apprehension of the various small scale entrepreneurs about disaster-insurance so as to evolve an insurance scheme which precisely matches their expectations and needs. The findings of this demand survey will feed into creating an insurance policy best suited to the needs of the targeted group. Important aspects of such a policy such as the premium, time frame, claim settlement mechanism, etc. will all depend upon the findings of the demand survey as well as consultations with relevant stakeholders (such as insurance

companies, partners and the local community).

Once the insurance scheme is formalised, it will be piloted with 5000 small business operators in each of the above mentioned cities. All the steps of the process of taking this insurance scheme will be closely monitored and a thorough evaluation will be made of the impact of this scheme on the insured entities.

Presently, the demand survey in Puri district of Odisha with 1500 small scale enterprises has been completed. The survey in Puri has highlighted some interesting aspects about the needs of small business there such as the migration, mobility and seasonality involved with small business predicated on religious tourism. These aspects will be taken into consideration while designing an

appropriate micro insurance scheme for such businesses. Similarly, such contextual needs of small business from the other two disaster prone sites will also be taken into account in devising the final micro insurance scheme.

Other external factors such as rapid urbanization, climate change and economic growth will also dictate the evolution of the micro insurance scheme. The hitherto progress of the project has been encouraging and it is hoped that disaster insurance scheme for small and informal businesses could well be the humanitarian innovation that can help engender sustainability and resilience to business enterprise so sorely needed in post-crisis settings. ■

- Kshitij Gupta, AIDMI

#### CLIMATE CHANGE

## Climate Change Adaptation through Microinsurance in Coastal Odisha

The state of Odisha in the Indian Union is prone to multiple hazards. Due to its sub-tropical littoral location, the state is prone to tropical cyclones, storm surges and tsunamis. Its densely populated coastal plains are the alluvial deposits of its river systems. The rivers in these areas with heavy load of silt have very little carrying capacity, resulting in frequent floods, only to be compounded by breached embankments. Especially the 480 km coastline of the state is extremely prone to cyclones and floods.<sup>1</sup>

This vulnerability is further exacerbated by climate change, which

has thrown open new challenges to the poor and marginalized communities of the state striving to lead a dignified life in the face of this new threat. The occurrence of two major cyclones, *Phailin* and *Hudhud* in 2013 and 2014 respectively bear testimony to the enhanced vulnerability of the Odisha to climate change.<sup>2</sup> While the state's administration and its disaster management authority did a splendid job in reducing the death toll from these disasters, the financial losses could not be prevented. While Cyclone *Phailin* destroyed crops worth Rs. 2400 crore, the financial losses arising out of Cyclone *Hudhud*

were close to the vicinity of Rs. 4,949.38 crore.<sup>3</sup> These disasters were particularly debilitating to the poor communities of coastal Odisha which were highly dependent on climate sensitive livelihoods and have little or no access to risk transfer mechanisms. Such poor and vulnerable communities are mostly involved in small scale informal and unregistered businesses operating as street vendors and in-home businesses, on both residential sites and local market sites. These businesses are often without register in government regulations and in the absence of risk transfer mechanisms,

1 Odisha Vulnerability Profile <http://www.osdma.org/ViewDetails.aspx?vchglinkid=GL001&vchplinkid=PL003>

2 Fierce cyclones could be linked to climate change <http://www.thethirdpole.net/fierce-cyclones-could-be-linked-to-climate-change/>

3 [http://www.telegraphindia.com/1141113/jsp/odisha/story\\_19031670.jsp#.VSYbA\\_mUeSo](http://www.telegraphindia.com/1141113/jsp/odisha/story_19031670.jsp#.VSYbA_mUeSo)

are highly unlikely to recover in post disaster situations.

Thus, there is a need to promote risk transfer mechanisms among such small scale and informal business units to effectively address the risk arising out of climate change and disasters. Under a project titled, *Disaster Microinsurance for Local Market Recovery*, the All India Disaster Mitigation Institute (AIDMI) has collaborated with Stanford University and the Humanitarian Innovation Fund (HIF) to promote a disaster microinsurance scheme called *Afat Vimo* for small and informal businesses units in three urban locations of India. One of these locations is the Puri district in Odisha and the Society for Women Action Development (SWAD) is the local partner helping in promoting the concept of microinsurance among the poor and vulnerable communities of coastal Odisha. SWAD is a registered non-government organization based in the Puri district of Odisha, committed to the cause of development and welfare of poor women and weaker sections of society.

