

Journal

April, 2015



Disaster Management
- Things to know & learn



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From the Publisher

Natural disasters of any kind have crippling effect not only on affected individuals but also on the society, the region and depending on the scale of damage, countries too. Whether it be the recent earthquake in Nepal and Bihar, the Cyclone that hit Andhra Pradesh or be it the floods in Jammu and Kashmir, the scale of destruction is immense. These disasters cause losses both to life and property. While loss of life cannot be fully compensated by any means, loss to property can be dealt with effectively with adequate insurance covers taken prior to the disaster.



There are challenges in covering Natural disasters by insurance be it either lack of awareness or the availability of appropriate insurance covers. While the people at large need to be educated about the need for such covers, expeditious claim settlements and immediate assistance upon happening of the insured events encourage the uninsured to move into the insurance net thereby expanding the insurance base and thus further bringing down costs.

While several steps are being taken by the Indian insurance industry with active support of the Regulator towards swift handling of claims of such natural calamities, it is also essential that the industry takes pro-active steps towards loss-prevention and loss-minimization . Insurers can be pro-active and make use of modern early warning techniques to sensitize insured public on loss prevention before the disaster hits as also towards loss minimization after the calamity.

I am happy to note that Articles published in the current issue of the Journal have covered various facets of Disaster Management. While dedicating this issue of Journal to the earthquake victims of India and Nepal, I take this opportunity to assure that all necessary steps will be taken towards expeditious claim settlement of the insured.

Keeping in view the increasing menace of mis-selling, the focus of next Issue of the Journal will be "Mis-Selling in the Insurance Industry with particular reference to Policyholders".

A handwritten signature in black ink, which appears to read 'T.S. Vijayan', is positioned above the printed name.

T.S. Vijayan

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Role of Insurance Companies in Disaster Management

Dr Aswathi Nair & Dr Karanam Nagaraja Rao

Introduction

A legendary story from Maha Bharata is the story of Kaurava's plot to destroy the lak house where the five Pandavas with their mother were sleeping. Lak is prone to fire risk and a casual flick of fire from the match box is enough to engulf it in to flames. The clever Pandavas dug out a deep cave as a provision and escape mechanism as a disaster management strategy. Unlike in the story, not always we can anticipate the disaster - for the disasters may drown us in Tsunamis or batter us with battalions of woes. Thus disaster management can and should be both preventive as well as curative. The role of insurance sector both in preventive as well as curative aspects of disaster management is vital since it is this sector that has to share the cost of claim settlement operations. The catalytic role of insurance companies cannot be underestimated in this major task.

What is a disaster?

The dictionary meaning of a disaster is a sudden accident or a natural

catastrophe that causes great damage or loss of life. It is inappropriately ill managed risk with catastrophic effects. Disaster is a culmination of of natural hazards or manmade hazards systematically perpetrated on the planet. The factors responsible for disasters mainly twofold:

- a. Manmade- wars, terrorist attacks, bomb blasts, chemical and biological warfare, emission of Chlorofluorocarbons, oil spillage, nuclear explosions, dumping of e-waste and the like.
- b. Nature made- Earth quakes, Tsunamis, tempests, hurricanes and the like.

Magnitude of the problem:

The disastrous consequence of natural disasters leaves behind a track of substantial loss of lives, belongings and employment. They outweigh the developmental gains and financial progress. High vulnerability profile of future disasters has been a challenge for the affected economies and communities.

“India is vulnerable, in varying degrees, to a large number of disasters. More than 58.6 per cent of the landmass is prone to earthquakes of moderate to very high intensity; over 40 million hectares (12%) of its land is prone to floods and river erosion; close to 5,700 kms, out of the 7,516 kms long coastline is prone to cyclones and tsunamis; 68% of its cultivable area is vulnerable to droughts; and, its hilly areas are at risk from landslides and avalanches. Moreover, India is also vulnerable to Chemical, Biological, Radiological and Nuclear (CBRN) emergencies and other man-made disasters.

Disaster risks in India are further compounded by increasing vulnerabilities related to changing demographics and socio-economic conditions, unplanned urbanization, development within high-risk zones, environmental degradation, climate change, geological hazards, epidemics and pandemics. Clearly, all these contribute to a situation where disasters seriously threaten India's economy, its population and sustainable development. Of the 7,516 km long coastline, close to

5,700 km is prone to cyclones and tsunamis” (National Disaster Management Authority, Vulnerability profile, 2013).

Approach to disaster management- role of insurance companies

India, by and large, has been ‘reactive’ in its perspective towards disasters with expensive capital being spent on relief, rehabilitation and restoration efforts. There is a prerequisite to be proactive in developing all-inclusive proficiencies for disaster management. The idea is to ingrain this concept in to the very processes and decision making systems since the investments in mitigation are more cost-effective than spending on relief, rehabilitation and rebuilding. Disaster insurance ought to be measured as a stage towards disaster preparation.

The setting up of National Disaster Management Authority (NDMA) under the Act of The National Disaster Management Act, 2005 gave an impetus in pushing forward a comprehensive disaster management policy in India. It has made the district as the nodal agency at the basic level. Insurance companies, though can play risk mitigation in a bigger way, they are not specifically considered as part of disaster management strategy.

Insurance companies risk departments have a potential role in forecasting disasters, mapping risk across the board, alert the authorities and stakeholders,

involving vulnerable groups, and to subsequently develop responsible response mechanisms/plans to build and better management of risk. But the insurance market in India, both life and non-life, has not been able to fulfill its potential and achieve higher penetration levels and thus lag behind in their goal of achieving corporate social responsibility.

The recently held Third United Nations World Conference on Disaster Risk Reduction, Ministerial Round Tables at Sendai Japan, 15 March, which established worldwide collaboration from 186 United Nations associate states, focused on ‘scale-up disaster risk reduction efforts that can be measured against development outcomes. It should emphasize greater outreach at local and community levels and reflect on the substantive issues, especially the economic case for greater investment in disaster risk management. Finally, discussions that define a post-2015 framework for disaster risk reduction need to be broad, consultative and inclusive of all stakeholders’ (<http://www.unisdr.org/we/coordinate/hfa-post2015>). Insurance companies are certainly have high stake in disaster management and they should be part of problem solving mechanism. But there is little appreciation of the role of insurance companies in NDMA frame of work. What is now required is the proactive participation of insurance companies in disaster management for national good.

Disaster Risk Management Mechanisms:

The risk management processes in insurance spans a range of activities, starting with classifying, evaluating, averting and decreasing risk, to appraising, carrying and diversifying risk.

The insurance industry plays a serious role in arranging financial shield and safety to risk prone communities to upkeep, and preserve the improvements of, social and economic development. In 2013, worldwide financial losses due to natural disasters calculated to USD 131 billion, which signifies nearly 2% of GDP, with USD 37 billion of these damages being insured. Certain risk mitigation/ post risk management mechanisms are:

- a. Risk transfer mechanisms can successfully arrest the spiraling cost of disasters and their wider socio-economic import. The logic behind risk transfers is that the transferor takes on the risk as a part or consequence of its core business and his incentive being that the cost of transferring or hedging the risk is calculated to be lower than the cost of retaining it.
- b. Micro insurance policies provide protection to low-income households against specific risks like insuring their crops, livestock and assets in exchange for a regular payment of premiums that are calculated proportional to the likelihood and cost of the relevant risk.

c. Business interruption insurance - It is a fact that many industries would miss critical functioning proficiency after a natural catastrophe. Business interruption insurance is an enabling instrument permitting for exchange of uncertainty of financial risk for the certainty of a premium. It specifies a recognition of the risk and displays that the sector is conscious of the perils it is exposed to and is expected to guard itself against. Everyone wish to diminish the impact and the probability of occurrence. The strategy helps in business continuity planning.

d. Gujarat model of group Insurance in India- During the Gujarat earthquake, 2011, the Government Insurance Fund (GIF) of the Government of Gujarat acted as an insurer for all Government commercial and industrial schemes. The GIF undertook the responsibility of insurance of the properties belonging to the Government, semi-government or any other statutory bodies and public undertakings. The GIF was also associated with the personal group insurance schemes run by the Government in association with subsidiary insurance companies.

Taking a cue from the experience in community insurance in Gujarat, corporate sector can explore the possibility of group insurance on

the basis of a cluster of industries in an industrial estate or an industrial zone.

e. Macro-index based insurance linked securities offer important risk-transfer instruments which include index-based insurance solutions, catastrophe insurance pools and catastrophe bonds that facilitate the coverage of disaster risk in highly-exposed and vulnerable communities. Insurance-linked securities, such as catastrophe bonds, can bring alternative capital to cover disaster risk.

f. Disaster risks intersect with a wide range of environmental, social and governance risks. Disaster resilience protects the development gains and supports the economic, social and environmental dimensions of sustainable development. Therefore, disaster resilience is an integral component of sustainability.

Can Insurance companies innovate?

Can insurance companies resort to innovation in products and processes in the area of disaster management? There can be a few suggestions, given the pathetic appreciation of the role of insurance companies among the public in a hypothetical disaster that may or may not occur. The burden of creating awareness rests with the insurance companies. The awareness generation need to be

integrated in to the DNA of the insurance companies and their CSR teams should take upon this task as part of corporate social responsibility.

Disaster management is highly techno centric. The mapping of cause specific, technology specific and environmental specific disasters needs the adaptation of high degree of information technology. Are our R&D units in insurance companies have the expertise to map disaster prone areas and the relevant frequency charts? The Geographic Information System (GIS) helps in identifying the vulnerable areas with regard to disasters like flood, earth quake, hurricane and the like. Insurance companies can leverage the world-weather reports and alarming systems across the global spectrum and thus build up data to forecast the events in advance and it helps in mitigating the imminent loss of life and property. The general insurance companies can make use of weather based reports for quickening the process of claims in the area of crop insurance.

Issuance of group insurance policies for general insurance needs in a big way may be thought of by the insurance companies. Here the group is the entire flood affected area or the cluster of draught affected districts and the like. On the lines of social security policies designed for life insurance needs with the governmental subsidies, general insurance policies can be designed and developed on the

fulcrum of geo climatic data and weather reports. The creative partnership of public and private players injects necessary resilience in disaster management processes. The need is, therefore, to keep the information technology on high pedestal and embrace corporate entrepreneurial spirit in true spirit. The other procedural aspects such as hassle-free claim processing, dedicated operational staff to take care of the affected communities of people, utilizing the expertise of NGOs and SHGs in disaster management and above all creating insurance awareness among the

populace lie exclusively on the shoulders of the insurance companies.

Conclusion

No company can operate in isolation and insurance is no exception. Insurance companies operate in the social spectrum and the society itself is the stakeholder. Disaster management is to be viewed as a corporate social responsibility and all energies need to put in mitigating the catastrophic effects of disasters. As the range of disasters are beyond the limits and

boundaries of mechanical human efforts, there is a need to ingrain information technology on a large scale. Innovation in designing products, processing techniques and distribution mechanisms will go a long way in making an insurance company a good corporate citizen.

Dr Aswathi Nair & Dr Karanam Nagaraja Rao, (Faculty, School of Business, Alliance University, Bangalore)

Curtain Raiser for May 2015 Issue of IRDAI Journal

What to speak of the common man, even educated and elderly population of the country and particularly in the financial market are falling victim to mis-selling of various kinds-losing their hard earned saving with disaster effect on their family members. With availability of improved technology in the market the modus operandi adopted by perpetrators of such crime found to be quick and effective. This is not only affecting individuals but also society and having wide economic ramification for the country like ours. Keeping in view the huge psychological, societal and financial effects such Mis-selling have, May 2015 Issue of the Journal will focus on “ Mis-Selling with Particular reference to Policyholders of Insurance Industry”

B.K Sahu

Consultant Communication

Disaster Management and Govt. of India

Srinivas Bhoosarapu

Introduction:

Disaster: A disaster is a serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources. Disasters are seen as the consequence of inappropriately managed risk. These risks are the product of a combination of both hazard/s and vulnerability.

Type of Disaster include acts of terrorism, industrial sabotage, fire, natural disasters (such as earthquakes, hurricanes, etc.), public disorder, industrial accidents, and communication failures.

Developing countries suffer the greatest costs when a disaster hits - more than 95 percent of all deaths caused by hazards occur in developing countries, and losses due to natural hazards are 20 times greater (as a percentage of GDP) in developing countries than in industrialized countries.

A natural hazard is a natural process or phenomenon that may cause loss of life, injury or other health

impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

Various phenomena like earthquakes, landslides, volcanic eruptions, floods, hurricanes, tornadoes, blizzards, tsunamis, and cyclones are all natural hazards that kill thousands of people and destroy billions of dollars of habitat and property each year. However, the rapid growth of the world's population and its increased concentration often in hazardous environments has escalated both the frequency and severity of disasters. With the tropical climate and unstable land forms, coupled with deforestation, unplanned growth proliferation, non-engineered constructions which make the disaster-prone areas more vulnerable, tardy communication, and poor or no budgetary allocation for disaster prevention, developing countries suffer more or less chronically from natural disasters. Asia tops the list of casualties caused by natural hazards.

Disaster Management:

The development of emergency plans is a cyclical process, common

to many risk management disciplines, such as Business Continuity and Security Risk Management, as set out below:

- Recognition or identification of risks
- Ranking or evaluation of risks
 - o Responding to significant risks
 - o Tolerate
 - o Treat
 - o Transfer
 - o Terminate
- Resourcing controls
- Reaction Planning
- Reporting & monitoring risk performance
- Reviewing the Risk Management framework

There are a number of guidelines and publications regarding Emergency Planning, published by various professional organisations such as ASIS, FEMA and the Emergency Planning College. There are very few Emergency Management specific standards and emergency management as a discipline tends to fall under business resilience standards.

In order to avoid, or reduce significant losses to a business, emergency managers should work to identify and anticipate potential

risks, hopefully reducing their probability of occurring. In the event that an emergency does occur, managers should have a plan prepared to mitigate the effects of that emergency, as well as to ensure Business Continuity of critical operations post-incident. It is essential for an organisation to include procedures for determining whether an emergency situation has occurred and at what point an emergency management plan should be activated.

The recovery phase starts after the immediate threat to human life has subsided. The immediate goal of the recovery phase is to bring the affected area back to normalcy as quickly as possible. During reconstruction it is recommended to consider the location or construction material of the property.

In recent years the continuity feature of emergency management has resulted in a new concept, Emergency Management Information Systems (EMIS). For continuity and inter-operability between emergency management stakeholders, EMIS supports an infrastructure that integrates emergency plans at all levels of government and non-government involvement for all four phases of emergencies. In the healthcare field, hospitals utilize the Hospital Incident Command System (HICS) which provides structure and organization in a clearly defined chain of command

The World Bank has approved more than 500 projects related to disaster management, dealing with both disaster mitigation as well as reconstruction projects, amounting to more than US\$40 billion. These projects have taken place all over the world, in countries such as Argentina, Bangladesh, Colombia, Haiti, India, Mexico, Turkey and Vietnam.

Prevention and Mitigation

Prevention and mitigation projects include forest fire prevention measures, such as early warning measures and education campaigns; early-warning systems for hurricanes; flood prevention mechanisms (e.g. shore protection, terracing, etc.); and earthquake-prone construction. In a joint venture with Columbia University under the umbrella of the ProVention Consortium the World Bank has established a Global Risk Analysis of Natural Disaster Hotspots.

In June 2006, the World Bank, in response to the HFA, established the Global Facility for Disaster Reduction and Recovery (GFDRR), a partnership with other aid donors to reduce disaster losses. GFDRR helps developing countries fund development projects and programs that enhance local capacities for disaster prevention and emergency preparedness

4Rs is the emergency management cycle used in New Zealand, its four phases are known as

- o Reduction = Mitigation
- o Readiness = Preparedness
- o Response
- o Recovery

India

A protective wall built on the shore of the coastal town of Kalpakkam, in aftermath of the 2004 Indian Ocean Earthquake.

The National Disaster Management Authority is the primary government agency responsible for planning and capacity-building for disaster relief. Its emphasis is primarily on strategic risk management and mitigation, as well as developing policies and planning. The National Institute of Disaster Management is a policy think-tank and training institution for developing guidelines and training programs for mitigating disasters and managing crisis response.

The National Disaster Response Force is the government agency primarily responsible for emergency management during natural and man-made disasters, with specialized skills in search, rescue and rehabilitation. The Ministry of Science and Technology also contains an agency that brings the expertise of earth scientists and meteorologists to emergency management. The Indian Armed Forces also plays an important role in the rescue/recovery operations after a disaster.

Aniruddha's Academy of Disaster Management (ACDM) is a non-profit

organization in Mumbai, India with 'disaster management' as its principal objective.

Govt. of India:

Based on the Risk and Mitigation Process with support of the Government, Insurance products various risks should be available in the market. Premium of the product should be in affordable condition for the Policyholders.

Disasters disrupt progress and destroy the outcome of developmental efforts over several years, often pushing nations in quest for progress back by several decades. Thus, efficient reduction of disaster risks, rather than mere response to their occurrence, has in recent times, received increased attention both within India and abroad. With a vision to build a safe and disaster resilient India, the Government has adopted a holistic, proactive, multi-hazard oriented and technology driven strategy by promoting a culture of prevention, mitigation, preparedness and response.

Several initiatives to achieve sustainable reduction in disaster risk. These encompass multi-hazard planning, use of technology for disaster mitigation, and empowerment of various stakeholders by enhancing their capacities to prepare, respond and mitigate hazards.

Disaster Management Act, 2005:

The institutional and policy mechanisms for carrying out response, relief and rehabilitation have been well established in the country. In the recent past, the orientation for handling disaster situations has been changed from a relief-centric to a holistic, multi-dimensional and multi-disciplinary approach involving diverse scientific, engineering, social and financial processes. The new approach encompasses the entire gamut of disaster management activities, i.e. prevention, mitigation, preparedness, response, relief and rehabilitation. This approach stems from the conviction that development is not sustainable unless disaster mitigation and response is mainstreamed and inbuilt into the development process. Keeping in view the vision articulated under the Disaster Management Act, 2005 for building a safe and disaster resilient India, the Disaster Management Policy was announced in 2009.

On the recommendation of the Thirteenth Finance Commission, the Ministry of Finance, GoI has allocated funds for strengthening disaster management institutions, capacity building and response mechanisms.

The following schemes are also being considered for disaster risk mitigation:-

- **National Emergency Communication Plan (Phase II):** The project aims to provide VSATs for voice, data and video communication between National Emergency Operation Centre, NDRF and NDMA.
- **School Safety Programme:** The project aims to promote a culture of safety in schools.
- **National Earthquake Risk Mitigation Project:** The project aims to enhance the preparedness of the nation to face earthquakes and to reduce the loss to life and property caused by earthquakes.
- **National Landslide Risk Mitigation Project:** This project aims to strengthen the structural and non-structural landslide mitigation efforts to reduce the landslide risk and vulnerability in hilly districts prone to
 - landslides and mud flows.
- **National Flood Risk Mitigation Project:** This project aims to mitigate consequences of floods by improving capacity for effective preparedness, promptness in response and to assess the risk and vulnerabilities associated with floods.

Table :

State-wise Allocation of State Disaster Response Fund

(₹ in Crore)

Sl. No	States	2010-11	2011-12	2012-13	2013-14	2014-15	Total
1	Andhra Pradesh	508.84	534.28	560.99	589.04	618.49	2811.64
2	Arunachal Pradesh	36.74	38.58	40.51	42.54	44.67	203.04
3	Assam	263.77	276.96	290.81	305.35	320.62	1457.51
4	Bihar	334.49	351.21	368.77	387.21	406.57	1848.25
5	Chhattisgarh	151.32	158.89	166.83	175.17	183.93	836.14
6	Goa	2.96	3.11	3.27	3.43	3.6	16.37
7	Gujarat	502.12	527.23	553.59	581.27	610.33	2774.54
8	Haryana	192.9	202.55	212.68	223.31	234.48	1065.92
9	Himachal Pradesh	130.76	137.3	144.17	151.38	158.95	722.56
10	Jammu & Kashmir	172.46	181.08	190.13	199.64	209.62	952.93
11	Jharkhand	259.45	272.42	286.04	300.34	315.36	1433.61
12	Karnataka	160.96	169.01	177.46	186.33	195.65	889.41
13	Kerala	131.08	137.63	144.51	151.74	159.33	724.29
14	Madhya Pradesh	392.75	412.39	433.01	454.66	477.39	2170.2
15	Maharashtra	442.69	464.82	488.06	512.46	538.08	2446.11
16	Manipur	7.22	7.58	7.96	8.36	8.78	39.9
17	Meghalaya	14.65	15.38	16.15	16.96	17.81	80.95
18	Mizoram	8.55	8.98	9.43	9.9	10.4	47.26
19	Nagaland	4.97	5.22	5.48	5.75	6.04	27.46
20	Orissa	391.58	411.16	431.72	453.31	475.98	2163.75
21	Punjab	222.92	234.07	245.77	258.06	270.96	1231.78
22	Rajasthan	600.66	630.69	662.22	695.33	730.1	3319
23	Sikkim	22.75	23.89	25.08	26.33	27.65	125.7
24	Tamil Nadu	293.52	308.2	323.61	339.79	356.78	1621.9
25	Tripura	19.31	20.28	21.29	22.35	23.47	106.7
26	Uttar Pradesh	385.39	404.66	424.89	446.13	468.44	2129.51
27	Uttarakhand	117.66	123.54	129.72	136.21	143.02	650.15
28	West Bengal	304.83	320.07	336.07	352.87	370.51	1684.35
	Total	6077.3	6381.18	6700.22	7035.22	7387.01	33580.93

Source: Annex.11.1, Thirteenth Finance Commission Report, pp 450, Ministry of Finance, Gol.

Conclusion:

The institutional and policy mechanisms for carrying out response, relief and rehabilitation have been well established in the country. In the recent past, the orientation for handling disaster situations has been changed from a relief-centric to a holistic, multi-dimensional and multi-disciplinary approach involving diverse scientific, engineering, social and financial processes. The new approach encompasses the entire gamut of disaster management activities, accordingly Insurance Industry should create the products and awareness for the Disaster Management affectively.

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Diversity presents Unique Problems for Disaster Management

Jagendra Kumar

Across the globe the economic and insured losses from disasters are rapidly rising in line with the frequency and severity of major natural catastrophes which is due to a combination of rapid simultaneous global economic and population growth. Limitations in public and private sector disaster risk prevention management and planning, globalisation, and a growing concentration of assets and people in urban centres and high exposure areas also contribute to the rise in disaster-related losses. Natural catastrophes affect all sectors of business, both directly and indirectly. Disasters can cause operational and supply chain disruptions through the physical damage to property and/or loss of critical resources and infrastructure, such as energy supplies and transmission, public infrastructure and distribution networks. The World Bank has estimated the damage from Japan's earthquake and tsunami to be around \$235 billion and says that it could take the country five years to rebuild itself. The degree of devastation in Japan has left other nations in shock. India too has had

experiences of earthquake, tsunami and floods, but there is still limited awareness about the need for catastrophe insurance.

