

Pakistan Floods

**Underlining the Need for Regional Cooperation for
Disaster Risk Management in South Asia**



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Pakistan Floods — Underlining the Need for Regional Cooperation for Disaster Risk Management in South Asia

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Abstract

The 2022 flooding in Pakistan was a catastrophic humanitarian disaster compared to other climate-induced disasters that have occurred in South Asia. For a country that has already witnessed the devastation caused by the 2010 floods, Pakistan was ill-prepared to deal with the destruction and damage caused by the 2022 floods. Bearing in mind the transnational character of disasters and their impact on the region, this paper aims to critically assess Pakistan's implementation of mitigation and adaptation strategies, followed by the disaster risk management systems of South Asian countries. The disaster management plans are analysed by studying the legal frameworks and operational clarity at all governance levels. In addition, collaboration and coordination with other relevant stakeholders are analysed to identify the country's overall proactive or reactive approach to disaster risk management. The strategies are also evaluated with reference to the Sendai Framework for Disaster Risk Reduction. Finally, the scope of regional institutional cooperation for disaster management in South Asia is explored.

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Acronyms

COP	Conference of Parties
DRR	Disaster Risk Reduction
DRM	Disaster Risk Management
ICIMOD	International Centre for Integrated Mountain Development
SAARC	South Asian Association for Regional Cooperation
SCO	Shanghai Cooperation Organisation
SDMC	SAARC Disaster Management Centre
SFDRR	Sendai Framework for Disaster Risk Reduction (2015-2030)

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PAKISTAN

Floods



Pakistan Floods 2022

The 2022 floods in Pakistan, according to the Minister of Climate Change were a “climate-induced, humanitarian disaster of epic proportions”.³ These floods epitomised how countries vulnerable to climate change can be just a season away from existing in a state of climate emergency. Flooding is not a new phenomenon for Pakistan; it is one of the countries with the highest number of people exposed to floods per annum.⁴ Over the past several years, Pakistan has witnessed unprecedented amounts of monsoon rainfall, combined with the melting of glaciers, which have resulted in riverine, urban and flash floods. However, August 2022 saw an unparalleled increase of about 243 per cent in the average national rainfall, resulting in a third of the country submerged under water.⁵ With two thousand lives lost and eight million people displaced, the 2022 floods affected approximately 33 million Pakistanis with an estimated 14.9 billion U.S. dollars in total economic losses and a 16.3 billion U.S. dollars requirement for rehabilitation purposes.⁶

The World Resources Institute estimates that between 2010–2030, thrice as many Pakistanis will be impacted by riverine floods.⁷ This is evident given the exceptional rainfall observed in the monsoon season of the year 2023, which has exacerbated the already dire conditions of the communities affected by the floods in 2022.⁸ Despite witnessing the devastation caused by the colossal 2010 floods and a lapse of twelve years, the destruction and damage caused by the 2022 floods were massive and require a critical assessment of the implementation of adaptation strategies, mitigation procedures and methods employed to improve resilience.

Assessing Pakistan’s Implementation of Disaster Mitigation and Adaptation Mechanisms

Pakistan’s greenhouse gas emissions total less than one per cent of the global footprint, yet it has been among the top ten countries most vulnerable to extreme weather events in the past two decades.^{9,10} The country experiences a rise in temperature considerably above the

global average rates of warming, resulting in an increase in both the occurrence and intensity of droughts, floods, heatwaves, cyclones, etc.¹¹ Moreover, exogenous factors, such as political instability, staggering inflation, energy crisis, and macroeconomic instability, have challenged relief and recovery efforts, diverting attention away from disaster risk reduction (DRR) and building community and institutional resilience. Despite this, successive governments have made several efforts to devise policies and plans that address issues of adaptation and mitigation.

After the 2010 floods, Pakistan developed its first Climate Change Policy (2012).¹² The policy aimed at ensuring sustainable development by mainstreaming climate change in socially and economically vulnerable (to climate change) sectors, with the purpose of building a climate-resilient Pakistan. Adaptation focused on areas including water resources, agriculture, human health, forestry, etc., and mitigation measures focused on the energy sector, urban planning, forestry and agriculture. In its essence, the policy was a detailed document in the right direction, which provided the required mechanisms to address climate change; however, there was a gap in actionable implementation: some objectives were not supported by policy measures, and some recommendations were very broad and lacked statistical evidence.¹³

Following this, a comprehensive National Disaster Management Plan was formulated to effectively respond to disasters by working towards national preparedness.¹⁴ The plan comprised three phases of implementation from 2012–2022. It discussed measures for adaptation, mitigation of the impact of disasters, building national resilience, functioning of institutions through a proper legal framework, and capacity building, which included training, creating awareness and mainstreaming disaster risk management (DRM). Despite this detailed framework, 2022 saw a catastrophic impact much more significant than the 2010 floods, indicating issues in the operationalisation of the plan. Moreover, there were financial limitations and a lack of capacity to employ elaborate risk assessments for urban planning.

