

ECOWRAP

**LEARNING FROM THE FREQUENT NATURAL DISASTERS IN INDIA:
URGENT INTERVENTIONS REQUIRED TO IMPROVE PROTECTION
GAP CURRENTLY AT 8% (GLOBAL AVERAGE AT 54%)**

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Natural disasters in the form of recent floods in Northern India and the *Biparjoy* cyclone in Gujarat have caused loss of human life and the economic impact is huge. The heavy toll on infrastructure due to these type of natural disasters is a matter of grave concern for the country like India where the locational and geographical features render it vulnerable to a number of natural hazards. **While the current status of economic loss due to these floods is yet to be estimated, we believe this in the range of Rs 10,000-15,000 crore.**

India has been ranked at 3rd position, after US and China in recording the highest number of natural disasters since 1900. **India recorded 764 instances of natural disasters (Landslide, Storm, Earthquake, Flood, Drought, etc.) since 1900 with 402 events occurring during 1900-2000 and 361 during 2001-2022, indicating the preponderance of tail events at an alarming frequency and each such event setting new records of economic stress. By disaster type, India is marred mostly with floods. Almost 41% of disasters occurred in the form of floods followed by storms.**

The question is how do we cope with frequent natural disasters in India? Apart from the typical issues of planning up of urban infrastructure, the crucial issue of protection gap (defined as typically the losses that are uninsured) is almost neglected in a country like India. For example, out of the total \$284 bn global economic losses, natural disasters resulted in \$275 billion in 2022, of which \$125 billion were covered by insurance (incurred losses). The overall protection gap has increased to \$ 151 bn in 2022, which is much higher than the 10-year average of \$130 bn **but still at around 54% of the total losses uninsured. Though still large, this is less than the 61% average protection gap of the previous 10 years. For India this figure is a staggering 92%.** In effect, In India, an average Indian is insured of roughly 8% of what may be required to protect a family from financial shock following the death of the breadwinner. This means having savings and insurance of just Rs 8 for every Rs 100 needed for protection, leaving a protection gap of Rs 92.

What we need is a public-private solution, say a Disaster Pool, for natural disaster risk involving the insurance sector could offer many benefits over government crisis loans and grants. If we consider 2020 floods in India, the total economic loss was of \$7.5 billion (Rs 52,500 crore) but insurance cover of only 11%. If Government would have insured it, then the premium for the sum assurance of Rs 60,000 crore would have only in the range of Rs 13,000 to Rs 15,000 crore.

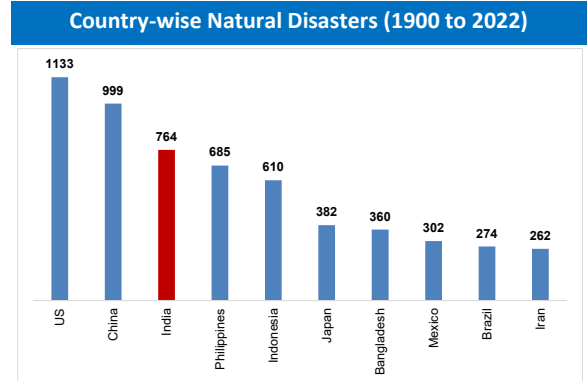
The lessons from COVID-19, from the need for improvements in public health and business preparedness to the availability of new data on mitigation measures and business impacts, provide an opportunity to reduce future pandemic impacts and enhance insurability. The insurance sector and governments need to actively engage and discuss how best to address the potential contingent liabilities.

We need out of box solutions for addressing these natural disasters and the general lack of awareness even across businesses in ensuring protection gap for workers. In the MSME sector, only 5% of the units are insured in the country. This sector needs much higher level of protection. In such a case, the Government may launch a partnership program to cover the MSME employees and provide social security to them in terms of insurance benefits and income protection for their families by way of Insurance Scheme for MSME Promoter to cover losses in business due to reasons beyond control of the promoter. The contours of such a programme could involve bonus to MSME entrepreneurs for running business sustainably for more than 10 years, with regular payment of Interest to bank and taxes to Government. Even the bank can annually provide 0.5% of interest earned into a linked account with lien and after successful running of business with no default, the corpus build in the lien marked account should be paid to the borrower as a mark of recognition of running business with fulfillment of all financial discipline, with the clause that it should be used for welfare of the employees!

In a similar vein, under PM-JAY, the beneficiary is currently at 120 million in an effort to provide affordable quality healthcare to more citizens. The Government can provide PM-JAY to all the residents with OPT-IN facility.