WHAT IS DISASTER?

WHO has defined the disaster as “Any occurrence that cause damage, ecological disruption, loss of human life, deterioration of health and health services on a scale, sufficient to warrant an extraordinary response from outside the affected community of area.” A disaster is a sudden, calamitous event that seriously disrupts the functioning of a community or society and causes human, material, and economic or environmental losses that exceed the community's or society's ability to cope using its own resources. Though often caused by nature, disasters can have human origins. A disaster occurs when a hazard impacts on vulnerable people. The combination of hazards, vulnerability and inability to reduce the potential negative consequences of risk results in disaster. Disasters can take many different forms, and both natural and man-made or technological in

nature - that can impact a community.

Hurricanes and tropical storms are among the most powerful natural disasters because of their size and destructive potential. Tornadoes are relatively brief but violent, potentially causing winds in excess of 200 mph. Both earthquakes and tornadoes strike suddenly without warning. Flooding is the most common of natural hazards, and requires an understanding of the natural systems of our environment, including floodplains and the frequency of flooding events. Wildfires are more prevalent in the event of a drought. Geography, history of disasters in a particular area, and the type of catastrophic event all impact how easily—or how challenging—it will be to recover following a natural disaster.

Disasters also can be caused by humans. Hazardous materials emergencies include chemical spills and groundwater contamination. Workplace fires are more common and can cause significant property damage and loss of life. Communities are also vulnerable to

threats posed by extremist groups who use violence against both people and property. High-risk targets include military and civilian government facilities, international airports, large cities and high-profile landmarks. Cyber-terrorism involves attacks against computers and networks done to intimidate or coerce a government or its people for political or social objectives.

RESEARCH- A KEY SUPPORT:

The greater the vulnerability of the population to natural disasters, and the smaller the budget available for disaster reduction measures, the greater the need for research required to determine the most cost-effective measures for risk reduction. Consequently, the need for research and training increases as the availability of funds decreases. Presently, very little research on disaster management is being undertaken in India, especially in the human sciences, as most risk reduction and disaster management approaches have relied on technological or engineering solutions. Research is a key support mechanism for any activity and thus disaster management should also undertake research projects or study those aspects that have already been researched.

TRAINING & EDUCATION:

Many institutions ranging from health, fire to others have training

programmes that are designed to ensure personnel are able to deal with emergency situations. Given that disaster management involves a wide ranging field of expertise, the question is: should future training needs be best met with a dedicated programme of training for disaster management, or should training needs be designed that augment and integrate into existing programmes? The use of existing entry routes may help to cover a wider constituency than having a dedicated training programme specifically for disaster management. The main emphasis is on integration. Many services and training institutions have compiled, or are in the process of compiling, various training courses and modules that address or impact upon disaster management issues

PLANNING & SETTING STANDARD:

Planning is required to reduce vulnerability. It is also required to ensure that mechanisms are in place to reduce the risks and impacts of disasters when they occur. A major feature of the new disaster management approach is that it attempts to understand the causes of vulnerability and risk. This includes taking into account socio-economic, environmental and others factors that worsen the impacts of recurrent threats. Depending on the geographic location and targeting the most vulnerable sectors of our society, plans can be put in place that can

be implemented at the national, provincial, local or community level. Mitigation against disasters requires implementation and participation at all levels. Planning for disasters is even more crucial given the range of social, economic and cultural diversity that exists in the country. This diversity presents unique problems for disaster management. India's Vulnerability to Disasters is as follow:

- 59 per cent of land is earthquake-prone
- 12 per cent of land is prone to floods and river erosion
- 76 per cent of coastline is vulnerable to cyclones and tsunamis
- 68 per cent of cultivable land is susceptible to drought
- Up to 90 per cent of forest area is prone to fires

ROLE OF "NDMA" IN DISASTER MANAGEMENT:

Questions are being raised about the role of the National Disaster Management Authority (NDMA). The apex body to deal with all types of disasters, natural or man-made, was constituted in 2006. The objective of the authority has been to lay down policies and guidelines for effective management, risk mitigation and prevention of disasters in the country. However, in Uttarakhand, people were caught

unawares by the series of flash floods and landslides in the absence of any mitigation measure or early warning despite the state having a history of such disasters. The post disaster relief response has been equally poor—more than 70,000 people were reported missing. NDMA had initiated projects for flood mitigation and landslide mitigation at the national level in 2008. However, those projects have either been abandoned midway or are being redesigned because of poor planning. The projects to prepare national vulnerability atlases of landslides, floods and earthquake are also incomplete.

DISASTER RELIEF AND RISK TRANSFER:

India is extremely vulnerable to natural disasters. Floods, droughts, cyclones, landslides and earthquakes are a recurrent phenomenon in India. Disaster Risks are also increasing due to development processes exposing a larger number of people and assets to climate related hazards at a pace that outstrips our ability to reduce vulnerability and develop resilience. The situation is worsened by the frequent occurrence of manmade disasters. Insurance plays a key role in facilitating public-private partnerships for dealing with the losses from disasters. It stresses the importance of identifying and assessing the risk, understanding

both the decision processes of individuals/organisations in hazard-prone areas and the insurability issues associated with the disaster risk. Insurance cover is one of the best methods of mechanism to financially protect individuals, companies and the public sector against damage.

(A) PROTECTING LIFE:

When a family loses its key earning member through death or disability that could throw the entire family into crisis, especially when there is no external financial support. A term policy is a pure risk cover product that supports a family that has lost its key income-earning member by providing a lump sum amount. The premium for pure term covers is usually nominal as no maturity benefits are attached. With term policies now available online, term insurance policy premium rates have come down even further. A term policy, however, only offers benefits on death. It doesn't help in a crisis situation such as the accidental disability. One should thus supplement pure term cover with an accident cover.

An accident cover can be taken as a standalone policy from a general insurer or even as a rider with the term policy from a life insurer. Death or disability that follows an accident (natural disasters included) is covered under a personal accident policy. There are bouquets of products from different insurers,

both to cover life and personal accidents. Risks covered and benefits offered increase with the premium (there are policies that give twice the sum assured on an accident cover if the claim follows accident on mass transport). So, it pays to make an informed choice.

(B) PROTECTING AGRICULTURE:

The Centre is devising an insurance product for farmers that will guarantee to make good their loss in income from natural calamities for at least seven years. For crops with minimum support prices (MSPs), the loss in income will be based on the MSP; for others, it will be calculated based on the average market price of the commodity for the past seven years. If states do not want to avail of the central scheme, they can frame individual income insurance schemes, depending on their geographical and agro-climatic needs. The proposed scheme, to be called the National Agriculture Income Insurance Scheme, will be run on a pilot basis from 2015-16. The farm income insurance scheme will have two components — price-based insurance and yield-based insurance. Currently, the Department of Agriculture runs two crop insurance schemes, one of which is weather-based. Guarantee compensation for loss of yield in case of natural disasters but do not make good the loss in income. The Centre will give the same financial assistance to states that want to

have their own income insurance scheme as it does for other crop insurance schemes.

(C) PROTECTING PROPERTY:

General insurers as a rule do not offer blanket policies that cover all risks. The risk of damage of a house and its contents following flood, earthquake, tsunami, fire as also terrorist activities are insurable risks which protect the future of your assets (or your dependants) from natural disasters. A home insurance policy, offered by both public and private general secures the structure and contents of a building used for residential purposes. It covers risks that follow fire, earthquake, flood, storms and landslide (a cover for earthquake and flood automatically includes risk from a tsunami). Terrorism cover is usually an 'add-on feature' for a little extra premium. General insurance policies are normally issued for a year and have to be renewed at the end of every year. There is still a lot of room to find ways of integrating insurance policies in an innovative way as part of an overall disaster management strategy.

There are four essential parts to disaster management: prevention, preparation, relief and recovery. Not all catastrophes can be prevented, but many types can be avoided, and the effects of others can be mitigated. Floods, droughts, cyclones, landslides and

earthquakes are a recurrent phenomenon in India. Disaster Risks are also increasing due to development processes exposing a larger number of people and assets to climate related hazards at a pace that outstrips our ability to reduce vulnerability and develop resilience. The situation is worsened by the frequent occurrence of manmade disasters. The Government of India have adopted mitigation and prevention as essential components of their development strategy. A number of dams and barrages have been constructed. The State Governments have been assisted to take up mitigation programmes like construction of raised platforms etc. Floods continue to be a menace however mainly because of the huge quantum of silt being carried by the rivers emanating from the Himalayas. This silt has raised the bed level in many rivers to above the level of the countryside. To evolve both short-term and long-term strategy for flood management/erosion control, Government of India have recently constituted a Central Task Force which will examine causes of the problem of recurring floods and erosion in States and region prone to flood and erosion; and suggest short-term and long-term measures. In order to devise an effective and holistic campaign, a steering committee for mass media campaign has been constituted at the national level with due representation of experts from

diverse streams of communication.. The mass media campaign will help build the knowledge, attitude and skills of the people in vulnerability reduction and sustainable disaster risk management measures.

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An overview of Hudhud losses and its impact on economy and Insurance Industry

YRC.Bharadwaj

Vishakapatnam also called as Vizag is known for its picturesque landscapes and greenery across the city region. The entire city is covered with huge sprawling trees, lush green vegetation, splendid

mountains and beautiful beaches. This was the picture till the super cyclone Hudhud hit the serene city.

Very Severe Cyclone Hudhud made landfall on October 12, 2014 between 6:30 and 7:30 UTC near the

city of Vizag on the east coast of India with maximum sustained winds of 87 knots, according to the India Meteorological Department.

With the above brief introduction, it is apt to know various dimensions of Hudhud which left Vizag with a trail of destruction.

Preparedness of the Government:

The newly elected government with its able Chief Minister of the AP State had responded with great eagerness and efficiency to the emergency situation. The entire government machinery has been alerted well in advance and they had taken all the necessary disaster management plans and executed them perfectly. To illustrate a few of them; evacuation of the people living near by sea shores in the entire region, issuing strict warnings not to go for fishing and ensured no one ventures into waters, installing rescue teams at strategic places to meet any kind emergency and seamless coordination with ISRO and



IMD to understand the velocity and magnitude of the Hudhud. Bulletins were also issued to keep the public vigilant. All these timely precautions have led to low casualties.

Using Scientific Technology

IMD and ISRO played a key role in identifying the storm well in advance and most importantly provided satellite pictures as to the exact point of impact of the cyclone. This has helped with timely release of periodical bulletins which kept the public/ industries to be informed and also prepare accordingly. ISRO supplied satellite pictures also helped speed up rescue and restoration work for officials and personnel monitoring the situation.

Loss Estimates:

AIR Worldwide initially estimated that insured losses from Very Severe Cyclone Hudhud will range between USD 100 million and USD 400 million. AIR's insured loss estimates assume insurance take-up rates of 3% for residential lines, 20% for commercial, and 30% for industrial. These take-up rates are somewhat higher than state-wide take-up rates and reflect the fact that the majority of losses are coming from Vizag, which has higher insurance penetration compared to the average across Andhra Pradesh.

Vizag, Vizianagaram and Srikakulam districts bore the brunt of Hudhud fury; State government has estimated a loss of USD 3.651 billion. Vizag Industries GDP is USD 5.83 billion, due to this fury, many of the industries production affected for more than 10 days. On an average, production has fallen down to USD 33 million per day in the said region. Many MD & BI claims reported from industrial clients. RINL, BHEL, HPCL, Corramandel, Port to name a few major industries faced millions of dollar losses.

Reports of damage to hundreds of fishing boats have come in from these districts. Scores of communication towers were also uprooted by strong winds, disrupting telephone and mobile network. 33 million hectare farm lands had suffered destruction in the region, amounting to an estimated INR 2,287 Cr towards crop losses alone. A whopping 40,000 electricity poles were knocked down by the cyclone fury in Vizag and an estimate of 2,470 houses has suffered total damages. An estimate of 3753 kilometers roads suffered damages. Almost every household in the four affected districts suffered damage at least to some extent.

Indian Navy suffered a loss of USD 333 million; For Railways it caused a loss of USD 833,000 as it cancelled more than 100 trains and diverted an equal number of services. Universities, commercial buildings

and educational institutes have suffered huge losses.

Vizag Steel plant (RINL), one of the largest steel production facilities in India, suffered damages of USD 39 million. The plant's operations came to a standstill as power supply was disrupted. Nearly about 20 days of operation has been affected. The plant lost daily USD 6.6 million due to loss of production; also the cyclone left the plant stripped of its glorious greenery.

Vizag Airport suffered a loss of USD 83 million. The airport's roof was blown away while its communication network collapsed. All air services to and from the port city were suspended and resumed only after 4 days.

Vizag Port has suffered a loss of USD 38.65 million. Huge impact left on SME's and tiny industries with heavy winds and loss of production.

Rescue Operations:

Thanks to state preparedness and the government machinery who worked extremely well to bring back the normality. In just 4 days, 80% of the power and drinking water supply has been restored in Vizag. A mobile app was also created to report the damages and where the restoration is awaited for.

Future plans for Vizag :

In the Aftermath of this natural fury, government has called for a study

on laying underground power cables in the Vizag region to avoid power failure at times of natural calamities and to avert major industry losses.

The government was planning to build cyclone resilient homes in villages five km from the coast to help the villagers. Government is also preparing a blue print on this event, recording all the experiences for even more preparedness in future. Government has had taken good initiative steps to restore the greenery and in this direction millions of plantations are underway. It is also advisable to revisit the building design codes to withstand the winds of this size to avoid losses in future.

Insurer’s response:

All Insurers have responded with earnestness and many of them have opened special claim cells in Vizag for speedy settlement of claims. Many of the major losses have already been paid for. Dwelling and motor claims had met the insured community expectations. Munich Re described this event as the most expensive natural catastrophe of 2014, resulting in a loss of \$7 billion for the Indian economy, with insured losses of US\$ 530m. In view of the accumulation of catastrophe losses in the recent past, calls for creating a natural catastrophe pool for insurance in India are on the rise. GIC Re, is planning to form a natural catastrophe disaster pool.

At this end, appreciate to look at the reasons behind the size of staggering economic losses and available mitigating steps.

Rapid urbanisation, climate change and strong economic growth increases the loss potential from natural perils.

Mr. Jerry Velasquez, UNISDR’s Chief of Advocacy and Outreach, noted: The way we do development is the reason why economic losses are so high. Development drivers are stronger drivers of the increase of risks than hazards themselves. In order to limit economic losses in the future, we need to improve urban planning and make economic growth resilient.

In recent past the subcontinent is increasingly exposed to heavy rain and storms with high frequency. Flash floods have occurred in many locations caused fatalities and PD losses. It is no surprise then that adequate protection against cat disorders is becoming a hot topic for state as well as other stake holders.

It is impossible to accurately determine precisely where or when the next natural hazard event will strike. However Government in coordination with all the stake holders can have a sustainable mitigation sketch in place to avert major losses from cat events. We now look at the constructive role of the stake holders including state and insurance industry.

- State to formulate an effective building and urbanization code in collaboration with risk modelers and insurers to avert major losses expected from catastrophe risks.
- (Re) Insurers to develop an XOL product for state to cover all the coastal areas and river basins / dams/roads and infrastructure for a sum of USD 3-5 Bln in excess of USD100 Mln.
- Promote cooperation between academic, scientific and research entities and networks and the (Re) Insurers to develop new products and services to help reduce disaster risk.
- State to develop and implement of normative frameworks, standards and plans for disaster risk reduction; engage in the implementation of local, national, regional and global plans and strategies; contribute to and support public awareness, a culture of prevention and education on disaster risk; and advocate for resilient communities and an inclusive and all-of-society disaster risk management which strengthen the synergies across groups, as appropriate.
- State along with all the relevant stakeholders should perform the function of capacity building for effective and efficient management of disaster management.

- Formulate public policies aimed at addressing the issues of prevention or relocation, where possible, of human settlements in disaster risk zones.
- Strengthening good governance in disaster risk reduction at the national, regional levels and improving preparedness and national coordination for disaster response, rehabilitation and reconstruction.
- Risk modelers to develop a realistic, transparent, easy to understand and meaningful risk measure tools which enable to take day to day risk selection decisions. This should also provide a consistent yardstick to measure the risk across the organization.
- State to have a realistic and consistent risk measurement model in place to measure the risk across the potential disaster risk zones (River basins/dams/ coastal area).
- State and other stake holders to develop a sustainable and executable policy on climate change and green energy.
- Insurers to develop a very low cost product to cover the last rites cost for the deceased in CAT events to fulfill their social commitment role.
- NDMA to have more active relationships with (Re) Insurance Industry and Risk Modelers for effective catastrophe /disaster risk management.
- Last but not least , all the stake holders to be actively involved in building up quality data that enables risk modelers to design consistent and reliable probabilistic models.

Conclusion:

In the face of rapid urbanisation and climate change flood risk remain to be active; Insurers along with other key stake holders keep itself

constantly engaged in their respective roles to understand the catastrophe risks, risk accumulation and ultimately to structure proactive steps to mitigate the damage that catastrophe events can cause. State also to consider having a natural disaster fund to protect the state budget from worsening storm, flood and fire events.

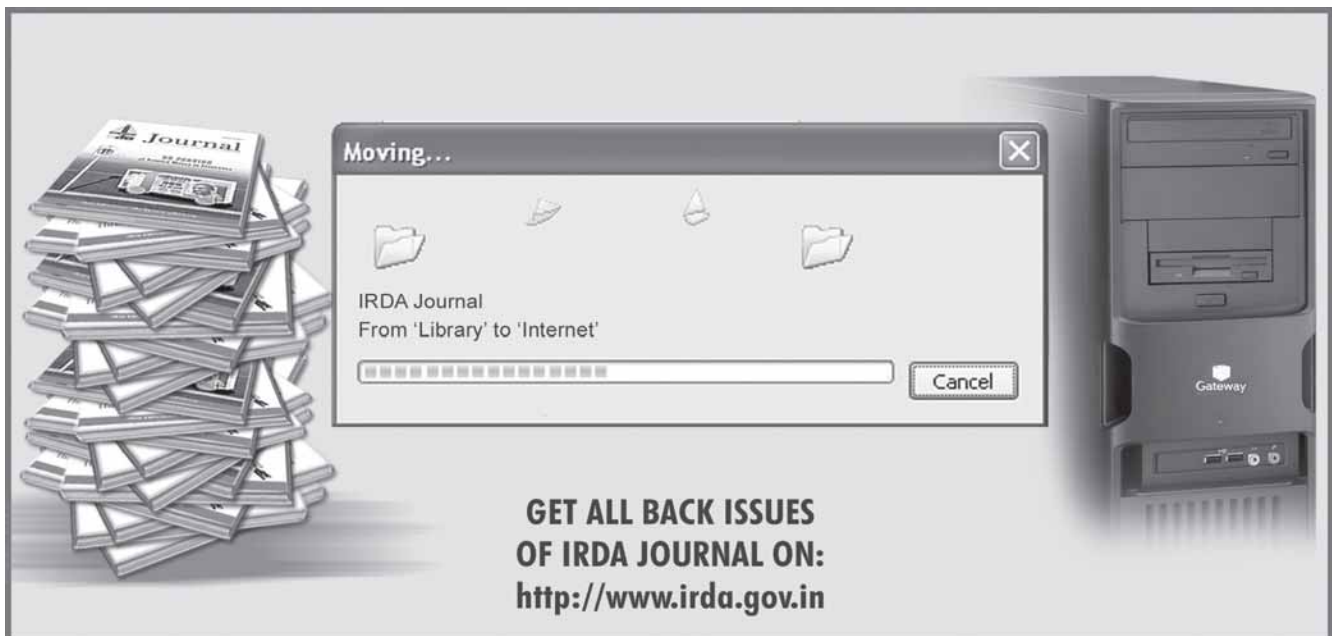
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'Building Financial Resilience of SAARC Countries against Natural Disasters: The Insurance Option'

Presented by Author in a Seminar organised by SAARC Disaster Management Centre (SDMC) and Insurance Institute of India (III)

Dr. George E. Thomas

Introduction

Losses due to natural disaster have been steadily increasing. Losses could be different - loss of human life, personal misery, loss of livelihood and economic losses. While monetary losses were high for the developed countries, the financial impact on the gross domestic product (GDP) was greater for the other countries. Fatalities too were disproportionately higher in developing countries. Though the Hyogo Framework¹ for Action 2005-2015 emphasises the need for building the resilience of nations and communities to recover from the effects of disasters by creating ex-ante mechanisms for financial risk transfer including insurance, the need is particularly relevant for developing countries. Insurance for financing disaster risks has existed in various operational models such as micro-insurance for low-income populations, private insurance markets, public-private partnerships, reinsurance pools, risk

transfer for governments etc. The United Nations Climate Change Conference² of 2010 (Cancun Adaptation Framework) also advocates enhanced action on risk transfer and climate risk insurance.

SAARC Disaster Management Centre (SDMC) and Insurance Institute of India (III) discussed the concerns in detail and decided to work together to bring about greater conceptual clarity on the issues at hand and facilitate the creating of an implementable roadmap for the SAARC Region.

This paper is intended to bring the various dimensions of the issue to the discussion table and initiate a process of collective thinking among the various stakeholders and thought leaders from the areas of disaster management and insurance in the SAARC countries. The paper also seeks to enable researchers to draw from the experiences of developed countries and create innovative models that suit the

realities of the SAARC countries and protect them against the financial consequences of natural disasters.

The paper attempts to address the problem from multiple actionable areas so that the roles expected to be played by major stakeholders like insurers, reinsurers and governments are clearly understood and action plans formulated to try and find an answer to the complex issues of financing disaster cost.

The Thought Sequence

1. The Complexity of the Context
2. The Quest for Solutions
3. The Importance of Insurance as a Solution for Financing Disaster
4. The Dynamics of Insurance
5. The Conditions Necessary to Make Insurance Work
6. The Importance of Governmental Support in Making Insurance Work
7. Evolving an Action Plan
8. Conclusion

“Procrastination is the foundation of all disasters.” Pandora Poikilos³

1. THE COMPLEXITY OF THE CONTEXT

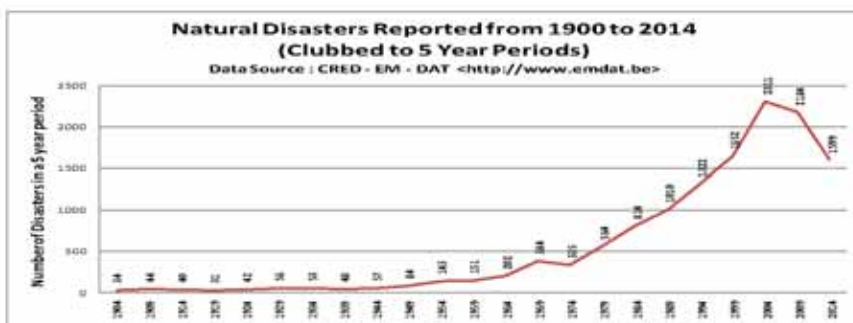
Natural catastrophes have always taken mankind by surprise. While the bow-wave effect of the disaster shocks the affected area and painfully devastates its serenity, the wake-effect of the disaster causes a long chain of events that slowly and steadily pulls the survivors of the disaster into a vortex of suffering - physical, emotional and financial.

