Strengthening Inclusive Disaster Risk Governance for Climate Resilience in Asia (SIDRRA):

A case study of Pakistan

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List of Acronyms

ADRRN: Asian Disaster Risk Reduction Network

AKDN: Aga Khan Development Network

CAC: Climate Action Center

CEPA: Centre for Poverty Analysis

CBDRM: Community-Based Disaster Risk Management

CBDRR: Community-Based Disaster Risk Reduction

CBO: Community-Based Organisation

CC: Climate Change

CM: Climate March

CNIC: Computerized National Identity Card

CSCCC: Civil Society Coalition for Climate Change

CSO: Civil Society Organisations

DDMA: District Disaster Management Authority

DMA: Disaster Management Authority

DN: Duryog Nivaran

DRR: Disaster Risk Reduction

EAD: Economic Affairs Division

EOBI: Employees' Old Age Benefit information

EWS: Early Warning Systems

FAFEN: Free and Fair Elections Network

FCS: Fishermen Cooperative Society

FDI: Forum on Dignity Initiative

GB: Gilgit Baltistan

GBV: Gender-Based Violence

GESI: Gender Equality and Social Inclusion

GIA: Gender Interactive Alliance

GIS: Geographic Information System

IBA: Institute of Business Administration

IDP: Internally Displaced People

INGO: International Non-Governmental Organisation

IRA: Indigenous Rights Alliance

KBT: Karachi Bachao Tehreek

KP: Khyber Pakhtunkhwa

KUJ: Karachi Union of Journalists

KUL: Karachi Urban Lab

LFM: Logical Framework Matrix

MoCC: Ministry of Climate Change

NDMA: National Disaster Management Authority

NGO: Non-Governmental Organisation

NHEPRN: National Health Emergency Preparedness and Response Network

NHN: National Humanitarian Network

PCAN: Pakistan Climate Action Network

PDMA: Provincial Disaster Management Authority

PDNA: Post-Disaster Needs Assessment

PFF: Pakistan Fisherfolk Forum

PHF: Pakistan Humanitarian Forum

PIPFD: Pakistan–India People's Forum for Peace and Democracy

RSP: Rural Support Program

SBT: Sindh Bachao Tehrik

SDPI: Sustainable Development Policy Institute

SG: Shirkat Gah-Women's Resource Center

SHRH: Sexual and Reproductive Health and Rights

SIDRRA: Strengthening Inclusive Disaster Risk Governance for Climate Resilience in Asia

SNA: Social Network Analysis

List of Acronyms

SOP: Standard Operating Procedure

TKF: The Knowledge Forum

URC: Urban Resource Center

WAF: Women's Action Forum

WFFP: World Forum of Fisher People

WWF: World Wildlife Fund

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Introduction

Pakistan is highly vulnerable to natural disasters, including floods, earthquakes, droughts, crop failure, and extreme urban heatwaves, due to both its geographic location and global climatic conditions. The country has experienced a series of devastating events caused by climate change (CC) and other unrelated disasters. These events have highlighted the need for robust disaster risk reduction (DRR) strategies, igniting climate justice actions on the streets, within policy spaces, and across local and international courtrooms. Conversations on DRR within the country are often difficult to isolate from climate change discourse due to the interoperability of data and narratives. With evolving terminology, what started as conversations on disaster management - including early recovery, rehabilitation, and eventually better preparedness following major disasters across the world before the turn of the millennium - are now overshadowed by broader climate change discourse (adaptation, resilience, 'net zero,' loss and damage, etc.). Discourse whose technical language can create knowledge and power imbalances. Climate policy researchers, such as Dawar Butt, however, maintain that following the 2022 floods across Pakistan (which were induced by climate change), superficial discussions emerged on issues like groundwater depletion and fossil fuel usage, while people's main concern was how to get food back on the table (Anmol Irfan, 2023).

Critiques argue that Pakistan's newfound **leverage at U.N. climate negotiations** does not automatically translate to local-level mobilization as a disconnect remains between (technocratic) government leaders and the public at large (Anmol Irfan, 2023).

According to one respondent to this study, "whereas Pakistan got international funding to deal with the aftermath of [the] 2004 earthquake when it didn't know how to, twenty years later (2022), it had the systems and capacity, but the global community was unwilling to give [the] funds it desperately needed".[1] Geopolitics and internal governance issues have thus impacted the resources and capacities of local DRR networks to undertake and sustain their work.