The efficacy and uptake of any microinsurance scheme depends upon the extent to which it is synced to the needs of its target group. Thus, the first step in piloting this microinsurance scheme was to conduct a demand survey about the needs of the targeted groups to evolve a microinsurance scheme which is best suited to their needs. This demand survey has already been completed in the Puri district of Odisha and has covered 1550 owners of such small and informal business units. This survey which was facilitated by resource persons from SWAD and AIDMI has revealed some very interesting information about the targeted client group.

The first interesting highlight was about the structure of the business



*Local adaptation strategy against extreme events in coastal Odisha.*

units covered in this survey. Most of the business units covered under this survey were permanent fixed shops, fixed stalls, temporary stalls, mobile trolleys or home based manufacturing workshops. This has given a good insight into the pattern of mobility and seasonality of the businesses that have been surveyed. A large number of the owners of such business units did not have prior knowledge about the concept of disaster microinsurance but were be willing to adopt such a risk transfer mechanism if it meets their premium paying capability.

Interestingly, the greatest finding of this demand survey has been the prevalence of a knowledge gap among the respondents of this survey. This knowledge gap is further compounded by a great level of mistrust and misunderstanding about microinsurance among the respondents of this survey. A lot of the respondents said that they do not trust insurance companies nor do they fully comprehend the concept of risk pooling. This knowledge gap and mistrust of microinsurance has emerged as the greatest barrier to the uptake of the proposed microinsurance scheme.

All these findings have been duly noted and they will feed into the formulation of an appropriate microinsurance scheme for the targeted clients. Before the piloting of the microinsurance scheme, a consultation involving the prospective clients of this microinsurance scheme will be held. This consultation will involve all the stakeholders of his project and it will help in furthering the understanding of the clients about the concept of risk pooling mechanisms to help them overcome issues of mistrust and knowledge gaps.

SWAD's mission is to reduce poverty and improve the quality of lives of the poor and vulnerable groups in the Puri district of Odisha. To achieve this mission, we rely on capacity building, promotion of sustainable livelihoods, greater access to self-governance and basic rights, services and needs. By partnering with AIDMI and HIF on this project, we hope to provide a protective cover to the businesses of the poor and vulnerable communities of our area so that they may thrive and prosper even in the face of risks from disasters and climate change. ■

**- Binapani Mishra, SWAD**

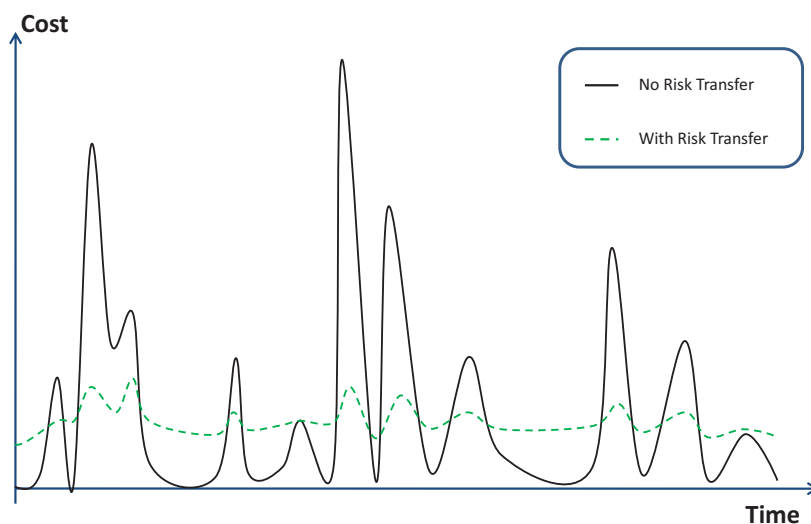


# Risk Transfer through Microinsurance: Management of Loss and Damage from Climatic Stressors

*Insurance minimizes the shock to those affected by disasters, facilitating faster and more robust recovery.*

Risk transfer helps societies and individuals prepare for catastrophes and mitigate their effects on households and the broader economy. A schematic diagram showing the smoothing effect of risk transfer, reducing the severity of the peaks while creating a base-line cost is given alongside. Furthermore, these instruments put a price tag on risks and thus create transparency for the costs of physical preparedness measures.<sup>1</sup>

Risk transfer is undertaken when the potential loss and damage it could experience could be greater than its ability to manage that loss and damage. In the developed world, risk transfer instruments such as insurance play an important role in mitigating economic loss from natural disasters, covering about 30% of economic losses. In lesser-developed countries, these instruments cover only 1% of losses (WEF 2011).