Data available with the Emergency Events Database⁴ (EM-DAT Database) of the Centre for Research on the Epidemiology of Disasters (CRED) shows that while the average number of natural disasters in a year was around 7 in the early 1900s, it rose to around 50 per year in the 1970s. In the early 2000s the average number of disasters per year was between 350 and 550. The actual number of reported natural disasters increased from around 50 in 1960 to more than 400 in 2011, representing a 700% increase in a fifty year period. Interestingly,

though the number of people affected by disasters increased substantially, the number of people killed by natural disasters has decreased steadily since the 1960s. As per reported estimates, the economic damage caused by natural disasters increased from less than 1 billion (USD) in 1950 to more than 100 billion (USD) in 2011.

Munich Re’s study ‘Emerging countries affected by insurance gaps’⁵ points out that natural catastrophe losses are on the rise and that many developing and emerging countries are hit especially hard. It states that the increase in the natural catastrophe (nat-cat) losses is primarily because the socio-economic factors involved have changed. The concentration of risks has increased in almost all the disaster prone zones, practically exposing more value to catastrophic situations. This has translated into increased accumulation of risks, especially in regions where state agencies and the insurance industry have paid little heed when analysing loss potential. Secondly, in a number of regions, weather-related natural catastrophes have grown more

frequent and more severe in recent years, changing the risk landscape. Changes in many atmospheric processes would cause numerous regions to experience higher losses with a major impact on material assets and affecting the lives and well-being of millions of people. The study reveals that more than two million people lost their lives in natural hazard events between 1980 and 2012, of which 60% was due to weather and climatic events and the remaining 40% due to geophysical events. As per Munich Re data, while a storm surge in Bangladesh claimed 300,000 lives in 1970, an earthquake in China killed some 242,000 people in 1976. Other examples of major humanitarian tragedies caused by natural disasters include the 2004 tsunami in East Asia with 220,000 fatalities, the tropical cyclone in Myanmar of 2008 that killed 140,000 and the earthquake in Haiti where 222,000 people lost their lives in 2010. The study points out that the experience was different with strong economies where Hurricane Katrina of 2005 - the costliest natural catastrophe to affect the USA for many decades - claimed only some 1,300 lives and the exceptionally strong earthquake and tsunami that hit Japan in 2011 only around 16,000. As per Munich Re⁶ data, in the period 1980-2012, natural catastrophe fatalities were highest in developing and emerging countries amounting to 52% in Asia, 27% in Africa, 12% in North America, 7% in Europe, 2 % in South America



and less than 1% in Australia. This calls our attention to that sad fact that though natural catastrophes occur throughout the world, the probability of dying due to a natural catastrophe is greater for those living in developing and emerging countries, geographic specialities notwithstanding.

The Munich Re⁷ study also observes that the "most vulnerable population groups are also those with least access to affordable insurance cover by way of support to help them adapt to the economic consequences of natural events in the short and the long term. Due to their limited tax bases, high indebtedness and at best low nat-cat insurance density, many highly exposed developing and emerging countries have insufficient financial resources. They cannot rely solely on donor aid to fully recover from the effects of a catastrophe because aid normally covers a mere fraction of the overall losses, and it is impossible to predict how much will be available and when with the necessary certainty. Being

dependent on an uncertain source of funding following a disaster can exacerbate the consequences because reconstruction can start neither immediately nor on the requisite scale."

2. THE QUEST FOR SOLUTIONS

The Importance of Creating Funding Systems Ex-ante: Given that no system can exactly predict when and where a disaster would strike, one fundamental that we should agree upon is that while the occurrence of a disaster is an unexpected event for anyone else, it is an expected event for the Government.

Over the past few decades and especially in the years following the Hyogo Framework for Action (HFA) 2005, more and more nations have become aware that negative impacts of natural disasters can be prevented and mitigated through concerted effort and have started believing in the importance of catastrophic risk mitigation through cooperation among nations. The world has made giant strides in

creating scientific early warning systems that allow more lead time for man to respond to situations, developing infrastructural barriers to provide insulation from disaster, prevention or mitigating the impact of disasters, employing latest technology to provide physical resilience and building ex-post systems that can respond with speed and efficiency. However, as regards financing the cost of disaster, other than creating relief funds, precious little has been done by way of creating ex-ante systems, especially among the developing nations. Funding the costs of disaster still remains solely a Governmental problem. A quick look at the common ex-post disaster funding mechanisms is presented in the table below:

Governmental ex-ante systems for disaster financing conventionally consist of three windows, (i) an emergency fund for immediate humanitarian needs; (ii) a program to support the reconstruction of public infrastructure and low-income housing; and (iii) a trust

Ex-post measures	Features/ Advantages	Disadvantages
Budget	National source of funding	Limited, resources may get diverted to other priority areas.
Raising taxes	National measure	Limited, politically sensitive, likely to dampen economic growth.
Debt Donor aid	Standard instrument Inexpensive	Potentially slow and costly. Availability and quantum uncertain, slow, distribution systems may not ensure equitable disbursement of relief.

Ex-ante measures	Features/ Advantages	Disadvantages
Creating reserve funds	National measure, does not impact financial strength	Costly, resources may get diverted or be idle over time
Contingent financing	Guaranteed access, defined interest	Repayable with interest
Indemnity insurance	Low cost for insured	Loss assessment needed
Parametric insurance	Low cost for insured, Quick disbursement, low administrative costs	Basic risk of insured

fund to manage the resources and act as the contracting authority for risk transfer mechanisms, through which governments could leverage their financial capacity⁸. Some of the well known ex-ante disaster-funding mechanisms are presented below:

There is an increased interest in harnessing the power of risk financing solutions, hinging on risk transfer mechanisms, as part of the holistic disaster risk management strategy. Here, risk transfer would essentially mean shifting the burden of financing disaster induced loss to another entity through legislation or contract or any other means. In addition to creating safety nets and calamity funds from a social protection point of view, different governments have tried out a range of risk transfer mechanisms such as catastrophe bonds, catastrophe pools, index-based insurances and micro-insurance schemes to finance disaster, with varying degrees of success.

This paper does not intend to position insurance as the single panacea for all disaster related problems. What is recommended is

a holistic approach towards effective catastrophe risk management where the time honoured system of ex-ante disaster financing through insurance is also factored.

As per the Munich Re⁹ study mentioned earlier, in "industrialised, developing and emerging economies, catastrophe risk management is most effective when it follows a two-tier strategy."

Strategy 1 is to reduce the "vulnerability of human beings and material assets to extreme atmospheric and geophysical events, even before such events occur, by adopting long-term ex-ante risk mitigation strategies". Issues like land-use management in flood-prone areas, building codes in regions with exposure to windstorms or earthquakes and the development of information and warning systems to help reducing vulnerability form part of this strategy. The Study argues that while the insurance industry,

collectively would have the data and the expertise needed to support

policy makers and supranational organisations in these areas, "the political and social responsibility for implementing appropriate regulations and ensuring they are complied with lies with government."

Strategy 2 is to set up comprehensive risk-based financing mechanisms on a national scale to ensure funding is available to cover losses caused by a major natural catastrophic event.

3. THE IMPORTANCE OF INSURANCE AS A SOLUTION FOR FINANCING DISASTER

Despite consistent endeavours of global bodies in creating awareness and the individual efforts of many countries, in most developing and developed nations the familiar scenario is that when disaster strikes, the Government practically continues to be the only source of financial relief. For tiding over the crisis situation, it still finances the cost of disaster by expending funds allocated for development activity. In developed countries, on the other hand, insurers and humanitarian agencies arrive earlier at the scene

to play their respective roles and Governments need to provide only the residual funding.

As a time-honoured ex-ante system for financing ex-post funding, through insurance, risk is transferred to the larger community which absorbs the financial shock of its unfortunate subset. Built on concepts of risk sharing and mutuality, and proven over centuries as a system that works in alleviating misfortunes, the insurance mechanism can ease the financial burden on the Government in providing disaster relief. In situations where Governments need viable channels for delivering relief at grass-root levels, the existence of organised insurance mechanisms can be considered a channel for reaching out to the affected. Many consider the well organised insurance sub-systems dependable in crunch situations in matters like assessment of claims, identification of the affected and capable of acting professionally to ensure that Governmental relief measures reach their intended destinations.

The International Covenant on Economic, Social and Cultural Rights (Article 9) of the Universal Declaration of Human Rights, an unchallenged statement, to which nations subscribe by virtue of their membership in the United Nations, recognizes “the right of everyone to social security, including social insurance.”

International Labour Organisation’s (ILO) “Social Protection Floor for Fair and Inclusive Globalization”¹⁰ considers livelihoods, food security and the natural environment as integral aspects of resilience building strategies. It discusses about integrating disaster and climate risk management into enhanced social protection schemes that are resilient to shocks while improving standards for safety, health, assets and well-being. It also discusses integration of poverty reduction initiatives such as employment guarantee schemes, conditional cash transfers, microfinance and insurance. A minimum ‘social protection floor’ to access essential services and income, including protection from the risks of disasters, is now being recognised as a universal human right that must be guaranteed to every individual.

Action 5 of the Hyogo Framework’s Priorities for Action¹¹ 2005-15, emphasises, inter alia, the need to strengthen disaster preparedness for effective response at all levels. At an umbrella level, in times of disaster, impacts and losses can be substantially reduced if authorities, individuals and communities in hazard-prone areas are well prepared and ready to act and are equipped with the knowledge and capacities for effective disaster management. To promote “the development of financial risk-sharing mechanisms, particularly

insurance and reinsurance against disasters” is one of the objectives stated by HFA in 2005. ISDR’s action plan urges stakeholders to develop partnerships “to implement schemes that spread out risks, reduce insurance premiums, expand insurance coverage and increase financing for post-disaster reconstruction, including through public and private partnerships” and to promote “an environment that encourages a culture of insurance in developing countries.”

‘Words Into Action’¹²: A Guide for Implementing the Hyogo Framework’ flagged insurance

Hyogo Framework for Action (HFA)

The HFA is a results-based plan of action adopted by governments around the world to reduce disaster risks and vulnerabilities to natural hazards and to increase the resilience of nations and communities to disasters over the period 2005 to 2015.

HFA Priority #1: *Ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation. HFA Priority #2:* *Identify, assess, and monitor disaster risks and enhance early warning.*

HFA Priority #3: *Use knowledge, innovation, and education to build a culture of safety and resilience at all levels.*

HFA Priority #4: *Reduce the underlying risk factors.*

HFA Priority #5: *Strengthen disaster preparedness for effective response at all levels.*

related priorities in various sections and stipulated that financial institutions providing mortgage loans or insurance should be involved in HFA implementation. It pointed out that actions for implementing national frameworks for disaster risk reduction would include promoting the development and use of insurance schemes that provide coverage to highly vulnerable populations, encourage mitigation through premium incentives and reduce government liability in case of disaster. Involvement of experts from the meteorological service, geological and earth science institutes, academia, professional organizations and insurance with capacity in scientific data collection and knowledge development was also stipulated. Another area highlighted for action was that risk transfer involves insurance and reinsurance both for physical damage and business interruption, and that coverage should provide cash compensation immediately after the disaster. It advocates the creation of large pools of insured to avoid paying high premiums and introduction of mandatory insurance for those businesses and public institutions that have to operate in the hazardous conditions. “Government¹³ can also facilitate public-private partnerships by creating appropriate and innovative fiscal and other policy measures, for instance promoting microcredit schemes, insurance, safer

construction and information technologies useful for early warning. This will ensure participation of the private sector in risk reduction and also generate much needed investment for risk prevention and mitigation activities.” The Guide touches upon financing specific post-disaster recovery needs of the poor, physically and age related disabilities, through microcredit and insurance products and services. The Guide for Implementation includes assessment of current practices, efficiency of insurance and reinsurance mechanisms in covering catastrophic events for the public sector, private sector and personal residences.

There was a clear mandate for expanding insurance programs. On the cards were, (i) exploring new methods of using public subsidies to promote the growth of insurance business as the economic benefits of such subsidies may be more cost-effective than post-disaster relief and rehabilitation, (ii) establishing crop insurance in another area, where governments subsidize the premium payments of the poor, thus saving on relief funds; developing life insurance for household earners as part of poverty-reduction programmes is another, (iii) In publicly funded housing, establishing compulsory insurance for risk reduction, with reduced premiums was earmarked as an action area while establishing compulsory home

insurance to protect against disasters, was another. Promoting the development and use of insurance schemes that provide coverage to highly vulnerable populations and (v) encouraging mitigation through premium incentives and reducing government liability in case of disaster, were also flagged as important.

Elaine Dezenski¹⁴ emphasises that “Financial preparedness includes the concept of risk transfer to protect people’s livelihoods. Traditional insurance using risk-based pricing free from political intervention is an important part of the toolkit to enable faster recovery and reconstruction. Alternative preparedness measures include micro-insurance; catastrophe bonds, which in parametric form can provide fast liquidity in times of crisis; and country-level funds to help reduce public sector liability.” She points out that making these measures affordable may require additional support from other stakeholders or post-disaster funding mechanisms. Underscoring that the “need to understand risk puts the insurance industry at the centre of private stakeholders and as a bridge to the public sector, the RRN paper points out that the role of the insurance industry needs to be complemented by other key stakeholders including banks, engineering, construction and real estate companies, and the media.

'Advancing¹⁵ Disaster Risk Financing and Insurance in ASEAN Member States: Framework and options for Implementation' makes five key recommendations to support and encourage the further development of cost-effective, affordable, and sustainable disaster risk financing and insurance in ASEAN Member States. These recommendations aim to offer a framework for a regional agenda on disaster risk financing and insurance and are equally relevant in the SAARC Region as well though each State may need to prioritize its agenda and tailor the recommendations to the country and contexts. This study and its recommendations were found to be of great relevance in the SAARC context as it intended to promote the development of national and regional disaster risk financing and insurance strategies within the context of the broader disaster risk management agenda. It also aimed to contribute towards better understanding and collective knowledge on disaster risk financing and insurance, to encourage open dialogue between stakeholders on how strategies can best be developed to increase financial resilience against natural disasters, as well as to look into training and capacity building of local stakeholders.

The gist of the recommendations is reproduced below:

"Recommendation 1: Develop risk information and modelling systems

for ASEAN governments to assess the economic and fiscal impact of natural disasters and include those risks in overall fiscal risk management.

Recommendation 2: Develop disaster risk financing and insurance strategies at the national and sub-national levels to manage potential budget volatility associated with natural disasters and provide insurance coverage against natural disasters for key public assets.

Recommendation 3: Establish national disaster funds as a financial mechanism to ensure the fast disbursement and execution of funds in the aftermath of a disaster.

Recommendation 4: Promote private catastrophe risk insurance markets through public-private partnerships and the development of enabling regulatory and risk market infrastructure.

Recommendation 5: Strengthen regional cooperation on disaster risk financing and insurance to support its development, including the establishment of a regional catastrophe risk insurance vehicle."

Drawing a leaf from Recommendation 5 above, among the SAARC nations also, the development of disaster risk financing and insurance can be strengthened via regional cooperation among Member States and a dedicated regional program on Disaster Risk Financing and

Insurance could be established to support these activities. As of now, we have already made a beginning by the formation of a dedicated SAARC Disaster

Management Centre (SDMC) and the following three areas earmarked for cooperation can be dove-tailed into the official SAARC/ SDMC agenda as well.

- Create Regional level risk information, assessment and modelling systems. These would be more cost-effective than individual country equivalents, particularly in the context of trans-boundary hazards, and would promote regional cooperation in risk management. The resulting risk assessments can be used to develop country-specific financial disaster risk profiles.
- Create Regional knowledge advisory services and capacity building programs to facilitate knowledge sharing.
- Create a Regional vehicle to leverage international reinsurance and capital markets. This would potentially generate significant economies of scale via both risk pooling benefits and reduced operating costs, thereby making risk transfer products more affordable both for governments and private individuals.

As we near the end of the Hyogo Framework of Action (HFA) with the world starting a dialogue on post 2015 interventions, efforts on monitoring and reviewing the progress on HFA Priorities are very much visible.

Reviewing the progress of 133 countries towards the objectives and goals of the HFA for 2009-2011, John Harding¹⁶ points out that in many cases, disaster risk reduction spending is not effectively monitored and the appropriate methodology, standards and capacity for such monitoring may not be in place. Further, the right ministries may not be sufficiently engaged, explicit disaster risk reduction budgets may be very limited and the government spending on disaster risk reduction very low. The mid-term review¹⁷ of the HFA by UNISDR points out the lack of efforts by the private sector and by international financial institutions to increase access to risk transfer measures such as insurance. Though efforts at developing new innovative products for risk transfer ranged from weather-indexed insurance for small farmers to catastrophic risk financing for nation states, the work was devoid of a clear set of well proven mechanisms. The review showed that 44 out of 76 countries have some form of national

contingency funds for disaster response purposes, while 34 out of 76 countries reported that post-disaster recovery programs explicitly incorporated and budgeted for Disaster Risk Reduction (DRR). As regards risk transfer mechanisms, (a) some 32 out of 76 countries indicated in their HFA monitoring reports that their country had some form of catastrophe insurance in place, (b) 8 countries had issued catastrophe bonds and (c) a number of countries indicated that they should explore the introduction of insurance mechanisms to improve the financial management of disaster risk reduction.

The European Union brought out a Green Paper on the Insurance of Natural and Man-made Disasters in April 2013 to raise awareness and launch a consultation process on the subject. The Malta Forum¹⁸ for Climate Change Adaptation concurred with the paper that insurance can be considered an appropriate tool to remedy natural and man-made disasters and many other types of damages as well and endorsed the EU view that insurance plays an important role as an instrument for climate change adaptation. “The most important strength of insurance is that, when appropriately designed, it can have strong preventive and therefore risk

mitigating attributes. In that respect insurance has major advantages, especially compared to alternative financing strategies (such as government compensation or a compensation fund financed via a tax). Also, government strategies should therefore be primarily geared towards stimulating insurance based solutions, since those can aim at the mitigation of disaster risks.” As per studies in the European context, the Forum states that “there are increasingly positive experiences with insurance for disasters (more particularly flooding), demonstrating the ability of insurance not only to adequately compensate victims of disasters, but also to provide incentives to adopt appropriate mitigation strategies.” The Malta Forum, however, points out the existence of academic and empirical literature that indicates the particular conditions under which insurance could play this important role.

As per Munich Re¹⁹, property catastrophe insurance programs are designed to protect private and/or public assets against natural disasters and promote ex-ante financial risk management of natural disaster risk. It points out that “with an increasing concentration of people and assets

Period 1980-2012: Fatalities	Asia America	Africa	North America	Europe	South	Australia
Natural catastrophe fatalities per continent	52%	27%	12%	7%	2 %	< 1%

Period 1980-2012: Insured Losses	Africa	South America	Australia	Asia	Europe	North America
Insured losses per continent	< 1%	1 %	5%	14%	16%	64%

in high risk zones (e.g., coastal areas), many cities have become more vulnerable to natural hazards, especially in developing countries where poor land management and weak enforcement of building codes lead to significant losses from property damage after natural disasters."

Fatalities: As per the Munich Re's study huge gaps exist amongst these continents. When the disasters for the period 1980-2012 are geographically distributed, it shows that natural catastrophe fatalities per continent were highest in Asia at 52% followed by 27% in Africa.

Economic Losses: As per the estimates of NatCat Service²⁰ presented in the graph below, the overall economic losses due to natural catastrophe during the period 1980 to 2010, totalled \$380 billion while the insured losses totalled

\$105 billion. While the distribution of insured losses as per Munich Re statistics were 14% in Asia and less than 1% in Africa, insured losses were 64% in North America and 16% in Europe.

This huge gap in insurance cover is another area of concern. Even though insurance is acclaimed as a benign system of protection where the self-respect of the recipient is

kept intact on the one hand and no post-claim obligations get attached to the beneficiary, insurance protection is sadly not available for those who need it most in emerging and developing countries. According to the World Bank²¹ studies, in the period 1980-2012, low and low-to-medium income economies (i.e. with Gross National Incomes (GNI) of less than US\$ 1,026 and US\$ 1,026-4,035 respectively) accounted for 10% of overall losses compared with a mere 1% of insured losses worldwide. As per the study, for "every euro of destruction caused by a natural catastrophe in Asia, on average only eight cents was covered by insurance during this period, while the average for the same period was 40 cents on the American continent (North, Central and South America)."

Munich Re²² points out that due to the lack of insurance cover, reconstruction following a disaster may be delayed or even not happen in poorer countries. Thus, natural catastrophes may adversely affect economic growth in emerging and developing countries in the long term. The IPCC SREX²³ Report, 2011 emphasises on the complexity of such atmospheric phenomena and indicates that this situation will further deteriorate as rising air and ocean temperatures can cause more frequent and/or more extreme

atmospheric conditions such as "too little water" (drought) or "too much water" (flooding). While on the one hand the difficulty in predicting the impact climate change will have on a given country is more for developing countries; on the other hand, disaster-prone developing and emerging countries find it most difficult to adapt to changes of this sort. Their weak economic base and lesser availability of options for improving the overall resilience of their economies to exogenous shocks, complicate the situation further.

4. THE DYNAMICS OF INSURANCE

The 'principle of solidarity' and the 'principle of mutuality' form part of the bedrock on which the Insurance system has been founded.

The Principle of Solidarity is based on the notion that the system belongs to everyone and benefits everyone. Solidarity underpins the social insurance or universal coverage model and is usually associated with mandatory participation, risk equalisation, applicability of community rated premiums, minimum common benefit packages, no underwriting and guaranteed renewals.²⁴ This model is seen in Social Insurance schemes where individuals contribute a sum to the insurance pool which is not explicitly linked

to their actual level of risk. [In actual terms it is often seen that someone else like the government or a philanthropic body makes the payment on their behalf as well.] In social insurance, any claim which is made on the insurance fund is met from the pool, and may be based on an entitlement arising from contributions or may be related to the individual's level of need. Social insurance programmes based on solidarity principles emerged in many developed nations in the 20th century, but in many cases lost the favour of the contributors due to various issues in actual implementation.

