



# South-South Cooperation in Action: Urban Resilience and Risk Transfer



*The views expressed in this publication are those of the author.*

*For Personal and Educational Purpose only*



**southasiadisasters.net**

*Advocating Disaster Resilience in South Asia since 2005*



## ABOUT THIS ISSUE

Rising urbanization is an inevitable concomitant of economic growth. India's economic growth in the past decade has fuelled a vast expansion of her cities which now house 31% of its total population. However, poor land-use planning, flouting of environment and municipal by-laws, and the absence of disaster-risk assessment in urban design have drastically increased the vulnerability of India's cities to a variety of climate and disaster risks. India's urban poor who live and work on marginal lands are disproportionately exposed to such risks. Thus, there is an underlying need to build resilience in urban India by empowering its marginalized communities.

This issue of *Southasiadisasters.net* focuses on the theme of "Building Urban Resilience through Risk Transfer and Insurance". It brings together the insights from the 8th South-South Citizenry Based Development sub-Academy (SSCBDA). This academy was organized in Ahmedabad, India from 11th February-13th February, 2015. It saw the coming together of academics, students and practitioners from the field of humanitarianism to discuss and deliberate upon the importance of risk transfer mechanisms as instruments for engendering resilience for India's urban poor.

A risk transfer mechanism like disaster microinsurance helps in transferring the risk of an impending catastrophe from an individual to an institution (insurance company). This issue highlights the way in which contextualized risk transfer mechanisms can protect the livelihoods and assets of India's urban poor from disaster and climate risks. Such mechanisms will eventually help in making India's cities safe, sustainable and inclusive. ■

- Kshitij Gupta, AIDMI

## Preface

The eighth South-South Citizenry-based academy focused on the subject of "Building Urban Resilience through Risk Transfer and Insurance". As the urban component of the world's population increases (now more than 50%), more and more marginal areas are settled. Such areas, especially in developing countries, are vulnerable to hazards such as flooding, water logging, earthquakes, landslides, rising sea levels and smog. These hazards, made worse by inadequate urban planning; i.e. inadequate drainage systems, unplanned development, expansion of slums, violations of building codes and a lack of awareness of proper construction requirements have led to losses for people in both developed and developing countries.

The urban area material losses are estimated at 16% of global Gross Domestic Product in the last decade by the Red Cross. However, such an estimate does not even start to show the disproportionate impact on the poor, who after all, are the likeliest to be found in the marginal and vulnerable areas.

Risk transfer and insurance are becoming important in the discussion about urban resilience. The urban disaster plans need to have the aspects of disaster mitigation and preparedness. Preparedness also includes putting the vulnerable in the best position to recover quickly from disaster shocks. Well targeted insurance for recovery from disaster is important as are other forms of insurance such as health. It requires a national effort by state policy makers and regulators, implementing local authorities and the private sector as provider.

The eighth South-South Citizenry Academy, true to its central creed that effective development solutions are best created by all development stakeholders thinking and working together, was an important learning forum whose case studies, policy perspectives and inputs from insurance policies and the users provided a rich foundation for anyone seeking knowledge on this subject. The UN Office for South-South Cooperation is pleased to help bring this message to a wider audience. ■

- Denis Nkala, UNOSSC



Mr. Denis Nkala, UNOSSC, underlines the support of the South-South Cooperation to the 8th SSCBDA.

## 8th South-South Citizenry Based Development sub-Academy (SSCBDA)

The All India Disaster Mitigation Institute (AIDMI) in collaboration with the United Nations Office for South-South Cooperation (UNOSSC) had organized the '8th South-South Citizenry Based Development sub-Academy (SSCBDA)' at Ahmedabad, Gujarat from 11-13 January 2016.

The theme of this year's academy was **'Building Urban Resilience through Risk Transfer: Protecting Small Business and Local Market Recovery'**. This academy provided the perfect platform for several leaders, practitioners, students and members of various community based organizations (CBOs) and non-governmental organizations (NGOs) to share their experience and knowledge of reducing risks in their communities and learn from the experience and knowledge of others.

This year a total of 37 participants from 8 countries and 6 Indian states participated in the academy. It is often observed that local communities are the first responders to any disaster. This high level of risk exposure has led these local communities to partner with local Community Based Organizations (CBOs) and Non-Government Organizations (NGOs) come up with coping mechanisms based on local knowledge systems. However, such risk reduction innovations from the grassroots often go unnoticed at regional and global processes. "The SSCBDA provides a perfect platform for capturing the voice of such CBOs, NGOs and experts to expose them to the knowledge and experience of other such actors", said Mr. Vishal Pathak of AIDMI.

Some of the most reputed practitioners from government and multi-lateral agencies participated in this conference. These included Mr. Denis Nkala, Regional Chief (Asia Pacific), UN Office for South-South Cooperation; Ms. Nandita Hazararika, Deputy Secretary and SPO, Assam State Disaster Management Authority (ASDMA); Dr. Aditya Prakash, Probationary DM, Muzzafarpur, Bihar; Dr. Kamal Lochan Mishra, Chief General Manager, Odisha State Disaster Management Authority (OSDMA); Dr. Supriya Akerkar, Lead Senior Lecturer, CENDEP, Oxford Brookes University (OBU); Ms. Prabha Pokhrel, Chairperson, Integrated Development Society (IDS) Nepal; and Dr. M.G.S. Silva, Chairman, Yasiru Mutual Provident Society Ltd., Sri Lanka. 8 students from Oxford Brookes University also attended the academy.

Based on a mix of classroom teaching and experience sharing, the academy helped the participants to thoroughly understand the dynamics of making a risk transfer approach work for local market recovery. "The academy had a perfect blend of theory and practice which made learning easy and enjoyable", said Mr. Shahied Chauhan, a Prime Minister's Fellow in Jammu and Kashmir.

