

HPNLU Journal of Environment and Disaster Management

(Online)

Volume - III

2022

ISSN: 2583-1429

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INTERNATIONAL COOPERATION IN DISASTER RISK REDUCTION: Analyzing the Role of India's G-20 Presidency

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[Abstract: With the world getting more interconnected, we have unintentionally established mechanisms that could transmit disaster risks across boundaries. Climate change has made disaster management tougher. EM-DAT documented 387 natural disasters in 2022, killing 30,704 people and impacting 185 million. Due to global, complicated, and unknown systemic hazards like the COVID-19 pandemic, traditional risk management methods have rendered ineffective, therefore disaster management now requires international cooperation. Despite UNDRR aid, many nations cannot handle disasters. This research paper will address the Sendai Framework for Disaster Risk Reduction, which emphasizes international cooperation to accelerate its implementation. G20 countries have the exposure of asset concentration and natural hazards with 4.7 billion people. The G20 Leaders have long recognized the significance of comprehensive plans to make countries resilient to extreme weather and disasters. DRR supports the UN Sustainable Development Goals and G20 goals. Thus, India's Presidency has created a DRR working group to encourage G20 collaboration, multidisciplinary research, and DRR best practices. It's also crucial as the world recovers from the pandemic, international assistance is vital. This must be supplemented by technology transfer and capacity development to improve sustainability in recipient nations. Due to its socioeconomic profile and exposure to various types of disasters, India is at high disaster risk. Nevertheless, it has strong institutional, legislative, and financial mechanisms at all levels. India has participated in disaster risk management worldwide. The paper will discuss the challenges and possible solutions for international disaster management collaboration to make the world more resilient and prepared.]

Keywords: G20, International Cooperation, Disaster management, UNDDR etc.

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Introduction

Risks from disaster are growing and evolving. India is one of the nations with the highest risk of natural disasters. Despite this vulnerability, disaster management had hardly been a major political focus in the nation before Coronavirus (COVID-19) hit in 2020. As the pandemic hit India, soon the Disaster Management Act, 2005, was activated and was applied pan-India for the first time. The frequency of global disasters was rising before the outbreak of COVID-19 pandemic. As per the Global Assessment Report 2022, the effects of disasters are dispersing more widely across nations in today's highly interdependent world.

The World Economic Forum, its first Global Risk Outlook, underlined the recognition of the interaction between economic, environmental, geopolitical, sociological, and technical threats in the context of the global risk landscape.³ In 2022, the Emergency Event Database (EM-DAT) recorded 387 natural disasters and hazards worldwide, resulting in 30,704 fatalities and affecting 185 million individuals. The economic damages amounted to approximately \$223.8 billion. Heat waves in Europe caused approximately 16,000 fatalities, and droughts affected 88.9 million individuals in Africa. Hurricane Ian caused \$100 billion USD in damages in the Americas. Disasters have had a significantly greater impact on both individuals and the economy in Africa, as evidenced by the 16.4% fatality rate, which is notably higher than the 3.8% rate observed in the preceding two decades.⁴

The Intergovernmental Panel on Climate Change (IPCC) is moving from static to dynamic risk classification based on hazards, exposure, and vulnerability. However, changing from a response-based attitude to a proactive, prevention-based disaster risk reduction (DRR) strategy is tough. Despite UN Office for Disaster Risk Reduction (UNDRR) efforts, many countries have been reluctant to switch from a response-focused to a prevention-focused

¹ Subhradipta Sarkar, National Disaster Management Authority: Close Encounters with COVID-19, in International Handbook of Disaster Research 2 (A. Singh ed., 2022).

² Arunabh Mitra and Rajib Shaw, *Systemic risk management in India: An analytics perspective*, 18 PROGRESS IN DISASTER SCIENCE 3 (2023).

³ Rajib Shaw and Kamal Kishore, Disaster risk reduction and G20: A major step forward, 17 PROGRESS IN DISASTER SCIENCE 1 (2023).

⁴ CENTRE FOR RESEARCH ON THE EPIDEMIOLOGY OF DISASTERS, DISASTERS YEAR IN REVIEW 2022 70 (2023).

strategy for systemic risks. Often disasters come in groups, e.g., floods accompanied by water-borne diseases. We have witnessed that COVID-19 spread over India had put communities at risk. Multi-hazard occurrences increased COVID-19's systemic risks, affecting more people directly and indirectly.⁵ Unless we are prepared, such occurrences place us under greater risk.