Risk-pooling and benefits are often described as three pillars in social security systems. The 1st Pillar confers universal benefits for all citizens and funding is typically from common taxes. The 2nd Pillar can be a contributory reinforcement or even a substitute for Pillar 1 characterised by mechanisms to ensure social solidarity usually by income-based cross-subsidies, risk-related cross subsidies and usually mandatory participation. The 3rd Pillar refers to discretionary social security over-and-above the essential minimum levels. However, this pillar which envisages individuals to make decisions at their discretion can exist only if a basic consumer protection by the Government already exists.²⁵

There are some well known examples of this model. (1) A

universal social security program to cover all citizens, regardless of class, in the event of sickness or injury making them unable to work, was created by the National Council of the French Resistance during the 2nd World War. (2) A generalized, national social security system for the integration and evolution of social security was brought out in post-war France in line with the studies of noted British economist William Beveridge.

Solidarity is premised on the notion that the system belongs to everyone and benefits everyone. At any given moment there are a majority who are bearing the cost of premiums so that the small number of unfortunate can receive the facilities they need. Those who are paying now are aware that a time may come when the roles are reversed and they become the recipients. RVZ, the Dutch Government's advisory body states that "Solidarity is essentially about transfers between citizens (i.e. insurance policyholders). Solidarity and its associated transfers can take many different forms, from small-scale, informal arrangements to statutory provisions for the population as a whole." Comprehensive arrangements seek to guarantee access for all citizens to the primary necessities of life and in the Netherlands, have resulted in laws such as the Social Assistance Act (ABW), social insurance schemes and the collective healthcare laws like Exceptional Medical Expenses

Act (AWBZ), Care Insurance Act (ZVW) and Social Support Act (WMO). In essence, everyone helps to pay for these schemes through statutory premiums and taxes - with the realization that a loss of income or need for care can happen to anyone. Solidarity looks beyond income-solidarity to include socio-economic differences like the need to continue working beyond pensionable age. Solidarity is most successful when proper use is ensured and all stakeholders feel responsible for the care system, bearing out the knowledge that the system exists not only for them, but because of them. Recognizing the public good may be practically in the self interest of the participants, for only then they can continue banking on solidarity in the future. Historically, this feeling of responsibility has worked better than minute supervision and control.

Weaknesses of Solidarity based Models: RVZ²⁶ points out that the chances that a person will seek recourse to collective solidarity are unevenly distributed over the population due to various reasons like some segments of the population being more resilient.

Studies conducted by RVZ show that in Solidarity based models, it is accepted that "broadly speaking, people fall on two sides of the net, with those who pay more on one side and those who receive more on the other". However, when there is

a perception that certain individuals or groups can influence what they receive from the system, this acceptance declines. A study by RVZ examining the principle of solidarity in the context of health insurance, pointed out that "sustained rise in healthcare costs and hike in care premiums and personal excess in recent years, together with the current economic malaise, is eroding the Dutch public's confidence in the solidarity principle as defined above, and testing faith in the promise that a contribution made today offers guarantees for the future." (emphasis added). The growing number of people with chronic conditions such as diabetes and an increasing awareness about the behavioural components that factor into (and cause) illness are actually exacerbating the scenario. This study²⁷ lays bare "one of the fundamental weaknesses of systems based on solidarity: that resources are vulnerable to misuse, abuse and fraudulent use - not just by citizens-cum-patients, but equally by care providers and insurers."

Solidarity is a collective achievement. As everyone's solidarity depends in turn on the solidarity of others, it can prosper or plummet in a society depending on the measure of trust people have in the solidarity of others. For solidarity to work, the prime stakeholders - the citizens, who pay the premiums and benefit from it,

should share in common a sense of trust in the concept of mutual solidarity. In this context, mutuality imposes an obligation on everyone involved to manage and expend collective resources as efficiently as possible.

The Principle of Mutuality where the losses of the affected few are voluntarily shared by many individuals, who are more or less similarly placed, is commonly seen in the private, market-based models. Mutuality is hall-marked by voluntary participation, premiums based on risks covered and rating by specific factors based on underwriting and no guarantee of renewability.

History recounts the existence of certain professional organizations that provided private professional collective security (limited assistance) to their members right from the Middle Ages. Though this system was put to an end by the Allarde Decree²⁸ of 1791, it got resurrected as the Charte de la Mutualité, or Charter of Mutuality by the law of 1 April 1898 which establishes the principles of 'mutualisme', as they are found today in French law. 'Mutuelles' - organizations for collective social insurance - were permitted to offer loans to any French citizen.

We can find that alongside the movement for mutual, private social insurance, legislators pushed state-sponsored social aid, which was

based on the principle of national solidarity. Schemes for free medical assistance, worker compensation claims, childbirth assistance programs, elderly and disabled persons assistance programs, child welfare clinics and free or subsidized milk supplies came into being as a result of various legislations. The development of insurance companies in the early years of the 20th century, was also encouraged by legislation²⁹. It is important to note that all the 3 systems, viz. Social Security driven by the State, Mutuels run on cooperative principles and Insurance Companies which are profit driven, work using different models towards the same end - amelioration of the financial aftermath of loss making events. Early Mutuels worked as small communities, some calling themselves lodges or clubs, based on mutuality and interdependence among all the members, where only the members could benefit from the club.

Hybrid models where mutuality and solidarity principles are practiced together do also exist. In such models we find limited underwriting, limited risk rating, portability, open enrolment, guaranteed renewability, waiting periods, extensive pre-existing conditions and support by way of tax subsidies.

5. THE CONDITIONS NECESSARY TO MAKE INSURANCE WORK

Bearing the risk of catastrophic losses due to natural or man-made disaster is a challenge to any entity and more so to the insurer which is contractually liable to fund its costs.

As part of the contractual obligation, the Insurance mechanism takes over the risk of financing the costs of disaster, to a pre-determined extent. This makes it imperative for the insurer to assess the risk and reasonably estimate the possibility of the disaster to occur. The insurer should also have some sort of an estimate of the financial implications in the event of the disaster striking. The insurer needs to know the specific factors that make a place more or less disaster prone and the concentration of risk - in terms of human or animal lives or assets at risk. One should also bear in mind that insurers are mostly limited companies and cannot in principle be exposed to unlimited risks and liability in the face of catastrophic or multi-catastrophic situations. There exists a need for complementary or supplementary mechanisms as well. Before examining the multifarious needs of insurers, let us have a closer look at what is expected from the Government to make insurance work.

Reasons for low demand for Disaster Insurance: In its responses to the 'Green Paper on the Insurance

of Natural and Man-made Disasters³⁰, the Malta Forum points out five factors that could "account for a low demand for the cover for natural disasters.

- (i) Cognitive limitations as a result of which low-probability events like natural disasters are systematically misjudged. This is also called the "it will not happen to me" attitude.
- (ii) A behavioural bias as a result of which insurance is considered as an investment. Since low probability events like disasters cannot guarantee a return on investment there is low demand. People may actually be prepared, in a sense, to bear uncertain losses rather than bear the certain 'loss' of paying the insurance premium on the premise that the loss may never actually happen given its low probability.
- (iii) Ex post government relief (provided after disaster) would reduce incentives to purchase insurance coverage. This is referred to as the "charity hazard", as defined by Browne and Hoyt. A study on crop insurance in the Netherlands confirmed that the willingness of producers to purchase private insurance was significantly negatively influenced by the producers' beliefs about the availability of disaster relief in the future.

(iv) Some families face severe budget constraints which limit their interest to purchase adequate insurance coverage.

(v) Lack of effective information, especially where it concerns probabilistic information regarding catastrophes. People have difficulties judging risk assessments in terms of relative frequency."

Rationale for charging risk dependent premiums: While many studies emphasize the affordability of insurance premiums and recommend doles, experts like Kunreuther³¹ feel that this can cause the 'charity hazard' and argue that it is important that insurance premiums reflect risk and hence should not be uniform. If individuals in disaster prone areas lack capacity to pay insurance premiums, government could provide insurance vouchers or victims could be reimbursed by the government for a portion of the increased costs of insurance coverage. Nevertheless, premiums should still reflect risk. Kunreuther points out that the voucher system also would incentivize individuals to adopt mitigation measures. In a similar vein, another argument is that if the government makes in-kind transfers of insurance to the poor they will not rely on disaster relief ex -post in case of a loss. In summation, these studies conclude that through subsidization of insurance premiums the charity hazard can be avoided.

The Malta Forum acknowledges that “there is indeed a trade off between on the one hand the efficiency requirement of charging risk dependent premiums and on the other hand the equity problem that risk dependent premiums may lead to problems for some individuals who are not in a position to reduce their risk exposure at a reasonable cost and who cannot afford the insurance premiums.”

The thinking that poor needs stuff for free is nowadays challenged by interesting examples from several developing countries like Indonesia and Bangladesh which have developed private micro-insurance solutions for natural disasters. One has to appreciate the yearnings of the poor for dignity and self-respect and promote systems that can help them stand on their own feet rather than make them increasingly dependent on doles and give-aways.

6. THE IMPORTANCE OF GOVERNMENTAL SUPPORT IN MAKING INSURANCE WORK

The study ‘Advancing Disaster Risk Financing and Insurance in ASEAN Member States’³² referred to earlier emphasizes the importance of promoting property catastrophe risk insurance, agricultural insurance and disaster insurance. The study recommends three key areas by way of Governmental support for developing enabling regulatory and risk market infrastructure for promoting insurance.

1. “Governments could work toward the development of an enabling insurance regulatory and supervisory framework that controls insurers’ exposure accumulations to catastrophe risk using a risk-based capital approach. Regulation could also be used to support the growth of emerging insurance products that have the potential to increase insurance penetration and reach low-income populations.
2. Governments could develop risk market infrastructure to assist the development of a cost effective, affordable, and sustainable insurance market. Risk market infrastructure development could include: product development, risk assessment and pricing methodologies, loss adjustment procedures, and distribution channels. The need to develop risk market infrastructure is particularly strong for disaster microinsurance.
3. Governments could facilitate disaster risk pooling, creating a larger, more diversified portfolio which should lead to lower reinsurance prices and reduced transaction costs.”

The Asia-Pacific Input Document³³ for the Post-2015 Framework for Disaster Risk Reduction released at Bangkok on 26th June 2014, emphasises that risk sensitive

development is the cornerstone of resilience and sustainability. In many Asia-Pacific countries, the risk-sharing mechanism of insurance remains minimal, with inadequate legal and institutional structures for disaster risk insurance resulting in low insurance penetration, leaving a large section of the economy and the population unprotected. “Even when mechanisms do exist, few governments have sound risk financing schemes that can take care of catastrophic liabilities, which means serious financial strain on government budgets, and diversion of funds from social development. A more concerted effort is required to improve risk financing in the region and to identify the appropriate roles for public and private sectors to deliver these services.”

The Input Document points out the need to identify ways of strengthening and promoting the adoption and use of tools such as risk transfer and risk insurance, as well.

Again, the Malta Forum has examined conditions under which reinsurance by government could be efficient in solving problems on the supply side with disaster insurance (natural and man-made disasters including terrorism) and opines as follows:

- “(i) The government intervention should only take place when sufficient supply on the

commercial market would not have developed without government help.

(ii) Governments should charge risk based premiums for their intervention as reinsurer of last resort. (Re)insurance rates should reflect the risk as much as possible. Otherwise, the government intervention would amount to an undesirable subsidy which would create moral hazard. (The term 'moral hazard' is used here on a broad canvas where the system allows inconsistencies due to which some sections of the population could derive unintended benefits from the scheme while other sections could be left behind with below-par benefits, both disproportionate to the actual losses suffered.)

(iii) Insurers should be free to choose the state-provided reinsurance;

(iv) Government intervention should in principle also have a temporary character (thus include a so-called sunset provision) and provide incentives to come back to normal market conditions. Any type of government intervention should aim at reactivating the private insurance market. Also, government strategies should therefore be primarily geared towards stimulating insurance based solutions, since those can aim at the mitigation of disaster risks.”

Munich Re’s study ‘Emerging countries affected by insurance gaps’ discussed earlier also emphasises the vital role that needs to be played by governments and supranational agreements. It underscores the requirement of a strong political will and clear regulatory measures regardless of the strength of the economy in question, for making any form of risk transfer mechanism, including public/ semi-public and private-sector happen. Though such regulatory measures usually incorporate funding components that may vary depending on the financial strength of the economies concerned, it recommends the following imperatives which can be combined with both pre-disaster loss mitigation elements for the implementation of effective post-disaster financing schemes:

- engage in catastrophe risk management issues,
- discuss realistic risk transfer options (including mandatory catastrophe insurance) with the relevant public-sector and/or private-sector organisations,
- establish a framework of legal and regulatory measures to foster the development and operation of sustainable public-sector and/or private-sector risk financing schemes.

On a broader canvas, the state’s various roles can be discussed from an activity-based perspective as detailed below:

The State’s role in spreading knowledge and awareness: The State is the prime mover for effecting social and behavioural changes by empowering the country with knowledge and awareness. A prerequisite for the growth of insurance is the country’s awareness of the benefits of the insurance system and its willingness to participate in the system. Willingness to pay is only the next step, as in many cases, even when schemes are free or heavily subsidized, participants are scarce to find. The State has to possibly make use of concepts like social marketing in bringing about a behavioural change and sensitizing the country’s population to insurance.

Sunset Provision

A Sunset Provision is "a clause in a statute, regulation or similar piece of legislation that provides for an automatic repeal of the entire or sections of a law once a specific date is reached. Once the sunset provision date is reached, the pieces of legislation mentioned in the clause are rendered void. If the government wishes to extend the length of time for which the law in question will be in effect, it can push back the sunset provision date any time before it is reached." <http://www.investopedia.com/terms/s/sunsetprovision.asp>

The State's Role in providing product level clarity: The State, through the Regulator should ensure that all insurers sell similar products at the same prices so that there is no confusion in the market on product features and benefits. Though all insurers may sell the product, undue tinkering on product features and prices may create confusion in the minds of the common man.

The State's Role in mandating catastrophe obligations: On the lines of the Indian Rural and Social Obligations decided by the State and the Insurance Regulator, obligations should be fixed on insurers that a given proportion of their business in terms of amount of premium, number of insured, percent of premiums percent of total policies/lives should be from catastrophe insurance by way of their "Catastrophe Obligations" or Social Obligation. However, this should not form a stand-alone mandate without the necessary support from the State on other demarcated areas.

The State as facilitator for getting the spread: It is imperative for insurers to spread the risk over large numbers, so that the losses of the few affected are shared by the many. Also, unless a significant number of insured is available for spreading the risk, insurers will not be able to keep the price of insurance products within reasonable limits. When insurers

have to insure catastrophes, since the number of affected can go into large numbers, insurers need to ensure that correspondingly a much larger number of insured is there to share the expected losses. As insurers by themselves may not be able to get the required large numbers to make insurance feasible, the State has a big role to play in creating awareness and sensitising citizens to the need for buying insurance. This is important for commercial insurance to take wings. Other measures for getting the required numbers could be compulsory insurance of property

risks in selected areas, mandatory carpet insurance coverage for people above certain income levels, funding disaster insurance by special taxes; and creating a conducive regulatory environment for the formation of mutuals, cooperatives and support groups, which would solve the problems associated with some small scale disasters.

The State's role in creating funding systems for paying the risk premiums: Munich Re's study³⁴ brings out the significant difference between the options available to

Some Definitions

Stop Loss: A form of reinsurance also known as "aggregate excess of loss reinsurance" under which a reinsurer is liable for all losses, regardless of size, that occur after a specified loss ratio or total dollar amount of losses has been reached.

Stop Loss Reinsurance (SLR): An agreement whereby a reinsurer assumes on a per-loss basis all loss amounts of the reinsured, subject to the policy limit, in excess of a stated amount. Not to be confused with aggregate stop-loss reinsurance. SLR resembles 'Excess of Loss Reinsurance'.

Excess of Loss Reinsurance: A form of reinsurance that indemnifies the ceding company for the portion of a loss that exceeds its own retention. It is generally used in casualty lines.

Aggregate Stop Loss Reinsurance: A type of reinsurance in which the reinsurer pays losses in excess of the attachment point. This kind of protection, if unlimited, caps the annual aggregate loss of the captive or insurer. Unfortunately, it is seldom unlimited, hard to find, and expensive.

Definition courtesy: International Risk Management Institute, Inc. < <https://www.irmi.com> >

Aggregate Stop-Loss Insurance: A policy designed to limit claim coverage (losses) to a specific amount. This type of coverage is to ensure that catastrophic claims (specific stop-loss) or numerous claims (aggregate stop-loss), do not upset the financial reserves of a self-funded plan.

Aggregate stop-loss protects the employer against higher- than-expected claims. If total claims exceed the aggregate limit, the stop-loss insurance carrier reimburses the employer.

Definition courtesy: "Investopedia" <<http://www.investopedia.com>>

high-income and those available to low-income nations for paying the necessary risk premiums. "In developed countries, risk financing is normally provided by private or commercial property owners, in some cases with co-financing by means of additional state support from public funds and/or tax relief for insurers and reinsurers. In each case, the financing solutions are created within the national economy and they normally involve the market. By contrast, emerging and developing countries often lack the financial resources to establish an insurance system to cover future natural disasters. Adopting insurance-based funding solutions would allow them to substantially reduce the impact of natural catastrophes on the national budget and speed up economic recovery." This can be done through multi-pronged strategies.

The State as provider of subsidy: People just above the poverty line also need insurance badly but cannot afford it. For this segment of people subsidised insurance is necessary. The State has to ensure that incapacity to pay premium does not deprive anyone from insurance by contributing to the premium of those at the lowest rungs of the society. Where the target population may not have the ability to pay, financial support from the Government would be needed for providing the cover, at least in the initial years. This would be needed

irrespective of the model - social security, cooperative or insurance, though the quantum of funds and funding systems would be different based on the model and the ground realities. In ex-ante financial planning situations like paying insurance premiums, governmental funding would form part of planned expenditure over time in contrast with unplanned ex-post doles that throw budgets out of gear. Financial support can be in various forms like full premiums, subsidised premiums, tax benefits to individuals, tax waivers or tax holidays for insurers etc.

The State to help in getting the right and relevant data: Insurers need to do a lot of data crunching to realistically estimate the likelihood of catastrophic events and the probable severity of losses that can occur. Based on his understanding of the risk proposed for insurance, he has to take a few decisions like - (i) whether to insure the risk?, (ii) if so, what kind of cover?, (iii) how much premium needs to be collected to cover the risk?, (iv) how much of the risk taken should be retained?; and (v) how much of the risk should be shared with reinsurers?

The important point is that the answers to these and similar issues have to be based on data. Insurers need relevant and error free data for all their calculations. They need to draw their inferences, make their estimates and formulate their

plans and predictions based on data that is clean, dependable and relevant, which is significant either by volume or by the representative nature of the samples studied. Data is arguably the foundation stone upon which the entire edifice of catastrophe insurance has to be built up and all related decisions to be taken. Unfortunately, data is a big challenge in highly populated developing countries, especially demographic data. Identifying the required data elements and precisely defining them is the first challenge. Setting up dependable and consistent data collection systems is another. A greater challenge is to actually collect the data. On the ground, often the human constituents of the data collection systems do not see the point in doing what they are supposed to do. Eventless months and years pass and the people involved get tired of feeding nil data into the systems and sending nil reports. Columns get deleted and forms also follow suit in course of time. Practically, the only primary sources of dependable data on the human lives, livelihoods and assets, exposed to disaster are governmental bodies. Again, the government is the one reliable source of data for assessing the impact of past disasters as well as for meteorological data for predictive studies.

The State to insist on using empirical data: Though such data can usually provide macro level

pictures, the problem of getting dependable and reliable data below aggregations, at granular levels continues to be challenge. Further, there is criticism that wherever this type of data has been collected, it has been lacking in homogeneity and quality. Also, the data available may not really be helpful for the insurers in terms of completeness, or be sufficient for taking critical predictive decisions. Reinsurers who have been operating across various geographies over many years have built large databases for their internal needs and magnanimously share authentic information and publish data at aggregate levels. There are some international agencies that compile data from multiple data sources, use predictive statistical modelling techniques and work with insurers in estimating the frequency and severity of different losses including catastrophes.

The State to ensure that insurers do not overexpose themselves or go beyond their capacity: Insurers are able to accept only a limited volume of risks and have to limit their individual exposures to certain levels based on their limited financial capacity. Again, as part of their strategy, conventionally, insurers and reinsurers do not prefer to over expose themselves to risks in one geographical location or situated in one cluster. Given the devastating nature of damages due to catastrophes and the extensive

geographic areas that can get affected by a single incident, insurers have to limit their disaster risk exposure at specific levels.

As part of their overall strategy of spreading disaster risk over a large pool, they may have to set certain limits of exposure based on locations, type of risks and even countries. For instance, an insurer may prefer insuring 100 buildings each in 10 different coastal towns than insuring all the 1000 buildings in one coastal town for a tsunami risk. The insurer may rather like to spread the risk of these 1000 buildings further, across multiple territories by reinsuring them as well. In case of loss liabilities of insurers crossing a critical level beyond the capacity of insurers (even after reinsurance support) there should be a system by which the Government bears the losses.

As sovereign bodies, governments have to play the role of 'Insurer of Last Resort' to take care that catastrophe situations do not go beyond the insurers' capacity. Models to limit insurers' liabilities at a macro level, possibly on a 'stop loss' basis, have to be created. This can be between the insurer and the reinsurer, insurer and the government, government* and reinsurer or any other viable hybrid model. An assurance or an agreement on the lines of an aggregate stop loss cover can state that if the insurers' aggregate losses due to catastrophic risks cross an

agreed percentage (say 125%), the government will pick up the bill and will not leave the insurer to fend for itself. (* in situations where the government acts as ceding insurer - discussed later.)

The State and Insurers should publically demonstrate their commitment to the cause: The "Kyoto Statement"³⁵ of the Geneva Association declares that insurers would "play a major and concerted role in the global efforts to counter climate risks". The action of signing the Statement demonstrated their willingness to "encourage political processes to work towards a better understanding of the potential costs of climate change and the advantage of market based solutions." The Statement emphasizes the strong need to create a structure of sustainable, market-friendly incentives for climate risk adaptation and mitigation and that insurers whose core expertise is managing the balance between risk exposure and financial stability are in an ideal position to suggest how this can be done effectively. The Kyoto Statement urges policy makers to collect robust data and make it freely available to allow risk assessment and to facilitate efficient solutions where premiums are risk-based. The need of communicating the financial benefits of risk mitigation and adaptation to customers is also stated.

The SAARC Governments and the Insurance community of the SAARC Region should likewise come together and unequivocally declare their commitment towards mitigating disaster and creating ex-ante measures for financing disaster losses.