The supporting partners of this academy included Humanitarian Innovation Fund, Stanford University, and Centre for Development and Emergency Practice, United Kingdom.

A new insurance product was launched at the academy by Mr. Denis



Mr. Mihir R. Bhatt, AIDMI, welcomes guests during the introductory session.

Nkala and state representatives with UIIC, Odisha. The insurance product was designed based on the demand survey and different consultations with stakeholders. This product will cater to 750 small businesses in Puri, Odisha.

"Objective, fearless and insightful sharing of knowledge on one-to-one basis was very valuable", said Ms. Nandita Hazarika of ASDMA.

"Most cities can not be seen separate from rivers in India. Cities are linked with rivers", said Kamal Lochan Mishra of OSDMA.

The academy ended on a promising note of scaling up the innovations and best practices from the local level to build resilience for India's urban poor. ■

- Mihir R. Bhatt

# Learning Statement from the Academy

As the urban population in developing countries increases rapidly, more people are exposed to a growing number of disaster risks, calling for new types of measures and policies. At present, about 31% of India's population, i.e. about 380 million people live in urban areas, a figure that will increase to about 600 million by 2030 (Planning Commission, GOI: 34)<sup>1</sup>. In view of the rapid growth of urban areas, there is an emerging concern about cities becoming more vulnerable to disasters on account of unsafe construction (Planning Commission, GOI: 72)<sup>2</sup>.

Poor people are particularly at risk when it comes to facing disasters and recovering after them. In India 85% of the land is vulnerable to one or multiple hazards and most cities are located on hazardous terrains. For example, about 60 cities whose population exceeds half a million are located within zones III, IV and V where severe impact of earthquake is expected<sup>3</sup>. Increasing urban resilience has therefore become a crucial challenge in which all the various stakeholders are to take part, whether national or local governments, international or local organizations, private sectors or city-dwellers themselves. The goal 11 of the post-2015 development agenda (Make cities inclusive, safe, resilient and sustainable) has made this increasing need for resilience an

**THE SOUTH-SOUTH CITIZENRY BASED DEVELOPMENT ACADEMIES**, as part of the Global South-South Development Academies, are southern learning platforms supported by the United Nations Office for South-South Cooperation (UNOSSC) in order to share knowledge, skills and practices. The SSCBDA seeks to contribute to the enhancement of the capacity of government, civil society and communities through joint reflection on development and disaster risk reduction.

important global priority. Urban resilience is indeed defined as the "capability to prepare for, respond to, and recover from significant multi-hazard threats with minimum damage to public safety and health, the economy, and security" of a given urban area (PAC)<sup>4</sup>. As stated in the Priority 3 of the Sendai Framework for Disaster Risk Reduction, the promotion of mechanisms for disaster risk transfer and insurance is necessary to increase the resilience of urban areas, especially in the context of climate change. The number of disasters is indeed expected to increase and measures need to be taken. The poor experience the most severe effects of disasters therefore risk transfer and insurance can be one of the keys for decreasing their vulnerability and dependency. Often, poor households and small businesses have no savings to use when a disaster occurs. In order to ensure a dignified life to every citizen, microinsurance can help rebuild livelihood and businesses. Disaster insurances therefore need to be considered as a tool for poverty

and risk reduction. In the current context of increasing climate change, it is a means to adapt to a more hazardous and uncertain future.

## The Eighth South-South Citizenry Based Development Academy

The Eighth South-South Citizenry Based Development Academy emphasizes the importance of building urban resilience, particularly through risk transfer and insurance. Risk transfer and insurance are indeed key tools to increase resilience of small businesses and households as they allow them to recover from the financial losses of disasters. The Academy aims at addressing this matter through its various dimensions – its potential for small businesses, its financial aspect, its inclusive extent etc. – and through the various voices of community, governments and in other countries.

This learning statement is the result of a three-day interactive academy in which various stakeholders took part. These stakeholders include researchers, practitioners, decision

1 Planning commission, GoI (2013) Twelfth five year plan (2012/2017). Faster, More Inclusive and Sustainable Growth Volume I. Available at [http://planningcommission.gov.in/plans/planrel/12thplan/pdf/12fyp\\_vol1.pdf](http://planningcommission.gov.in/plans/planrel/12thplan/pdf/12fyp_vol1.pdf)

2 Planning Commission, GoI (2011) Report of the Working Group on Disaster Management. For the Twelfth Five Year Plan (2012 - 2017). GoI: New Delhi. Available at: <http://ndma.gov.in/images/pdf/Working%20Group%20Report%20on%20Disaster%20Management%20for%2012th%20FYP.pdf>

3 Chandrani Bandyopadhyay Neogi, NIDM (2013) Training Module on Urban Risk Mitigation. NIDM: New Delhi. Available at: <http://nidm.gov.in/PDF/modules/urban.pdf>

4 Public Affairs Centre (PAC) 2014. Colloquium on 'Urban Resilience'. Available at: <http://pacindia.org/index.php/events/content/colloquium-on-urban-resilience>

makers, officials from government, non-government, UN, universities, community-based organization, community representatives, from six states of India and six countries. As a tool for advocating risk transfer and insurance in order to help implementing development frameworks (such as the SFDRR) as long as the Sustainable Development Goals 2030, this statement is comprised of three parts that elaborate on the main points to be considered within the development of risk transfer mechanisms - requirements, opportunities, and key message to policy makers.



Photo: AIDMI.

*Dr. Supriya Akerkar, Oxford Brookes University, presents the importance of research for risk transfer and insurance.*

**The Learning Statement as a tool to promote and strengthen risk transfer and insurance**

**Target Vulnerable Populations:**

Almost 70% of the world's population has not access to proper insurance coverage. Microinsurance has the potential to reach a high number of households and small businesses, particularly the vulnerable and marginalized population, to help raise their awareness and prepare them to face disasters in building financial resilience.

