

Insurance and Risk Finance Facility



Inclusive insurance and risk financing in India Snapshot and way forward 2024

Why this report ?

This report summarizes the key findings of an inclusive insurance and disaster risk finance country diagnostic carried out by the UNDP's Insurance and Risk Finance Facility (IRFF) and UNDP India. The objective of this summary report is to present a highlevel overview of the following information for India:

Key risks, especially climate risks

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The current state of inclusive insurance

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3 The current state of disaster risk finance

Recommendations to advance inclusive insurance, disaster risk finance and overall development

This summary is a starting point for discussion and collaborative action planning on inclusive insurance and disaster risk finance between UNDP and critical stakeholders, including the insurance sector, government agencies and other development sector actors.

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IRFF goals

Impacts: Reduced vulnerability, enhanced resilience of countries and communities and strengthened prospects for sustainable development. **Outcomes:** Country and community long-term resilience improved by development and delivery of integrated insurance, risk finance and investment solutions, from products, tools and services all the way leading to market transformation.

Contact IRFF for questions:

If you wish to discuss the findings and recommendations of this report, reach out to:

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Key messages



Risks: Two-thirds of India's States and Union Territories are prone to natural disasters. 'The majority of the country's districts and population are vulnerable to drought. Severe floods have occurred with a onein-five-year frequency and lead to huge loss of life and displacement. Most of India's extensive coastline is prone to tropical cyclones and disaster potential is particularly high during landfall in the North Indian Ocean. As climate change escalates, heatwaves are expected to become more frequent, and their duration, intensity and coverage are expected to increase. At the other end of the scale, northern States are vulnerable to damaging cold waves.

Inclusive insurance: India is one of the fastest growing insurance markets, although insurance penetration is only 4%. It has invested substantially in life, agriculture and health inclusive insurance schemes. The country has the third-largest agriculture insurance market in the world, driven by the government-supported crop insurance scheme, which reaches a large number of smallholder farmers. While there are as yet no microinsurance companies, regulations require insurers to assign a portion of their portfolios to social and rural sectors. Under the regulator's new initiative, Insurance for All by 2047, several steps are being taken to strengthen the three pillars of the insurance ecosystem: customers, providers and distributors.



Disaster risk finance: Considerable progress has been made in disaster management since the introduction of the Disaster Management Act 2005. India has Disaster Management Authorities at national, state and district levels, which are responsible for preparing and implementing disaster management plans. However, disaster risk financing is still centred on post disaster relief and recovery through the National and State-level Disaster Response Funds. The Government's Fifteenth Finance Commission has therefore recommended four pre-disaster interventions on disaster risk insurance, crop insurance, risk pooling for infrastructure protection and improving access to international reinsurance.



Key recommendations: To support inclusive insurance, interventions are proposed on: developing innovative microinsurance products tailored to the needs of low-income populations; exploring new distribution models that are accessible and offer value for the hard-to-reach; implementing insurance literacy initiatives to develop informed demand; enhancing operational efficiencies to reduce costs and develop the business case around inclusive insurance; promoting further changes in the microinsurance regulatory environment; and supporting the regulator's mandate on stringent data protection measures. To improve disaster risk financing, proposed interventions focus on supporting the Fifteenth Finance Commission's recommendations on disaster risk insurance and risk pooling. To improve disaster risk financing, proposed interventions focus on supporting the Fifteenth Finance Commission's recommendations on disaster risk insurance

India's development and risk profile

Key macroeconomic and development indicators

7.2% gross domestic product (GDP) growth was achieved in India in 2022 and 9.1% growth was seen in 2021, following a sharp contraction of **5.8%** in 2020 due to the COVID-19 pandemic.² India is a lower-middle-income country.

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More than 415 million

people moved out of poverty within 15 years between 2005/2006 and 2019/2021.⁶ Despite this success, poverty remains widespread in India and inequality has been rising sharply for the last three decades.⁷ The majority of poor people are from rural areas, where **64**% of the Indian population live.⁸

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78%

of Indian adults had a bank account in 2021, over double the amount 10 years prior. There is no clear gender gap: men and women have equal access to formal financial services.⁹

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35%

of adults – more men than women – used digital payments in 2021, lower than the developing economy average of **57%.**¹⁰ However, the number of digital transactions has been increasing exponentially year-on-year,¹¹ reaching 116.6 billion Indian rupee (INR; US\$1.4 billion)¹² in financial year 2023.¹³



of the country's economic activity is contributed by consumption and investment, since India's GDP is primarily driven by domestic demand.³

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17%
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of GDP comes from the country's vibrant and diverse agricultural sector,⁴ which employs **43%** of its workforce.⁵

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of men and **75%** of women own a mobile phone.¹⁴ Smartphone ownership is **49%** in urban areas, compared to **35%** in rural areas,¹⁵ while **24%** of men and **11%** of women have mobile money accounts.¹⁶

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Geographic context



India is the seventh largest country in the world by landmass and is heterogeneous in its geography and climate. It extends from the Himalaya mountains in the north to tropical rainforests in the south and has a coastline of 7,516 km. The mainland comprises four broad regions: the great mountain zone, the plains of the Ganga and the Indus, the desert region and the southern peninsula.¹⁷

Hazard context

Between 1998 and 2017, India suffered economic losses of \$79.5 billion due to natural disasters.¹⁸ Key natural hazard risks are droughts, floods, cyclones, heatwaves and cold waves. By 2100, it is predicted that climate change could reduce the country's GDP by between 2.6% and 13.4%, depending on whether the global temperature increase remains below 2°C or rises by up to 4°C.¹⁹ By 2050, severe water scarcity could affect more than 40% of the people in South Asia.²⁰ At the same time, flooding will intensify in the Ganga and Brahmaputra River basins.²¹ Due to the country's unique geoclimatic and socioeconomic conditions, 27 of India's 36 States and Union Territories (UTs) are disaster-prone.²²



Key risks and hazards



Drought

- An estimated **87%** of India's districts and **93%** of the population are moderately to very highly vulnerable to droughts.²³
- Between 2002 and 2022, nine major droughts have occurred in India. The drought of 2016, which impacted 10 States, was estimated to have impacted the national economy by around \$100 billion.²⁴ In the 10 years from 1998 to 2007, the effects of severe droughts reduced India's GDP by an estimated 2% per annum.²⁵
- India's southern and central zones are highly exposed to extreme drought events and 45% of the top 20 most drought-exposed districts of the county are in Rajasthan.²⁶ The highest frequency of severe droughts is seen in the Deccan region.²⁷