7. EVOLVING AN ACTION PLAN

Understanding the Needs and Addressing Them:

The most vulnerable sections of the society are those affected most by disasters. Insurance policies are usually not synchronized with the realities of the actual beneficiaries. It often transpires that when the promised benefits are meted out, they often fall short of the expectations of the recipients or offer too little to be worth the trouble of claiming. Universally, post-disaster financial relief is required when there is (a) loss of life, (b) permanent disability, (c) loss of livelihood, (d) incapacity to repay loans and (e) loss of belongings - ranging from movable possessions, cattle, cultivation, house etc. The last one would change with the varied income levels of the disaster affected. To understand the specific needs of the community or social segment proposed for insurance and provide them change and its consequences for the insurance industry, signed CEOs of 60 insurance and reinsurance companies across the world on 2nd July 2009. with simple insurance policies that provide at

least limited financial relief, a lot of strategic learning, research and exchange of information would be needed.

1. Designing simple need-based insurance policies: Insurers have to design products of this type, as a full-fledged scheme to address any disaster that the State declares as a catastrophe. The designers should avoid jargon and make policies easy to comprehend for those with basic literacy.

Life Insurers have to come forward with simple insurance policies to cover (a) loss of life and permanent total disability for a Sum Assured of say Rs.5,00,000, (b) permanent partial disability for a Sum Insured up to Rs.2,00,000 and (c) loss of livelihood and (d) incapacity to repay loans with Rs.1,00,000 as Sum Insured - on long term basis. [Figures are in an Indian context and need to be fixed to be meaningful in the country].

Non-Life Insurers need to come out with simple insurance policies to cover (e) loss of belongings - ranging from movable possessions, cattle, cultivation, house etc. with a Sum Insured of say, Rs.2,00,000 for people just above poverty line and Rs.1,00,000 for those below poverty line. People having assets of higher value and higher ability to pay would have to buy commensurately higher protection through insurance. [Figures are in an Indian context and need to be fixed to be meaningful in the country.]

2. Innovation on Products and Models: On the one hand Insurance Councils and other professional bodies should ensure that all insurers sell similar products at the same prices and do not create confusion in the market on product features and benefits, whether for the purpose of accepting more catastrophe risks or for avoiding catastrophe risks.

On the other, they should foster research and direct efforts in the field towards experimentation and innovation - be they related to products, systems, distribution, or internal back-end models or the way the business is run and risk managed by the company.

In different parts of the world, innovation in disaster risk financing and insurance is happening in different ways - risk transfer for governments and sovereign entities, private non-life catastrophe insurance markets for homeowners, agricultural insurance for farmers and herders, and disaster microinsurance for low-income populations. Furthermore, innovation is happening on a variety of fronts in the field of disaster risk financing and insurance - product development, disaster risk assessment and sharing, and delivery channels to name a few - that interact to produce new solutions. One should appreciate that in developing countries, only such innovations can foster the development of risk market

infrastructure, which are essential to ensure the emergence of cost-effective disaster risk financing and insurance solutions from sovereign entities to households.

Innovation - Example 1: The “Livelihood Protection Policy” (LPP) launched in Grenada³⁶ in January, 2014 is a new insurance product designed to protect low-income people against extreme weather risks. Grenada was the 3rd country in the region (following Saint Lucia and Jamaica) to offer this product developed under the “Climate Risk Adaptation and Insurance in the Caribbean” project implemented by the Munich Climate Insurance Initiative (MCII) in partnership with the Caribbean Catastrophe Risk Insurance Facility (CCRIF), insurance services provider MicroEnsure and global reinsurer Munich Re. The project³⁷ is part of the International Climate Initiative (ICI) and supported by the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU).

CCRIF points out that (Innovation in Disaster Risk Financing for Developing Countries: Public and Private Contributions) LPP aims to protect low-income earners, including small-holder farmers as well as day labourers in other sectors, with the intention to cover losses to people’s livelihoods caused by heavy rainfall and high winds, enabling affected people to recover faster after a damaging weather

event. It is important to observe that LPP policies purchased in both Saint Lucia and Jamaica were triggered and those farmers received their first payouts after the extreme rains that occurred in the Eastern Caribbean in December last year, allowing them to start recovery activities in time. (Innovation Courtesy: Caribbean Catastrophe Risk Insurance Facility)

Innovation - Example 2: The agricultural sector is at the mercy of weather-related natural hazards and can have disastrous and extreme consequences in terms of severity and extent. The droughts of 2010 in Russia, 2011 in East Africa, 2011 in Texas and 2012 in the US Corn Belt caused dramatic falls in yield and production throughout the agricultural sector of the countries concerned as a whole. Only a few of the agricultural insurances can effectively protect against catastrophic events. Pointing out that private-sector insurance covers at most named perils and only strategic partnerships between the private insurance sector, governments and farmers can cope with catastrophic agricultural events caused by multiple perils, Munich Re developed its 'SystemAgro'³⁸. This was “based on private-sector insurers specialising in agricultural cover and offering standard products at affordable cost on transparent terms and conditions. Since viability is guaranteed by the government, which co-finances

premiums and catastrophic losses, a maximum number of farmers can participate. To ensure this type of risk management is sustainable, it is based on an agricultural insurance law which forms a key element of the government's agricultural policy.” Following successes in the USA, Canada, Spain and Portugal, the SystemAgro strategy is gaining a foothold in emerging markets, especially in China. Observing that farmers increasingly rely on seed, fertilizers and other external inputs and need loans to finance their business, the Munich Re study explains its position that it is important to ensure that farmers in emerging and developing countries can cope with catastrophic weather events because of the limited asset base at their disposal. “Agricultural insurance as opposed to pledging limited assets as security against a bank loan, can improve access to funding and protect the farmers' property. Catastrophic risk transfer works well in an agricultural insurance context if farmers have effective and reliable cover, if the private-sector insurers providing this cover have their downside limited and can operate within a stable economic and regulatory framework, and if the government can achieve its political goal of supporting the agricultural sector without repeatedly having to pay ineffective ad hoc disaster relief.” (Innovation Courtesy: Munich Re)

Innovation - Example 3: Carolyn Kousky and Roger Cooke³⁹ in their

study, 'Explaining the Failure to Insure Catastrophic Risks' point out that catastrophic loss distributions can require premiums that may be greater than homeowners are willing to pay. They argue that Insurance can generate positive externalities like reducing the need for giving federal disaster relief to uninsured homeowners, paid for by all taxpayers, and business-owners are more likely to have the funds to rebuild and to do so quickly, generating economic spill-over effects in the community. Pointing out that if insurance could be provided more cheaply for these risks without threatening the solvency of insurers, it could provide both private and public benefits, they argue in favour of decreasing the necessary multipliers for catastrophe insurance with appropriate diversification.

Drawing from the diversification strategy of Born and Klimaszewski-Blettner⁴⁰ (2009), the study observes that some companies "will rely heavily on diversifying across regions and lines of business, others will use reinsurance to transfer risk, and still others may choose to create subsidiaries in high-risk areas to wall off the rest of the firm from exposure to a particular risk" and argues that diversification "across product lines and geographic regions can improve management of catastrophe risk if done appropriately, but will also interact to have a complex relationship on firm productivity."

3. Creating systems for reaching out to the insured: Insurers should ex-ante create foolproof and efficient systems for reaching out to the disaster prone areas, identifying the risks, assessing the magnitude of the maximum probable losses that can happen and identifying the insured. They should also establish in advance socially acceptable and accountable systems of assessment in case of loss-making situations and procedures for paying claims.

4. Creating efficient systems for effecting payments to the insured: Insurers have to educate the masses and make them aware of their benefits in case of disasters. The targeted beneficiaries should be made aware of what they have to do in case of a disaster situation and how to actually draw the benefit without being cheated by middlemen or loop-holes in the system.

5. Working closely with the Government: In matters of this nature, the insurers and the governmental mechanisms have to work seamlessly to ensure that benefits are meted out expeditiously, efficiently and transparently. For this, responsible systems have to be in place, well in advance.

6. Stakeholders working together lead by insurers: Due to the specialities of the catastrophe risks, risk carriers have to necessarily get into a close huddle. One way in which insurers work together in such

scenarios is by creating risk pools. In the Indian market we have seen such risk pools for Terrorism risks, for Motor Liability risks and a Natural Catastrophe Reinsurance Pool (Nat Cat RI Pool) at the Federation of Afro- Asian Insurers and Reinsurers (FAIR) level.

The FAIR Nat Cat RI Pool⁴¹ created by FAIR's member companies in 2014 is managed by GIC Re of India. The scope and territorial jurisdiction of this Pool is Asian and African Region.

The need for the Pool was felt by the member companies of FAIR due to various considerations like (i) losses caused by frequent occurrences of natural calamities in the region, (ii) low catastrophe insurance penetration, (iii) local insurance and reinsurance markets having limited risk bearing capacity, (iv) chance of low frequency and high intensity nature of natural catastrophe events endangering the financial strength of the local insurers and reinsurers, (v) reducing the dependency of the FAIR member companies on the reinsurance capacity of reinsurers from London and European Markets.

The main benefits expected from the pool from a Governmental perspective are (a) building effective Catastrophe Risk Management Systems as natural disasters have a disproportionately adverse impact on the poor, (b) making Catastrophe Risk Management an integral part of FAIR

countries' risk management and good macro-economic management and (c) defining allocation of Catastrophe Risk funding between the insurance industry and the Government and reducing FAIR countries financial exposures to natural disasters.

Benefits that the insurance and reinsurance industry sought to derive from the pool were (a) to increase insurance penetration for natural disasters in FAIR countries (b) to reduce governments' fiscal liability to natural disasters by transferring risk offshore, (c) to build up surplus inside the pool and reduce dependency on international reinsurers from London & European markets for reinsurance capacity (d) to reduce volatility of domestic insurance rates in FAIR countries for property coverage, (e) to reduce volatility of reinsurance rates and afford better pricing for the catastrophe covers of FAIR members and (f) to develop systems for catastrophe risk mapping and build risk exposure data for the Afro Asian region.

The main operational aspects of the Pool are as follows:

1. Mechanism - The FAIR Nat Cat Pool will act as a Lead Reinsurer and provide Catastrophe Excess of Loss covers to the members covering their cat exposures. Capacity offered will cover a major part of their capacity requirement.

2. Pool Capacity - Each member shall commit its capacity to the Pool placed in units of pre-agreed denominations (say \$500,000 per unit)

3. Retrocession - The net results of the Pool will be retro-ceded to the Pool members based on their capacity contribution on a Quota Share Retrocession basis.

4. Perils Covered - Earthquake, Floods, Tsunami, Landslide, Cyclone, Hurricane, Windstorm

5. Classes Covered - Fire including FLOP, Accident excluding Motor TP, Credit and Bonds, Project Insurances [CAR & EAR] including DSU

In the operations of such pools, there can be many variables as per the requirement of the pool members.

- **Property covered** - Pool may or may not automatically cover insurance of buildings/ contents/ business Interruption/ residential/ commercial/ industrial risks

- **Insurance coverage** - Pool may or may not cover insurance of all natural perils in-built in fire and property insurance policies or offered as extension or on stand-alone basis

- **Perils** - Pool may cover all or some Acts of God/ natural perils like storm, tempest, flood, inundation and wind perils, earthquake and tsunami

- **Nature of cover** - Pool may be voluntary or compulsory for insured

- **Membership** - Pool may be voluntary or compulsory for insurers/ pool members

- **Premium Rates** - Pool premium rates may be uniform flat rates or variable risk-based (depending on risk zone, construction standards)

- **Reinsurance** - Retrocession arrangements among pool members may vary - for instance, excess of loss covers may be with private international reinsurers

- **Management** - Functions of the Pool like Underwriting, Reinsurance, Retrocession, Investment, Accounting, Data Management may be managed by one of the members.

- **Manager's Remuneration** - The Pool Manager may be allowed a fees to cover the administration costs.

6. Stakeholders working together lead by governments and insurers:

While the initiative to create pools and share risks traditionally come from insurers, there can be models where governments as sovereign bodies can take the lead role of 'Insurer of Last Resort' and insure the nation on a solidarity model. Though this may be a difficult concept to imagine in respect of territorially large countries, large economies, large populations etc. where the scale would be too big and politically sensitive for a

sovereign entity to pay to an insurer or an insurance pool, perhaps it can work meaningfully in the case of small countries where the quantum of risk may not be that high.

United Nations Framework Convention on Climate Change (UNFCCC) should be credited with the idea of distinguishing the specific needs of small states in its proposal for the Alliance of Small Island States⁴² (AOSIS). Introducing the term 'insurance' in this forum for the first time in 1991, the AOSIS suggested at the third session of the Intergovernmental Negotiation Committee (INC) that a fund should be established to “compensate developing countries (i) in situations where selecting the least climate sensitive development option involves incurring additional expense and (ii) where insurance is not available for damage resulting from climate change”. AOSIS specified this demand with a proposal on the creation of an 'International Insurance Pool' and sought to establish an international scheme funded by industrialised parties, which would compensate small islands and low-lying developing nations for loss and damage resulting from sea level rise. An Authority was to be administering mandatory contributions to the pool and handling claims made against the resources of the pool. The proposal contemplated that before an insurance situation arose, areas in

developing countries potentially affected by sea level rise would be valued, with the insured values and coverage negotiated between each country and the Authority. This negotiation differs from a traditional risk assessment approach and all

assets and interests would then be registered with the Authority to determine the scope of application of the insurance scheme. Both economic and human losses as well as ecological damage were to be covered, including option and

Caribbean Catastrophe Risk Insurance Facility (CCRIF) is designed to allow the Caribbean Community (CARICOM) governments to purchase insurance coverage to finance immediate post-disaster recovery needs.

- The facility will act as a risk aggregator and the CCRIF will allow participating countries to pool their country specific risks into one, better-diversified portfolio.
- Claims payments will depend on parametric triggers. Index-based (or parametric) insurance instruments pay claims based on the occurrence of a pre-defined event rather than an assessment of actual losses on the ground. This measurement, made remotely by an independent agency, allows for transparent, low settlement costs and quick- disbursing contracts.
- The facility will transfer the risks it cannot retain to the international financial markets. This will be done through reinsurance or through other financial coverage instruments (for example, catastrophe bonds). The accumulation of reserves over time should lessen the facility's dependence on outside risk transfer and smooth the catastrophe reinsurance pricing cycle.
- The facility is expected to maintain financial protection to survive 1-in- 1,000 year events. Should the total insured losses exceed its claims- paying capacity, payouts will be pro-rated based on the total amount of expected claims compared to the remaining available funds.
- The CCRIF will be established as an independent legal entity. It will be created as an Insurance Captive managed by a specialised firm under the supervision of a Board of Directors composed of representatives from the donors and participating countries. This board will be supported by the technical advice of a Facility Supervisor.
- Insured countries will pay an annual premium commensurate with their own specific risk exposure. Parametric insurance products are priced for each country based on their individual risk profile. Annual premiums typically vary from US \$200,000 to US \$4 million, for coverage ranging from US \$10 million to US \$50 million.

Source: World Bank Paper - IAT03-13/3 'Caribbean Catastrophe Risk Insurance Facility'

existence value. Contributions to the fund were to be on the lines of the 1963 Brussels Convention on Third Party Liability in the Field of Nuclear Energy. Contributions would be calculated based on (i) the ratio between the GNP of each industrialised country contributor and the total of the GNPs of the group of contributors, and (ii) the ratio of individual country CO2 emissions to the CO2 emissions of the group of contributing countries.⁴³ With a donor pledge in 2007, the Caribbean Catastrophe Risk Insurance Facility (CCRIF) was established to provide the Caribbean Community (CARICOM) government with an insurance instrument to address this need. This instrument, akin to business interruption insurance, will provide them with short-term liquidity if hit by a hurricane or earthquake. CCRIF has a risk pooling facility, owned, operated and registered in the Caribbean for Caribbean governments. It is designed to limit the financial impact of catastrophic hurricanes and earthquakes to Caribbean governments by quickly providing liquidity when a policy is triggered. It is the world's first and, to date, only regional fund utilising parametric insurance, giving Caribbean governments the unique opportunity to purchase earthquake and hurricane catastrophe coverage with lowest-possible pricing, <http://www.sidsnet.org/natural-and-environmental-disasters>.

As part of World Bank's catastrophe risk insurance pilot program (supported by Swiss Re), to help governments respond to natural disasters, from early 2013 five Pacific Island Nations, the Marshall Islands, Samoa, Solomon Islands, Tonga and Vanuatu were insured against natural disasters to provide their governments with immediate funding if a major natural disaster occurs. Pacific Island countries are some of the most vulnerable in the world to natural hazards. Japan, the World Bank and the Secretariat of the Pacific Community (SPC) teamed up with Pacific island nations to launch the Pacific Catastrophe Risk Insurance Pilot. The pilot relies on state-of-the-art financial risk modelling techniques and is the first ever Pacific scheme to use parametric triggers, linking immediate post-disaster insurance payouts to specific hazard events and is expected to test whether a risk transfer arrangement modelled on an insurance plan can help Pacific island nations deal with the immediate financial effects of natural disasters. This joint effort is also expected to allow Pacific island nations to access earthquake and tropical cyclone catastrophe coverage from reinsurance companies at an attractive price.

8. CONCLUSION

There is a general consensus in the global community as regards the need to develop ex-ante mechanisms for disaster risk

financing. While various methods have been employed for the purpose by different stakeholders, insurance stands out as a time-tested mechanism that has worked in multiple contexts. Over the years, the concept of insurance has been put to use in diverse operational models - small self-driven semi-formal groups sharing costs and risks, the state paying uniform premiums for large groups for providing uniform benefits, the state subsidizing premium for the needy to provide limited benefits, insurance pools contributed by multiple states, insurance schemes funded by large corporates for employee welfare, commercial insurance bought by individuals with risk-based premiums, reinsurers supporting insurers in multiple states etc. each one with its own merits and demerits.

In the SAARC context, the eight countries, international organisations and various internal stakeholders would need to invest more and more of thought about using the concept of insurance as a benevolent social welfare mechanism to help the people and the governments manage disaster situations better. In times to come, this togetherness can work well in related areas like man-made disasters, terrorism, nuclear risks, war and other common concerns. Together all concerned have to find out how insurance can be put to optimum use to contribute to 'Gross National Happiness' for all the eight

SAARC nations, to borrow a term that has caught public imagination in Bhutan.

Disclaimer: The views expressed in this paper are those of the author and do not necessarily reflect those of SAARC Disaster Management Centre or Insurance Institute of India, the organizations conducting the SAARC Workshop.

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प्रकाशक का संदेश

किसी भी प्रकार की प्राकृतिक आपदा का विनाशकारी प्रभाव न केवल प्रभावित व्यक्तियों पर, बल्कि समाज, क्षेत्र और क्षति के पैमाने के आदार पर देशों पर भी पड़ता है। चाहे यह नेपाल और बिहार में हाल में आया भूकंप हो, आंध्र प्रदेश को आहत करने वाला चक्रवात हो अथवा जम्मू और कश्मीर में आई बाढ़, जो नुकसान हुआ उसका मान तो अत्यधिक है। इन आपदाओं के कारण जीवन और संपत्ति दोनों को हानि पहुँचती है। जबकि जीवन की हानि की भरपाई पूर्णतः किसी भी प्रकार से नहीं की जा सकती, वहीं संपत्ति की हानि के संबंध में उन पर्याप्त बीमा रक्षाओं के साथ प्रभावी ढंग से क्षतिपूर्ति की जा सकती है जो विपदा से पहले ली गई हो।

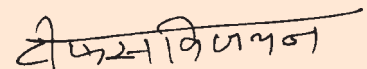


बीमा द्वारा प्राकृतिक आपदाओं के संबंध में रक्षा प्रदान करने में चुनौतियाँ हैं, चाहे वह जागरूकता का अभाव हो अथवा उपयुक्त बीमा रक्षाओं की उपलब्धता। एक ओर जहाँ ऐसी रक्षाओं की आवश्यकता के बारे में सामान्य रूप से जनता को शिक्षित करने की आवश्यकता है, वीहं दूसरी ओर बीमाकृत घटनाओं में आने के लिए प्रोत्साहन मिलेगा जिससे बीमा का आधार विस्तृत होगा और इस प्रकार लागतों में आगे और कमी आएगी।

जबकि इस प्रकार की प्राकृतिक विपत्तियों से संबंधित दावों के विषय में शीघ्र कार्रवाई करने की दिशा में विनियमनकर्ता के सक्रिय समर्थ के साथ भारतीय बीमा उद्योग द्वारा अनेक कदम उठाये जा रहे हैं, वहीं यह भी आवश्यक है कि उद्योग हानि के निवारण और हानि केन्यूनीकरण के लिए सक्रिय कदम उठाये। आपदा के घटित होने से पहले हानि-निवारण के संबंध में तथा आपदा के बाद हानि के न्यूनीकरण की दिशा में बीमाकृत जनता को सुग्राही बनाने के लिए बीमाकर्ता सक्रिय हो सकते हैं और आधुनिक पूर्व-चेतावनी प्रविधियों का उपयोग कर सकते हैं।

मुझे यह देखकर प्रसन्नता हो रही है कि जर्नल के प्रस्तुत अंक में प्रकाशित आलेखों के अंतर्गत आपदा प्रबंधन के विभिन्न पहलुओं को समाविष्ट किया गया है। जर्नल का यह अंक भारत और नेपाल के भूकंप-पीड़ितों का समर्पित करते हुए मैं इस अवसर पर यह आश्चस्त करना चाहता हूँ कि बीमाकृत व्यक्तियों के दावों के शीघ्र निपटान के लिए सभी आवश्यक कदम उठाये जाएँगे।

अपविक्रय (मिस-सेलिंग) के बढ़ते खतरे को ध्यान में रखते हुए जर्नल के अगले अंक का केंद्र बिंदु “पॉलिसीधारकों के विशेष संदर्भ में बीमा उद्योग में अपविक्रय” पर रहेगा


टी.एस. विजयन
अध्यक्ष

आपदा-प्रबन्धन का सर्वोत्कृष्ट समाधान-अनिवार्य बीमा

- गोपी चन्द विशनोई, उ.श्रे.सा. (प्रशा.) भारतीय जीवन बीमा निगम, मोदीपुरम शाखा

प्रकोप या आपदा दो प्रकार की होती है। - मानवीय तथा प्राकृतिक। मानवीय आपदा मनुष्यों के कर्मों के दुष्परिणाम स्वरूप होती है जबकि प्राकृतिक आपदाये नैसर्गिक रूप में घटित होती है। प्रकोप तथा आपदा में तकनीकी अन्तर यह है कि जब दुर्घटना में कोई जनहानि नहीं होती है तो प्रकोप कहा जाता है, जबकि जनहानि होने पर दुर्घटना को आपदा कहा जाता है। आज के भौतिकवादी युग में मानव स्वयं अपने विनाश का कारण बन रहा है। आतंकवाद, उपद्रव, दंगा, जनसंहार, खूनखराबा, युद्ध, सैन्य आपदायें, नरभक्षित युद्ध घटनाये, आगजनी अनेकानेक आपदायें मानव समाज को भारी नुकसान पहुँचा रही है। आतंकवाद विश्वस्तर की समस्या बन गयी है। इसके अतिरिक्त नैसर्गिक आपदायें क्षणभर में पृथ्वी पर भारी तबाही का मंजर पैदा कर सकती है, जैसे उष्णकटिबंधीय चक्रवात, भूकंप, बाढ़, सुनामी, जंगल की आग, बादल का फटना, वज्रपात, ज्वालामुखी फटना, जमीन धँसना, सूखा, महामारी, दुर्भिक्ष, अकाल इत्यादि।