Correspondingly, the National Monsoon Contingency Plan has been a standard operating procedure, a meeting for which is held annually before the monsoon season. A section of it is dedicated to reflecting on the systemic and operational weaknesses witnessed in the previous year. As per the exercise of 2023, the plan highlighted the problems faced during the 2022 floods.¹⁵ Some critical challenges that hindered effective risk reduction were associated with data collection and weather and river flow monitoring mechanisms, particularly for remote areas because of few telemetry and weather stations. This affected advanced mapping and planning. Also, there was no coordination between public and private weather reporting departments. The local level authorities were not equipped with human resources or machinery to conduct relief efforts. Additionally, the illegal construction of massive structures along the river bank and the inadequate desilting of rivers and reservoirs increased the magnitude of the disaster's impact.

After ratifying the Paris Agreement in 2016, Pakistan passed the Climate Change Act (2017). This legislation was much needed as Pakistan became part of the international climate regime. However, at a national level, federalism created obstacles in the implementation of climate change goals. Since the 18th Amendment, provinces have been given autonomy in environmental, agriculture and water sectors, whereas the Climate Change Ministry was formed at the federal level.¹⁶ Furthermore, the approach to date has not been focused on prevention and preparedness. Local level authorities, which include the tehsil and union council, are not given due importance, considering that they are on-ground and directly engage with the vulnerable communities. They lack capacity and are not equipped to mitigate the impacts of climate change.¹⁷ In addition, community-based organisations are not engaged by government stakeholders.

Another obstruction to building climate resilience has been weak governance. Pakistan has been marred by governance issues. In this case, they are not just limited to the governance of districts and cities but also ecological governance.¹⁸ Local

collectives that illegally regulate water distribution, unregulated constructions, poor urban and rural planning, including inadequate water drainage systems and infrastructure, deforestation, etc., have aggravated the effects of anthropogenic climate change.

Nonetheless, there are several new areas in which work is being done for environmental sustainability. The 1,000 MW Quaid-e-Azam Solar Park, Bahawalpur and 200 MW Wind Power Projects in Thatta are relevant initiatives under the Alternate and Renewable Energy Policy 2019 for an environment-friendly power system in the country.¹⁹ Similarly, the National Forest Policy aims to protect and conserve national forests, protected areas, natural habitats, and watersheds.²⁰ The policy includes massive plantation projects, including the Billion Tree Tsunami project, to restore degraded land and create green jobs, reducing flooding risk in flood-prone areas.²¹ The policy on National Electric Vehicles encourages the reduction of emissions from the transportation sector. It comprises measures such as tax incentives, charging infrastructure development, and local manufacturing of electric vehicles. Its objective is to see electric vehicles capture 30 per cent of all passenger vehicle and heavy-duty truck sales by 2030 and 90 per cent by 2040.²² In the same direction, the government launched a Clean Green Pakistan Movement with the Clean Green Pakistan Index as the core pillar for ranking cities according to their cleanliness and greenery.²³

Pakistan recently published its first National Adaptation Plan 2023. The plan came after Pakistan pushed for its case at the COP27 (Conference of the Parties) for a loss and damage fund after facing the disastrous 2022 floods. It aims to reduce climate vulnerability by constructing small dams, developing infrastructure for hill torrents, and exploring joint water management with neighbouring countries in transboundary catchment areas.²⁴ However, like many other plans previously furnished, there are gaps in actionable implementation. It also does not specify the financial division for each sector, as a result of which there will be transparency issues. No attention is given to leveraging finance from the private sector. Most importantly, while

all climate-related documents have mentioned the need for adaptation to quite an extent, what makes the National Adaptation Plan different is yet another question.

These are some of the many examples of measures taken in the recent past to address adaptation and mitigation needs in Pakistan. The question remains if the country's economic crisis will not deter progress. Moreover, the political will required to continue some remarkable projects by the previous government, considering that this year has seen a transition of three different governments, will be an added challenge.

South Asia's Disaster Profile

While Pakistan was grappling with destructive floods, neighbouring countries such as Afghanistan, India, and Nepal were simultaneously contending with various levels of deluges. South Asia's topography is susceptible to natural disasters. The densely populated region faces heightened risks from floods, droughts, earthquakes, and other environmental hazards. Notably, research has identified that South Asia hosts 64 per cent of the global population exposed to annual flood risks.²⁵

These vulnerabilities are further compounded by governance issues and a lack of sustained investment in other critical sectors like healthcare, leaving the population at a greater risk. Among these challenges, certain disasters carry broader and more severe consequences. Droughts impact Afghanistan, India, Pakistan, and specific parts of Nepal and Sri Lanka. Floods are a pressing concern in Bangladesh, India, Nepal, Pakistan, and Sri Lanka. In the mountainous regions of India, Pakistan, Nepal, Bhutan, and Sri Lanka, landslides are recurrent occurrences. Bangladesh has been observing a frequent pattern of devastating cyclones. Additionally, the Maldives, Bangladesh, and Sri Lanka's coastal regions grapple with issues related to coastal erosion and seawater intrusion into freshwater areas.