Flood

- Around **30%** of districts and **41%** of the population are moderately to very highly vulnerable to floods.²⁸
- Between 1980 and 2017, India experienced 278 major floods, affecting more than 750 million people.²⁹ In the last decade, severe floods occurred in 2018 in Kerala, in 2017 in Bihar, in 2015 in Chennai, in 2014 in Jammu and Kashmir and in 2013 in Uttarakhand. The frequency of major floods is more than once every five years.
- On an average annual basis, 7.5 million hectares of land are affected, 1,600 lives are lost, and damages to crops, houses and public utilities amount to \$215.6 million.³⁰
- The north-eastern and eastern zones including the States of Arunchal Pradesh, Assam, Manipur and Sikkim – are highly exposed to extreme flood events. The southern and central zones, including States such as Andhra Pradesh, Karnataka and Uttar Pradesh, are exposed to compounded flood events.³¹



Cyclone

- There were 16 major cyclones between 1970 and 2021, causing economic losses of up to \$14 billion each.³³ Of these cyclones, seven occurred between 2014 and 2021.³⁴
- Tropical cyclones are bimodal, with their primary and secondary peaks in November and May respectively.
- The disaster potential is particularly high during landfall in the North Indian Ocean, due to the accompanying destructive wind, storm surges and torrential rainfall. Storm surges cause the most damage, as seawater inundates low-lying areas of coastal regions, causing heavy floods, eroding beaches and embankments, destroying vegetation and reducing soil fertility.³⁵
- Cyclone Amphan, which hit the eastern coast of India in May 2020, was at the time the world's costliest natural disaster, causing estimated economic losses of more than \$14 billion.³⁶
- Over the five decades between 1970 and 2019, India has reported **46,784** deaths due to tropical cyclones, although loss of life has decreased since the cyclone forecast system and evacuation procedures have evolved.³⁷
- Tropical cyclones of various degrees affect 76% of the coastline.³⁸ Half of the 20 districts most exposed to extreme cyclones lie on the coast of Odisha.³⁹



Heatwave

- An estimated 13% of districts and 15% of the population of India are moderately to very highly vulnerable to heatwaves.⁴⁰
- Between 1971 and 2019, **706** heatwaves took place in India.⁴¹ Severe heatwaves in 2022 resulted in excess deaths, hospitalizations, lost wages, missed school days and loss of crops and livestock.⁴²
- Heatwaves typically occur between March and June. They are projected to become three to four times more frequent by the end of the twenty-first century compared to the baseline period of 1976–2005, and their duration, intensity and coverage are expected to increase.⁴³
- Heatwaves have claimed more than 17,000 lives in the country since 1971.⁴⁴ In 2015, India was hit by a heatwave that caused more than 2,400 deaths, making it the fifth worst global heatwave then recorded.⁴⁵
- Heatwaves generally develop over north-west India and spread gradually eastwards and southwards.⁴⁶ The States of Andhra Pradesh, Odisha and Telangana have recorded most deaths caused by heatwave in the country.



Cold wave

- Cold waves are generally experienced from November to March,⁴⁷ and 36% of districts and 40% of the population are moderately to very highly vulnerable.⁴⁸ Cold waves affect health, agriculture and infrastructure.
- The northern States of Bihar, Delhi, Haryana, Punjab and Uttar Pradesh, along with areas of Kashmir and the Union Territory of Jammu, reported the most frequent cold waves between 2001 and 2014.⁴⁹ The deadliest cold wave reported took place in 2015, in which **1,149** people lost their lives.⁵⁰



Inclusive insurance⁵¹: Status

Insurance Regulatory and Development Authority of India (IRDAI)

IRDAI regulates the insurance sector, issuing licences, norms and regulations for insurers and intermediaries. It emphasizes policyholder protection, market fairness, financial stability, competition and innovation.

Development banks

- The National Bank for Agriculture and Rural Development (NABARD) plays a significant role in facilitating inclusive insurance, especially in the agricultural sector, by distributing government-subsidized products like crop insurance.
- Small Industries Development Bank of India (SIDBI) works towards the growth of the micro-, small and medium-sized enterprise (MSME) sector, which includes providing access to insurance products tailored for small businesses.

Reserve Bank of India (RBI)

 As India's Central Bank, RBI's initiatives often influence the insurance sector, particularly through financial inclusion programmes that can include insurance services.



Insurance associations

- Institute of Actuaries of India (IAI) is a statutory body for the regulation of the actuarial profession in India, established under The Actuaries Act 2006 (35 of 2006).
- The Insurance Brokers Association of India (IBAI) is the main body of licensed insurance brokers, fostering industry standards and representing broker interests.
- United India Insurance Officers' Association (UIIOA) is a trade union for officers in public sector insurance companies and promotes professional welfare.
- The Associated Chambers of Commerce and Industry of India (ASSOCHAM) hosts events such as the Global Insurance Summit to unite industry players and discuss trends.
- The General Insurance Council is an association that represents the collective interests of non-life insurance companies in India.
- The Life Insurance Council is the principal representative body for life insurers in India.
- The Association of Mutual Funds in India (AMFI), while primarily focused on mutual funds, also addresses issues related to the insurance industry.

Insurance Advisory Committee

- The Insurance Advisory Committee was formed under Section 25 of the Insurance Regulatory and Development Authority Act, 1999.
- It represents the interests of relevant sectors and stakeholder groups for insurance, including industry, consumers, agents, intermediaries and actors in specific sectors like agriculture.
- Its main role is to advise on matters relating to regulatory amendments.⁵²

Microinsurance Committees

 IRDAI has appointed various committees to produce advisory reports on different aspects of microinsurance. These include the "Report of the committee for development of a concept paper on standalone microinsurance companies" and the "Report of the committee on designing of combi products for micro-insurance segment".⁵³

National Insurance Academy (NIA)

- The NIA was established in 1980 by the Ministry of Finance in collaboration with six insurance companies.
- It provides education, training and research on insurance, pensions and management.



Other government ministries

Multiple ministries at central and state government level also oversee and subsidize microinsurance schemes. These include:

- The Department of Financial Services, responsible for the Jan Suraksha health insurance schemes
- The Employee State Insurance Corporation (ESIC) in the Ministry of Labour and Employment, which supports the Employee State Insurance Scheme (ESIS)
- The Department of Agriculture and Farmers Welfare, which oversees the Pradhan Mantri Fasal Bima Yojana (PMFBY) and the Restructured Weather Based Crop Insurance Scheme (RWBCIS) crop insurance programmes
- The National Livestock Mission (NLM), which is responsible for the Livestock Insurance Scheme (LIS) under its sub-mission on livestock development.