नैसर्गिक आपदाओं को रोकना मनुष्य के हाथ में नहीं है, परन्तु आपदाओं से निपटने के लिये किये गये प्रबन्ध से जानमाल की हानि को बहुत सीमा तक कम किया जा सकता है। आपदा प्रबन्धन तीन स्तरों पर किया जा सकता है। आपदा पूर्व प्रबन्धन, विद्यमान आपदा पर तथा आपदा पश्चातवर्ती प्रबन्धन। आपदा से पूर्व प्रबन्धन में

स्थिति का पूर्वाकलन कर आपदा की पूर्व चेतावनी जारी करना, प्रभावित क्षेत्रों को खाली कराना व जनता को सुरक्षित स्थानों पर पहुँचाना, विस्थापितों को आवश्यक खाद्य तथा पेय पदार्थों, तम्बूओं, दावाओं, मिट्टी का तेल, कम्बल, नमक, माचिस, नाव आदि आवश्यक वस्तुओं की आपूर्ति करना। विद्यमान आपदा पर प्रबन्धन सबसे बड़ा चुनौतिपूर्ण कार्य है। जबकि वास्तविकता यह है कि यही कार्य उपेक्षित है। आनन फानन में किये गये कार्यप्रबन्ध में व्यय अत्यधिक होता है और परिणाम दुखद। इसका सबसे बड़ा कारण है कि विभिन्न विभागों को आपदा प्रबन्धन के कार्यों को निपटाने में लगा तो दिया जाता है परन्तु उनमें समन्वय की भारी कमी रहती है। इन परिस्थितियों में जानमाल की हानि रोकने में प्रबन्धन समिति असफल रहती है। आपदा प्रबन्धन का पश्चातवर्ती स्तर सबसे अधिक महत्वपूर्ण होता है। आपदा से पीड़ित/प्रभावित नारकीय जीवन व्यतीत करने को विवश होते हैं। ऐसे में उनकी आर्थिक स्थिति खराब होने के साथ-साथ उनका मनोबल टूट जाता है। सरकार द्वारा इस ओर ठोस कदम नहीं उठाए जाते। विश्व के कुछ राष्ट्रों को छोड़कर अनेक राष्ट्रों में इस सम्बन्ध में प्रभावी कानून लागू किये जाने हैं। भारतवर्ष में सन् 2005 से पूर्व आपदा प्रबन्ध कानून स्थिति नगण्य थी।

ऐसा नहीं है कि भारत ने प्राकृतिक आपदाओं का सामना नहीं किया है। वरन् “भगवान की

करनी के आगे क्या किया जा सकता है” सोच के कारण हम अकर्मण्य बने रहे। दक्षिण भारत ने सन् 1876 से 1878 तक सबसे बड़ा दुर्भिक्षकाल झेला है। बंगाल में सन् 1769 से 1773 तक दुर्भिक्ष में एक करोड़ से अधिक लोग काल का ग्रास बन गये थे। चीन के यूनान से फैले विश्वव्यापी रोग प्लेग ने सन् 1850 में न जाने कितने भारतीयों की जान ले ली। दुर्भिक्ष का भारत से बहुत पुराना नाता है। बंगाल में सन् 1943 में दुर्भिक्ष के कारण 40 लाख की मृत्यु हुई है तो सन् 1632-33 में दक्षिण में दुर्भिक्ष से 20 लाख से अधिक मारे गये। 25 नवम्बर, 1839 में चक्रवाती बवन्डर से आन्ध्रप्रदेश में 3.2 लाख लोगों की मृत्यु हो गयी। 7 अक्टूबर 1737 में तूफान/बवन्डर से कलकत्ता में 3 लाख की जनहानि हुई जिसमें 3 हजार ईस्ट इंडिया कम्पनी से सम्बद्ध थे। 26 जनवरी 2001 को 7.9 रियेक्टर स्केल की शक्ति से आये भूकम्प ने गुजरात में ऐसी तबाही मचायी जिसमें 30 हजार से अधिक व्यक्ति मारे गये तथा 6356 मकान नष्ट हो गये। इस तबाही ने सन् 1993 में लातूर में 6.4 रियेक्टर स्केल शक्तिशाली भूकंप की विनाशलीला को पीछे छोड़ दिया, जिसमें 20 हजार व्यक्ति मारे गये था 2 लाख मकानों को नुकसान पहुँचा था। दिसम्बर 2004 में 9 रियेक्टर स्केल स्तरीय सुनामी ने 10 हजार भारतीयों को कुछ क्षणों में मौत की नींद सुला दिया। इस त्रासदी से 11 देशों के 1.5 लाख लोग प्रभावित हुए थे।

यह तो बड़ी मुख्य ऐतिहासिक आपदोये रही है जबकि आपदाओं का सिलसिला निरंतर विद्यमान है। जून, 2013 में केदारनाथ में आयी बाढ़ का भयानक मंजर सुनकर ही रूह कांप जाती है। गत वर्ष सितम्बर, 2014 में कश्मीर में आयी बाढ़ 60 वर्षों की सबसे बड़ी त्रासदी रही है। सरकारी आंकड़ों के अनुसार कश्मीर बाढ़ में 281 मृत, 1000 से अधिक घायल तथा 12 लाख व्यक्ति प्रभावित हुये। 6 हजार स्कूल, 6,300 ग्रामों में भारी नुकसान हुआ, जिसमें 160 खरब रूपये आर्थिक क्षति का आंकलन किया गया। अस्पतालों में हुयी क्षति 410 लाख आँकी गयी।

भारत में इन आपदाओं से निपटने के लिये यहां के नागरिक केवल सरकार की ओर ही देखते है। सरकार राहत कोष के लिए जनता से अपील करती है। आधे अधूरे मन से, थोड़े बहुत राहत कोष से, आनन फानन में आपदा प्रबन्ध निपटारा जाता है। यह प्रबन्ध “ऊँट के मुँ में जीरा” सिद्ध होता है। सन् 2004 में आयी सुनामी ने भारत सरकार को झिझोड कर रख दिया। केन्द्र सरकार ने आपदा प्रबन्ध कानून, 2005 लागू कर भयंकर संकट के समय राष्ट्र को कुशल आपदा प्रबन्ध प्रदान करने की ठान ली। केन्द्र सरकार के साथ कन्धे से कन्धा मिलाकर आगे बढ़ा - भारतीय जीवन बीमा निगम। “निगम” ने सुनामी से पीड़ित पालिसीधारकों के दावेदारों को मृत्यु दावा भुगतान नियमों में भारी शिथिलता प्रदान कर मानवीयता का अनूठा उदाहरण प्रस्तुत किया। निगम ने अपने पास उपलब्ध सूचनाओं को आधार बनाकर आमजन को पारदर्शी तरीके से औपचारिकताओं में छूट प्रदान कर भारी राहत प्रदान कर सामाजिक दायित्व की पूर्ति की। निगम अपने राष्ट्रीयकरण काल से अब तक सामाजिक दायित्व की प्रतिपूर्ति करता चला आ रहा है। यह राष्ट्र प्रेम का विश्व भर से सर्वोच्च प्रतीक है।

जीवन बीमा हो या साधारण बीमा भविष्य के सम्भावित संकट को ध्यान में रखकर ही कराया जाता है। यह बिड़म्बना ही है कि भारत की जनता बीमा में अपेक्षित रुचि नहीं लेती, तभी ता भारत की 64 प्रतिशत से अधिक बीमा योग्य जनता

अभी बीमित नहीं है। समय के साथ-साथ मानवजनित आपदाओं का संकट भी बढ़ता चला जा रहा है। सड़क, रेल, हावाई, समुद्री दुर्घटनाये, औद्योगिक, भवन निर्माण, पुल, संरचना सम्बंधी दुर्घटनाओं के साथ-साथ विकिरण, नाभिकीय, सैन्य, अन्तरिक्ष दुर्घटनाओं का संकट बढ़ा है। इससे आतंकवाद प्रमुख विश्वव्यापी समस्या बन चुकी है। ऐसे में मानव जीवन को तो सम्भावित संकट है ही, सम्पत्ति का संकट भी कुछ कम नहीं है। अभिष्ट राशि का जीवन बीमा कराने का साथ-साथ सम्पत्ति मूल्य का बीमा कराया जाना आवायक हो गया है। आपदा काल में यह धनराशि डूबते को बचाने के समान होगी।

मानव जीवन अनमोल है। परन्तु जीवन बीमा की अल्पराशि भी उत्तराधिकारी को आर्थिक राहत प्रदान करती है। विश्व में यूँ तो अनेक संगठन है, जो आपातकाल में फौरेन राहत प्रदान करते है तथा रोडक्रास सोसाइटी। परन्तु कभी-कभी पालिसीधारक ऐसी विषम परिस्थिति में पहुँच जाता है जब वह शारीरिक रूप से अक्षम हो जाता है तथा नियमित आय बन्द हो जाती है। अग्नि कांड में झुलसे व्यक्ति की आय बन्द होने के साथ-साथ उसके मनोबल में भारी न्यूनता आ जाती है। ऐसे में, सामाजिक संगठनों द्वारा प्रदान की गयी अल्पराशि उसके सम्मान को ठेस पहुँचाती है विद्युत, तेजाब, बम, रसायन, विकिरण, मानसिक आघात के कारण अक्षमता, मनोबल पर वज्रपात करती है।

इसके अतिरिक्त व्यवसाय में अत्यधिक घाटा, नौकरी या नियमित आय का किसी कारण बन्द होना हमारे लिये भारी संकट पैदा कर देता है। ऐसे में जीवन बीमा व सम्पत्ति बीमा से प्राप्त दावा राशि हमारी अर्थिक विपन्नता को दूर करने में सहायक होती है। भोपाल गैस काण्ड से प्रभावित पीड़ित 30 वर्ष बाद आज भी अर्थिक क्षतिपूर्ति के लिये संघर्ष कर रहे है। यह तो पुरानी कहावत है कि “मुसीबत कहकर तो आती नहीं”। अतः आपदा आने पर राहत के लिए केवल सरकारी तन्त्र के भरोसे बैठे रहना उचित नहीं है - सरकार

सीमित साधनों के बल पर भरपूर सहायता करने में सफल नहीं हो पाती। अतः बीमा को ढाल बनाकर आपदा पर विजय प्राप्त की जा सकती है।

आपदा प्रबन्ध के सम्बन्ध मे भारत सरकार को यह सुझाव बहुत रास आना चाहिए कि जिस प्रकार वाहनों में तृतीय पक्षकार का बीमा कराना अनिवार्य है उसकी प्रकार आय अर्जित करने वाली सभी नागरिकों को जीवन बीमा कराना अनिवार्य कर दिया जाये। इससे बीमा व्यवसाय में भारी वृद्धि होने के साथ-साथ राष्ट्रीय आय में वृद्धि होगी तथा संकट कालीन निधि का विस्तार किया जा सकेगा। प्राप्त धनराशि का आपदा प्रबन्ध में उपयोग कर राष्ट्र की सुरक्षा तरलता का प्रबन्ध हो पायेगा। जीवन बीमा के पश्चात चरणबद्ध तरीके से सम्पत्ति बीमे का नियोजन भी किया जाना उचित होगा।

यह तथ्य किसी से छिपा नहीं है कि विकसित राष्ट्रों में जीवन बीमा तथा साधारण बीमा व्यवसाय पूर्ण रूप से समाज को लाभान्वित कर रहे है, फिर चाहे वह अमेरिका हो या जापान। बीमा राष्ट्र के विकास में भारी योगदान प्रदान करता है। अमेरिका जैसे समृद्ध राष्ट्र में विभिन्न प्रकार के बीमा प्रचलित है यथा स्वस्थ बीमा, अपंगता बीमा, आकरिमक बीमा, सम्पत्ति बीमा, देयता बीमा, ऋण बीमा, जीवन बीमा आदि। साधारण बीमा में अग्नि-बीमा, बाढ बीमा, गृह बीमा, भूकंप बीमा, समुद्री बीमा, ऑटोमोबाई बीमा, विमानपत्तन बीमा, निर्माता का जोखिम बीमा, आतंकवाद बीमा, ज्वालामुखी बीमा आदि-आदि। मानव द्वारा प्रदूषित वातारण के कारण पर्यावरण संतुलन को भारी क्षति पहुँच रही है। ऐसे में प्राकृतिक आपदाओं के सामने बीमा ही हमारा सुरक्षा कवच होगा

- गोपी चन्द विशनोई, उ.श्रे.सा. (प्रशा.)
भारतीय जीवन बीमा निगम, मोदीपुरम शाखा

बीमा के माध्यम से आपदा प्रबंधन कैसे?

डॉ. अजय कुमार मिश्रा

प्रस्तावतना: इतिहास इन प्रमाणों से भरा पड़ा है कि हम-सब ने कई तरह की आपदाओं का समाना किया है, और अभी भी कर रहे हैं। आपदाएं दो तरह की होती हैं, एक प्राकृतिक आपदाएं - जिनके कारण होते हैं, भूकंप, बाढ़, ज्वालामुखी, विस्फोट, भूस्खलन, तूफान आदि। दूसरी तरह की आपदाएं मानव द्वारा निर्मित हैं- जिनके कारण हैं, आतंकवाद, महामारी, वनों की कटाई, प्रदूषण, युद्ध, सड़क/ट्रेन दुर्घटना, दंगे, विषाक्त भोजन, औद्योगिक आपदाएं/संकट, पर्यावरण प्रदूषण, स्वास्थ्य आपदाएं आदि। इन आपदाओं में धन, जन और संपत्ति की असहनीय हानि होती है, जिसकी भरपाई कभी नहीं की जा सकती है। इन आपदाओं से न केवल हम सब समय-समय पर चोट खा रहे हैं बल्कि विश्व के कई और देश भी इन आपदाओं से पीड़ित हैं। 1.2 अरब आबादी (जन गणना 2011 के अनुसार) के साथ भारत दूसरी सबसे बड़ी आबादी वाला देश है, और यहां भी कई प्रकार के आपदाओं की एक बड़ी हिस्सेदारी विद्यमान है। हमारे देश के लिए वास्तव में कुछ तरह की आपदाओं को रोकना अभी भी लगभग असंभव सा है। विभिन्न सरकारी, अर्द्ध-सरकारी, निजी क्षेत्र की कंपनियां, और एन.जी.ओ. आपदा प्रबंधन के क्षेत्र में कार्यरत हैं। भारत सरकार के अधीन भारतीय राष्ट्रीय आपदा प्रबंधन प्राधिकरण आपदा प्रबंधन के लिए कार्यरत है।

आपदाएं	
प्राकृतिक आपदाएं	मानव रचित आपदाएं
भूकंप	नाभिकीय
बाढ़	जैविक
शहरी बाढ़	रासायनिक
मूस्खलन	
चक्रवात	
सुनामी	
गर्म तरंगों	

विश्व के प्राकृतिक आपदा जोखिम श्रेणी में भारत का क्रम 100 है एवं आपदा जोखिम 7.7% है। हमारे देश ने कई तरह की आपदाओं का सामना किया है, जिनमें प्रमुख हैं, बंगाल अकाल (1770), हिंद महासागर सूनामी (2004), महान अकाल (1876-78), गुजरात में आया भूकंप (2001), तीसरे प्लेग महामारी (1894), कोरिंग चक्रवात (1839), लातूर भूकंप (1993), उत्तराखंड में अचानक आयी बाढ़ (2013), कलकत्ता चक्रवात (1737), कश्मीर बाढ़ (2014), मुंबई तबाही (2005), भोपाल गैस त्रासदी (1984), गैसल ट्रेन आपदा (1999) इत्यादि। मरने वालों की संख्या के आधार पर प्राकृतिक आपदाओं की सूची, (दस सबसे खराब प्राकृतिक आपदाओं) का विवरण

निम्न प्रकार है। इस विवरण से यह स्पष्ट होता है कि आपदा आने पर बड़े पैमाने पर क्षति होती है।

बहुत सारी आपदाएं देश में घटित होती रहती हैं, इन आपदाओं के पीछे का मुख्य कारण प्राकृतिक व्यवहार और मानवीय कृत्य दोनों शामिल हैं। ये आपदाएं कुछ दिनों तक तो देश के मुख्य समाचार में बनी रहती हैं, और लोकलुभावन घटनाओं के पश्चात् जमीनी समस्याओं से रुबरु उन लोगों को होना पड़ता है, जो प्रत्यक्ष या अप्रत्यक्ष तौर पर इससे प्रभावित हुए रहते हैं। हमारे देश का पॉलिसी संचालन इतना अव्यवस्थित है, कि इस तरह की आपदाओं में मिलने वाले लाभ कई वर्षों पश्चात्, मिलता है या तो मिलता ही नहीं है। सारे लाभ सरकारी फाइल तक ही सिमट कर रह जाते हैं, जबकि आपदा की स्थिति में घोषित लाभ और सहयोग की जरूरत तुरंत होती है।

आपदाओं का कुप्रभाव: आपदा जब आती है तो अपने साथ न केवल जीवन, धन, सम्पत्ति का विनाश कर देती है बल्कि कई तरह की उम्मीदों और आशाओं का भी गला घोट देती है, विकास की बात तो दूर, उनसे प्रभावित लोगों के लिए पुनः साधारण जीवनशैली का वातावरण बनाना भी संभव नहीं हो पाता है। मंजर इतना भयावह

श्रेणी	मरने वालों की संख्या (अनुमान)	घटना	स्थान	दिनांक
1.	10-40 लाख	चीन में आई बाढ़	चीन	जुलाई-अगस्त, 1931
2.	09-20 लाख	पीली नदी बाढ़	चीन	सितंबर-अक्टूबर, 1887
3.	08-30 लाख	शानक्सी भूकंप	चीन	23 जनवरी 1556
4.	02.42-6.55 लाख	तांगशान भूकंप	चीन	28 जुलाई 1976
5.	05-10 लाख	भोला चक्रवात पूर्वी	पाकिस्तान (अब बांग्लादेश)	13 नवंबर 1970
6.	03 लाख	भारत चक्रवार	भारत	25 नवंबर 1839
7.	03 लाख	कलकत्ता चक्रवात	भारत	7 अक्टूबर 1737
8.	2.80 लाख	हिंद महासागर में आए भूकंप और सूनामी	भारत	26 दिसंबर 2004
9.	2.73 लाख	हैयुआन भूकंप	चीन	16 दिसंबर 1920
10.	2.50-3.00 लाख	अन्ताकिया भूकंप	बीजान्टिन साम्राज्य (अब तुर्की)	मई 526

श्रोत: http://en.wikipedia.org/wiki/List_of_natural_disasters_by_death_toll

होता है की सह पाना मुश्किल और कह पाना मुश्किल होता है। इन आपदाओं का कुप्रभाव क्या होता है, निचे दिए गये विवरण से स्पष्ट है। सरकारी खजाने की क्षति के साथ - साथ देश का विकास भी कुछ समय के लिए रुक जाता है, जो न केवल उस देश के लिए चिंता का विषय है जो इससे प्रभावित हुआ रहता है, बल्कि उससे जुड़े समस्त देशों पर उसका प्रभाव पड़ता है। आपदाओं के कुप्रभाव को निम्नांकित वर्गीकृत विवरण के द्वारा स्पष्टतः समझा जा सकता है।

भौतिक

लोगों का अंगभंग होना
लोगों का जलना
लोगों को चोट लगना
लोगों में संक्रमण का होना
लोगों का विषाक्तिकरण होना
जीवन का आसामायिक समापन

मनोवैज्ञानिक

अवसाद
शोक, विलाप, मातम
क्रोध
अपराध

उदासीनता
डर, आशंका
सिंड्रोम-जलने की वजह से
विचित्र व्यवहार
आत्महत्या
वियोग
चिंता
तनाव प्रतिक्रियाओं
शराब का सेवन
नौकरी का न होना

सामाजिक-आर्थिक

पर्यावरणीय
विनाश
विप्लव/अत्वयवस्था
स्वास्थ्य समस्याएं
बेघर

बेरोजगारी

कही न कही आपदा का जीवंत उदाहरण है। आज किसान आत्महत्या कर रहे हैं। इस तरह की आपदाओं की वजह से देश की प्रगति कुछ समय के लिये रुक जाती है, जबकि व्यक्तिगत

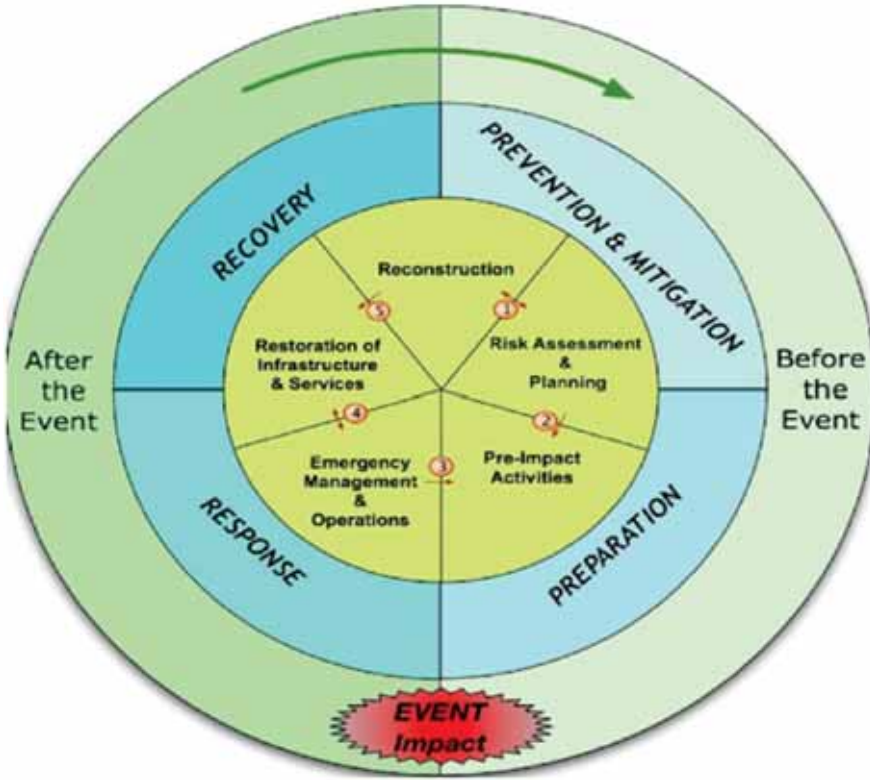
नुकसान कई तरह से होते हैं। भारत एक कृषि प्रधान देश है, और आज भी किसानों की इस तरह ही समस्याओं का समाधान नहीं हो पा रहा है।

आपदा प्रबंधन की वर्तमान स्थिति: आपदा प्रबंधन के लिए विभिन्न सरकारी, अर्द्ध - सरकारी निजी क्षेत्र की कंपनियों एवं समाजिक संस्थाओं द्वारा भारतीय राष्ट्रीय आपदा प्रबंध प्राधिकरण के नेतृत्व में कार्य किया जा रहा है। विभिन्न तरह की युक्तियों को अपना कर लोगों को जागरूक किया जा रहा है, और घटनाओं को घटित होने के पश्चात् सुविधा प्रदान की जा रही है। कुछ आपदाएं आज भी नियंत्रण के बाहर हैं और समय-समय पर घटित हो रही हैं। सरकार द्वारा इस क्षेत्र में किया गया प्रयास को अत्यधिक प्रभावशाली बनाने के लिए इस क्षेत्र को बीमा से जोड़ने की जरूरत है। आपदा प्रबंधन को निम्नकित चित्र के माध्यम से आसानी से समझा जा सकता है।

बीमा के माध्यम से आपदा प्रबंधन कैसे?