**Preserve what has been Built:** When a disaster occurs, the economic improvement and wealth created or saved by small businesses or family can be destroyed. Moreover, the aftermath of a disaster often brings debts, for the small businesses often choose loans as a way to recover from the loss. Informal and exploitative credits then prevents them from full recovery and growth. Disaster insurance can help keeping the level of development already achieved and protecting the assets of such populations to break the poverty cycle.

**Prepare for the Future:** Climate change increases the number of disasters and changes the nature of risks. For instance, flash floods have become a major threat for small businesses, especially because

frequently occurring disasters are more harmful than rare large-scale disasters. Microinsurance are therefore key tools to bring sustainability to the response and recovery in the aftermath of a disaster, supporting both households, small business owners and the local economy.

**Empower Communities:** Offering economic opportunities and a more equal access to financial tools support the development of small businesses and households. It improves their knowledge and ability to master their development.

**Support Global Economy:** Small and informal businesses are the motors of the economy in the urban context of developing countries. Strengthening their growth allows for more general economic growth through a virtuous cycle.

**Requirements to put learnings into practice**

**State recognition and political will:** The implication of State and local governments is an important step in raising the awareness of insurance companies and city-dwellers. Government can ensure regulation, monitoring and promotion of disaster

insurances. Strong political institutions are also a key step towards efficient organization.

**Governance and transparency:** Communication and consultation from the part of the different stakeholders is a key element to the success of microinsurance systems. Information must reach and be discussed by all the actors.

**Tailor-made Policy:** As coping strategies are not universal, solutions have to be adapted according to the situation, whether social, financial or geographical. The policy must adapt according to the place and people involved, to be as close as possible to the interests of the stakeholders.

**Education:** A certain level of awareness and education is needed on the part of various stakeholders to build strong disaster insurance systems together. Potential clients must be aware of the importance of the microinsurance systems to understand the mechanisms in order to trust the system and invest money in it.

**Research and Data:** Both are necessary to identify the needs, to understand the perspectives of the different stakeholders and to create

coherent microinsurance schemes suitable for the different populations targeted. Research needs to focus both on knowledge of people's incomes and ability to pay for insurance as long as knowledge of hazards and all possibilities of risks in order to focus areas.

**Documentation:** It is very much important to show case the success stories of people who gained benefit of disaster insurance in order to convince more people. Documentation of such success stories can be one of the tools to increase the demand for disaster insurance.

**Simplicity:** The mechanisms and language need to be easily understandable so that every stakeholder can take part and feel concerned, affording sound and reliable claim processes.

#### **Opportunities for a rapid implementation**

**Current Interest:** A month after the end of the COP21, a year after the Sendai Framework for Disaster Risk Reduction was launched; the international interest for urban resilience and risk reduction is increasing. India will also host the Asian Ministerial Conference on Disaster Risk Reduction by the end of the year 2016. 2016 can be a turning point in term of awareness and creation of projects at various scales.

**Current Investments from The Government:** The current investments made by the Government of India on smart cities and urban development in general can offer an opportunity to develop resilience. Indeed, smart cities cannot be considered as such without being safe cities and disaster insurances can help providing the required protection to their dwellers. The new initiatives by the Government in the field of insurance and coverage show a renewed interest for the sector. Two new insurance schemes were created in 2015: *Pradhan Mantri Jeevan Jyoti Bima* for life insurance, *Pradhan Mantri Suraksha Bima Yojana* for personal accident insurance, and a new pension fund: *Atal Pension Yojana*.

**Disaster:** Disaster themselves can also be seen as an opportunity to raise awareness and promote suitable insurance packages to affected and vulnerable groups.

**Local capacities:** Urban and rural dwellers often carry an important memory of disasters and of resilience practices that has been long-acquired throughout time. This precious knowledge needs to be recognized and promote as a key tool for urban resilience.

**Insurance companies' involvement:** Insurance companies are not used to the type of population requiring

microinsurance, and often does not see the advantage of insuring people with low premiums. However, the potential increase of their involvement could help devising new mechanisms that could cover large amounts of the population.

**Operationalization:** The practical aspects of microinsurance are central in order to implement efficient schemes reaching communities and gaining the trust of people.

**Financing:** The financial supply to provide insurance in the long-term and possibly reinsure companies or NGOs is a crucial matter to allow for a sound insurance system. The financial matter is an important challenge for short but also especially long-term recovery.

#### **Key message for policy makers**

**Rising financial losses:** Natural disasters and climate change induced financial losses are likely to rise, which will not only wipe out developmental gains, but also put pressure on public funds and economic growth prospects in absence of catastrophic risk transfer arrangements at national and sub-national levels.

**Setting examples:** Disaster management being the state subject, ideally governments should lead in introducing risk transfer and insurance mechanisms to protect public and private investments as risk reduction and adaptation strategy.

**Enabling environment:** Creating enabling environment for private sector players through supportive policies and regulatory environment in the risk transfer and insurance sector should be seen as a strategy to reduce its own losses and cost of rebuilding and reconstruction. This sector must have both, incentives for investors as well as products and policies that cater to the needs of the poor and vulnerable. ■

- Pauline Prevost, AIDMI



Mr. Mihir R. Bhatt interacting with the participants at the 8th SSCBDA.

Photo: AIDMI

# Financial Burden Due To Natural Disaster



Mr. Abdul Jafar at his shop in Ambari, Guwahati.

The following case study has emerged from interactions through a demand survey conducted in Assam, April 2015, for piloting a disaster micro-insurance for small and informal business.

Mr. Abdul Jafar is of 32 years of age and stays at Ambari, Guwahati. His Family includes 2 male members & 4 Female members with his daughter, who is only 2 years old. He is not very well off and falls under the low-income households.

He owns a betel leaf (paan) shop near his home. He also stocks the complementary items like gutkha, cold drinks and tobacco are in the shop. He owns a brick and cement room for doing his business. From the age of 10 he had started the business. Although his business is about 22 years old, but still now it is still a challenge to earn more profit. On an average he has a monthly income of about Rs. 6000. Moreover, he and his brother earn to bear all the expenses of their family.