NATURAL DISASTERS IN INDIA

- ◆ Natural disasters in the form of recent floods in Northern India and the *Biparjoy* cyclone in Gujarat has caused loss of human life and the economic impact is huge. The heavy toll on infrastructure due to these type of natural disasters is a matter of grave concern for the country like India where the locational and geographical features render it vulnerable to a number of natural hazards.
- ◆ India has been ranked at 3rd position, after US and China in recording the highest number of natural disasters since 1900. India recorded 764 instances of natural disasters (Landslide, Storm, Earthquake, Flood, Drought, etc.) since 1900 with 402 events occurring during 1900-2000 and 361 during 2001-2022, indicating the preponderance of tail events at an alarming frequency and each such events setting new records of economic stress. These events in statistical parlance are commonly called fat-tail events. Since 2001, a total of 100 crore people has been impacted and almost 85,000 people died due to these disasters since 2001.
- ◆ **By disaster type, India is marred mostly with floods. Almost 41% of disasters occurred in the form of floods followed by storms.**
- ◆ Apart from human losses, there is huge economic loss due to these disasters. Since 1900, India has suffered an economic loss of \$150 billion (where the loss is reported) with largest loss from floods (\$92.1 billion) followed by storms (\$44.7 billion).
- ◆ Global geospatial technology solutions consultancy RMSI has assessed the very severe cyclone Biparjoy could lead to an approximately estimated economic loss of about Rs 830 crore (\$100 million) due to wind, storm surge, and flooding.
- ◆ The recent North India floods severely affected Himachal Pradesh, Uttarakhand, Punjab, Uttar Pradesh, Rajasthan, Jammu and Kashmir, and Delhi. An interaction between monsoon and a western disturbance is believed to be the cause of heavy rainfall which is causing floods and landslides. **While the current status of economic loss due to these floods is yet to be estimated still we believe this in the range of Rs 10,000-15,000 crore.**
- ◆ In Himachal Pradesh roads, transformers, electric sub-stations and water supply schemes has suffered extensive damage. As per an initial estimate, the loss could in the range of Rs 3,000-4,000 crore.

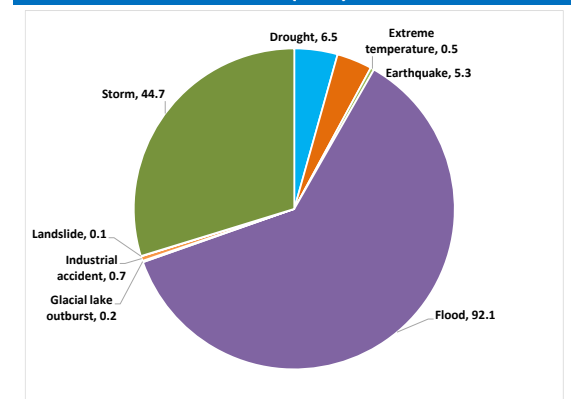


Source: EM-DAT; SBI Research

Natural Disasters in India			
Year	Occurrences	Deaths	Total Affected (in crore)
1900-2000	402	9050599	147.4
2001	22	21045	2.7
2002	18	2991	34.2
2003	18	2251	0.8
2004	7	17737	3.4
2005	31	4997	2.9
2006	20	1431	0.7
2007	20	2236	3.8
2008	11	1808	1.4
2009	17	2204	1.1
2010	18	1344	0.4
2011	13	1038	1.3
2012	10	599	0.4
2013	12	7119	1.7
2014	16	1072	0.6
2015	22	3400	34.7
2016	16	1129	0.4
2017	18	2346	2.2
2018	23	1396	3.2
2019	14	2428	2.3
2020	11	2316	2.0
2021	17	1860	0.4
2022	7	2210	0.2
2001-2022	361	84957	100.8
Total (1900-2022)	763	9135556	248

Source: EM-DAT; SBI Research

Economic Loss due to Natural Disasters in India since 1900 (\$ Bn)



Source: EM-DAT; SBI Research

REDUCING PROTECTION GAP IN THE HINTERLAND

- ◆ The natural disasters has been increasing across the world. In 2022, there were many large natural catastrophes demonstrated a wide variety of risks across different perils around the world. The different events shed light on the underlying drivers of the long-term trend of rising catastrophe-related insured losses.
- ◆ Out of the total \$284 bn global economic losses, natural disasters resulted \$275 billion in 2022, of which \$125 billion were covered by insurance (incurred losses). The overall protection gap has increased to \$ 151 bn in 2022, which is much higher than the 10-year average of \$130 bn. The large protection gap, with around 54% of the total losses uninsured. Though still large, this is less than the 61% average protection gap of the previous 10 years.
- ◆ Recently, in India the intensity and frequency of natural calamities, especially cyclone, have increased manifold. Further, the cyclones in west coast (Maharashtra, Gujrat) in increasing, which has not ben witnessed in the past. However, around 8% of the total losses are covered, so, there is around 93% protection gap during the period 1991 to 2022. So, early intervention is needed to close the protection gap, which are in all lines of insurance.
- ◆ In a number of countries, insurance programmes or pools have been established, usually with the support of the public sector, to provide insurance coverage for certain risks and/or for certain segments of the population.
- ◆ In many cases, these programmes have been established to provide affordable insurance coverage for risks that have been deemed uninsurable through private insurance markets – although in others, the programmes have been established in order to promote solidarity in terms of loss-sharing across regions.
- ◆ Among all the countries, France has had a nationwide insurance scheme since 1989. From 2016, insured losses have exceeded EUR 550 million each year, with the average annual loss standing at EUR 810 million, compared with an average annual loss of EUR 310 million in 2000–2015.