With the urgency of environmental hazard mitigation (e.g., an increase in the frequency and intensity of flooding, wildfires, and storm events), community planners have expanded their areas of responsibility.6 In order to fully utilise the advantages of DRR and overcome the difficulties brought on by disaster risks, international cooperation is an imperative of the day. Therefore, in the awake of India's presidency, the G20 countries would cooperate and share information.⁷ This research paper seeks to describe the opportunities and challenges in DRR faced by the G20 nations. It discusses the significance and necessity of international cooperation among countries in DRR approaches. It gives an overview of India's leadership in DRR, and identifies a few crucially important areas where India might play a pivotal role in this regard.

II

Disaster Management and Indian Legal Regime

According to the Index for Risk Management (INFORM), which looks at the likelihood of humanitarian catastrophes in 191 countries, India's risk ranking is 38 out of 191 in 2022. According to a scale from 1 (with a low risk) to 10 (high risk), the overall INFORM risk rating of India was 5.2. India is therefore considered to be a "high" risk country. Because of its geographic features and geographical area, India is highly susceptible to dangers such

⁵ Supra note 2, at 2

⁶ Catherine T. Lawson and Adam Tobey, The role of natural hazard mitigation plans in an age of pandemics, 12 Progress in Disaster Science 1 (2022).

Reduction Working Group Issue Note 12 (2023), Disaster Riskhttps://g20drrwg.preventionweb.net/media/86694/download?startDownload=true (last visited May 27, 2023)

floods, hurricanes, earthquakes, cloud bursts, severe droughts landslides, and extreme cold or heat waves.⁸

The Disaster Management Act, 2005 (DM Act) transformed India's disaster management strategy. The statute harmonised the response system and created a central-to-local authority chain. This act created the National Disaster Management Authority (NDMA) and its state and district counterparts.⁹ After 15 years, the DM Act was used for the first time to fight the pandemic.¹⁰ Nevertheless, during COVID-19, NDMA remained almost a non-existent authority with lesser impact on ground and disaster management is still heavily dependent on government machinery.¹¹ Despite such a unpromising scenario, the NDMA has the potential to actually emerge as principal authority in disaster management in the country, if it is armed with effective leadership, adequate resources and independence.

Public health emergencies are currently on the verge of overtaking all other existential threats to humanity as a result of the rise in the frequency of public health catastrophes over the past few decades.¹² Each nation has a vested interest in cooperating with the others on a basis of solidarity in a globalised world of interrelated threats and difficulties. India changed its legal and policy framework for disaster management as a result of signing numerous international agreements. Therefore, the goal of greater well-being can only be attained through extensive, intense, and ongoing international cooperation between governments. Such collaboration is only conceivable if each country's policy considerations go beyond the requirements of its own inhabitants to include the needs of others.¹³

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⁸Supra note 3, at 3.

⁹ SECOND ADMIN. REFORMS COMM'N, GOV'T OF INDIA (GoI), CRISIS MANAGEMENT: FROM DESPAIR TO HOPE 32 – 33 (2006)

¹⁰ See, C. Chauhan, Covid-19: Disaster Act invoked for the 1st time in India. HINDUSTAN TIMES, Mar. 25, 2020, available at https://www.hindustantimes.com/india-news/covid-19-disaster-actinvoked-for-the-1st-time-in-india/story-EN3YGrEuxhnl6EzqrlreW (last visited May 27, 2023)

¹¹ See, generally Subhradipta Sarkar, supra note 1, at 3 – 6.

¹² See, Tarun Arora and Nibedita Bhattacharjee, Disaster Management Laws: International and Indian Perspectives, in INTERNATIONAL HANDBOOK OF DISASTER RESEARCH 2 (A. Singh ed., 2022).

¹³ See, generally Jobair Alam and Md. Naimul Hasan, International Law, Human Rights, and Public Health Emergencies During Disasters: A Developing Country Perspective, in INTERNATIONAL HANDBOOK OF DISASTER RESEARCH 1 (A. Singh ed., 2022).