Insurance Act

- The Insurance Act 1938 and the Insurance Laws (Amendment) Acts of 2015 and 2021 regulate the insurance industry in India, setting out the legal framework for conducting insurance business. The 2015 and 2021 amendments introduced several reforms, including increasing the foreign investment cap in Indian insurance companies to 49%.⁵⁴
- Regulations
- The Insurance Regulatory and Development Authority (IRDA) Act 1999 established IRDAI as the regulatory body overseeing the insurance industry in India.⁵⁵

Other inclusive insurance regulations

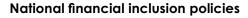
- IRDAI promotes innovation and technological solutions through its regulatory sandbox framework, allowing insurers to experiment with new products and services.⁵⁷
- Other IRDAI-issued regulations and guidelines include or have been specifically developed to address stringent data protection measures for insurance companies. These include:
 - Protection of Policyholders' Interests Regulations, 2017
 - Maintenance of Insurance Records Regulations, 2015
 - Information Technology Act, 2000 and Information Technology Rules, 2011
 - Guidelines on Information and Cyber Security for Insurers, 2017
 - Guidelines on Insurance E-Commerce, 2017
 - Digital Personal Data Protection Act, 2023.

Microinsurance regulations

- Microinsurance regulations were first issued in 2005 and then revised in 2015, and are currently undergoing another review.
- The revised microinsurance regulations of 2015 made several important amendments, including providing guidance on product development, adjusting risk coverage levels, permitting more entities to distribute microinsurance products and setting rules on microinsurance agent training. Key revisions included:
 - The definition of non-life microinsurance was revised to include MSMEs as a target segment
 - Minimum coverage limits for microinsurance products were removed
 - Maximum coverage limits for microinsurance products across life and non-life categories were increased
 - Rural and social sector obligations were introduced for insurers
 - Eligible distribution channel types were expanded from three to eight.
- Microinsurance is defined in the microinsurance regulations according to non-life and life lines of business, and further by type of cover and liability limit – in some cases, varying by type of policyholder.⁵⁶
- Non-life microinsurance includes:
 - Health insurance for individuals and family/groups up to a liability limit of ~\$1,300 and ~\$3,300, respectively
 - Personal accident insurance up to ~\$1,300
 - Dwelling and contents, livestock, tools or other named assets, or crop insurance up to ~\$1,300
 - Non-life insurance policies issued to MSMEs up to ~\$130 annual premium per enterprise.
- Life microinsurance is any product up to a liability limit of ~\$2,600.

Insurance strategies and plans

- Insurance for All by 2047 is an initiative spearheaded by IRDAI with the aim of ensuring that "every citizen has an appropriate life, health and property insurance cover and every enterprise is supported by appropriate insurance solutions". To achieve this objective, IRDAI is taking proactive steps to strengthen the three pillars of the entire insurance ecosystem: customers, providers and distributors.⁵⁸
- IRDAI has also already introduced various initiatives and policies to develop the insurance market in India, such as allowing more foreign investment, launching standardized insurance products, permitting video-based Know Your Customer (KYC) verification and encouraging digital platforms and innovation.⁵⁹
- The Government has a number of other strategies to support the implementation of specific microinsurance schemes that meet the needs of vulnerable populations. These schemes also receive financing in the form of direct premium subsidies and indirect subsidies such as tax waivers.



- The National Strategy for Financial Inclusion for India 2019–2024 makes specific reference to insurance. It incorporates indicators on access to life and non-life insurance for adults and also specifically for women.⁶⁰
- The Government has launched various initiatives to promote financial inclusion, such as Jan Dhan Yojana (a scheme to provide bank accounts to every household), Aadhaar (a unique identification number for every resident) and Mobile Connectivity (a scheme to provide mobile phones and internet access to every citizen). These programmes form the JAM trinity, which can facilitate the delivery of inclusive insurance services through digital platforms.

Financial education initiatives

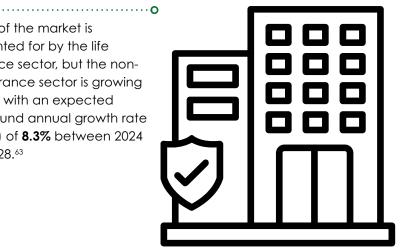
- Increasing insurance understanding is included within the National Strategy for Financial Inclusion for India 2019–2024.
- Inclusive insurance marketing and awareness-raising are also addressed by other measures.
 IRDAI issues guidelines for marketing campaigns, to avoid mis-selling of insurance. For the Jan Suraksha health insurance schemes, marketing campaigns are managed by the Department of Financial Services. The operational guidelines for PMFBY crop insurance, meanwhile, require insurers to spend 0.5% of the farmers' share of premium contributions on marketing.

Supply-side snapshot

Overall insurance coverage (traditional and inclusive): Fast facts

4% (gross written premium as a percentage of GDP) is India's insurance penetration rate.⁶¹ While the rate is below the global average, India's insurance market is one of the fastest growing among the G20 nations, with an average expected growth rate of 7.1% between 2024 and 2028.62

76% of the market is accounted for by the life insurance sector, but the nonlife insurance sector is growing rapidly, with an expected compound annual growth rate (CAGR) of 8.3% between 2024 and 2028.63



67 insurance service providers were active in India as of March 2022: 24 life insurers, 26 general insurers, 5 stand-alone health insurers and 12 re-insurers.⁶⁴ This includes a mix of specialized insurers, insurtechs and traditional public and private sector insurers. The governmentbacked reinsurer General Insurance Corporation of India (GIC Re) is the leading reinsurer in the country.65

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Inclusive insurance: Fast facts



- In the financial year 2022/23, 450,000 individual micro life insurance policies were issued and 162.6 million lives were covered under group policies.⁶⁶
- Insurers are required by IRDAI to provide insurance to rural and social sectors, with a target of 15% of life premiums and 15% of non-life premiums of their portfolios.
- There are no specialized microinsurers, but IRDAI commissioned a report by a Committee on a Standalone MicroInsurance Company, which provided recommendations for their establishment.⁶⁷
- In addition, there are 19 mutual and cooperative insurers in India, but they are not regulated under IRDAI and as a result face difficulties in securing finance to scale their offerings.68

Products offered

• The government supports three schemes: Pradhan Mantri Jan Arogya Yojana (PMJAY), which covers secondary and tertiary care in public and private empanelled hospitals across India; Rashtriya Swasthya Bima Yojana (RSBY), which covers hospitalization expenses; and the Employee State Insurance Scheme (ESIS), which provides in-patient and out-patient benefits to private establishment workers and their families earning less than INR 21,000 (\$251) per month. States also have their own health insurance schemes targeted at low-income populations.