Over the past three decades, natural disasters have taken the lives of nearly 300,000 people in Bangladesh, followed by Pakistan and Sri Lanka,

highlighting the urgency of addressing these multifaceted challenges in South Asia.²⁶ These cross-border mortalities necessitate a dire need for creating effective DRM plans on a national and regional level to reduce disaster risks and losses and create regional preparedness.

Disaster Risk Management Approaches of South Asian Countries

DRM, often used synonymously with DRR, is an overlapping but distinct concept. The United Nations Office for Disaster Risk Reduction defines DRM as the "application of disaster risk reduction policies and strategies to reduce existing risks, prevent new risks and limit the impact of risks that cannot be eliminated, in order to improve resilience and minimise losses resulting from disasters".²⁷ It further goes on to differentiate between the abovementioned categories by dividing them into prospective, corrective and compensatory DRM activities. Thus, it is safe to say that under the larger umbrella of DRM, which is more at the operational and tactical level, DRR falls at the strategic level — both together work towards reducing the impacts of disasters.

The perception associated with what DRM is has evolved over time with the transition in the understanding of disasters not necessarily being natural. Assessing disaster risk through the vulnerability of a population by linking it to environmental degradation and sustainable development has made DRM plans more effective. Prevention, mitigation, preparedness, response and recovery are the five critical phases of DRM, directed by the Sendai Framework for Disaster Risk Reduction 2015–2030 (SFDRR). The SFDRR, adopted by the United Nations General Assembly in 2015, targets to reduce losses in terms of lives, affected populations, gross domestic product and critical infrastructure. It also aims to increase international cooperation, particularly for developing countries, increase the accessibility of multi-hazard early warning systems and encourage more countries to have national disaster management strategies by 2030.²⁸

Each of the eight South Asian countries has an operational mechanism that steers the country's disaster management plan. However, the efficacy of the implementation of DRM policies varies across countries based on the quality of governance and institutional capacity, among other factors. The following section discusses the primary legal framework and prominent DRM policies in each of the South Asian countries. In compliance with the SFDRR, DRM has been integrated into other development sectors, making it multifaceted in its implementation. However, for the scope of this

study, the legal and institutional framework of each country has been limited to disaster management only, despite having supporting policy documents in other sectors. The frameworks are then analysed for operational clarity and implementation, and consultations and collaboration with other stakeholders to get a clear understanding of the effectiveness of the DRM system in each country to establish whether it has a proactive or reactive approach.

Table 1: Principle legal instrument and focal authority guiding each of the South Asian countries' national disaster management strategy

Country	Principle Legal Instrument	Focal Authority
Afghanistan	National Disaster Management Law (2012)	Afghanistan National Disaster Management Authority
Bangladesh	Bangladesh's Disaster Management Act (2012)	National Disaster Management Council
Bhutan	Disaster Management Act (2013)	National Disaster Management Authority
India	Disaster Management Act (2005)	National Disaster Management Authority
Maldives	Disaster Management Act (2015)	National Disaster Management Authority
Nepal	Disaster Risk and Management Act, 2074 (2017)	National Disaster Risk Reduction and Management Authority
Pakistan	National Disaster Management Act (2010)	National Disaster Management Authority
Sri Lanka	Disaster Management Act (2005)	National Council for Disaster Management

Source: Compiled by authors

Bangladesh

Bangladesh's Disaster Management Act 2012 is the principal legal document for a coordinated approach to disaster management, which aims to strengthen the country's preparedness and response. Guided by this legal framework is the National Plan for Disaster Management 2021–2025, which has been revised subsequently from 2016–2020 and 2010–2015, when it was first conceived. The National Plan for Disaster Management 2021–2025 works through four priority action areas to achieve effective recovery, save lives and protect investments. These priority actions focus on disaster risk assessment, risk governance, investing in resilience and a prepared response. It is devised following the SFDRR and the Sustainable Development Goals.²⁹

In addition, Bangladesh has several other policy documents covering disaster management, such as the Strategy on Internal Displacement 2021, Climate Change Initiatives of Bangladesh, and Standing Orders on Disasters 2019, to name a few. These policies support the Disaster Management Plan in different sectors.

The responsibility of the implementation of the National Plan for Disaster Management lies with the Ministry of Disaster Management and Relief in consultation with other relevant ministries, departments, private sector and development organisations like the Bangladesh Meteorological Department, Water Development Board, Ministry of Agriculture, Ministry of Women and Child Affairs and so on. Under the National Disaster Management Council, the Inter-Ministerial Disaster Management Coordination Committee and the National Disaster Management Advisory Committee manage disaster response at the national level, while Disaster Management Committees coordinate at the district and sub-district levels.