Need of International Cooperation in Disaster Management

An important element that has disastrous impact on developing nations is a lack of early preparation. For instance, most countries were completely unprepared for the most recent COVID-19 outbreak and were therefore caught completely off unprepared. Many developing as well as developed nations were not adequately prepared, as evidenced by the following facts: they overestimated the threat when the virus outbreak occurred; they lacked adequate crisis management strategies for the pandemic; they experienced a shortage of vital medical supplies; and they lacked adequate public health spending because of budget deficits. To overcome such difficulties, the world community should work together to develop capacity for early disaster preparedness.¹⁴

During the COVID-19 outbreak, the world witnessed significant connections between international law, human rights, and public health emergencies. In such a case, the role of the United Nations (UN) becomes crucial. The UN General Assembly (UNGA) has outlined the responsibilities of various entities, including the UN, states, international organisations, non-governmental organisations, scientific and technological societies, humanitarian groups, and financial institutions, towards disaster management through multiple resolutions. Adopting disaster prevention and mitigation at the global scale demonstrates and affirms global cooperation to protect human dignity and build resilience to lessen the impact of disasters. The report titled "Our Common Future" by the World Commission on Environment and Development in 1987 highlighted the need for a multidisciplinary and multidimensional global approach that fosters international and intra-national collaboration to deal with many types of disasters, and the UNGA also acknowledged this need in its resolution A/42/427.¹⁵

¹⁴ Supra note 11, at 3

¹⁵ *Id*.

IV

International Law Governing Disaster Management

Draft Articles on the Protection of Persons in the Event of Disasters:

The International Disaster Law (IDL) does not offer an all-encompassing legal framework. Rather, it consists of a number of treaties, traditional international law, fundamental legal principles, and soft law instruments. The UNGA recommended that the International Law Commission (ILC) include "Protection of people in the event of disasters" in its program of work in order to create an internationally consistent instrument for regulating disaster assistance and disaster risk reduction.¹⁶

The ILC authorised the Draft Articles on the Protection of Persons in the Event of Disasters (DAPPED) in 2016 after ten years of work. The ILC then advised the UNGA to "the elaboration of a convention on the basis of the draft articles". The DAPPED is crucial to IDL law. Art. 1 of the DAPPED covers the rights and duties of disaster-affected States towards people present on their territory or under their jurisdiction, regardless of nationality, as well as third States, intergovernmental organisations, nongovernmental organisations (NGOs), and other organisations with the capacity to cooperate in disaster management.¹⁷

International Disaster Management Norms

The debate that ensued is focused on the development of international standards and norms as they relate to the Yokohama Strategy, Hyogo and Sendai Framework. The Yokohama Strategy (1994) promoted the display of powerful political determination in order to reduce vulnerabilities, establish laws, and create multifaceted, all-encompassing policies that ranged from national to local levels. The Hyogo Framework of Action (2005) placed emphasis on building a robust, capable, and integrated national disaster risk reduction framework with sufficient statutory backing, including appropriate rules and clearly defined

¹⁶ See, generally Quazi Omar Foysal, The International Law Commission and International Disaster Law, in INTERNATIONAL HANDBOOK OF DISASTER RESEARCH 3 – 6 (A. Singh ed., 2022).

¹⁷ *Id.* at 3.

¹⁸ *Supra* note 11, at 5.

mechanisms to encourage compliance, incentivize risk reduction, and conduct mitigation measures. The Sendai Framework for Disaster Risk Reduction (SFDRR 2015) reaffirmed that member states' primary responsibility is to safeguard against and mitigate disaster risk through collaboration, shared responsibility among stakeholders, protection of human life, property, and the right to development, including participation, strong national and local legislative and executive support, intra-agency and inter-agency interaction, cost-effective investments in human resource to realize the ultimate objective of 'Build Back Better'.¹⁹

 \mathbf{V}

DRR at the United Nations

UNDRR and India's National Plan

The UNDRR's goal is to strengthen governance for disaster risk reduction at the international, regional, national, and local levels.²⁰ In order to enable those making decisions throughout government sectors to develop and fund DRR policies and initiatives that are supported by evidence, UNDRR promoted the collection, sharing, and analysis of comprehensive and validated risk information. Increasing public understanding of how disaster risk reduction contributes to sustainable development is another goal of UNDRR. To accomplish these goals, UNDRR worked with governments and other stakeholders to incorporate climate change and DRR into more comprehensive policies and strategies within and across sectors. Through routine evaluations and monitoring, these accomplishments were accelerated and accountability towards the SFDRR was strengthened.²¹

The UNDRR assisted Member States and other organisations to improve DRR through its regional offices. Through a clear vision, plans, the development of capacity, direction, and coordination within and across sectors, these initiatives promoted cohesion participatory

¹⁹ *Id*.

²⁰ UNDRR, ANNUAL REPORT 2022 8 (2023).