- The insurance industry has also developed affordable hospital cash insurance products, which are packaged with services like telemedicine and medicine delivery. These include insurance products that cover specific illnesses for a shorter duration, as well as products that provide cover for vector-borne disease.
- The regulator has mandated all insurers to offer a standard individual health microinsurance product, Arogya Sanjeevani, with a sum insured from as low as ~\$670. Among other expenses, the product covers the costs of hospitalization, daycare treatments and taking an ambulance.

Agriculture insurance



Crop insurance

India has a long history of government-subsidized crop insurance, which dates back to 1985. In 2016, the Pradhan Mantri Fasal Bima Yojana (PMFBY), which includes the Restructured Weather Based Crop Insurance Scheme (RWBCIS), was launched. PMFBY is the third-largest crop insurance scheme in the world. Both schemes were reformed in 2020, with one of the biggest changes being the move to voluntary from mandatory crop insurance.

Health insurance

- Area Yield Index Insurance (AYII) is the main product offered under PMFBY. It is available for all food and oilseed crops during the Kharif (June to October) and/or Rabi (November to May) growing seasons. Since 2020, States have had the option to include add-on covers as standard, for losses during sowing, mid-season and post-harvest.
- Under RWBCIS, the product is Weather Index Insurance (WII). It is aimed at annual commercial/horticultural crops and States decide what crops to notify for RWBCIS coverage.
- Subsidies of the scheme are shared 50:50 between Federal and State Governments, or 90:10 for the North-Eastern Region. The premium payable by farmers is capped at 2% and 1.5% for Kharif and Rabi crops respectively, and at 5% for annual commercial/horticultural crops.⁶⁹
- In addition to central government-backed crop insurance, multiple States have launched their own crop insurance programmes.

Livestock insurance

- The government-supported Livestock Insurance Scheme (LIS) was launched in 2005. Livestock insurance has very low penetration compared to crop insurance. The product is offered by a limited set of insurance companies.
- LIS offers an indemnity product that covers death and permanent disability due to accidents, diseases, riots, strikes, etc. for up to 10 milk-producing 'cattle units'. The government subsidizes 85% of the premium share.⁷⁰
- Agriculture Insurance Company of India Limited (AIC) has launched an index-based insurance product to protect against cattle milk production deficit due to extreme heat.⁷¹



Income protection/business interruption



• Extreme Heat Income Replacement Insurance is a market-led index-based microinsurance product piloted in 2023. It compensates women workers in the informal sector for income lost due to heatwaves.⁷²

Life insurance

- The government supports two inclusive life insurance schemes: Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY) and Pradhan Mantri Suraksha Bima Yojana (PMSBY).
- IRDAI has mandated all insurers to offer a standard life insurance product, Saral Jeevan Bima, which compensates up to **\$33,300**, depending on the sum insured, to the nominated beneficiary in case of the policyholder's death. The policyholder can pay premiums on an monthly, quarterly or annual basis.



Distribution





Common channels:

- Low and medium-income segments are largely served through bancassurance channels and insurance company-appointed agents.
- The Government's Common Services Centres (CSC) distribute microinsurance products, along with the other government services they offer to citizens. However, the number of CSCs engaged in selling insurance is relatively low.⁷³
- Other potential channels:
- IRDAI has been proactive in permitting the involvement of other insurance distribution channels. Regulations allow for: Insurance Marketing Firms (IMFs); Insurance Self-Network Platforms (ISNPs); and Point of Sale Persons (POSPs). However, these have so far been underutilized for the provision of inclusive insurance.
- Agtechs and insurtechs are largely untapped for inclusive insurance in India.

Demand

- In general, the following factors have been highlighted as demand-side challenges for the low-income market:⁷⁴
 - Lack of self-confidence in engaging with formal financial systems and limited financial management skills among heads of households
 - Low levels of awareness about insurance products
 - Reluctance about paying for future events that may or may not happen, when meeting daily needs is a more pressing problem
 - Perceptions that many of the existing insurance products are not useful
 - Beliefs that servicing is poor quality and/or prohibitive for them, due to issues such as slow claims settlements, the quantity of documentation required and the difficulty of renewing policies.
- In terms of life insurance demand, households still face a significant financing gap in the event of the premature death of the breadwinner.⁷⁵
- For health insurance, insured patients under PMJAY were found to have similar out-of-pocket expenses to uninsured patients.⁷⁶ In addition, most of the micro hospital cash products cover less than \$5, but the average cost of treatment in public hospitals is \$60, and in private hospitals, \$425.⁷⁷
- Since the crop insurance schemes under PMFBY became voluntary in 2020, demand-side information will become even more important to obtain and monitor.



Disaster risk financing: Status



Disaster risk assessments and data systems

The Government has conducted a range of vulnerability and risk assessments, including, but not limited to the following:

- The Climate Vulnerability Assessment for Adaptation Planning in India Using a Common Framework was conducted by the Department of Science and Technology (DST) in collaboration with Swiss Agency for Development and Cooperation (SDC). The key objectives of the study were to assess and categorize the level of climate vulnerability for States.⁷⁸
- Mapping India's Climate Vulnerability A District Level Assessment was carried out by the Council on Energy, Environment and Water. It aimed to understand district-level vulnerability based on mapping exposure, sensitivity and adaptive capacity with respect to hydro-meteorological disasters.⁷⁹
- A Risk and Vulnerability Assessment of Indian Agriculture to Climate Change was conducted by the National Innovations in Climate Resilient Agriculture (NICRA) project to assess vulnerability to future climate change.⁸⁰
- India also has a variety of data systems, including the Climate Hazards and Vulnerability Atlas of the India Meteorological Department, which monitors and provides early warning services for meteorological disasters.⁸¹

Existing legal, institutional and policy frameworks



Legal:

The Disaster Management Act 2005 governs the design and structure of disaster management in India.⁸²

Institutional:

- The National Disaster Management Authority (NDMA) was established under the Disaster Management Act, with the Prime Minister as chairperson. The NDMA is responsible for creating policies, plans and guidelines for disaster management and for ensuring timely and effective disaster response.
- The National Executive Committee (NEC) was created to assist the NDMA. The NEC is composed of secretary-level officers representing ministries of the Government of India. The NEC is responsible for the preparation of the National Disaster Management Plan for India and its annual review.⁸³
- All State Governments are required to form a State Disaster Management Authority (SDMA) and set up a State Executive Committee, which are responsible for preparing State Disaster Management Plans and implementing the National Disaster Management Plan. Similarly, at the district level, District Disaster Management Authorities (DDMA) are tasked with creating and coordinating District Disaster Management Plans (DDMPs). However, reportedly, only 63% of districts have a DDMP, of which only 32% were updated as of 2019.⁸⁴
- The National Disaster Response Force (NDRF) provides specialist on-the-ground response to severe calamities when States require central government support.
- The National Institute of Disaster Management (NIDM) is responsible for disaster management capacity development, research and policy advocacy.