Bangladesh is one of the few South Asian countries that incorporated DRR in practice very early on in the 1970s, even before it was officially part of its legal framework. Over the past several years, it has actively focused and invested in its DRM system. A shift is noticeable in its strategy

from relief and recovery to prevention and preparedness. The success of the country's DRM policies is evident from the decrease in the number of lives lost to disasters over the years. The decentralisation of disaster management at different governance levels has been a significant positive shift in the effective implementation of DRM plans. Besides, the active role of non-state actors, including non-governmental and private volunteer organisations, has been crucial in promoting adaptation processes and providing relief, particularly to the severely impacted coastal communities.³⁰ The government has managed to enhance institutional capacity by investing in early warning systems and a strong communication network that has also helped with creating awareness. Climate resilient infrastructure, particularly for cyclones and floods, has strengthened the adaptation of people living in high-risk areas.³¹ The Cyclone Preparedness Program is one of the successful examples of DRR in Bangladesh. However, despite having a proactive approach, the local disaster management institutions seem to lack technical expertise, coordination with the national level bodies and funding limitations, which hampers the efficiency of the country's overall DRM approach.³²

India

In India, the Disaster Management Act 2005 is the primary legal framework which defines key responsibilities and coordination mechanisms between the national, state, district and local level authorities.³³ The National Policy on Disaster Management was formulated in 2009 to encourage investment in technology and institutions, create awareness for disaster preparedness and prevention, create efficient institutional coordination, capitalise disaster risk identification and forecasting, incorporate DRM in development, emphasise efficient relief and recovery for the vulnerable population and engage the media in disaster management.³⁴

Currently, India follows the National Disaster Management Plan 2019, which was revised after first being approved in 2016. The plan ensures that the implementation of disaster management

complies with the abovementioned legally binding instruments, as well as the international agreements that India is a signatory of, including the SFDRR.³⁵ Social inclusion and mainstreaming DRR in all development sectors are also key pillars of the policy. In addition, the Prime Minister's 10-point agenda on DRR, which includes women's involvement, risk mapping, local capacity building and international cooperation for disaster response, is also an important facet of the policy.³⁶

Under the Ministry of Home Affairs, the National Disaster Management Authority works with State and District Disaster Management Authorities to operationalise disaster management policies and coordinate with other relevant departments. Policy formation and implementation involve multiple stakeholders. It is inclusive and gender-responsive.

India has established a comprehensive and robust disaster management system, which has moved towards a pre-disaster proactive approach, with a better understanding of disaster risks at all levels of governance. The increased upgradation of early warning systems and the use of geospatial technology have improved disaster preparedness. However, other systemic issues and the dynamics of having such a large population are a challenge to the DRM framework, which calls for improvised risk assessment and disaster mapping, knowledge sharing and creating awareness amongst the general masses.³⁷ The risk landscape is quite varied because of the different types of disasters that India faces. A multi-hazard approach is required, and an in-depth, evidence-based analysis of historical patterns of disasters will enable a better response. DRM requires a constant effort to ensure coordination among the different bodies and maintain a proactive approach, and a lack of inter-institution coordination can result in ineffective execution, which is another weakness in India's case.

Nepal

Nepal's Disaster Risk Reduction and Management Act, enacted in 2017 and revised in 2018, is the main legally binding document along with which the Disaster Risk Reduction and Management

Rules 2019 provide a framework for institutionally managing disasters.³⁸ The Disaster Risk Reduction and Management Strategic Plan of Action (2018–2030) comprises four priority areas in light of the SFDRR: understanding disaster risk, strengthening disaster risk governance, promoting risk-informed investments in the public and private sectors and enhancing disaster preparedness for better response, recovery, rehabilitation and reconstruction. Each priority area is sub-categorised into actions that will enable Nepal's disaster management to work alongside sustainable development.³⁹ It complements the National Policy for Disaster Risk Reduction 2018.⁴⁰

Nepal's DRM approach is integrated through the formation of the Nepal Risk Reduction Consortium, which combines development, humanitarian response and disaster management by taking onboard international funding agencies.⁴¹ The Disaster Risk Reduction and Management Council is the leading body for the coordination of DRM activities at different levels. Different ministries work in collaboration with the Disaster Risk Reduction and Management Authority to facilitate disaster management and incorporate disaster risk in their planning. The National Disaster Response Framework is looked after by the Ministry of Home Affairs, and the Local Disaster and Climate Resilience Plan is under the stewardship of the Ministry of Federal Affairs and General Administration.