²¹ See, G20, supra note 7, at 11.

action to decrease risk and address the emergency of climate change at the national, regional, and global levels.²²

Aligned with the international norms, the National Disaster Management Plan 2019 (NDMP) emphasises a fundamental change from remedy to proactive approaches through implementing various international objectives including the Sustainable Development Goals (SDGs) together with the nation-wide objectives in the Prime Minister of India's DRR 10-point agenda.²³ It focuses on integrating DRR into daily life by raising disaster risk reduction awareness, improving the transmission and management of disaster risks, improving the use of DRR structures and capacities, securing funding, implementing DRR plans, and enhancing governance. ²⁴

Challenges in DRR framework

a) Scale of International-National Policy Discordance: In DRR, it is challenging to translate international policy issues into practical consequences because the information is frequently too general and does not take into account regional context, customs, and institutions. This issue extends beyond studies on DRR and affects the closely related fields of sustainable development change and climate change as well. The phenomenon is referred to as "scale discordance", and it happens when scientific data fall short of accurately reflecting the unique environmental conditions and geographic dimensions in a way that facilitates decision-making.²⁵

b) Insufficient data on systemic disaster events: Systematic documentation of patterns in disaster occurrence and impacts is not efficient so, it makes difficult to predict future risks. Another problem is that there isn't a centralised infrastructure for gathering data about

²² See, UNDRR, supra note 20, at 16.

²³ NDMA, GoI, *Prime Minister's Ten Point Agenda on DRR*, https://ndma.gov.in/Governance/PM-10-Agenda_(last visited May 27, 2023).

²⁴ Shaw and Kishore, *supra* note 3, at 4.

²⁵ See, id.

disasters. It is difficult to comprehend the complexity of hazards as a result while performing scientific evaluations and creating policies.²⁶

c) Cascading impact of the COVID-19: Developing nations are currently endeavouring to recover their economies in the aftermath of the COVID-19 pandemic. Hence, it is imperative to prioritise the most venerable individuals and their education, activation, and guidance in the process of reconstruction. The confluence of natural disasters and the COVID-19 pandemic has severely impacted the livelihoods of these individuals.²⁷

VI

G-20, Indian Presidency and DRR

The G20 (Group of 20), formed in 1999, serves as a forum for Finance Ministers and central bank governors to discuss global economic and financial issues, following the Asian Financial Crisis of the late 1990s. During the 2007 global financial and economic crisis, the G20 was promoted to the rank of Heads of State/Government. In 2009, it was designated as the primary platform for international economic collaboration. The G20 is a prominent economic coalition comprising the European Union and 19 other nations, encompassing both developed and developing countries.²⁸

The G20 countries, with a combined population of 4.7 billion, have the highest exposure, asset concentration, and vulnerability to natural calamities. According to the Ruhr University's, World Risk Index, four of the top ten most susceptible countries are G20 members. The G20 nations are simultaneously the hubs of innovation and technological advancement. As a result, throughout time, the G20 countries have begun to examine topics

²⁶ Debabrat Patra, Global Platform for Disaster Risk Reduction 2022: Challenges in building resilience & way forward, DOWNTOEARTH.ORG.IN, Jul. 15, 2022, https://www.downtoearth.org.in/blog/climatechange/global-platform-for-disaster-risk-reduction-2022-challenges-in-building-resilience-wayforward-83746 (last visited May 27, 2023)

²⁷ See, id.

²⁸ See, GoI, About G20, https://www.g20.org/en/about-g20/ (last visited May 27, 2023).

related to the effects of climate change, sustainable agriculture, energy, and the environment.²⁹

After assuming the Presidency of the G20, India decided to establish the first G20 Working Group on Disaster Risk Reduction (DRRWG). However, DRRWG would depend on past DRR conversations undertaken during the last G20 Presidency, including the Indonesian Presidency, and would give disaster risk reduction activities a renewed sense of urgency. Additionally, this would cooperate with other G20 working groups, such as the Infrastructure, Development, and Climate Sustainability Working Groups. The G20 countries have the technical capacity across numerous organisations and fields that can be used to minimise catastrophic losses substantially in G20 countries as well as internationally by 2030.³⁰