Policies:

- The Fifteenth Finance Commission (XV-FC) provided several policy recommendations on disaster risk management and allocated at least \$30 billion to NDMA to assess and enact these recommendations.
- Under the Seventh Schedule of Finance Act, 2001, National Calamity Contingent Duty (NCCD) is levied as a duty of excise on certain manufactured goods.⁸⁵ Revenue collected from NCCD is transferred to the National Disaster Response Fund (NDRF).
- To address the growing impact of climate change, the Government of India has established funds including the National Clean Energy Fund (NCEF) and the National Adaptation Fund (NAF). The Government also provides funding through eight missions established under the National Action Plan for Climate Change.

Disaster risk finance mechanisms and instruments

While much progress has been made in disaster management, disaster risk financing is still centred on post disaster relief and recovery.⁸⁶

 Disaster response funds. The National Disaster Response Fund (NDRF) and the State Disaster Response Funds (SDRFs) are the primary tools for disaster relief financing. In the aftermath of a disaster, State Governments provide relief through the response window of the SDRF. In case of need, States can ask for additional funds through the NDRF, in which case a three-tier system is followed to calculate the level of financial assistance needed.⁸⁷ An on-the-spot assessment is made by an Inter-Ministerial Central Team (IMCT) in cooperation with the officials of the State requesting assistance. The IMCT report is then considered by a Sub-Committee of the NEC, and recommendations made are then considered and approved by a High-Level Committee.



- The NDRF released INR 100 billion in financial year 2018/19, INR 185.31 billion in 2019/20 and INR 82.57 billion in 2020/21 (\$1.2 billion in 2018/19, \$2.2 billion in 2019/20 and \$988 million in 2020/21).⁸⁸ For 2019, the bulk of NDRF funding was disbursed to Kerala SDRF for relief following the Kerala floods and to Maharashtra SDRF because of damage to crops due to unseasonal rainfall. In 2020, there was a rise in NDRF disbursals to States. Maharashtra was allocated 28% of NDRF funding to aid in recovery from severe floods and Cyclone Kyarr, while Odisha was allocated 18% and Karnataka 17%.
- For 2020–2026, the allocation is INR 1,281 billion to the SDRFs.⁸⁹
- The XV-FC recommended changes to the funding structures of the NDRF and SDRFs, proposing their allocations be split into response and relief; recovery and reconstruction; and preparedness and capacity-building. The XV-FC also suggested that Mitigation Funds should be set up at both national and State levels for community-based interventions that can mitigate risks and enable environment-friendly practices.⁹⁰





- Sovereign risk transfer instrument experience is limited to an indexbased pilot for excess rainfall that can cause severe flooding in Nagaland. The Nagaland State Disaster Management Authority, with support of the InsuResilience Solutions Fund, worked with the insurance sector to design a solution.⁹¹ However, at national level, the XV-FC provided recommendations specific to disaster risk insurance and risk pooling, which are being addressed by the NDMA and relevant line ministries.
- **Public asset insurance** is the responsibility of the ministry or department to which the assets relate, but it is rarely used and penetration is negligible.

Way forward for inclusive insurance and disaster risk financing

The following recommendations support the development of inclusive insurance and disaster risk financing in India.

Recommendations for the development of inclusive insurance

Inclusive insurance products are largely supply-led

Develop innovative microinsurance products that are tailored to the needs of low-income populations.

- In-depth demand research should be conducted for specific product lines and segments of the population, for example related to current indemnity-based livestock insurance offerings.
- New products or product combinations should be explored to fill identified gaps, such as:
 - Health microinsurance products that also cover Outpatient Department (OPD) costs and not only hospital expenses
 - A combi microinsurance product, as recommended by IRDAI, which insurers could offer on a modular basis, thereby giving them flexibility to offer coverage to different groups and individuals that fits their specific protection needs
 - Combined solutions for agricultural livelihoods, such as crop insurance paired with coverage for loss of farm equipment
 - Composite or group insurance products for farmers, women or rural entrepreneurs.
- Lessons should be drawn from recent index-based insurance products for heatwave (for livestock insurance and for lowincome women workers), and the potential for scaling them up should be explored.

1.2

There has been an overreliance on credit-linked insurance, and innovative distribution channels are underutilized.

Explore new distribution models that are accessible and offer value for the underserved and hard-to-reach.

- Inclusive insurance products should be bundled with value-added and risk-reducing services, for example by bringing together health insurance, online doctor consultations and medicine provision that can help prevent hospitalization.
- Organizations with a strong presence in low-income communities, such as self-help groups, should be leveraged to reach target segments.

There is limited awareness and understanding about how microinsurance products work, leading to low demand and consumer protection risks.

Implement insurance literacy initiatives to develop informed demand.

1.3

- Working with community leaders, schools and other organizations, efforts should be made to educate people about the benefits of insurance.
- Accessible materials and methodologies should be developed to help people to understand relevant cover features such as exclusions, deductibles and waiting periods.
- Awareness should be raised among insurers on the importance of investing in and/or supporting client education. Well-informed policyholders reduce risk for insurers, thus improving profitability at the same time as improving client protection.
- Agents and distribution channel partners should be supervised to avoid mis-selling particularly for health insurance – and investment should be made in building their capacity.

Supply-side actors see inclusive insurance only as a social obligation.

Enhance operational efficiencies to reduce costs and develop the business case around inclusive insurance.

- Research and capacity-building should be conducted on the business case for inclusive insurance and approaches should be developed to build the business case.
- Technology should be leveraged to reduce overhead costs, such as by automating processes like underwriting and claims processing, and to reach a wider audience efficiently through digital channels.
- If a combi microinsurance product is introduced, IRDAI should be supported to expedite its recommendations on developing a common underwriting and servicing technological platform.

The regulatory environment has been highly responsive, but some gaps remain.

Promote further changes in the regulatory environment for microinsurance.

1.5

1.6

- Periodic revision of microinsurance regulations should be carried out to add needs-based products and update distribution channels.
- The International Association of Insurance Supervisors' guidelines on inclusive insurance should be incorporated to cater to the "missing middle".
- Flexibility in distribution should be encouraged, such as by allowing distributors to sell limited non-microinsurance products designed to meet the needs of low-income segments, for example two-wheeler (motorcycle) insurance as well as microinsurance products, to enable a business case to be created for the distribution of microinsurance.
- Approaches should be explored to develop a regulatory framework conducive to building the role of mutual and cooperative insurers, which can balance the solvency requirements of risk carriers with the supply-side constraints of covering poor people.

Data protection is a major concern within the insurance industry and requires a concerted effort from various stakeholders.