The Nepalese leadership has been trying to shift to a proactive approach in managing disasters; however, despite efforts to strengthen the DRM system, the focus is more on relief and rehabilitation because of limited capacity and financing issues. While legislation for disaster management has become nuanced in recent years, there is still a lack of implementation, particularly because of the unclear demarcation of responsibilities at the district and lower levels.⁴² Local bodies are still heavily dependent on the Ministry of Home Affairs to function. On-ground responders are not well prepared or equipped and lack the resources. Additionally, financial and technical limitations limit the effective operationalisation. Despite this, Nepal is trying to improve its capacity by investing in technology for mapping and monitoring

disaster-prone areas, incorporating disaster management in the school curriculum, facilitating the local government bodies to better equip them for disaster response and preparedness and using indicator-based disaster resilience measurement tools.⁴³

Sri Lanka

Sri Lanka Disaster Management Act No. 13 of 2005 formed the basis of the DRM system in the country, under which the National Policy on Disaster Management 2010 was drafted.⁴⁴ The policy builds on the Act. In addition to providing a structure for limiting the damage, effectively using the resources before and after the disaster, and building capacity and awareness, the policy aims to be multi-dimensional. It touches upon the intersection of different sectors that need to be focused upon when addressing disasters. Therefore, it considers “multi-hazards, multi-sectors, multi-stakeholders, multi-phases, multi-locality and is multi-temporal”.⁴⁵ The Policy on Disaster Management 2010 works in an integrated manner with other guiding documents such as the National Disaster Management Plan, the Sri Lanka Comprehensive Disaster Management Plan 2014–2018 and the National Emergency Operations Plan 2013.⁴⁶ The updated National Disaster Management Plan 2022–2030 (draft) is a thorough strategy with the goal to “prevent new risks, reduce existing risks and strengthen resilience”. It not only discusses the responsibilities at different levels of government but also in different sectors, incorporating international instruments that are key to disaster management.⁴⁷ Other policies with overlapping sectors also discuss disaster management, such as the National Climate Change Policy.

The National Council for Disaster Management carries out its operations through the Disaster Management Centre under the State Ministry of National Security and Disaster Management. Stakeholders and experts from the technical and developmental sectors are consulted in the policy-making and implementation process.

Sri Lanka has an exhaustive framework for DRM with operational clarity and strong coordination amongst the disaster management agencies, yet it

functions in a reactive mode, and the financing in disaster management is focused on post-disaster relief efforts. A study identified seven challenges to collaboration between organisations for DRM in Sri Lanka. These were limited communication between organisations, uncertain environmental events, lack of awareness and prioritisation amongst the general public, unnecessary political involvement, limited inter-organisational capacity, limited intra-organisational collaboration and lack of information sharing.⁴⁸

Maldives

In Maldives, the amended Disaster Management Act 2015 (originally enacted in 2006) establishes a holistic approach to DRM. It delineates the various facets of Maldives’ approach to disaster management. At the centre of this is the protection of its citizens, followed by the responsibilities of the city, atoll and island councils. The inclusion of disaster risk mitigation and preparedness guidelines and disaster risk assessment as part of sustainable development are also highlighted.⁴⁹ Several policy frameworks assist the Act. The Maldives Climate Change Policy Framework 2014–2024 also acts in conjunction with existing policies and establishes effective DRM at all levels. The Strategic National Action Plan for Disaster Risk Reduction and Climate Change Adaptation 2010–2020 was developed with a pragmatic approach after the tsunami to build a resilient Maldives and reduce the risk of disasters by providing sectoral development plans.⁵⁰

The National Community-Based Disaster Risk Reduction Framework acknowledges that reducing the risk of disaster requires a bottom-up approach, prioritising community engagement and awareness by mainstreaming DRM to empower the vulnerable population.⁵¹ The National Disaster Management Authority is responsible for DRM interventions at all levels, including non-governmental organisations. It is also responsible for formulating regulatory mechanisms and coordinating operations. The Ministry of Environment and Energy is the focal governmental body that deals with disaster management through the National Ministerial Coordination Committee. The island councillors are responsible for their localised disaster management policy, plans and funds. Disaster

Management Councils and Steering Committees function at the national and local level alongside emergency response forces. The government works closely with international organisations and other development sectors, including education and urban development departments, because of the country's high risk and limited capacity to address hazards and disasters.

Climate change is an existential threat to the island nation, which makes it necessary for it to expend its resources on managing disasters through a proactive approach. Maldives recognises the need for a decentralised risk management approach and has incorporated it into its operational framework. However, due to its limited expertise, the government frequently partners with foreign organisations. The financing of DRR projects is also heavily dependent on private and international donor organisations such as the United Nations Children's Fund and the Maldivian Red Crescent. Another issue is the lack of data collection on disasters, as no institution is solely responsible for data management. Understanding the limitations of its capacity and budget, the government has established a Disaster Relief Loan Scheme for relief and recovery operations.⁵² It is essential for the Maldives to focus on capacity building of its institutions to move from vulnerability to a resilient nation.

Bhutan

The Disaster Management Act of Bhutan was passed in 2013 to establish a coordination system for disaster management which would work towards improving institutional capacity, increasing community engagement and mainstream disaster risk reduction. Under the Disaster Management Act, the Disaster Risk Management Strategy was prepared, envisioning the implementation of a DRM plan that would be integrated with climate change adaptation and sustainable development, applying a "whole of society approach".⁵³ Priority Action would be based on four key areas: understanding disaster risks, risk governance, disaster risk reduction for resilience and capacity building in disaster management.⁵⁴

The National Disaster Management Authority functions under the Department of Disaster Management, Ministry of Home and Cultural Affairs. The National Disaster Management Authority coordinates and directs the DRM strategies. It also collaborates with the private sector. The DRM policy drafting included all relevant stakeholders from different ministries. A careful and comprehensive assessment of international standards and key trends in addressing disasters was also considered with the assistance of foreign agencies.