जब भी कोई आपदा आती है, उसके द्वारा कई तरह की क्षति होती है और यदि गहराई में उसका अध्ययन किया जाय तो, यह ज्ञात होता है कि पर्यावरण को पुनः उसी रूप में लाना अत्यंत ही चुनौतिपूर्ण कार्य होता है। जन की जो क्षति हो जाती है, उसे वापस उसी रूप में नहीं लाया जा सकता परन्तु उसके अलावा सारी चीजों को सामान्य रूप में लाने के लिए एक बड़ी धनराशी की आवश्यकता होती है। यानि की उस आपदा के पश्चात् धन ही है, जो कुछ हद तक स्थिति को सही रूप में पुनः लाने के लिए मदद कर सकता है। सरकारी प्राधिकारी (केन्द्र आर राज्य), एन.जी.सी., पूंजी बाजार, निजी क्षेत्र की कंपनियों के अलावा बीमा इस तरह की आपदाओं में एक महत्वपूर्ण योगदान कर सकता है। जो बीमा और पुनर्बीमा के माध्यम से किया जा सकता है। हालांकि सबकी सामूहिक जिम्मेदारी है, कि भी आपदाओं का सामना करने की।

आपदा प्रबंधन बीमा के माध्यम से करने पर, बीमा क्षेत्र के विकास के साथ साथ आपदा प्रबंधन



में भी मदद मिलेगी। आज आम लोगों के लिए समूह बीमा एवं सूक्ष्म बीमा के रूप में छोटे ही सही पर विकल्प मौजूद है। साधारणतः बीमा को आपदा प्रबंधन में जोड़ने पर प्रीमियम देने की समस्या सामने आ सकती है। बीमा कंपनियों प्रीमियम के आधोर पर सुरक्षा प्रदान करती है, और जोखिम का अंकन भी करती है। आपदा प्रबंधन में बीमा एक बेहतर विकल्प हो सकता है। प्रारम्भ में कुछ समस्याओं का सामना जरूर करना पड़ेगा, परन्तु लम्बी अवधि में वह अपना प्रभाव व्यापक रूप में दिखायेगा। आपदा प्रबंधन बीमा के माध्यम से करने के लिए निम्न बिन्दुओं पर ध्यान देने से महत्वपूर्ण सहयोग मिलेगा।

1. संभावित आपदा क्षेत्र में रहने वाले लोगों के लिए बीमा अनिवार्य कर देना चाहिए, जिसमें प्रीमियम की 50 प्रतिशत हिस्सदारी केन्द्र/राज्य सरकार करें और शेष उन क्षेत्रों में रहने वाले लोग। यदि इन क्षेत्रों का कोई व्यक्ति बीमा नहीं लेता है, तो उसे उसकी सहमती के पश्चात बीमे से बाहर रखा जाय

एवं आपदा के पश्चात् सुरक्षा राशि न प्रदान की जाय।

2. सूक्ष्म बीमा का प्रचार-प्रसार किया जा जिससे लोग इसे लेने के लिये स्वयं प्रेरित हों। हालाँकि इनमें मिलने वाली सुरक्षा कम है पर यह लेने योग्य है, खास कर गरीबों के लिये।
3. आपदा वाले क्षेत्रों के लिये स्वास्थ्य, सामान्य, एवं जीवन की संयुक्त पॉलिसी का निर्माण करना चाहिये। इन पालिसियों में चूँकि जोखिम अधिक होगा, अतः बीमा कंपनियाँ अधिक जोखिम के कुछ भाग को पुनर्बीमा कंपनी को हस्तांतरित कर सकती है।
4. विभिन्न बीमा योजनाओं के बारे में लोगों में जागरूकता लायी जाय।

5. प्राकृति जोखिम को बीमा में सम्मिलित किया जाना चाहिये, चाहे स्थिति एकट आफ गॉड की वजह से ही क्यों न हो।
6. आतंकवाद से होने वाली हानि को भी बीमा में सम्मिलित किया जाना चाहिए।
7. जिन्हें बीमा की सबसे ज्यादा जरूरत है (गरीब तबके के लोगों के लिए), उन लोगों के लिए बीमा खरीदने योग्य अर्थात कम प्रीमियम पर उपलब्ध कराना चाहिये।
8. बीमा द्वारा सार्वजनिक, निजी भागीदारी के साथ संयुक्त रूप से मिलकर आपदा सांक्षण देना चाहिये।

निष्कर्ष: यह शाश्वत सत्य है कि हम प्राकृतिक आपदाओं से बच नहीं सकते है। हमें जितना संभव हो प्राकृतिक आपदाओं से और उससे होने वाले नुकसान को कुछ हद तक कम करने के लिए भरसक प्रयत्न करना चाहिए। मानव रचित आपदाओं को कुछ सावधानियों को अपनाकर हम कम कर सकते है। हम सब को, सरकारों (केन्द्र एवं राज्यों), उद्योगों, देश के शैक्षणिक क्षेत्र, बीमा कंपनियाँ एवं समाजिक संस्थायें आपसी सहयोग के माध्यम से “सुरक्षित भारत” बनाने का सबसे अच्छा प्रयास करना चाहिये। इन आपदाओं को बीमा से जोड़े देने पर न केवल व्यक्तिगत सुरक्षा प्राप्त होगी बल्कि लोगों में एक आत्मविश्वास का जन्म भी होगा। सरकार को एक बड़ी धनराशि का सहयोग बीमा के माध्यम से मिल जायेगा, जिससे पुनः निर्माण में सहायता मिलेगी। आपदाओं के प्रबंधन में बीमा एक विकल्प हो सकता है, साथ ही यह भी आवश्यक है की आम लोगों को इन आपदाओं के बारे में जागरूक किया जाय। स्वास्थ्य, संपत्ति और जीवन तीनों तरह के बीमा को इस क्षेत्र से जोड़ना अत्यंत आवश्यक है।

डॉ. अजय कुमार मिश्रा, सहारा इंडिया जीवन बीमा कंपनी लिमिटेड, लखनऊ, व्यक्ति किए गए विचार लेखक के व्यक्तिगत है।

आपदा प्रबंधन और बीमा उद्योग की भूमिका

कमल चौला का कहना है कि सभी महा विद्यालयों में आपदा प्रबंधन को एक अतिरिक्त विषय के रूप में यदि पढाया जाए तो हम देश की जवान पीढ़ी को आपदा की स्थिति में अपना अमूल्य योगदान देने के लिये प्रशिक्षित कर सकते हैं।

प्राकृतिक आपदा का प्रलयकारी प्रभाव

जैसा कि हम सभी जानते हैं कि आपदा प्रबंधन एक वृहत विषय है जिसमें किसी भी प्रकार की प्राकृतिक आपदा जैसे भूस्कलन, भूकंपन, सूनामी, ज्वालामुखी का फटना, बादल का फटना, बाढ़, सूखा, आदि से जुड़ने से संबंधित प्रावधानों का सूक्ष्मता से विश्लेषण होता है व आपदा की स्थिति में कार्यवाही की योजना (प्लैन ऑफ एक्शन) का विस्तृत रूप से रेखांकन किया जाता है। प्राकृतिक आपदाएँ वस्तुतः पृथ्वी के स्वभाविक क्रियाओं के कारण आती हैं जिनमें विस्तृत रूप से जान-माल व संपत्ति के नुकसान की संभावना रहती है व जिनके होने के उपरांत किसी क्षेत्र विशेष में रहने वाले लगभग सभी या अत्यधिक व्यक्तियों को उस आपदा के प्रभाव से उभरने में कई वर्ष लग जाते हैं। प्राकृतिक आपदा की तीव्रता के प्रभाव का अनुमान उससे प्रभावित जनसंख्या के अनुसार लगाया जाता है।

आपदा तीन प्रकार की हो सकती है जैसे - दैवी घटना (ऐक्टऑफ गॉड), मानवकृत और दुर्घटना (अग्रिकाण्ड, तेल फैलना, हवाई दुर्घटना, आदि)

भारत में आपदा बीमा की आज की स्थिति

भारत में आपदा बीमा के प्रचार में कमी पाई गई है जिसके कई कारण हैं जैसे-गरीब लोग इसके प्रीमियम का वहन नहीं कर सकते, कम आय वाले इसके कुछ भाग का वहन कर सकते हैं, अधिक आय वाले तभी यह बीमा खरीदते हैं जब उन्हें किसी प्राकृतिक आपदा से उनके कारोबार में हुई क्षति को कम करने की संभावना हो। इस बीमे के कम प्रचलन में होने का एक मुख्य कारण यह भी है कि यह अनुमान लगा लिया जाता है कि भूकंप, भूस्खलन, बाढ़ आदि का विशिष्ट स्थान पर ही हो सकते हैं अतः अन्य पठारी क्षेत्र व वह क्षेत्र के लोग जिनसे नदियाँ, समुद्र अत्यधिक दूरी पर होते हैं वहाँ पर प्राकृतिक आपदा के कम आसार होते हैं अतः इन क्षेत्रों के लोग इस श्रेणी का बीमा कम करवाते हैं।

प्राकृतिक आपदा में बीमा जगत का योगदान

प्राकृतिक आपदा की घटना होने के उपरांत कुछ संस्थाएँ महत्वपूर्ण भूमिका अदा करती हैं जिनमें प्रमुख हैं- सरकारी संस्थाएँ, एनजीओ, पूँजी बाजार व बीमा उद्योग। बीमा उद्योग का प्रथम कार्य होता है जोखिम मूल्यांकन व जोखिम-अंकन। जोखिम अंकन की प्रणाली के अंतर्गत बीमा कंपनी किसी उद्योग की बीमा के लिये प्रस्तावित संपत्ति के रखरखाव व किसी आकस्मिक स्थिति में उसकी सुरक्षा से संबंधित व्यवस्थाओं का अध्ययन करती है और यदि उनके सुरक्षा के लिये यथा स्थिति परामर्श देती है ताकि किसी आपदा या हानि की स्थिति में उनकी सुरक्षा सुनिश्चित की जा सके। बीमा कंपनी यह सुनिश्चित करती है कि यातायात, भंडारण, रसायनों का संचालन व प्रयोग व अन्य खतरनाक कच्चा माल आदि से आसपास के क्षेत्र को नुकसान न पहुँचे व वातावरण भी स्वच्छ व सुरक्षित रहे।

बीमा कंपनी कृत्रिम प्रशिक्षण भी आयोजित करती है ताकि आपदा प्रबंधन का समय समय पर परीक्षण हो सके ताकि आपदा की स्थिति में क्षति को न्यूनतम स्तर तक लाने के लिये सही समय पर प्रभावकारी उपाय किये जा सकें। बीमा कंपनी स्थानीय प्रशासन की सहायता से ऑन-साईट व ऑफ-साईट आपदा प्रबंधन योजनाएँ बनाती है। आपदा प्रबंधन के क्षेत्र में किये गये नये परीक्षणों के आधार पर अग्रसक्रिय योजनाएँ बनाई जाती है। जिसके अंतर्गत उद्योगों के कार्यरत कार्मिकों को आपदा की स्थिति में अपनाई जाने वाली क्रिया प्रणाली का प्रशिक्षण दिया जाता है।

आपदा प्रबंधन के अंतर्गत बीमा कंपनियों उत्पादन में लगे उद्योग को यह सुझाव देती है कि वे अपनी फैक्ट्रियों, संस्थानों, आदि की इमारतों को बनाते हुए सावधानी बरते ताकि किसी भी प्रकार की आकस्मिक घटना का नुकसान कम किया जा सके। इसके लिये उन्हें सुझाव दिया जाता है कि अपने जल व रसायन निकास द्वारों को समय-समय पर साफ करते रहें व उन्हें किसी भी स्थिति में अवरुद्ध न होने दें, इमारत को भूकंपन सुरक्षित बनाएँ, भारी मशीनें आदि भूस्तल पर ही रखें, मूल्यावान मशीनों, कच्चे माल की देख-रेख व रख-रखाव में किसी प्रकार की कोताही न बरतें।

कुछ देशों में गैर-जीवन बीमा कंपनियों के लिये कानून आवश्यक होता है कि वह आपदा जोखिम को अपनी बीमा पॉलिसियों में नीहित करें जैसे - आस्ट्रेलिया (आतंकवाद), बेल्जियम व फ्रांस (प्राकृतिक आपदा व आतंकवाद), न्यूजीलैण्ड

(भूकंप), नोर्वे व स्पेन आदि।

बीमा कंपनियों कि ओर से पहले भी एक सुझाव दिया जा चुका है कि सरकार चाहे तो वह समाज के उच्च वर्ग से आपदा कर वसूल कर सकती है जोकि संपत्ति कर के साथ जोड़ा जा सकता है अतः जिन व्यक्तियों के पास किसी भी प्रकार की अचल संपत्ति होगी वह लोग संपत्ति कर के साथ यह कर भी अदा करें और इस कर में एकत्रित धन की सहायता से आपदा प्रबंधन निधि बनाई जाए जो आपदा की स्थिति में प्रयोग की जा सके। तथा निम्न वर्ग के लोगों या गरीबी रेखा के नीचे वाले व्यक्तियों के जान-माल की हानि की स्थिति में, उनके मवेशियों, कच्चे घरों, खेतों आदि के नुकसान की स्थिति में उन्हें राज्य सरकारों द्वारा मदद पहुँचाई जाए जिसके लिये केंद्र सरकार सभी अन्य राज्यों से आपदा प्रबंधन निधि के रूप में एकत्रित करें।

एक और महत्वपूर्ण सुझाव यह है कि देश के सभी शिक्षा संस्थानों में यदि आपदा प्रबंधन निपुणता का एक विषय सम्मिलित किया जाए ताकि दैवीय आपदाओं या मानवकृत आपदाओं से जूझने का ज्ञान हम सब नागरिकों तक पहुँचा सकें। इसी क्रम में संस्थानों में कार्यरत अधिकारियों/कर्मचारियों आदि को भी आपदा प्रबंधन से जुड़े विषयों में भली भाँती अवगत कराया जाना चाहिए।

सभी महा विद्यालयों में यदि आपदा प्रबंधन को एक अतिरिक्त विषय के रूप में यदि पढाया जाए तो हम देश की जवान पीढ़ी को आपदा की स्थिति

में अपना अमूल्य योगदान देने के लिये प्रशिक्षित कर सकते है।

आपदा प्रबंधन में सूक्ष्म बीमा की भूमिका

आपदा प्रबंधन में सूक्ष्म बीमा एक महत्वपूर्ण भूमिका अदा कर सकता है। चूँकि बीमा का महत्व किसी भी दुर्घटना होने के उपरांत बढ़ जाता है उसी प्रकार यदि निम्न स्तर के लोगों को यदि सूक्ष्म बीमा (माइक्रो इंश्योरेंस) के लाभों से अवगत करा दिया जाए तो उन लोगों को जो प्राकृतिक आपदा की अधिक आवृत्ति वाले इलाकों में रहते है उन्हें अधिक से अधिक सूक्ष्म बीमा का लाभ पहुँच सकेगा। प्राकृतिक आपदाओं जैसे, बाढ़, सूखा, मवेशी रोग, फसल बर्बाद होना, आदि के उपरांत अधिकांशतः यही लोग अधिक प्रभावित होते है और इन घटनाओं के बाद इनके पास इतने साधन या धन नहीं होता कि वह कम से कम समय में फिर से आत्मनिर्भर हो सकें। अतः ऐसी स्थिति में बीमा इन लोगों के लिये नए प्राण का प्रवाह कर सकता है। इस अभियान की सफलता के लिये गैर-सरकारी संस्थान (एनजीओ), बीमा कंपनियों, स्थानीय व केंद्रीय सरकार की भूमिका अत्यंत महत्वपूर्ण है। इन सभी के सामूहिक सहयोग से बीमा का लाभ प्राकृतिक आपदा के प्रभाव में आने वाले संभावित लोगों तक पहुँचाया जा सकता है।

राष्ट्रीय आपदा प्रबंधन प्राधिकरण (एनडीएमए) की भूमिका

दिनांक 23 दिसंबर, 2005 को भारत सरकार ने आपदा प्रबंधन अधिनियम पारित किया जिसमें

राष्ट्रीय आपदा प्रबंधन प्राधिकरण (एनडीएमए) की स्थापना को उल्लेखित किया गया जिसके अध्यक्ष स्वयं प्रधान मंत्री है तथा राज्य आपदा प्रबंधन प्राधिकरण (एसडीएमए) के अध्यक्ष वहाँ के मुख्य मंत्री है ताकि संपूर्ण भारत में अखंड व एकीकृत रूप से आपदा प्रबंधन की अगुवाई की जा सके। इस संस्था का ध्येय है अग्रसक्रिया पद्धति के प्रयोग व उत्कृष्ट तकनीकी संसाधनों दीर्घकालिक विकास पद्धति व सभी अंशधारियों की सहायता से ऐसी संस्कृति का प्रोत्साहन करना जिसमें रोकथाम, तत्परता व अल्पीकरण की सहायता से भारत को आपदाओं से सुरक्षित बनाया जा सके।

एनडीएमए एक शीर्ष संस्था है जोकि आपदा प्रबंधन की नीतियों, योजनाओं व दिशानिर्देशों को बनाने के लिये अधिदेशित है ताकि आपदाओं पर यथासमय प्रभावकारी प्रतिक्रिया की जा सके। इसके लिये वह आपदा प्रबंधन पर नीतियाँ बनाती है, राष्ट्रीय योजनाओं को अनुमोदित करती है।, मंत्रालयों या भारतीय सरकारी विभागों द्वारा योजनाओं को अनुमोदित करती है, राज्य योजनाओं के कार्यान्वयन के लिये दिशानिर्देश देती है, आपदाओं की रोकथाम के लिये सभी राज्य सरकारों व केंद्र सरकार के विभागों को दिशानिर्देश देती है ताकि आपदा की स्थिति में उसके प्रभावों को न्यूनतम स्तर तक लाया जा सके व उनकी विकास संबंधी योजनाओं व परियोजनाओं को सुरक्षित करती है, यह अल्पीकरण के लिये निधियों का सुझाव देती है।, यह केन्द्रीय सरकार द्वारा सुनिश्चित

दिशानिर्देशों के आधार पर अन्य देशों में इस प्रकार की आपदाओं में सहायता पहुँचाने का कार्य करती है, यह राष्ट्रीय आपदा प्रबंधन संस्थान (एनआईडीएम) के कार्यान्वयन के लिये नीतियाँ व दिशानिर्देश निर्धारित करती है।

बीमा कंपनियों की तत्परता

वर्ष 2013 में उत्तराखण्ड में हुई भारी तबाही से सैकड़ों लोगों को अपनी जान से हाथ धोना पडा। इस तबाही के उपरांत सभी बीमा कंपनियों ने अपनी कमर कस ली। सरकार द्वारा दिशानिर्देशों के आधारपर सभी बीमा कंपनियों ने द्रुत गति से बीमा दावों को निपटाने के लिये यथा संभव प्रयास किये। इन दावों में संपति बीमा, दुकान और व्यवसायिक बीमों की संख्या अधिक थी। इस आपदा के दावों से निपटने के लिये चारों सरकारी बीमा कंपनियां नैशनल इश्योरेंस कंपनी, न्यू इंडिया एश्योरेंस, ओरियंटल इश्योरेंस और यूनाइटेड इंडिया इश्योरेंस मिलकर नुकसान का आँकलन व निपटान किये। इस आपदा में वाहन बीमा के दावों की संख्या भी काफी अधिक थी। जीवन बीमा की कंपनियों ने भी जैसे ही दावा प्रस्तावित हुआ, वैसे ही उसे निपटाने के लिये सरसक प्रयत्न किये।

आपात स्थिति में बीमा कंपनियों की विनम्र कार्यनीति

सामान्य: दावे का भुगतान तभी किया जा सकता है, जब शव मिल जाता है और मान्यता प्राप्त चिकित्सक मृत्यु प्रमाणपत्र जारी कर देता है। भारतीय कानून के तहत लापता व्यक्ति को उसकी

मृत्यु के 7 साल बाद ही मृत माना जाता है और तभी बीमा का दावा भी किया जा सकता है। लेकिन उत्तराखण्ड त्रासदी में इस प्रकार के नियमों के पालन में नरमी बरती गई व आश्रितों की दुर्दशा को ध्यान में रखते हुए अत्यधिक दावे बिना आवश्यक दस्तावेजों के आधार पर भी दिये गये।

देश में आपदा के लिए बीमा अनिवार्य नहीं है। यह ऐसी श्रेणी है, जिस पर बीमा उद्योग में पिछले कई वर्षों से चर्चा का विषय बना हुआ है। गैर-जीवन बीमा कंपनियों ने भी राष्ट्रीय आपदा प्रबंधन प्राधिकरण को इस विषय पर अपने विचार प्रस्तुत किये है।

राज्य सरकारों द्वारा बीमा कॉर्पोरेशन स्थापित करने का विचार

हाल ही में ओलावृष्टि के कारण फसलों को हुए भारी नुकसान को देखते हुए भारत सरकार ने दावा किया है कि जल्दी ही सभी प्रभावित किसानों को आपदा प्रबंधन के तहत मुआवजा दे दिया जाएगा। हरियाणा सरकार ओलावृष्टि जैसी समस्याओं से निपटने के लिए हरियाणा राज्य की अपनी बीमा कॉर्पोरेशन बनाने पर विचार कर रही है, ताकि आपदा प्रबंधन के तहत दिए जाने वाले अधिकतम 10 हजार रुपये से अधिक का मुआवजा इसके माध्यम से किसानों को उपलब्ध करवाया जा सके।