Support the IRDAI's mandate on stringent data protection measures for insurance companies.

- Awareness of data privacy should be raised among individuals and organizations and education should be provided about data protection rights and best practices.
- Data protection principles should be integrated from the start in business processes and product design.
- Potential conflicts between data protection law and sector-specific regulations should be addressed through coordination among relevant authorities.

Recommendations for the development of disaster risk financing

Disaster risk financing is still centred on post disaster relief and recovery.

Work with the NDMA and relevant line ministries in exploring the XV-FC's four recommended insurance interventions to supplement existing disaster management financing mechanisms.

- Feasibility assessments, knowledge-sharing, relevant roadmaps, product/programme design, setup and implementation should be supported on:
 - A national insurance scheme for disaster-related deaths to be financed by state and national governments
 - Synchronization of relief assistance from SDRFs and the NDRF with crop insurance payouts
 - A risk pool for infrastructure protection and recovery
 - Access to international reinsurance for outlier hazard events: parametric insurance aimed at low-frequency, high-intensity natural disaster events.
- Coordination of DRF efforts should be encouraged through, for example, the development of a
 dashboard where all the pipeline activities are visible to nodal line ministries, including the finance
 ministry, to encourage a harmonized approach.

Endnotes

- 1. India, National Institute of Disaster Management, India Country Profile (New Delhi, 2014). Available at https://nidm.gov.in/easindia2014/err/pdf/country_profile/India.pdf.
- 2. World Bank, "GDP growth (annual %) India", DataBank. Available at https://data.worldbank.org/ indicator/NY.GDP.MKTP.KD.ZG?locations=IN.
- 3. India, Ministry of Finance, Department of Economic Affairs, Economic Survey of 2020-21 (New Delhi, 2021). Available at https://www.indiabudget.gov.in/budget2021-22/economicsurvey/doc/echapter_vol2.pdf.
- 4. World Bank, "Agriculture, forestry, and fishing, value added (% of GDP) India", DataBank. Available at https://data.worldbank.org/indicator/NV.AGR.TOTL.ZS?locations=IN.
- 5. World Bank, "Employment in agriculture (% of total employment) (modeled ILO estimate) India", DataBank. Available at https://data.worldbank.org/indicator/SL.AGR.EMPL.ZS?locations=IN.
- 6. UNDP and OPHI, Global Multidimensional Poverty Index (MPI) 2022: Unpacking Deprivation Bundles to Reduce Multidimensional Poverty (New York, 2022). Available at https://hdr.undp.org/content/2022-global-multidimensional-poverty-index-mpi#/indicies/MPI.
- Kapoor and J. Duggal, The State of Inequality in India Report (Gurgaon, India, Institute for Competitiveness, 2022). Available at https://www.competitiveness.in/wp-content/uploads/2022/05/ Report_on_State_of_Inequality-in_India_Web_Version.pdf.
- 8. World Bank, "Rural population (% of total population) India", DataBank. Available at https://data. worldbank.org/indicator/SP.RUR.TOTL.ZS?locations=IN.
- L. Klapper, D. Singer and S. Ansar, "The Global Findex Database 2021: India Country Brief" (Washington, D.C., World Bank, 2021). Available at https://thedocs.worldbank.org/en/ doc/4c4fe6db0fd7a7521a70a39ac518d74b-0050062022/original/Findex2021-India-Country-Brief.pdf.
- 10. Ibid.
- 11. India, Press Information Bureau, Government of India, "Digital Transactions in India", 8 February 2023. Available at https://pib.gov.in/PressReleaselframePage.aspx?PRID=1897272.
- 12. The rate of exchange used throughout this document is US\$1 = 83.54 Indian rupees. See UN Operational Rates of Exchange, 14 June 2024. Available at https://treasury.un.org/operationalrates/OperationalRates.php.
- 13. India, Press Information Bureau, Government of India, "Total digital payment transactions volume increases from 2,071 crore in FY 2017-18 to 13,462 crore in FY 2022-23 at a CAGR of 45 per cent: MoS Finance", 19 December 2023. Available at https://pib.gov.in/PressReleaselframePage.aspx?PRID=1988370.
- 14. GSMA, The State of the Industry Report on Mobile Money 2024 (London, 2024). Available at https://www.gsma.com/sotir/wp-content/uploads/2024/03/GSMA-SOTIR-2024_Report_v7-2.pdf.
- 15. GSMA, The State of Mobile Internet Connectivity 2023 (London, 2023). Available at https://www.gsma. com/r/wp-content/uploads/2023/10/The-State-of-Mobile-Internet-Connectivity-Report-2023.pdf.
- 16. GSMA, The State of the Industry Report on Mobile Money 2024.
- 17. India, National Institute of Disaster Management, India Country Profile.
- 18. CRED and UNISDR, "Economic Losses, Poverty and Disasters 1998-2017" (Louvain and Geneva, 2018). Available at https://www.preventionweb.net/files/61119_credeconomiclosses.pdf.
- M. E. Kahn, K. Mohaddes, R. N. C. Ng, M. H. Pesaran, M. Raissi and J.-C. Yang, "Long-Term Macroeconomic Effects of Climate Change: A Cross-Country Analysis", IMF Working Paper, No. 2019/215 (Washington, D.C., 2019). Available at https://www.imf.org/en/Publications/WP/Issues/2019/10/11/Long-Term-Macroeconomic-Effects-of-Climate-Change-A-Cross-Country-Analysis-48691.
- IPCC, "Climate Change 2021: The Physical Science Basis Summary for Policymakers", Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (Geneva, 2021). Available at https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_ SPM_final.pdf.
- 21. M. Krishnan, "Climate change: It's now or never for India", DW, 3 March 2022. Available at https://www. dw.com/en/climate-change-why-it-is-now-or-never-for-india/a-61000680.
- 22. India, National Institute of Disaster Management, India Country Profile.
- 23. India, Indian Meteorological Department, Office of Climate Research and Services, "Summary of Climate Hazards and Vulnerability Atlas of India". Available at https://imdpune.gov.in/hazardatlas/atlas_summary.html.
- 24. Business Standard, "Impact of drought on economy pegged at Rs 6,50,000 crore", 11 May 2016. Available at https://www.business-standard.com/article/economy-policy/impact-of-drought-on-economy-pegged-at-rs-6-50-000-crore-116051100422_1.html.