Bhutan's DRM strategy lacks a proactive approach. Some of the key challenges to DRM are insufficient data, budgetary constraints, capacity at the local level and the lack of knowledge sharing and awareness amongst the people.

Afghanistan

Afghanistan's National Disaster Management Law was legislated in 2012 to regulate disaster response and preparedness.⁵⁵ In 2010, the National Disaster Management Plan was formulated, under which the National Disaster Risk Reduction Plan and the National Disaster Response and Recovery Plan were to be implemented. The Strategic National Action Plan for Disaster Risk Reduction 2011–2015 emphasised minimising losses and creating a link between disaster risk reduction, adaptation and resilience.⁵⁶ The Disaster Management Strategy 2014–2017 was drafted to implement key activities to reduce disaster risk by targeting vulnerable communities through an impartial approach.⁵⁷

Under the National Disaster Management Commission, the Afghanistan National Disaster Management Authority, the Ministry of Disaster Management is the focal body responsible for disaster response and preparedness. It also manages the funds for disaster management. The National Disaster Management Commission corresponds with several other relevant ministries. The Ministry of Rural Rehabilitation and Development addresses the sub-national coordination, while the Ministry of Interior and Planning coordinates at the provincial and district levels.

Afghanistan has been marred by decades of conflict, which has resulted in weak governance and a low capacity of institutions to cope with disasters. The additional poor levels of socioeconomic development make it more prone to disaster risk.⁵⁸ Limited resources, dependence on foreign agencies for financing and lack of direction for prioritised investment add to increased disaster vulnerability. Besides, the political and security situation has led to a lack of accountability, making Afghanistan lag behind in its disaster management approach.

Pakistan

For Pakistan, the country's disaster management system was legally established through the enactment of the National Disaster Management Act 2010, which outlines the formation of government bodies at the national, provincial, district and local levels and identifies their mandates for disaster preparedness and recovery.⁵⁹ Prior to this, a National Disaster Risk Management Framework was formulated in 2007 in line with the National Disaster Management Ordinance of 2006.

Pakistan's National Disaster Management Policy 2012 was aimed at mitigating the losses that result from disasters by minimising the risks, particularly to the marginalised communities, and identifying the positions of both private and public organisations in disaster management.⁶⁰ The plan is supported by three additional supporting policies: a Human Resource Development Plan on Disaster Management, a Multi-Hazard Early Warning System Plan, and Guidelines on Community-Based Disaster Risk Management. The 2013 Disaster Risk Reduction Policy was drafted to give an anticipatory focus to both natural and manmade disasters by using a multi-stakeholder approach.⁶¹ The National Disaster Response Plan 2019 (revised from 2010) is referred to as a "multi-hazard" plan, which was drafted in line with the global goals of the SFDRR, incorporating international best practices. Most importantly, the Response Plan acts as an operational mechanism, ensuring collaboration and cooperation at all levels, including regional and international.⁶²

The National Disaster Management Authority, as part of the National Disaster Management Commission, is tasked with coordinating and collaborating with national and international bodies and is responsible for the implementation of the Disaster Response Plan. The National Disaster Management Commission works at the federal level, while the Provincial Disaster Management Commission work with the National Disaster Management Commission at the provincial level. The District Disaster Management Authorities function at the district level in close coordination with the National Disaster Management Commission. At the frontline is the Union Council. Government bodies like the Space and Upper Atmosphere Research Commission, along with other international organisations, are integrated into the disaster management system in the country.

Pakistan has an extensive DRM policy with well-defined roles for different bodies that function alongside the National Disaster Management Authority; however, the National Disaster Management Authority is still focused on a post-disaster reactive approach for relief, response and recovery, where it also falls short due to lack of capacity.⁶³ Moreover, the budgetary allotment is not sufficient and puts it under financial constraints to efficiently develop strategies that would result in effective management. The operational framework also has overlapping jurisdiction in some cases, and institutional reforms in line with practical on-ground implementation are required for a well-coordinated approach.