He has been saving 50/- per day from the last three years for the marriage of his sister. So in last two years he

saved around Rs. 36000/-. Also he saved some amount for the future of his daughter.

Since he is a localite, he is well aware of the floods in that area. Apart from infrastructural damage, i.e. damage to shop, house, physical environment, he also has to close the shop during the flood time. But the floods that occurred in 2014 were so horrible that the water got into shop for two to three days resulting in a lot of damage.

He had bought a new refrigerator for his shop just six months ago. During the floods, this refrigerator remained submerged under water for two full days. The result was that the compressor of the refrigerator got damaged. Since the company warranty on the refrigerator did not

*Disaster microinsurance can provide a much needed respite to small and informal businesses. Such a risk transfer mechanism, with its comparatively miniscule annual premium would insure Abdul's assets against losses from floods.*

cover damages incurred due to flooding, Abdul had to use his meagre savings for the repairs. But in that year, the shop was affected by flooding three more times.

The repeated repairs made a huge dent in Abdul's savings. He had to spend all the money that he had saved for his sister's marriage. To secure operating capital, he took a loan from a local moneylender at a rate of 60% per annum. After one year he was able to repay all the money. Now he has started to save money again. But he still fears floods that can undo all his hard work and deplete his savings.

Abdul's story highlights the precariousness of small business owners in the absence of risk transfer mechanisms. It also shows how traditional insurance fails to address the needs of such people in the aftermath of a disaster (the losses incurred due to floods were not covered in the refrigerator's normal warranty). Having spent all his savings on repairs, Abdul was forced to take a loan at an exorbitant rate of interest just to secure the capital needed to operate his business.

Disaster microinsurance can provide a much needed respite to small and informal businesses. Such a risk transfer mechanism, with its comparatively miniscule annual premium would insure Abdul's assets against losses from floods. This in turn, would provide him with the freedom to use his savings for personal and professional growth. For instance, if Abdul had access to disaster microinsurance, then he could have indeed used his savings for his sister's marriage.■

- Arup Das, sSTEP, Assam

# Risk Transfer and Urban Resilience: Opportunities in COP21 and SFDRR Implementation

Typical of any country undergoing rapid economic development, India too has experienced a surge in urbanization in the last decade. This surge has been fuelled by the movement of people from the countryside to the cities in search of better jobs and livelihoods. If the present trends in urbanization persist, then the Planning Commission of India estimates that the population of urban areas in India will increase to 600 million people by 2030.<sup>1</sup>

However, India's urban infrastructure falls woefully short of accommodating this influx of people coming into her cities. The result of this imbalance in infrastructure development and population growth are ballooned up urban systems that are distended way beyond their carrying capacities.

The problem of inadequate urban infrastructure has exponentially increased the vulnerability of India's cities to a variety of climate and disaster risks. The recent floods in Chennai are a sobering reminder of this dismal fact. Not only do urban disasters, particularly floods cause widespread economic loss and damage, they also undo a lot development progress hitherto achieved. Just like everywhere else in the world, it is the poor in India's cities, who live on marginal lands and work in the informal sector experience the most profound impacts of these urban disasters. Therefore, there is an urgent need to promote urban resilience in India keeping in mind the needs of India's working poor.

Risk transfer mechanisms can be a potent tool to build the resilience of the urban poor to the various risks they face. A risk transfer mechanism predicts a future scenario of risk brought on by emergencies, disasters or other stresses and then makes provisions for transferring that risk from one party to another. Disaster microinsurance is one such risk transfer mechanism that has the potential to improve the resilience of India's urban poor to the various risks they face.

The importance of risk transfer mechanisms is echoed in all the major humanitarian frameworks such as Sendai Framework for Disaster Risk Reduction (SFDRR), the Sustainable Development Goals (SDGs) and the recently concluded Climate Deal following Conference of Parties 21 (COP 21). The overlap in the agendas of these distinct frameworks represents an opportunity for promoting risk transfer approaches like disaster microinsurance in developing countries like India.

Disaster microinsurance can be described a risk transfer approach which aims to provide low-income households and businesses with easily accessible and affordable life and health insurance as well as insurance to cover the loss of small-scale assets, livestock, and crops in the event of a flood, typhoon, or other natural disaster. If properly integrated within a broader development framework, disaster microinsurance can prove to be a potent adaptation and risk transfer tool for long term recovery by building the resilience of the poor against loss and damage.

## Risk Transfer and Sendai Framework for Disaster Risk Reduction (SFDRR)

The Sendai Framework for Disaster Risk Reduction (SFDRR) is a voluntary non-binding agreement adopted by 187 United Nations Member States at the 3rd World Conference on Disaster Risk Reduction (3rd WCDRR) in April 2015. The SFDRR aims to build the resilience of countries and communities against the various hazards faced by them.

In striving to build resilience, the SFDRR has outlined 5 priorities of action. Priority 3 of SFDRR relates with 'Investing in DRR for Resilience'. This priority also calls out to *promote mechanisms for disaster risk transfer and insurance, risk sharing and retention and financial protection, as appropriate, for both public and private investment in order to reduce the financial impact of disasters on governments and societies, in urban and rural areas.*"

## Urban Resilience in the New Climate Deal

The New Climate deal concluded at the Conference of Parties 21 (COP21) gives great impetus to building urban resilience to climate risks. At the COP21 in Paris, more than 450 cities with a combined population of nearly 1bn people pledged to reduce emissions by more than 50% in around 15 years.