- 25. UNDRR, "Disaster Risk Reduction in The Republic of India: Status Report 2020" (Bangkok, 2020). Available at https://www.undrr.org/media/48528/download?startDownload=true.
- 26. Mohanty and S. Wadhawan, Mapping India's Climate Vulnerability A District Level Assessment (New Delhi, Council on Energy, Environment and Water, 2021). Available at https://www.ceew.in/sites/default/files/ceew-study-on-climate-change-vulnerability-index-and-district-level-risk-assessment.pdf.
- 27. UNDRR, GAR Special Report on Drought 2021 (Geneva, 2021). Available at https://www.undrr.org/ publication/gar-special-report-drought-2021.
- India, Indian Meteorological Department, Office of Climate Research and Services, "Summary of Climate Hazards and Vulnerability Atlas of India"; Mohanty and Wadhawan, Mapping India's Climate Vulnerability – A District Level Assessment.
- 29. UNEP, "The devastating impact of floods in India and what can be done", 27 April 2020. Available at https://www.unep.org/news-and-stories/story/devastating-impact-floods-india-and-what-can-be-done.
- 30. India, National Disaster Management Authority, "Floods". Available at https://ndma.gov.in/Natural-Hazards/Floods.
- 31. World Bank, "Climate Risk Country Profile: India" (Washington, D.C., 2021). Available at https:// climateknowledgeportal.worldbank.org/sites/default/files/country-profiles/15503-WB_India%20Country%20 Profile-WEB.pdf.
- 32. Telangana Today, "Major cyclones that hit India in past few decades", 26 May 2021. Available at https://telanganatoday.com/major-cyclones-that-hit-india-in-past-few-decades.
- 33. World Meteorological Organization, State of the Global Climate 2020 (Geneva, 2021). Available at https://library.wmo.int/viewer/56247?medianame=1264_Statement_2020_ en_#page=1&viewer=picture&o=bookmark&n=0&q=.
- 34. Telangana Today, "Major cyclones that hit India in past few decades".
- 35. India, National Disaster Management Authority, "Cyclone". Available at https://ndma.gov.in/Natural-Hazards/Cyclone.
- 36. World Meteorological Organization, State of the Global Climate 2020.
- 37. India, National Disaster Management Authority, National Disaster Management Guidelines: Management of Cyclones (New Delhi, 2008). Available at https://ndma.gov.in/sites/default/files/PDF/Guidelines/cyclones.pdf.
- 38. Ibid.
- 39. Mohanty and Wadhawan, Mapping India's Climate Vulnerability A District Level Assessment.
- 40. India, Indian Meteorological Department, Office of Climate Research and Services, "Summary of Climate Hazards and Vulnerability Atlas of India".
- K. Ray, R. K. Giri, S. S. Ray, A. P. Dimri and M. Rajeevan, "An assessment of long-term changes in mortalities due to extreme weather events in India: A study of 50 years' data, 1970–2019", Weather and Climate Extremes, vol. 32 (June 2021). Available at https://www.sciencedirect.com/science/article/pii/ S221209472100013X.
- 42. BBC, "India heatwave: High temperatures killing more Indians now, Lancet study finds", 26 October 2022. Available at https://www.bbc.com/news/world-asia-india-63384167.
- 43. India, Ministry of Earth Sciences, Assessment of Climate Change over the Indian Region (Pune, 2020). Available at http://cccr.tropmet.res.in/home/docs/cccr/2020_Book_AssessmentOfClimateChangeOverT.pdf.
- 44. Ray, Giri, Ray, Dimri and Rajeevan, "An assessment of long-term changes in mortalities due to extreme weather events in India: A study of 50 years' data, 1970–2019".
- 45. S. Guleria and A. K. Gupta, Heat Wave in India: Documentation of State of Telangana and Odisha (2016) (New Delhi, National Institute of Disaster Management, 2018). Available at https://nidm.gov.in/PDF/pubs/ heat_wave_18.pdf.
- 46. Ibid.
- 47. India, India Meteorological Department, Office of Climate Research and Services, "Cold wave". Available at https://imdpune.gov.in/hazardatlas/cold.pdf.
- 48. India, Indian Meteorological Department, Office of Climate Research and Services, "Summary of Climate Hazards and Vulnerability Atlas of India".
- B. Mahapatra, M. Walia and N. Saggurti, "Extreme weather events induced deaths in India 2001– 2014: Trends and differentials by region, sex, and age group", Weather and Climate Extremes, vol. 21 (September 2018). Available at https://www.sciencedirect.com/science/article/pii/ S2212094718301166?via%3Dihub.