Insured losses in 2022 well above the 10-year Average (in USD Bn)					
		2022	2020	2019	10 Yr Average
Economic Losses	A	284	202	150	220
% of Global GDP		0.27	0.24	-	0.23
Insured Losses	B	132	89	63	91
Global Protection Gap	C=A-B	151	113	87	130

Source: SBI Research, Swiss Re, Sigma 1/2023

Extent of Insured losses in recent natural disasters in India					
Year	Disaster Type	Location	Economic Loss (\$ Bn)	Insured Loss (\$ Bn)	Insured as % of Total
1991	Flood	Mumbai, Kerala, Gujarat	0.1	0.0	48%
1997	Flood	Himachal Pradesh.	0.1	0.0	9%
1998	Storm	Gujarat, Maharashtra	0.5	0.2	46%
1999	Storm	Orissa, Andhra Pradesh, West Bengal	2.5	0.1	4%
2001	Earthquake	Gurajat	2.6	0.1	4%
2004	Earthquake	Tamil Nadu, Andhra Pradesh, Kerala	1.0	0.0	0%
2005	Flood	Multiple States	3.3	0.8	25%
2005	Flood	Gujarat	2.3	0.2	7%
2006	Flood	Multiple States	3.4	0.4	12%
2009	Flood	Karnataka, Andhra Pradesh, Maharashtra	2.2	0.1	2%
2013	Flood	Multiple States	1.1	0.5	45%
2014	Flood	J&K	16.0	0.2	1%
2014	Storm	Andhra Pradesh, Orissa	7.0	0.5	8%
2015	Storm	Multiple States	0.9	0.1	12%
2015	Drought	Multiple States	3.0	0.4	13%
2015	Flood	Andhra Pradesh, Tamil Nadu	2.2	0.8	34%
2016	Storm	Tamil Nadu, Andhra Pradesh	1.0	0.2	20%
2016	Flood	Andhra Pradesh, Telangana	0.6	0.0	7%
2017	Flood	Mumbai, Thane	0.3	0.1	26%
2019	Flood	Multiple States	10.0	0.2	2%
2020	Flood	Multiple States	7.5	0.8	11%
2021	Flood	Multiple States	3.2	-	-
2021	Glacial lake outburst	Multiple States	0.2	-	-
2021	Storm	Multiple States	4.4	-	-
2022	Flood	Multiple States	4.2	-	-
Total			79.6	5.7	7%

Source: EM-DAT; SBI Research

WHAT NEEDS TO BE DONE?

- ◆ India is a hugely under-insured country, compared to global peers. Although third party insurance is mandatory, but around 79% of four-wheelers are covered and 65% per cent four-wheelers are insured for own-damage only. For two-wheelers, it is much worse, as around 35% of vehicles are insured under third party and 39% are covered for own damage. In the health sector, some 36% people are insured but of these, three-fourths are insured by government schemes and the remaining 3.2% have got individual health plans. An additional 5.4% have got group health. So, almost 62% of the total health expenditure is out-of-pocket. Furthermore, only 0.9% of houses are insured whereas in the US, more than 90% of dwelling units enjoy cover. In the MSME sector, only 5% of the units are insured in the country. This sector needs much higher level of protection. So, we believe the regulator/Government should come out with some standardised products for various sectors so that the protection gap in each segment can be reduced significantly.
- ◆ Further, the overall Protection Gap in this country, whether it is life or general (non-life), in most of the segments the protection gap is about 70 to 80%. Only 20% to 25% is being availed. There is a huge gap. So, insurers needs to exploit the situation, which has huge business potential.
- ◆ In India, an average Indian is insured of roughly 8% of what may be required to protect a family from financial shock following the death of the breadwinner. This means having savings and insurance of just Rs 8 for every Rs 100 needed for protection, leaving a protection gap of Rs 92. Lack of awareness around what is an adequate life insurance cover for an individual increases the mortality protection gap.
- ◆ A public-private solution, say a Disaster Pool, for natural disaster risk involving the insurance sector could offer many benefits over government crisis loans and grants. If we consider 2020 floods in India, the total economic loss was of \$7.5 billion (Rs 52,500 crore) but insurance of only 11%. If Government would have insured it, then the premium for the sum assurance of Rs 60,000 crore would have only in the range of Rs 13,000 to Rs 15,000 crore.
- ◆ For better underwriting and risk assessment, updated property value should be considered. For instance, in the last two years inflation has surged, and this has pushed up the costs of property rebuilds and reconstruction. Inflation effects contributed to the large losses from the floods .
- ◆ The lessons from COVID-19, from the need for improvements in public health and business preparedness to the availability of new data on mitigation measures and business impacts, provide an opportunity to reduce future pandemic impacts and enhance insurability. The insurance sector and governments need to actively engage and discuss how best to address the potential contingent liabilities from pandemic risk so that lessons learned can be applied that ensure better management of the next crisis.
- ◆ Under PM-JAY, the beneficiary is currently at 120 million in an effort to provide affordable quality healthcare to more citizens. We expect Government to provide PM-JAY to all the residents with OPT-IN facility.

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