बीमा व अन्य संस्थानों द्वारा प्रशिक्षण

गत वर्षों में हुई प्राकृतिक आपदाओं के मद्दे नजर अब बीमा कंपनियाँ आपदा प्रबंधन विभाग के

सहयोग से अपने अधिकारियों और एजेंट्स को आपदा प्रबंधन के उपायों का प्रशिक्षण दे रही है। इसमें आपदा प्रबंधन के तहत सभी को आपदा स्थिति के दौरान बचाव के तरीके बताए जा रहे हैं, साथ ही आपदा स्थिति में बचने के तरीकों को कैसे अपनाए इसके संबंध में जानकारी दी जा रही है, ताकि आपदा स्थितियों के समय ज्यादा से ज्यादा लोग अपनी जान बचा सकें।

नेपाल भूकंप त्रासदी

25 अप्रैल, 2015, शनिवार की सुबह आए प्रलयकारी भूकंप ने न केवल नेपाल बल्कि नेपाल से सटे सभी प्रांतों को बुरी तरह सए झंकझोर दिया। इस आपदा में केवल नेपाल में ही 6000 से अधिक लोगों के मरने की आशंका जताई जा रही है व लगभग 11000 से अधिक व्यक्ति घायल हुए हैं। 25 अप्रैल के बाद भी 2 दिन तक 70 और झटके महसूस किये गये। लगभग 12 लाख से अधिक की आबादी वाले शहर काठमांडू में भी भूकंप ने बड़े पैमाने पर प्रलय मचाई, जिसके फलस्वरूप कई ऐतिहासिक इमारतें, मंदिर, सरकारी इमारतें, आवासीय बिल्डिंगें बुरी तरह से तहस-नहस हो गईं। काठमांडू के सातल चौक पर एक सात मंजिला इमारत पूरी तरह धराशायी होने से 80 लोग दबकर मर गए। नेपाल सरकार ने इसे राष्ट्रीय आपदा घोषित करने के साथ भूकंप प्रभावित सभी 29 जिलों को आपदाग्रस्त घोषित कर दिया है। इस क्षेत्र में इससे पहले 15 जनवरी, 1934 में नेपाल व बिहार में भूकंप आया था जिसकी तीव्रता 8.1 आँकी गई थी और उसमें लगभग 10,700 लोगों की मौत हुई थी और

उसके बाद 20 अगस्त, 1988 को 6.8 तीव्रता वाला भूकंप आया था जिसमें नेपाल में 721 और बिहार में 277 लोगों की मौत हुई थी। परंतु गत 80 वर्षों में यह भूकंप सबसे अधिक शक्तिशाली और भयावह साबित हुआ।

नेपाल भूकंप त्रासदी के उपरांत भारतीय बीमा जगत भी पूरी तरह सक्रिय हो गया है। भारत की एकल पुनर्बीमा कंपनी जीआईसी री के अनुसार वह नेपाल के सबसे बड़े विदेशी पुनर्बीमाकर्ता कंपनी है व उन्होंने 10 हानि निर्धारकों के एक दल को नेपाल में हुई जान-माल की हानि के ऑकलन के लिये भेजा है जो अपना काम कुछ दिनों में पूरा कर लेंगे। भारतीय बीमा कंपनियों ने भी नेपाल में प्रभावित लोगों की सहायता के लिये समर्पित हैल्पलाईन सेवा प्रारंभ की है तथा नेपाल में बीमा-दावों को प्राथमिकता पर यथा-शीघ्र भुगतान की व्यवस्था की है व इस कार्य के लिये अपने अधिकारियों के विशेष दल नेपाल भेजे हैं। इस त्रासदी से भारत की सबसे बड़ी जीवन बीमा कंपनी एलआईसी में भी दावों की अत्यधिक संख्या बड गई है।

निष्कर्ष

किसी भी प्रकार की आपदा से जूझने के लिये व उसके उपरांत उससे उद्घृत मामलों से निपटने के लिये बीमा जगत सदैव तत्पर व सजग रहता है, चाहे वह देशीय हो या विदेशी। भारतीय बीमा जगत के दीर्घ अनुभव व उसमें कार्यरत कौशलपूर्ण अधिकारियों की मदद से भारत सरकार भी ऐसी संकट की स्थिति में किसी भी

प्रकार की चुनौती का सामना करने में सक्षम सिद्ध होती है। इस प्रकार के दुखद अनुभवों के आधार पर यह अत्यंत आवश्यकता हो जाता है कि हम अपने कार्यकौशल को उस स्तर पर पहुँचाएँ जिससे की भविष्य में इस प्रकार की स्थिति का सामना यथा समय कर सकें व प्रत्येक प्रभावित व्यक्तियों की अधिकाधिक मदद कर सकें।

लेखक: वरिष्ठ सहायक निदेशक, गैर-जीवन (विनियामक कार्यवाहियाँ), भारतीय बीमा विनियामक और विकास प्राधिकरण है, उपर्युक्त आलेख में अभिव्यक्त विचार लेखक के निजी हैं।

लेखक: - वरिष्ठ सहायक निदेशक, गैर-जीवन (विनियामक कार्यवाहियाँ), भारतीय बीमा विनियामक और विकास प्राधिकरण है। उपर्युक्त आलेख में अभिव्यक्ति विचार लेखक के निजी विचार हैं।

Snapshot of Life Insurance as at 31.03.2015

The Life Insurance Sector completed Rs 113142.65 Cr total First Year Premium with de-growth of 5.84 as at the end of March 2015. LIC completed Rs 78302.64 Cr with de-growth of 13.62% where as Private Sector completed Rs 34840.01 Cr posting a growth of 18.05%. Private sector experienced a growth in both Individual NB and Group NB where as LIC shown a decline in both Individual NB and Group NB. The number of individual policies has shown a decline in both private (by 9.78%) and public sector (by 41.60%). The number of lives covered under Group policies has gone up substantially (by 30.69% at the industry level).

After a span of three years the ULIP business has shown a growth of 54.64% up to the month of March, 2015 compared to the corresponding previous period. The Life Insurance Industry has procured Linked Premium of Rs.13329.45 crore as at 31st March, 2015 as against Rs.8619.28 crore for the corresponding period of previous year. This entire growth may be attributed to the Private Sector (growth of 55.40%) while LIC has no significant ULIP business this year.

The share of Annuity (6.53%) and Pension (24.96%) segments have shown growth whereas Life (68.41%) and Health (0.10%) segments have shown a slight decline compared to last year's performance. The individual pension business shows substantial growth both in terms of number of policies and premium. Group Pension premium has a growth of 22.01% for private sector and a decline of 8.12% for LIC. However, the share of individual pension premium out of the total pension premium remains at just around 4.3%.

The number of individual agents* in life insurance sector stood at 20,67,856 with a net reduction of 121741 (5.6%) for the period. The reduction is 89429 (9.0%) in private sector which has ended up with a total of 9,04,252 agents while the reduction is 32312 (2.7%) in case of LIC which closed the month of March 2015 with a total of 11,63,604 individual agents.

Analysis of ULIP business:

The Life Insurance Industry has procured Linked Premium of Rs.13329.45 crore as at 31st March, 2015 as against Rs.8619.28 crore for the same corresponding period of previous year. It shows an increase of 54.64%.

LIC's Premium is Rs.0.69 crore (PY Rs.42.49 crore), a decrease of 98.38%.

Private players have collected linked Premium of Rs.13328.76 crore (PY

Rs.8576.79 crore), an increase of 55.40%.

Analysis of Traditional Business:

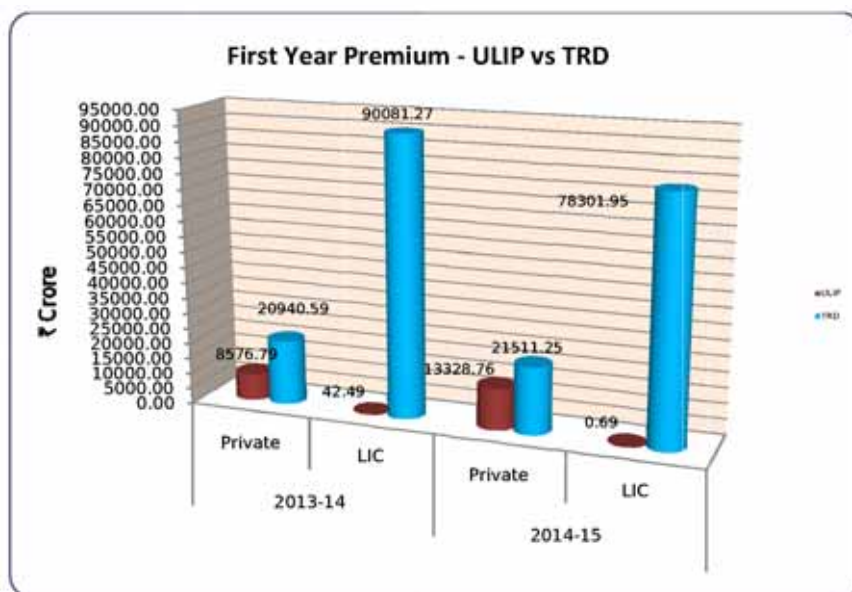
The Life Insurance Industry has procured Non-Linked Premium of Rs.99813.20 crore as at 31st March, 2015 as against Rs.111021.85 crore for the same corresponding period of previous year. It shows a decrease of 10.10%.

LIC's Premium is Rs.78301.95 crore (PY Rs.90081.27 crore), a decrease of 13.08%.

Private players have collected Non-linked Premium of Rs.21511.25 crore (PY Rs.20940.59 crore), an increase of 2.73%.

Rural & Social sector business:

The Rural and Social Sector business (New Business) for the period ended 31st March, 2015 is as follows:



Sector	No. of Rural policies sold	No. of policies sold	Rural policies as a percentage of total policies sold	No. of Social lives
Private	1368564	5738812	23.85%	9917407
LICI	5165265	20171063	25.61%	20596725
Industry	6533829	25909875	25.22%	30514132

Note: Business figures provided for FY 2014-15 are provisional.

Compiled by Life Dept., IRDIA

Celebration of Insurance Awareness Day-2015 - News & Views



The formation day of Insurance Regulatory and Development Authority of India (IRDAI) was celebrated as Insurance Awareness Day on 19th April, 2015. The Hon'ble Governor of Andhra Pradesh and Telangana, Shri E.S. L. Narasimhan graced the occasion. Senior officials from insurance industry, other financial sector regulators, NISM, officials from State Government, former Members of IRDAI, insurance Ombudsmen along with the staff members of IRDAI and their family members attended the event. The finals of the In-house Quiz Competition and Pan India Insurance Quiz Competition were also conducted on the day. The team

of officers from Agency Department won the IRDAI's In-house Quiz Competition and the team from Legal Department were the 'runners-up'. As far as results of Pan India Insurance Quiz Competition are concerned, the participants from Exide Life Insurance Company were declared as 'winners' while participants of Reliance General Insurance Company were 'runners-up'.



On the occasion, Chairman IRDAI launched the E-Module for Insurance Brokers' Training and the booklets on Intermediate Medical Life Insurance Underwriting and Advance Life Insurance Underwriting published by Insurance Institute of India. In the post-lunch session, a panel discussion on Financial Inclusion and Insurance literacy was organized. Shri Sandip Ghose from National Centre for Financial Education (NCFE) in National Institute for Securities Management (NISM), Smt.

Usha Sangwan from LIC of India and Shri Manas Ranjan Mohanty from Reserve Bank of India and Shri D.D. Singh, Member (Non-Life), IRDAI participated and expressed their views. The need for financial inclusion and literacy, government initiatives in providing insurance like Jan Dhan Yojana, steps taken by insurers for promoting insurance awareness and insurance inclusion, highlights of the financial awareness and inclusion survey conducted by NCFE, steps taken by IRDAI in promoting awareness etc. were discussed.



Shri T.S. Vijayan, Chairman, IRDAI, in his address gave a brief outline about the developments in the insurance sector since opening of the insurance sector for private participation and setting up of IRDAI. He apprised the audience about the challenges before the industry on account of changes in the legal framework consequent upon the enactment of Insurance Laws (Amendment) Act, 2015.

Shri E.S. L. Narasimhan, Hon'ble Governor, in his address appreciated the role of IRDAI in empowering the policyholder through consumer education. However, he suggested that in order to address the insurance policy



related issues, the terms and conditions of the policies should be simple and informed upfront so that common man can understand the nuances of an insurance policy without much difficulty. He stressed that the trust that claim would be paid promptly is the main reason for people to take insurance. Though payment of claim is moment of truth, policyholders are facing a lot of difficulties in getting claim amount paid, especially in crop, health and motor insurance. For the farmers who have lost their crop, delay in claim settlement or refusal will create undue hardship. He urged upon insurers to simplify the claim process. He cautioned the insurers that if the sales force remains “dream merchants” they will be failing in their duty in gaining the confidence of the customers which will only cause further damage to the industry. Talking about corporate social responsibility, he advised the industry to consider accepting risks such as providing coverage to police personnel and farmers etc. He also indicated that considering the large number of senior citizens, the insurance companies should focus on insurance products to suit their requirements.

The occasion was marked by the launch/release of the following consumer education material:-

- **Television Commercial cautioning public against spurious callers:-** Spurious calls is a menace and IRDAI is making all out efforts to curb the menace using print and electronic media. A TVC Ad was produced by IRDAI as a part of its continuous efforts to educate public cautioning them against spurious callers.
- **Facebook Page of IRDAI:-** Facebook is the in thing for corporate sector as a part of social media and IRDAI wants to make use of this channel for reaching the public through this platform as well.
- **E-Books :-** IRDAI has developed a lot of consumer education material. Three books viz. Introduction to insurance; Employment opportunities in insurance sector and Handbook on insurance were converted in to e-books to make use of technological platform for dissemination of insurance education.



- **IRDAI Brochure and Handbook on Crop Insurance :-** This brochure is updation of existing version after the re-naming of IRDAI, handbook on crop insurance is the requirement to cater to the rural segment for insurance education.
- **Consumer Affairs Booklet 2014-15:-** The consumer education booklet is a compilation of the grievance redressal data pertaining to various insurance companies and presents analysis of IGMS date for the FY 2014 & 15.

National Centre for Financial Education's (NCFE) National Financial Literacy Assessment Test (NFLAT) is a first of its kind national level test, conducted to measure the level of financial literacy among school students. Through this test NCFE aims to encourage school students to obtain basic life skills which will help them lead a financially stable and healthy life. Around 1 lakh students appeared in this test. The Chief Guest distributed the prizes to the student and school winners of the NFLAT for East and South regions.



List of NCFE-NFLAT 2014-15 Awardees on 19-Apr-2015

Region – East		
Rank	Student Name	School Name
Rank 1	Priyam	Agrasen D.A.V. Public School, Ramgarh (Jharkhand)
Rank 2	AdarshChoudhury	Don Bosco Higher Secondary School, Silchar (Assam)
Rank 3	AniruddhaDebnath	Don Bosco School, West Tripura, Tripura.
Region– South		
Rank	Student Name	School Name
Rank 1	RittvikSarvan	Presidency School, Bangalore (Karnataka)
Rank 2	Paul David Chemmanoor	Jawahar Higher Secondary School, Cuddalore (Tamilnadu)
Rank 3	Eman Amina Saleem	Rani Public School, Kozhikode (Kerala)
Winning school based on participation		
Rank	School name	
Rank 2	Rani Public School, Kozhikode, Kerala	
Rank 3	Smt . Narbada Devi J Agarwal, Vivekananda Vidyalaya , Chennai, Tamilnadu.	
Rank 4	Vikash Residential School , Bargarh, Odisha	
Rank 9	SGBK Sahu Inter School, Warisaliganj, Nawada, Bihar	
Rank 15	Delhi Public School, Siliguri, Darjling (West Bengal)	
Rank 15	Corporation Girls Hr Sec School, Oppanakara Street , Coimbatore, Tamil Nadu.	
Rank 20	P.S. ChidambaraNadar Senior English School, Virudhunagar, Tamil Nadu	
Rank 23	Basaveshwar International Public School(CBSE), Bagalkot, Karnataka.	
Winning school based on Performance		
Rank	School name	
Rank 5	Sri Kumaran Public School, Bangalore (Karnataka)	

This was followed by cultural programme in which employees of IRDAI and their family members gave performances. The kids of IRDAI's employees also participated in the fancy dress competition. Folk dance and Kathak dance performances by professional groups were also formeda part of the celebrations. A fashion show by the staff members of IRDAI was the last programme. The audience was enthralled by the performances during the cultural programme.



The entire programme was conceptualised by the Communication Wing with logistic support from Administration Department and enthusiastic participation of the staff member of all cadres.

STATISTICS NON-LIFE INSURANCE

Report Card : General

Gross Premium underwritten for and up to the month of February 2015

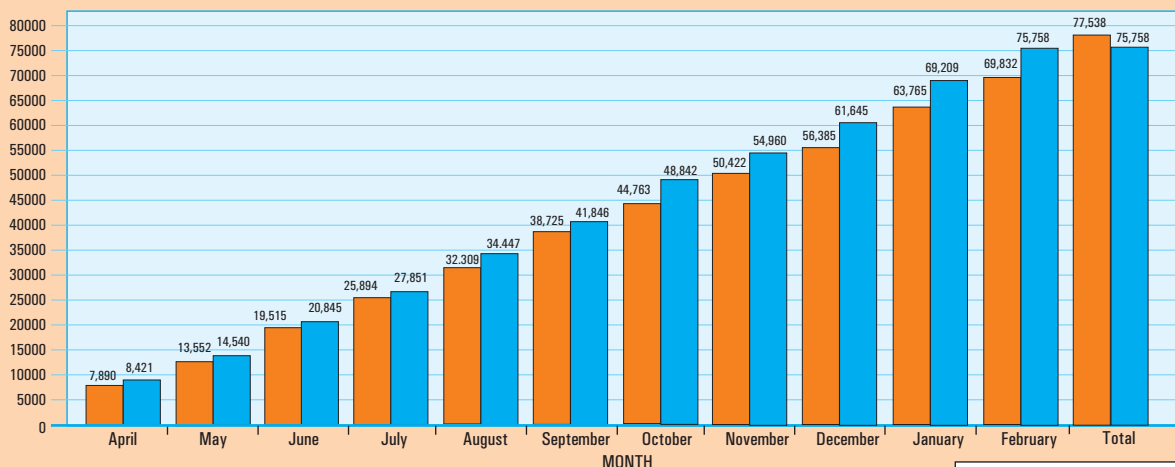
(₹ in Crores)

(%)

INSURER	FEBRUARY		APRIL - FEBRUARY		GROWTH OVER THE CORRESPONDENCE PREVIOUS YEAR
	2014-15	2013-14*	2014-15	2013-14*	
Royal Sundaram	126.89	102.97	1,420.64	1,316.78	7.89
Tata-AIG	222.50	179.92	2,448.53	2,139.76	14.43
Reliance General	205.82	180.12	2,485.83	2,223.83	11.78
IFFCO-Tokio	282.92	204.09	2,960.60	2,591.81	14.23
ICICI-lombard	518.32	517.18	6,170.10	6,298.59	-2.04
Bajaj Allianz	415.26	335.52	4,687.32	4,029.54	16.32
HDFC ERGO General	277.64	261.08	2,847.66	2,570.88	10.77
Cholamandalam	151.83	136.74	1,676.10	1,605.69	4.39
Future Generali	75.81	95.77	1,344.14	1,152.46	16.63
Universal Sampo	55.31	41.91	581.15	468.85	23.95
Shriram General	129.10	124.90	1,328.09	1,359.98	-2.34
Bharti AXA General	101.63	102.92	1,334.08	1,286.47	3.70
Raheja QBE	1.63	1.69	19.45	21.67	-10.25
SBI General	160.29	104.03	1,346.09	1,040.82	29.33
L&T General	31.73	21.40	287.09	221.01	29.90
Magma HDI	35.56	40.11	432.40	377.13	14.66
Liberty	21.36	15.14	259.70	107.65	141.26
Star Health & Allied Insurance	142.89	103.24	1,240.86	944.56	31.37
Apollo MUNICH	69.81	59.03	681.71	598.60	13.88
Max BUPA	33.83	27.61	315.99	266.57	18.54
Religare	31.07	16.08	239.57	140.76	70.20
Cigna TTK	4.28	0.04	16.29	0.04	37437.10
New India	1,003.31	900.53	11,816.38	10,300.09	14.72
National*	778.89	778.39	10,025.69	9,287.44	7.95
United India	775.11	680.90	9,514.76	8,750.59	8.73
Oriental	562.01	552.4	6,715.37	6,461.23	3.93
ECGC	117.61	113.60	1,191.81	1,143.21	4.25
AIC	229.02	369.01	2,371.02	3,125.84	-24.15
PRIVATE TOTAL	3,095.50	2,671.48	34,123.39	30,763.45	10.92
PUBLIC TOTAL	3,465.94	3,394.83	41,635.04	39,068.40	6.57
GRAND TOTAL	6,561.44	6,066.30	75,758.43	69,831.86	8.49

Note: Compiled on the basis of data submitted by the Insurance companies
* Figures revised by insurance companies

Premium underwritten by non-life insurers up to the month of February, 2015



* Compiled on the basis of data submitted by the Insurance companies
The total bar in the above chart represents the business figures of the entire financial year



IRDA of India Does Not Sell Insurance!

The public are hereby cautioned regarding the following:

- There are certain telephone calls by persons claiming to be employees of Insurance Regulatory and Development Authority of India (IRDA of India), trying to sell insurance policies or offer 'benefits'.
- IRDA of India does not sell or promote any insurance product or offer any benefit.
- If any person approaches you claiming to be IRDA of India employee for sale of insurance products or offering any 'benefit', please report it to the nearest police station.

IRDA of India regulates the activities of insurance companies to protect the interests of the general public and insurance policyholders



www.irda.gov.in

You may contact IRDA of India Call Centre at 155255 or Lon on to www.igms.irda.gov.in
If your grievance has not been attended to by the insurance company.



BEWARE OF FAKE TELEPHONE CALLS

**IRDAI Kisi Bhi Tarah Ki
Telephone Calls Nahi Karta, Aise Fraud Calls Se
Raho Hoshiyaar, Police Mein Karo F.I.R.**



I.R.D.A of India:

- Never sells any insurance or financial products
- Never invests the premium of insurance companies
- Never endorse any bonuses

Report the name, phone number and other details of such callers to your nearest Police Station.

A public awareness initiative by



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