The G20 countries collectively account for more than 80% of internet users worldwide. Despite a significant digital push, there are still gaps in urban and rural locations, as well as in age, gender, and other categories. It's crucial to close this gap and implement an inclusive digital transformation. Information and communication technology (ICT) needs to be used properly. Digital literacy, standard data protection laws, collaboration with the private sector's tech industry, and the supply of open data are all required. Big data, satellite data, and data exchange in DRR will be crucial for both prevention and response. Future DRR in G20 economies must be centred on open data, open governance, and open science which would facilitate technology transfer.³¹

The Italian Presidency of 2021 has emphasised the theme of "People, Planet, Prosperity" and urged the G20 to address the pressing need for increased financing for DRR. The meeting addressed the importance of DRR strategies in the context of a global pandemic. The UNDRR presented four recommendations in their input paper. The proposed measures are:

1) to create specific financing strategies for DRR and integrate DRR into national and local financing strategies; 2) to adopt a "Think Resilience" approach for all financial investments;

²⁹ *Supra* note 3, at 4.

³⁰ UNDRR, G20 Working Group on Disaster Risk Reduction, https://g20drrwg.preventionweb.net/ (last visited May 27, 2023)

³¹Supra note 3, at 3.

3) to prioritise investment in resilient infrastructure; and 4) to urge national and international financial institutions and development banks to align their strategies, operations, and activities with the SFDRR.³²

In the recent times, India has been engaging itself financially and otherwise in significant disaster response, restoration, and recovery programs worldwide. have also received funding from India. The Government of India quickly sent National Disaster Response Force (NDRF) experts and special planes with rescue and relief supplies to Nepal after a devastating 7.8 magnitude earthquake devastated the country in 2015. Three power substations in the Kathmandu valley were restored with assistance from India. Over US\$ 67 million in disaster aid from India was given to Nepal.³³ Even in the context of COVID-19, India's efforts to assist countries to fight the pandemic continued as it shipped almost 300 million doses of COVID-19 vaccines to over 100 countries.³⁴ India intends to conduct a midterm evaluation of the SFDRR's implementation in order to assess how far the nation has come in implementing the SFDRR priorities and to identify trends, accomplishments, opportunities, obstacles, and new problems.³⁵

The current disaster response systems, both on a national and global scale, will not be able to meet the growing demands of communities impacted by disasters. The G20 group of nations must strive towards achieving worldwide coverage of early warning networks for all hydrometeorological disasters under the broader structure provided by the SFDRR.³⁶ The second priority could be to find out ways to speed up capacity-building efforts in various nations so that early warning systems are used in every country. Hence, greater collaboration is required among the G20 nations and strengthened international and national disaster

³² See, id.

³³ *See*, G20, *Supra* note 7, at 5.

³⁴ The Statesman, *India shipped almost 300 million doses of Covid-19 vaccines to over 100 countries*, ASIA NEWS NETWORK, May 22, 2023, *available at* https://asianews.network/india-shipped-almost-300-million-doses-of-covid-19-vaccines-to-over-100-countries/ (last visited May 27, 2023).

³⁵ See, G20, supra note 7, at 5

³⁶ See, id.

response systems to deal with the effects of rising disaster frequency and intensity and India holds the key in achieving the same.³⁷

VII

Conclusion

The creation of the required infrastructure as well as other socio-political and economic tools in developing nations for international cooperation or solidarity has the capacity to stop violations of human rights before an emergency arises. Countries won't be able to avert or fully recover from mega disasters without a strong bond of international solidarity. The most recent instance in our time that highlights the value of international cooperation was responding to the COVID-19 outbreak. The current digital era of information technology provides an opportune moment to promote global solidarity by emphasizing shared human values and the commonality of humanity, particularly in light of the widespread dissemination of global suffering.

One of the most operationally applicable dimensions of collaboration is capacity building. It demands for the institutional mapping of all G20 nations' potential institutions that have already launched or intend to launch DRR-specific projects. It is necessary to contextualise and incorporate disaster lessons from India and various other nations into the training and capacity-building programmes. Training for DRR personnel at various levels, including operational and policy training, response-related training, training for humanitarian planning, etc are required. Finally, climate change adaptation is ultimately necessary at all scales since the effects of climate change are a significant cause of disaster-related damages and development failures.

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³⁷ See, id. at 20.

JEDM

ISSN: 2583-1429

The HPNLU Journal of Environment and Disaster Management is online journal owned by the Himachal Pradesh National Law University, Shimla, 16 Mile, Shimla-Mandi National Highway, Ghandal, District Shimla, Himachal Pradesh-171014 India.

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MODE OF CITATION: III HPNLU JEDM. L. REV. <pg. no.> (2022)

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