Table 2: Overview of Disaster Risk Management Approaches in South Asia

Country	Level of Coordination	Operational Clarity	Approach
Afghanistan	Moderate	Low	Reactive
Bangladesh	High	High	Proactive
Bhutan	Moderate	Moderate	Reactive
India	High	High	Proactive
Maldives	High	High	Proactive
Nepal	Moderate	Moderate	Reactive
Pakistan	High	Moderate	Reactive
Sri Lanka	High	High	Reactive

Source: Compiled by authors

Overview of Disaster Risk Management Approaches in South Asia

The table above represents a summary of the DRM approaches of South Asian countries, as discussed in the previous section. The analysis is based on the level of inter and intra-level coordination among representative disaster management bodies, other ministries and organisations, both national and international. This also includes collaboration with other stakeholders in both policy formation and implementation. “High” refers to strong coordination among relevant agencies, and “Moderate” refers to coordination that requires more efficiency in order to bring about effective implementation in collaboration with other bodies. “Low” refers to weak coordination among relevant bodies, which is severely impacting disaster management. The second criterion is operational clarity, which denotes the roles and responsibilities of individual governmental bodies that are directly engaged in disaster management. “High” clarity means operations are well defined and do not overlap with multiple disaster management committees and result in effective disaster management. “Moderate” refers to a slight lack of clarity in operational mechanisms and requires improvement. “Low” operational clarity implies that disaster management is being negatively impacted as a result of unclear duties within the larger operational framework of different organisations responsible. The third categorisation is whether

the DRM approach is “reactive” or “proactive”. In simple terms, a reactive approach is focused more on post-disaster relief, response, recovery and rehabilitation, while a proactive approach refers to preemptively working on preparedness by using prevention, adaptation and/or mitigation so as to reduce the losses to the minimum, even when a disaster is inevitable.

In the South Asian context, countries show similar trends in several areas of DRM. Despite the fact that some countries have taken a proactive approach, efficient action is noticed among more during the post-disaster recovery and relief phase, even though efficiency during pre-disaster preparedness would mean effective results and cost-cutting by reducing loss and damage. In some cases, for example, in Nepal, the official stance says that the country is moving towards a proactive approach; however, in practice, this is not the case. More importantly, a high level of operational clarity and coordination does not necessarily mean a country has the resources to ensure a proactive approach, for example, in the case of Sri Lanka.

All countries have incorporated the Hyogo Framework for Action 2005–2015, followed by its successor, the SFDRR, in their policies. Under these frameworks, decentralisation of authority has been encouraged, considering that disaster management is a bottom-up approach and requires frontliners to be empowered and prepared for response.

While all countries are functioning through a decentralised arrangement, the local government body taking the lead in DRM can be problematic due to capacity limitations, lack of independence, administrative and financial authority, and an absence of technical knowledge despite having on-ground experience. In some cases, resource allocation is still centralised, which undermines the authority and functioning of the local-level bodies. This also implies that theoretically or as per policy, some agencies look responsible and powerful, yet in practice, they are dependent on the centre. Another common issue is the lack of transparency and accountability, particularly with reference to financing DRM projects. While countries like Bhutan, Maldives and Afghanistan heavily rely on foreign funding for DRM, transparency and accountability could assist in better managing and allocating funds. Setting the base of a country's DRM policies through the guidelines of international frameworks, which are often generic, is also another challenge, considering that practical implementation based on on-ground realities may significantly vary. An important common aspect of emergency disaster response noticed among South Asian countries is the role of the armed forces. In most cases, because of their capability, the armed forces step in to deal with relief efforts. This might be problematic when it comes to providing support across countries.

As mentioned earlier, the approach to DRR and DRM has evolved over time, as has the understanding of climate change. DRM is no longer understood in the context of managing a disaster once it has occurred; rather, the focus now is on forecasting and managing disaster risks through a preventive approach. It is critical to integrate DRR policies with climate change adaptation as both are aimed at strengthening resilience. In the cases of most South Asian countries, DRM and climate change frameworks are under separate ministries and work in isolation from each other. Although national-level policies both mention and act as supporting documents, there still lacks horizontal coordination between government bodies of both DRM and climate change. The lack of coordination also results in risk-blind assessment and planning, bringing about negative consequences for society.

Scope for Regional Institutional Cooperation

In the face of climatic risks in South Asia, disaster management systems need to evolve to mount a regional response. According to estimates, 750 million people in South Asia have borne the brunt of at least one natural disaster since the year 2000.⁶⁴ The 2022 Intergovernmental Panel on Climate Change report similarly highlighted that disasters from climatic events in Asia would result in substantive urban infrastructure damage, disrupt systems related to sustaining human life, affect coastal communities, and increase the risk to food and water security due to changing rain patterns and drought.⁶⁵

Due to the contiguous geographical proximity, the climate crisis and associated disasters have a transnational character in South Asia. Glacial melting in one country affects the agricultural produce of the other. Similar drought, rain and heat patterns can be witnessed in parallel across all the South Asian countries.⁶⁶ The Himalayan Mountain range, spanning from the Tibetan plateau to the Indo-Gangetic Plains, is considered an active earthquake region due to the convergence between the Indian and the Eurasian tectonic plates.⁶⁷ Adaptation to plug these vulnerabilities is difficult for the developing countries of South Asia as there is no sustained investment in critical infrastructure owing to a lack of resources and capacity.