- 50. S. S. Nair, "Spatial & temporal analysis of cold-wave incidences and Mortality in Indian States" (New Delhi, National Disaster Management Authority, 2022). Available at https://ndma.gov.in/sites/default/files/ Newsletter-Nov22/images/Coldwave%20article_SSN.pdf.
- 51. Inclusive insurance is a broader term denoting all insurance products aimed at the excluded or underserved market, rather than solely microinsurance, or those products specifically aimed at the poor or low-income market. For this definition, see International Association of Insurance Supervisors, "Issues Paper on Conduct of Business in Inclusive Insurance", IAIS Issues Papers (Basel, 2015).
- 52. India, Insurance Regulatory and Development Authority of India Act, 1999. Available at https://irdai.gov. in/document-detail?documentId=366291.
- 53. See India, Insurance Regulatory and Development Authority of India, "Committee Reports". Available at https://policyholder.gov.in/en/web/guest/committee-reports.
- 54. India, Insurance Regulatory and Development Authority of India, "Insurance Acts". Available at https:// irdai.gov.in/acts.
- 55. Ibid.
- 56. India, Insurance Regulatory and Development Authority of India, "About Microinsurance". Available at https://irdai.gov.in/about-microinsurance.
- 57. India, Insurance Regulatory and Development Authority of India, "IRDAI Press Note: Insuring India by 2047 – New Landscape for Insurance Sector", 25 November 2022. Available at https://irdai.gov.in/web/guest/ document-detail?documentId=1624671.
- 58. Ibid.
- 59. India, Insurance Regulatory and Development Authority of India, Annual Report 2021-22 (New Delhi, 2022). Available at https://irdai.gov.in/documents/37343/366637/Annual+Report+2021-22.pdf/5ac27b18-2520-1186-8807-00e0342d9f2d?version=1.0&t=1671780581841&download=true.
- 60. India, Reserve Bank of India, National Strategy for Financial Inclusion 2019–2024 (New Delhi, 2020). Available at https://policyholder.gov.in/documents/37343/366723/ National+Strategy+for+Financial+Inclusions+-+2019-24.pdf/13a4f7f1-09db-0f00-4393-e42500fea33c?version =1.0&t=1631531409564&download=true.
- 61. India, Insurance Regulatory and Development Authority of India, Annual Report 2022-23 (New Delhi, 2023). Available at https://irdai.gov.in/document-detail?documentId=4273788.
- 62. Swiss Re Institute, "India's insurance market: growing fast, with ample scope to build resilience" (Zurich, 2024). Available at https://www.swissre.com/dam/jcr:595c5497-a367-404e-82e0-4ef673e9bd30/2024-01-sri-expertise-publicatoin-india-insurance-market.pdf.
- 63. India, Insurance Regulatory and Development Authority of India, Annual Report 2022-23; Swiss Re Institute, "India's insurance market: growing fast, with ample scope to build resilience".
- 64. R. Dhanuka, "BFSI Insurance", Invest India. Available at https://www.investindia.gov.in/sector/bfsiinsurance.
- 65. General Insurance Corporation of India, "Welcome to GIC Re". Available at https://www.gicre.in/en/.
- 66. India, Insurance Regulatory and Development Authority of India, Annual Report 2022-23.
- 67. India, Insurance Regulatory and Development Authority of India, "Report of the committee for development of a concept paper on standalone microinsurance" (New Delhi, 2020). Available at https://irdai.gov.in/document-detail?documentId=395546.
- P. Agarwal, K. Shailabh and S. Nisar, Insuring Bharat: Scaling Up People Led Risk Protection. A study on mutual and cooperative insurers in India (Ahmedabad, India, Bharat Inclusion Research Fellowship, 2021). Available at https://sewainsurance.org/wp-content/uploads/2021/03/A-study-on-Mutual-and-Cooperative-Insurance-in-India.pdf; National Insurance Academy, Pune, Study of Mutual Models in Insurance (Pune, 2022). Available at https://niapune.org.in/uploads/researchreports/Study%20of%20 Mutual%20Models%20in%20Insurance_%20Report_03%20Oct.pdf.
- 69. World Bank, "Transforming Agricultural Insurance: A Comprehensive Exploration of the PMFBY" (Washington, D.C., 2024). Available at https://www.financialprotectionforum.org/publication/transformingagricultural-insurance-in-india-a-comprehensive-exploration-of-the-pradhan.
- 70. India, Prime Minister of India, "Cabinet approves inclusion of additional activities in National Livestock Mission", 21 February 2024. Available at https://www.pmindia.gov.in/en/news_updates/cabinet-approvesinclusion-of-additional-activities-in-national-livestock-mission/.
- 71. India, Press Information Bureau, Government of India, "First Heat Index Based Insurance for Cattle under 'Saral Krishi Bima'", 12 April 2003. Available at https://pib.gov.in/PressReleasePage.aspx?PRID=1915851.

- 72. Blue Marble, "Innovating to protect vulnerable women from extreme heat". Available at https:// bluemarblemicro.com/innovating-to-protect-vulnerable-women-workers-from-extreme-heat/.
- 73. National Insurance Academy, Pune, Role of Common Service Centres (CSCs) in Inclusive Growth of Insurance (Pune, 2021). Available at https://www.niapune.org.in/uploads/researchreports/CSC%20 Main%20Report_%20Final_%20Feb%202021.pdf.
- 74. India, Reserve Bank of India, Report of the Household Finance Committee: Indian Household Finance (New Delhi, 2017). Available at https://rbidocs.rbi.org.in/rdocs/PublicationReport/Pdfs/ HFCRA28D0415E2144A009112DD314ECF5C07.PDF; India, Insurance Regulatory and Development Authority of India, "Report of the committee on designing of combi products for micro-insurance segment" (New Delhi, 2022). Available at https://policyholder.gov.in/en/web/guest/documentdetail?documentId=1252306.
- 75. India, Ministry of Finance, Department of Economic Affairs, Economic Survey of 2022-23 (New Delhi, 2023). Available at https://www.indiabudget.gov.in/economicsurvey/doc/echapter.pdf.
- 76. S. Garg, K.K. Bebarta and N. Tripathi, "Performance of India's national publicly funded health insurance scheme, Pradhan Mantri Jan Arogaya Yojana (PMJAY), in improving access and financial protection for hospital care: findings from household surveys in Chhattisgarh state", BMC Public Health, vol. 20, No. 949 (June 2020). Available at https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-020-09107-4.
- 77. The Economic Times, "Average medical expenditure at private hospitals seven-times higher than government ones: NSO Survey", 23 November 2019. Available at https://economictimes.indiatimes.com/ news/economy/indicators/average-medical-expenditure-at-private-hospitals-seven-times-higher-thangovernment-ones-nso-survey/articleshow/72202732.cms.
- 78. India, Department of Science and Technology, Climate Vulnerability Assessment for Adaptation Planning in India Using a Common Framework (New Delhi, 2020). Available at https://dst.gov.in/sites/default/files/ Full Report %281%29.pdf.
- 79. Mohanty and Wadhawan, Mapping India's Climate Vulnerability A District Level Assessment.
- 80. India, Press Information Bureau, Government of India, "Ministry of Agriculture & Farmers Welfare, Effect of Climate Change on Agriculture", 9 February 2021. Available at https://pib.gov.in/PressReleasePage. aspx?PRID=1696468.
- 81. India, India Meteorological Department, Office of Climate Research and Services, Climate Hazards and Vulnerability Atlas of India. Available at https://imdpune.gov.in/hazardatlas/index.html.
- 82. India, Disaster Management Act 2005. Available at https://ndma.gov.in/Reference_Material/DMAct2005.
- 83. India, Disaster Management Division, "Power and Functions of National Executive Committee". Available at https://ndmindia.mha.gov.in/functions.
- 84. Mohanty and Wadhawan, Mapping India's Climate Vulnerability A District Level Assessment.
- 85. India, The Finance Act 2001. Available at https://thc.nic.in/Central Governmental Acts/Finance Act, 2001.pdf.
- 86. S. Ray, S. Jain and V. Thakur, "Financing India's Disaster Risk Resilience Strategy", ICRIER Working Paper 404 (New Delhi, Indian Council for Research on International Economic Relations, 2021). Available at https:// icrier.org/pdf/ES/ES_Financing%20India_Disaster_Risk_Resilience_Strategy.pdf.
- 87. India, Press Bureau of India, Government of India "Ministry of Home Affairs, Funds Disbursed Under NDRF", 14 December 2021. Available at https://www.pib.gov.in/PressReleasePage.aspx?PRID=1781305.
- 88. Ibid.
- 89. India, Finance Commission of India, Report of the Fifteenth Financing Commission for 2021–2026 (New Delhi, 2020). Available at https://fincomindia.nic.in/commission-reports-fifteenth.
- 90. Ibid.
- 91. BMZ, "Insurance against natural disasters for the Indian state of Nagaland". Available at https://www.bmz. de/en/issues/climate-change-and-development/climate-risk-insurance/indien-insuresilience-solutions-fund-127192.

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