The only way forward from here is to work on the evolution of sustainable cities by investing in infrastructure, transportation, energy, agriculture, education, health, gender, housing and livelihoods. Risk transfer

<sup>1</sup> Planning commission, GoI (2013) Twelfth five year plan (2012/2017). Faster, More Inclusive and Sustainable Growth Volume I. Available at [http://planningcommission.gov.in/plans/planrel/12thplan/pdf/12fyp\\_vol1.pdf](http://planningcommission.gov.in/plans/planrel/12thplan/pdf/12fyp_vol1.pdf)



mechanisms can be an appropriate way of achieving this.

### **Risk Transfer and Sustainable Development Goals**

The Sustainable Development Goals (SDGs) as promulgated in 2015 seek to make the world a more equitable and just place. It is a set of 17 global goals aimed at sustainable development. Goal 1 of the SDGs aims for 'No Poverty' and Goal 11 aims to 'Make Sustainable Cities and Communities'. Risk transfer mechanisms represent a great opportunity in making inclusive, safe and resilient cities by empowering the vulnerable communities that dwell in them.

### **National Level Measure to Promote Risk Transfer Mechanisms**

Since the promotion of risk transfer mechanisms for resilience building figures in the agendas of all global humanitarian frameworks, India can leverage the implementation opportunities that arise from these frameworks in the following manner:

- **City and State Level Development Plans**

To translate the intent of these global frameworks into actions at the local level, the promotion of risk transfer mechanisms like disaster microinsurance should be included as a statutory provision in various development plans at the city, district and state level. For instance, making statutory provisions for the implementation of risk transfer approaches in the disaster management and climate change adaptation plans will provide much needed efficacy to such resilience building initiatives.

- **The Importance of Data**

One of the greatest challenges surrounding the piloting of new

policies is the absence of data. There is a need to collate quality and disaggregated data to guide sound policy decisions regarding risk transfer mechanisms for the urban poor. Perhaps extensive surveys among low income households of key Indian cities can be a starting point for this. The analysis of this data can reveal significant insights on how to shape and pilot such policies.

- **Fostering Partnerships**

To improve the outreach and impact of any risk transfer mechanism like disaster microinsurance, there is a need to forge effective partnerships between the government, banks (insurers) and non-governmental organizations (NGOs). Through appropriate laws and policies, the government can provide a favourable ecosystem for successful implementation of a disaster microinsurance scheme designed by insurance companies (backed by banks) and administered to the intended beneficiaries by NGOs.

- **Contextualized Offerings**

Different communities are exposed to different types of risks. For instance, coastal communities may face the threat of cyclones and tsunamis which may totally be non-existent for inland communities. This necessitates the evolution of contextualized offerings of risk transfer mechanisms that can address the specific risks faced by particular communities.

It is estimated that 35% of urban Indian households live below the poverty line.<sup>2</sup> Therefore, the future of sustainable development in India, lies in creating a mix of financial and technical solutions that can match the complexity of building low carbon, resilient cities. Risk transfer mechanisms like disaster microinsurance need to be adopted and scaled up by national governments for bestowing the benediction of climate justice and disaster resilience on their most vulnerable and marginalized citizens. ■

- Kshitij Gupta, AIDMI



The recent floods in Cuddalore adversely affected many small businesses such as the one in the above picture.

<sup>2</sup> 35 per cent urban India is BPL, says unreleased data - See more at: <http://indianexpress.com/article/india/india-others/35-per-cent-urban-india-is-bpl-says-unreleased-data/#sthash.baJJKc14.dpuf>

# Insurance, Women and Climate Change

Climate change has significant effects on ecosystem, economies and communities worldwide. According to the 'Intergovernmental Panel on Climate Change', over the next 100 years the mean temperature of the atmosphere is going to increase significantly, by upto 6.4°C in the worst-case scenario with higher sea levels and exacerbation of weather extremes. (IPCC, 2007, 2011).<sup>1</sup> Increasing trends of extreme weather conditions – storms, floods, droughts and glacier melting have greater adverse impacts on human lives, health and their livelihoods too. Unprecedented heavy rain in Chennai, India victimizing nearly 200 lives is a very recent example of such adversities. Weather related disasters are amongst major causes of human fatalities, especially in developing countries<sup>2</sup>. Deaths, injuries and disabilities are direct consequences of natural disasters. Whereas change in climate also creates favorable environments for climate sensitive infectious diseases such as dengue or malaria fever and other vector-borne diseases. Thus climate change is considered to be the biggest threat of the century to human health.

## Climate Change and Women:

Impacts of climate change to economic development, economies and human migrations to adapt the changes are observed across the world. However, it is also true that poor and women are more vulnerable to adapting these consequences for various reasons. These reasons include, but are not limited to the lack of information, education and power. Inadequate distribution of roles and responsibilities for women in communities and poverty also play a significant role in increasing their vulnerability. Similarly often they are dependant and under represented in decision making for family finances and assets. On the other



hand, a majority of women in rural and coastal areas across the world rely on agriculture, aquaculture and livestock for their livelihoods which are most adversely affected in climatic and natural disasters. In addition, the need of fetching water from farther places, longer hours in field and malnutrition due to inadequate crop yields increase health related risks for women.

## Insurance – A Risk Mitigation Tool:

Insurance has been accepted as one of the convincing risk mitigation tools to cope with the adverse effects of climate change to vulnerable groups, especially women among the poor. The practitioners have explored a number of innovative and sustainable insurance products to cover the risks arising through drought, uncertain rains and higher temperatures. The biggest correlation between weather and losses in agriculture played a vital role in development of Index based weather insurance started in Sri Lanka, Peru, Kenya, Malawi and Mongolia has given new dimension to the traditional crop insurance. Similarly the risks to the hundreds of thousands of lives and injuries to millions of people and damage or destruction of buildings and assets, livestock, fisheries, stocks of raw material during disasters also indicate the

relevance of health, life, disability and other insurance products.