The regional cooperation efforts among South Asian countries on disaster management are virtually non-existent owing to their shared colonial experiences and political trust deficit. A mutual suspicion for each other arising from border disputes has made it hard to find common grounds for both countries and draw their attention from mounting an effective regional response to DRM.⁶⁸ That is why largely a bilateral mode of engagement has been followed where countries in individual capacity have helped each other.

This does not mean that the need for an institutional framework to deal with natural disasters has not been felt at the regional level. Under the South Asian Association for Regional Cooperation (SAARC), the member states agreed to form the SAARC Disaster

Management Centre (SDMC).⁶⁹ This was done in the wake of destruction caused by the deadly tsunami originating in the Indian Ocean Region in the previous year, killing approximately 230,000 people in the coastal region of many countries with material losses above 12 billion U.S. dollars.⁷⁰ The SDMC was mandated to develop regional DRR strategies to aid national response mechanisms. In 2011, the SAARC Agreement on Rapid Response to Natural Disasters was finalised, whose stated objective was to “achieve substantial reduction of disaster losses in lives, and in the social, economic, and environmental assets” through a joint response of member countries. This agreement also exhorted the regional countries to designate their assets for “regional standby arrangements on a voluntary basis”.⁷¹ In 2015, a simulation and training exercise was organised by the SDMC, known as the South Asian Disaster Management Exercise, to institutionalise regional cooperation on disaster response among the member countries.⁷² This event, which was supposed to be conducted on an annual basis, did not get repeated after the first iteration. It was a constructive step as it could have allowed disaster response interoperability among the neighbouring countries but failed to create an impact due to the weak institutional culture and low level of regional integration.

Where regionalism through SAARC has failed to lift off, the Shanghai Cooperation Organisation (SCO) has gradually gained ingress in the politics of South Asia. As the largest pan-Asian-Eurasian regional organisation, SCO includes India and Pakistan as member states and other South Asian countries as observers and dialogue partners, including Afghanistan, Nepal, Bangladesh, and Sri Lanka. Disaster response is the key theme on which the SCO countries have shown a willingness to cooperate and is mentioned in Article 3 of the SCO Charter.⁷³ Built as a multilateral partnership, the SCO model has proven to be more effective in disaster diplomacy. There has been a sustained engagement since 2005 through workshops and simulation exercises, with the most recent held in New Delhi in 2023, where the participants shared their lessons on disaster management and talked about cooperation in the event of natural contingencies.⁷⁴

DRM has also prompted leading international agencies such as the United Nations Office for Disaster Risk Reduction, the World Bank Group, the World Food Programme, and the United Nations Office for the Coordination of Humanitarian Affairs to get directly involved with the regional mechanisms in South Asia. The World Bank initiative, the Global Facility for Disaster Reduction and Recovery, collaborated with the European Union to reinforce the DRM capacity of the South Asian countries through knowledge creation related to disaster-resilient infrastructure and upgrading the hydro-meteorological systems, including the early warning systems.⁷⁵

In South Asia, there is a wide array of actors, including government and civil society organisations, that have also played an important role in DRM, even though they were not established to work on disaster issues. Organisations such as the International Centre for Integrated Mountain Development (ICIMOD) and Aga Khan Development Network help the local communities to adapt to sustainable and climate-friendly practices through the sharing of community-centric knowledge.⁷⁶

To make DRM a top regional priority in South Asia, it is important that the climate change issue has strong political and public support. It is important that disaster risk assessment should become a mandatory aspect of the culture of governance at the core of public administration activities, and the understanding of disaster risks should include regional, national, and localised knowledge. There is also a need for a regionally accepted operational plan and protocol that should serve as a guide for all South Asian states when responding to disasters. A coordinated, collective approach is essential to mitigate the growing threat of climatic risks and promote the resilience of the entire South Asian region. During the COVID-19 pandemic, South Asian countries collectively pooled money for an emergency relief fund on a short-term basis. A similar standing arrangement to deal with climate disasters in South Asia can be modelled on the likes of the African Union and the European Union, which have already set up regional disaster relief funds. An alternative to a disaster relief fund is the insurance scheme model that was

set up for the Caribbean governments to quickly inject short-term liquidity in case of a catastrophic earthquake or hurricane. It is the only example of a successful regional insurance fund that has made total payouts of 262 million U.S. dollars to date.⁷⁷ Such types of financial standing arrangements, if replicated in South Asia, will not only increase regional solidarity but also increase an awareness of each other's institutional capability.

In conclusion, South Asia faces formidable challenges in managing the escalating risks posed by climate-related disasters. The staggering number of people affected by natural disasters in the region underscores the urgent need for a coordinated response. While historical legacies and political distrust have hindered regional cooperation efforts, it is important for South Asian countries to transcend these barriers and foster a united front against the mounting threats. The establishment of the SDMC and agreements within the framework of SAARC were positive steps, but their continuation requires strong political commitment. On the other hand, the relative success of the SCO in disaster diplomacy demonstrates the potential for a more effective multilateral approach. By working collectively, South Asian countries can create a more resilient and sustainable future for their people and communities.

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
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