Effects of risk transfer.

Risk transfer is often used to protect livelihoods of low-income groups at the micro level. The need is greater than ever to reduce and transfer risk for climate change adaptation and sustainable development. Thus, two key issues demand attention: first,

incentivize risk reduction and loss prevention and second, to bridge the financial gap when losses occur, delivering climate insurance solutions that really work for communities exposed to climate extreme events.

## Highlights from World Conference on Disaster Risk Reduction (WCDRR)

Senior government and industry representatives on Disaster Risk Transfer and Insurance panel presented on how public-private partnership approaches that engage the insurance/reinsurance sector in pricing risk help drive efficient DRR and disaster response. They also highlighted the potential for public-private cooperation to increase disaster insurance penetration levels and to sustain livelihoods in the wake of significant disasters. Panel members stressed insurance as a critical part of the DRR agenda that needs greater prominence in the post-2015 framework. Participants called on industry to design insurance products affordable for vulnerable sectors.

For more information and source: <http://www.iisd.ca/vol26/enb2611e.html>

A UNISDR – commissioned study on catastrophe modelling recommends focusing on improving the availability of economic loss data, cost benefit analyses of measures such as land-use and urban planning, and the promotion of risk transfer.

A highlighted in WCDRR (see left side box) sustainable insurance is essential to achieve a secure society, and also to achieve resilience as a platform for sustainable growth and development. ■

– Vishal Pathak, AIDMI

1 World Economic Forum (2011); [http://www3.weforum.org/docs/WEF\\_VisionManagingNaturalDisaster\\_Proposal\\_2011.pdf](http://www3.weforum.org/docs/WEF_VisionManagingNaturalDisaster_Proposal_2011.pdf)

# Beating the Heat: Building Resilient Indian Cities in the Face of Climate Change



Climate change is fueling higher daily peak temperatures and longer, more intense heat waves with increasing frequency globally as well as in India. To protect vulnerable populations from the dangerous health effects of heat stress, a new scale of coordinated disaster preparedness is essential at municipal, state and national levels.

The western city of Ahmedabad has experienced its share of intense heat waves in recent years, with a deadly heat wave in May 2010 serving as a wakeup call to action on disaster preparedness for heat waves. The Ahmedabad Municipal Corporation (AMC) partnered with the Public Health Foundation of India (PHFI), Indian Institute of Public Health – Gandhinagar (IIPH) and the Natural Resources Defense Council (NRDC) to prepare Ahmedabad's local communities for increasingly extreme heat. Together with a coalition of academic, health and environmental groups, an early warning system and heat preparedness plan was developed and implemented, making Ahmedabad the first city in South Asia to comprehensively address the health threats of extreme heat.

As exemplified in Ahmedabad, many simple adaptation strategies can effectively help limit the deadly impacts of climate-related disasters. For example, through the Heat Action Plan, the city issues public warnings when extreme heat days are predicted and hospitals are notified to be on alert for heat-distressed patients. On those days, additional water is tanked in and cool public spaces are made available for relief



from the dangerous temperatures. Some permanent changes have been made too, such as a local hospital moving its vulnerable newborn ward to the cooler bottom floor and replacing its black tar roof with reflective white china mosaic tiles to reduce the temperature within its wards. The coalition has also organized trainings for the most vulnerable residents exposed to the most intense heat- including slum dwellers, construction workers, rag pickers, street vendors and officials such as traffic police officers – to sensitize them to the dangers of extreme heat.

As the latest **IPCC report** confirms, the effects of climate change are not limited to extreme temperatures, and global warming is already intensifying other extreme weather events in India and elsewhere. As we have seen, preparing for these events before they happen not only lessens

the damage that befalls residents when disaster strikes, but also enhances the recovery for communities in the aftermath. This model is saving lives in Ahmedabad and can also be adapted for other rapidly urbanising cities to prepare for present and future climate-related disasters including heat waves, flooding and cyclones.