## Challenges:

The biggest challenge in many developing countries like India is adopting insurance as a risk mitigation tool. Moreover, as women are mostly dependant in taking decisions for insuring their assets or even their lives and health, they largely remain deprived of insurance protection. Similarly, lack of information and knowledge about insurance products and procedures also bar women from adapting insurance to cover their financial risks. Apart from this, in the context of climate change related risks, risk prevention i.e. taking corrective steps towards reducing the adverse effects of climate change women can play a vital role through working for preserving the environment.

## Conclusion:

Climate change related risks are going to increase in coming years especially for women. Adequate and inclusive risk mitigating products along with intensive efforts for awareness generation and capacity building would help to protect women against such risks. ■

– **Shilpa Pandya**, Development Consultant

1 Microinsurance Compendium Vol II

2 Munich Re NatCatSERVICE

## Scope and Potential of Disaster Risk Transfer in Muzaffarpur

Muzaffarpur has seen a rapid growth in urbanization in the past few years. Being the largest urban centre in North Bihar, it does have its own share of urban complexities. The Gangetic plains of North Bihar support a vast population, and the population of urban centres waxes and wanes with the influx and efflux of migratory labour populations from the surrounding rural areas. This exposes them to a wide array of disaster risks.

Muzaffarpur lies in Seismic Zone 4, or the High Damage Risk Zone. It lies under the constant threat of floods from the three rivers that transect the district, such as Gandak, Burhi Gandak and the Baghamati. Unplanned town growth due to rapid population rise has also rendered it a potential hazard for the outbreak of fires. In the event of any such disaster, the administration acts as a first responder as well as the nodal point for financial relief distribution. The latter is often an inefficient process, being poorly targeted, inefficient and

riddled with the nuances of red tapism. Whilst awaiting relief from the administration, several good business days are lost, adding to the miseries. It is in such a scenario, that microinsurance can play an immense role.

Microinsurance, as a mechanism of Disaster Risk Transfer, is an emerging concept in strengthening resilience. It provides an immediate relief, a form of "bounce back" money, which can be used by the victims in rehabilitating themselves, thus extrapolating the work done by the District Administration. Also, if regulated, the payments can be made in an efficient, time bound manner, enabling the victims to start rebuilding their lives in a shorter span of time, instead of awaiting the channelized procedures to be complete and obtaining financial assistance. For the District administration too, this would be desirable, as it would delegate a substantial portion of disbursing relief money to these microinsurance companies, and they would be able

to expand their outreach and diversify their relief measures.

However, there are a lot of challenges that need to be overcome before this can translate into reality. The lack of data on disaster risk, hazard profile and vulnerability is a serious drawback. There is also a lack of culture of risk financing in India, especially in Bihar. There is also a reluctance of large insurance market players to invest in the development of small risk markets. Moreover, as this is a policy issue, political will along with consensual agreement by the private and public stakeholders is a sine qua non for this concept to materialize. As of now, only some small private players have ventured into these uncharted waters, and mainly cater to the urban rich. Their experiences and case studies need to be reflected upon, before we can agree upon a comprehensive Disaster Risk Transfer system through microinsurance policy in Bihar. ■

- Dr. Aditya Prakash, IAS,  
Probationary DM, Muzaffarpur, Bihar



Photo: AIDMI.

Meeting on youth centered disaster risk reduction in Muzaffarpur.

# A German Social Start-up on its Mission to Revolutionize the Market for Construction Material in Bangladesh

Humankind, by virtue of science and technology has sent a mission to Mars, but in a developing country like Bangladesh 8000 fire clay brick kilns rely on an out-dated 18<sup>th</sup> century technology—with slavery like working conditions that lead to severe environmental damage. On top of that, millions of families still live in tin shed houses. There must be a better solution! There is: Compressed Stabilized Earth Blocks (CSEB), a proven low-tech solution for developing countries, which is not yet available in the market in Bangladesh.

This is the story of a young German social entrepreneur who moved to Bangladesh, to radically change the market of affordable, eco-friendly and disaster resistant building material.

## **The problem: structural, multi-dimensional, and very dirty**

In Bangladesh, there are approx. 8000 kilns producing 18 billion fired clay bricks (FCB) per year. The kilns rely on an out-dated, energy inefficient technology with a yearly consumption of 3.5 million tonnes of coal and 2 million tonnes of fire wood. This causes 9 million tonnes CO<sub>2</sub> emissions and severe deforestation. 40% of Dhaka's fine particle pollution is due to kilns. The government passed several laws to prohibit the most inefficient kilns, but they have not been enforced due to corruption and a lack of alternative solid building materials. An attempt of UNDP and the World Bank to convert old kilns into modern, energy efficient ones failed due to the 10-times higher initial investment cost, that FCB owners were unwilling or incapable to bear.

Beside the environmental damage caused by FCB, there are other considerable downsides. The working conditions in the kilns are akin to modern day slavery; especially for unskilled labourers. FCB are unaffordable for many Bangladeshi, who therefore live in corrugated iron sheet shelters, as there is no affordable alternative to FCB (concrete is even more expensive). The price of FCB went up after India increased the price of coal; in addition the poor dimensional accuracy of FCB requires a lot of mortar (and plaster), which means high construction costs. In most cases, FCB houses are not built earthquake resistant, making them a deadly risk in this earthquake prone country. Corrugated iron sheet houses on the other hand do not withstand cyclones that frequently hit Bangladesh.

## **Why reinvent the wheel when a proven technology does the job?! Copy paste with a few tweaks.**

CSEB is a proven technology that was developed in the 1950s and is being used in more than 30 countries around the world among them South Africa, Mexico and India. The production is low-tech and suitable for unskilled labourers: a mix of soil, sand, water and 5% cement (stabilizer) is compressed in a manual or automated block press. Depending on the type of soil that is locally available, the sand and cement ratio needs to be adjusted. CSEB air-dried for 28 days; the cement makes them strong and water resistant. CSEB dispenses with firing in kilns; this reduces CO<sub>2</sub>-emissions by 75% and prevents deforestation. They can be produced in various dimensions and shapes, e.g. hollow-interlocking blocks for disaster-resistant housing. This only requires a different mould in the same press. CSEB have a dimensional accuracy of 1mm, which reduces the required amount of mortar and plaster. CSEB lower construction cost by 25% compared to FCB.



CSEB production team in Bangladesh with Building Pioneers Founder Ava Mulla.



Set-up of CSEB press for production.

**Dear "competitor", please, please copy us! A bold approach served with bubbly start-up spirit.**

Building Pioneers is a social business start-up. Our mission is to create as much social and environmental impact as possible while being financially sustainable - not donation based or profit driven. We want to establish CSEB as a widely available alternative to FCB in all areas of Bangladesh. The sheer scale of the problem requires an unconventional approach that includes all relevant stakeholders including commercial companies, development agencies, government authorities, architects, builders etc. Building Pioneers does not have the capacity to replace 18 billion FCB by CSEB. But we have the skills and the drive to prove that CSEB is technically feasible and economically viable in Bangladesh. This will attract commercial companies (e.g. cement suppliers, brick kilns etc.) to enter into the market. Building Pioneers has successfully set-up a small-scale pilot production facility south of Dhaka with an enthusiastic production team, that appreciates the modern facility and good working conditions. This proof of concept allows us to approach the big players. The feedback from all the sides is overwhelming and promising. We are excited to set-up a large-scale production next year with a production capacity of several houses per day. ■

- **Ava Mulla**, Co-Founder, CEO,  
Building Pioneers UG, Germany

## URBAN RESILIENCE

# Urban Resilience: Three Ideas for Action

Given that cities and towns are the primary centers of human activity and development, efforts to strengthen urban resilience are critical. The role of cities rather than states in this age of rapid urbanization requires an urban focused approach for protecting against the various hazards and risks that urban populations face. Resilience in these contexts requires that the range of actors at the city level from individuals to households to communities and institutions (public and private) will have to individually and collectively engage with the hazards they face to cooperatively improve the factors that allow protection from these risks. This recognition means that new and innovative ideas will need to be developed, tested, scaled and adapted to various contexts. While the evidence base on effective practices to improve urban resilience remains thin, our collective experience and data is growing.

Three ideas for action now:

1. Develop and implement risk transfer mechanisms for the urban poor through disaster microinsurance. This will have multiple benefits. As an insurance system it can induce behavior change away from high risk areas and behavior using market forces or encourage disaster risk reduction measures to lower premium costs and risk. This idea can be implemented in the pre-disaster phase to promote long term recovery from day 1 of the crisis. Concern about cost feasibility and the covariate risk of pooling high risk clients together can be overcome with smart policies and facilities such as targeted insurance products and reinsurance. Microfinance has proven transformative when applied to groups typically excluded by traditional finance and this should be no exception.
2. Funding focused on high risk cities in the pre-disaster phase. Building resilience necessitates work before a crisis to improve the ability to recover. Humanitarian funding, however, is heavily weighted on the post-crisis part of the cycle. While funding cannot simply be shifted from post-crisis to pre-crisis and the need to fund acute crisis will remain, new funding needs to be prioritized towards the pre-crisis phase of the cycle. Starting with targeting high risk cities and high risk populations will provide and even greater return on investment.
3. Adopt resilience as an outcome and evaluation measure for humanitarian aid. Humanitarian response is unfortunately still heavily mired in evaluations that emphasise process measures rather than outcome measures. Pursuing outcome measures and beneficiary evaluations is vital. Unfortunately, the aid that follows a humanitarian crisis often does not help reduce the pre-existing risk that contributed to the crisis and in some cases even creates new risks in the pursuit of short term gains. A further shift in evaluations towards resilience as an outcome measure of aid intervention should be prioritized to ensure that the gains of humanitarian aid are not lost to continued risk. ■

- **Ronak B. Patel**, MD MPH, Stanford University

# I Will Stand Again

The following case study has emerged from interactions through a demand survey conducted in Assam, April 2015, for piloting a disaster micro-insurance for small and informal business.

The name of the respondent is Mr. Upendra Shah, aged 50 years. He lives in Silpukhuri along with his wife and three children. He is a migrant from Bihar. He owns a sugarcane juice stall near Guwahati's main bus stand. His brothers and other members of his extended family stay in Bihar.

Due to financial constraints Mr. Shah was able to study only till the 7th standard. At that time, his parents couldn't afford to send him to high school. Therefore, at the age of 12, he dropped out of school and started his life as a daily wage labourer. As time passed he got married. After marriage it was very difficult for him to earn more in that place. So he came to Guwahati with some friends in search of a better livelihood. Since he didn't finish his schooling, he couldn't find a decent job in Guwahati. The

only remaining alternatives he had left were either to start a business or again work as a labourer. But he did not want to work as a labourer again.

Mr. Shah had saved some money for three years. But this was not sufficient to start a business. So he took money from friends and relatives and started the business of sugarcane juice. As it is a seasonal business, the business starts from April and ends in October. During the remaining months, he is forced to work as a daily wage labourer to make ends meet. He has been working in this manner for the past 15 years to eke out a living.

As time went by, his family grew and he had three sons. His elder son studies in the 8th standard while the younger one in the 4th standard. But the income that Mr. Shah earns is not sufficient to bear all the expenses of his family. Besides selling sugarcane he also takes up odd jobs which enable him to earn a monthly income of approximately Rs. 5000. His household expenses per month amount to approximately Rs. 5000.

Due to the floods in the previous year, he was forced to close the shop for 12 to 15 days. Furthermore, incessant rains also resulted in the closure of his shop for 4-5 days for a number of times. The loss of business days due to flooding and the rains resulted in substantial losses in revenue for him.