Building cities resilient to climate-related disasters is necessary to protect people and help them recover as the effects of global warming magnify natural disasters across India. Ahmedabad's heat action plan offers a blueprint for how local cities can prepare for and mitigate the impacts of not only heat waves, but a whole range of future calamities on its most vulnerable populations. ■

– Ms. Anjali Jaiswal,

Director, India Initiative, NRDC, and

Ms. Nehmat Kaur,

NRDC



# Challenges of Disasters in Pakistan



**H**istorically, Pakistan had been experiencing great challenges of disaster management due to the frequency and magnitude of natural disasters faced during the pre and post-independence period.

**Recently**, Pakistan has witnessed great earthquakes e.g. Quetta (1935), Hunza, Gilgit/Baltistan (1974) and Azad Kashmir/KPK/Islamabad (2008) side by side Floods/unprecedented torrential rains 1950, 1974, 2010, 2011 and Tsunami (1945) and drought Baluchistan (2002).

These are just examples (see table) where great damage to life and property was caused due to disasters while the challenges of Disaster Management have been increasing due to Global Warming and impact of Climate Change.

**But how Pakistan** has gradually prepared itself to meet such challenges is evident from the gradual progress in developing policies and systems to address the disasters. We see that Federal and Provincial Disaster Management Commissions under the chairmanship of PM and the CMs are constituted. National Disaster Management Authority has been fully established which coordinates all DRR and DRM issues with the provinces, AJK and Gilgit Baluchistan Governments. Provincial Disaster Management Authorities are also fully established and functional while District Disaster Management authorities are notified/being established and their roles clearly defined vide Parliament Act 2010.

**National Disaster Management Plan and National DRR Policy** has been prepared and the National strategies for DRR and DRM developed in consideration of the requirements/vulnerabilities on account of various Hazards and Environmental/Climatic Changes due to Global Warming and historical evidence of

disasters in the light of Hyogo frame work of Action adopted by UN as well as the decisions taken international conferences organized by UNISDR and other UN agencies. Provincial Disaster Management Action Plans in the light of national DRR policy and the national strategies mentioned in NDMP keeping in view also the

**Pakistan's witnessed great Earthquakes**

| Event / Disaster            | Location       | Date              | Affected    | Death Toll |
|-----------------------------|----------------|-------------------|-------------|------------|
| Earthquake/ Tsunami         | Makran         | 325 BCE           |             |            |
| 1935 Baluchistan Earthquake | Quetta         | 31 May 1935       |             | 60000      |
| 1945 Baluchistan Earthquake | Makran         | 27 November 1945  |             | 4000       |
| Flood                       |                | 1950              |             | 2900       |
| Windstorm                   |                | 15 December 1965  |             | 10000      |
| Flood                       |                | August 1973       | 4800000     |            |
| 1974 Hunza Earthquake       | Northern Areas | 28 December 1974  | 97,000      | 5,300      |
| Flood                       |                | 2 August 1976     | 5566000     |            |
| Flood                       |                | June 1977         | 1022000     | 10354      |
| Flood                       |                | July 1978         | 2246000     |            |
| Flood                       |                | August 1998       | 1000000     |            |
| Extreme Temperature         |                | 11 June 1991      |             | 961        |
| Flood                       |                | 9 August 1992     | 6184418     |            |
| Flood                       |                | September 1992    | 12324024    | 1334       |
| Windstorm                   |                | 14 November 1993  |             | 609        |
| Flood                       |                | 22 July 1995      | 1255000     |            |
| Flood                       |                | 24 August 1996    | 1186131     |            |
| Flood                       |                | 3 Marh 1998       |             | 1000       |
| Drought                     |                | Marh 2000         | 2200000     |            |
| Earthquake                  |                | 8 October 2005    | 2.5 million | 78000      |
| Flood                       |                | July/ August 2010 | 20000000    |            |
| Flood                       |                | August 2011       | 9275568     | 497        |
| Flood                       |                | September 2012    | 4849841     | 571        |
| Flood                       |                | August 2013       | 1489063     | 234        |
| Flood                       |                | August 2014       | 2.5 million | 367        |
| Cyclone                     |                | October 2014      |             |            |

Source: Wikipedia, Pakistan Disaster Knowledge Network.