To cover for these losses, Mr. Shah was driven to borrow money from a local money lender at an exorbitant rate of interest. To make matters worse, he also suffers from some health problems which prevent him from moving his stall from its present location (near home in case of an emergency) to a better one. Currently his elder son helps him in the business. Still it is difficult for him to earn enough. So he is considering returning to their home (Bihar), so at least he can survive somehow.

He currently does not subscribe to any insurance scheme. On being informed about disaster insurance he showed enthusiasm towards the same and wanted to buy disaster insurance, if he continues with the business. He said that in all probability he would continue the business for next 1 year. If everything will run smoothly as earlier, then he would go for micro insurance.

Gaining access to a risk transfer mechanism like disaster microinsurance can be very beneficial for Mr. Shah. It would provide him with an indispensable net of safety against unforeseeable losses from floods. It would also enable him to use his meagre savings for purposes other than recovery from loss and damage suffered during floods. ■

- Arup Das, sSTEP, Assam



Mr. Upendra Shah in front of his sugarcane juice stall.

## Case Study of Sankar Muduli



AIDMI and SWAD team handing out a cheque of INR 15,000 to Mr. Sankar Muduli, as a compensation against loss due to fire break out at his home. He was covered by 'Afat Vimo'; a disaster micro-insurance scheme initiated in 2011 by AIDMI.

Sankar Muduli is a 58 year old inhabitant of Jaypur village in Jaypur Gram Panchayat (GP), Odisha. He works as a potter but barely manages to make ends meet. Consequently, he falls under the category of low income households.

After an awareness program conducted by SWAD on Micro insurance in Jaypur village, he opted to subscribe to the *Afat Vimo* Yojana (disaster microinsurance). This microinsurance scheme is being run in conjunction with the United India Insurance Company (UIIC) and has a miniscule premium payment of Rs. 152 per annum.

After subscribing to this scheme, he paid the premium in the month of

April, 2014 for the year. On 15th October, 2015 a fire broke out in Sankar's pottery shed and destroyed everything. He informed SWAD regarding the losses he suffered. He also apprised the concerned government official (Tahasildar) of his situation so that he may avail some help from the government. But the government official turned down his appeal stating that fire was caused due to Sankar's own negligence.

It was the *Afat Vimo* policy that came to his rescue. After SWAD and UIIC established the validity of his claim, Sankar was able to get a claim settlement of Rs. 16,000 under the *Afat Vimo* policy. This money helped him to cover the losses he had suffered and restart his business. He feels very

satisfied with this disaster microinsurance policy and says that not only will he renew his policy every year, he will also spread the word about this policy in his village.

This case highlights the benefits of a risk transfer mechanism like disaster microinsurance. It depicts how disaster microinsurance was able to provide succor to an economically weak small business owner during exigent times. Most importantly, Sankar's story serves to underscore the importance of disaster microinsurance as an instrument for resilience building and poverty alleviation. ■

– **Binapani Mishra**, Secretary,  
Society for Women Action  
Development (SWAD), Puri, Odisha  
with **Kshitij Gupta**, AIDMI

## ABOUT HIF



This issue of Southasiadisasters.net has been produced under the project 'Innovating Disaster Micro-Insurance for Local Market Recovery'. This project is supported by the Humanitarian Innovation Fund, a programme managed by ELRHA (Enhancing Learning and Research for Humanitarian Assistance). AIDMI is delighted to receive the generous support of Humanitarian Innovation Fund towards this issue.

The Humanitarian Innovation Fund (HIF) is a non-profit grant making facility supporting organisations and individuals to identify, nurture and share innovative and scalable solutions to the challenges facing effective humanitarian assistance. Visit [www.humanitarianinnovation.org](http://www.humanitarianinnovation.org) for more information.

The Humanitarian Innovation Fund is managed by ELRHA (Enhancing Learning and Research for Humanitarian Assistance), in partnership with ALNAP (Active Learning Network for Accountability and Performance in Humanitarian Action). ELRHA is hosted by Save the Children UK. Visit [www.elrha.org](http://www.elrha.org) for more information.

The Humanitarian Innovation Fund is co-funded by UK and Canadian aid from the UK Department for International Development (DFID) and the Canadian International Development Agency (CIDA). The views expressed in this document are not necessarily those of DFID, or CIDA. ■

Do you wish to receive this publication regularly? Write to AIDMI ([bestteam@aidmi.org](mailto:bestteam@aidmi.org)). The publication will be sent by E-mail. Your comments help *southasiadisasters.net* remain an effective and informative resource for regional issues of disaster risk management. Please contribute comments, features, reports, discussion points, and essays about your work. Today!

### Editorial Advisors:

#### Denis Nkala

Regional Coordinator, South-South Cooperation and Country Support (Asia-Pacific), United Nations Development Programme, New York

#### Ian Davis

Visiting Professor in Disaster Risk Management in Copenhagen, Lund, Kyoto and Oxford Brookes Universities

#### Dr. John Twigg

Senior Research Associate, Department of Civil, Environmental and Geomatic Engineering, University College London, London

#### Madhavi Malalgoda Ariyabandu

Sub-Regional Coordinator, Central Asia & South Caucasus, United Nations Office for Disaster Risk Reduction (UNISDR), Kazakhstan

#### Mihir R. Bhatt

All India Disaster Mitigation Institute, India

#### Dr. Satchit Balsari, MD, MPH

The University Hospital of Columbia and Cornell, New York, USA

#### T. Nanda Kumar

Chairman, National Dairy Development Board (NDDB), Anand, Gujarat, India



### ALL INDIA DISASTER MITIGATION INSTITUTE

411 Sakar Five, Behind Old Natraj Cinema, Near Mithakhali Railway Crossing, Ashram Road, Ahmedabad-380 009 India. Tele/Fax: +91-79-2658 2962

E-mail: [bestteam@aidmi.org](mailto:bestteam@aidmi.org), Website: <http://www.aidmi.org>, [www.southasiadisasters.net](http://www.southasiadisasters.net)