*Victims of the floods of 2014.*

lessons learnt in handling previous disasters and the research studies carried out through international funding, have been prepared/being finalized.

**Mainstreaming DRR** in the development strategies has been major focus of the NDMA while provision of quick relief to all the victims/disaster affectees without

any time lag and appropriate rehabilitation of all the affected people keeping in view the physical and psychological needs of the victims specially women, children, elderly and the special children is the ultimate objective with optimum utilization of available resources in a transparent manner.

**The systematic approach** towards addressing the issues has definitely improved response to disasters in Pakistan. However, continued capacity building, better coordination and more effective use of media will further enhance the response capability. ■

**– Ms. Saira Ahmed,**

Disaster Risk Reduction Specialist,  
NDMA, Pakistan

## Case Study

**D**han Shyam Tale, 52 years old, has been a resident of Puri district since the last 25 years. Due to poor economic condition he has not able to buy a house for himself and lives in a rented *kuccha* house. He has been engaged in a street food stall since 22 years. He sells different kinds of street food like *Bada*, *Piyaji* and *Samosa*. His shop is made up of metal which is just beside the famous Gundicha temple of Puri. Usually he earns around Rs 4000 per month, however his expenditure is around Rs 2500. He is famous for his food around his vicinity. Since his son is also engaged in livelihood activity due to which he was able to manage his monthly family budget well.

When Dhan Shyam was asked about insurance he said he was not aware of it. He had heard about the word insurance but he does not know what exactly it is. He said that he has no knowledge about it. He suffered huge losses during cyclone *Phailin*. When he was asked about disaster insurance he had no idea of what it was. He had never heard this term from anyone. When he was explained about the insurance, he said insurance would help him to recover losses. He won't have to borrow money from money lenders to continue his business. There was a need for such an initiative. He wishes to subscribe to the disaster micro-insurance scheme. He said he will be able to pay 100-200 INR half yearly. ■



*Dhan Shyam Tale, Puri, Odisha.*

**– Neha Agarwal, Odisha**



## Victims of Popular Research!

The politics of aid is well known. Aid is sent to places which require it the most but also to places which are most media covered, exotic, and most exciting. Very often, the focus of media, aid and other relief and response efforts are made when a disaster strikes rural areas. There's more to do and even more to show. It is an opportunity to showcase work and morals. Everybody knows what happened in a remote village in Nagapattinam, Tamil Nadu during the 2004 Tsunami. We know what happened to the socio economic status of fishing communities there, but what happened to the that ordinary family of four—the father a driver, mother a maid, children who go to municipal schools? What about their socio-economic status? Did their girl go to school after the Tsunami?

Natural disasters are commonly viewed as great equalizers, indiscriminate forces that hit alike. But in reality, when disasters hit, relief is directed to the richer and



*Girls from Shindewadi Slum, Dadar, Bombay, after a funfilled session on Being a girl!*

media-popular sections of the society. Moreover, in urban areas, the divide is greater, and the poor remain neglected. An urban girl is that unknown whose life in and after a disaster has remained un-researched and un-documented.

In cities, particularly, in the poorer sections, the fight is tough. Along with the pressure of the gender comes

the added burden of poverty. Although there is greater social mobility, the social support available in cities is less. Girls who do not go to schools and are in a hand to mouth condition are at the receiving end of the disaster. The lack of shelters, resources and social support in the aftermath of the disaster leaves these girls with little protection to threats sexual exploitation in relief camps or otherwise. Studies contain innumerable stories of rape, sexual harassment, sexual favours, early marriages, unwanted pregnancies, STDs etc.

However this still remains a largely ignored area of study, the lack of studies available around this is evidence of the lack of importance given to this section. Women and men experience disasters differently, so has been stated in numerous articles and reports. What remains un-captured is the differentiated impact on GROWN UP women and YOUNG girls and more so between urban and rural areas! In our research efforts more space needs to be devoted to examine how disasters affect girls specifically in urban areas. ■

– **Meghna Goyal,**

Research Assistant, TERI (The Energy and Resources Institute), New Delhi



*Women and girls interacting in Shindewadi, Dadar, Mumbai during a mentoring session on Being a girl!*

## ABOUT HIF



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