The 2022 super floods in Pakistan is a recent case in point, which directly impacted approximately 33 million people[2] washed away millions of homes, putting half a million people in tents, and left thousands of people including 466 children dead. Over the past decade, Pakistan has made significant strides in developing its DRR framework, driven by both government initiatives and active involvement of civil society networks and coalitions. However, the immediate aftermath of the 2022 floods revealed near complete disarray and paralysis in local government systems with District Disaster Management officials scrambling to deal with the magnitude of the devastation. The only exceptions where people received, and could act on, advance warnings was in the northern parts of the country where **local mosques** proved pivotal networked nodes in warning and guiding people, and mobilizing quick emergency measures (PDNA, 2022). The same role was also recounted during the 2005 earthquake by Abdur Rehman Cheema in his 2022 book, *The Role of Mosques in Building Resilient Communities*. Communities in the Post-Disaster Needs Assessment (PDNA) reported that in their respective areas, women widows, pregnant women, persons with disabilities, older people and poorer populations were unable to access relief as it

was difficult to 'strong-arm their way ahead of lines and aid distribution points'. Uneven access to information about aid distribution amongst marginalised groups and displaced populations, reportedly generated significant distrust amongst families, and caused unravelling of the village culture in the face of displacement with increased reports of violence, conflict and a sense of severe personal insecurity.

In 2005, the country's first **National Disaster Management Authority (NDMA)** was established, however, its efforts were constrained by limited resources and coordination challenges in the years that followed. In 2014, the **National Disaster Risk Reduction Policy** was formulated on the heels of the 2010/11 super-floods along the Indus River and its tributaries, which marked a **shift towards a more comprehensive approach to DRR**, and the need to involve communities and social organisations in working with communities where the government had little to no reach. The 2014 policy also emphasised risk assessment, prevention, and preparedness, with a focus on integrating DRR into future development planning.

Pakistan's governance structures for disaster preparedness and climate change have gradually evolved, at the national, provincial, and local levels, with the last pillar widely reported to be weak. Key national institutions include: the **NDMA, the National Climate Change Council, the Pakistan Climate Change Authority, and the Ministry of Climate Change**. At the provincial and local governance levels, there are the **Provincial Disaster Management Authorities, Provincial Environment Protection Agencies, District Disaster Management Authorities**.

These perform unevenly within and in-between provinces.

Over the decades, civil society networks have also played a crucial role in advocating for policy changes and the greater inclusion of communities and non-governmental organisations (NGOs)/community-based organisations (CBOs) in DRR governance. This includes influencing the National DRR policies, where civil society organisations (CSOs) provided inputs into the National Disaster Risk Reduction Policy 2017, which emphasises promoting gender inclusivity and the inclusion of marginalised groups in DRR planning and decision-making processes. After the devolution of powers to provinces in 2010, provincial governments have also worked with local social networks and groups to take up policy inputs.

There are also many **large NGO networks** that work directly with government on mobilising recovery and providing relief to disaster-stricken communities. For instance, the Pakistan Humanitarian Forum (PHF), represents 63 international aid organisations and has been active since 2003, addressing humanitarian and development needs for vulnerable populations in Pakistan. In remote areas, these local NGOs have supported the monitoring of shelter reconstruction across Pakistan by different partners, feeding back to provincial government authorities' Shelter Cluster. Within these networks, smaller **CBOs** play a crucial role in implementing policies and managing risks at their respective levels, working sometimes in concert with government and/or larger NGOs in resilience-building and awareness-raising/ sensitising work.

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[1] Discussion with Zeenia Shaukat, The Knowledge Forum.

[2] An estimated 3.8 million people with disabilities were reported to have been impacted across 4 provinces. People with disabilities also faced specific challenges during evacuation due to disability unfriendly evacuation services and lack of appropriate equipment for self-help groups (PDNA, 2022: Government of Pakistan, Asian Development Bank, European Union, United Nations Development Programme, World Bank., p. 132).

While disaster management, whether by government or CSOs, was primarily reactive up until 2014 in Pakistan, focusing mainly on emergency response and harm reduction, it has since shifted more towards prevention and preparedness. Nevertheless, the absence of a comprehensive framework for integrating community inputs into disaster planning processes continued to exacerbate the number of challenges for governance, furthering the disconnect between policy and practice (Ali et al 2020; Hussain et al. 2019). More recent policies, such as the revised **National Disaster Management Plan 2022**, emphasise the importance of social inclusion and gender in disaster management and such policies aim to address the specific needs of women, children, and marginalised groups. However, ensuring practical implementation of gender-sensitive and inclusive approaches remains a challenge, with varying levels of successes across different regions and projects across the country. As a result, bridging the gap between local knowledge and formal disaster management frameworks is truncated, particularly in ensuring that local insights are adequately incorporated into broader sustainable development policies.

The devastation of floods in 2010 and 2011 in Pakistan in many ways acted as a catalyst for change in DRR governance and networks, with some significant successes and persisting challenges. The scale and impact of these disasters exposed **significant gaps in DRR frameworks** and highlight the need for a more integrated and inclusive approach.

Disaster Risk Reduction Networks in Pakistan

Several studies across the globe point to social practices that enhance the effectiveness of DRR networks including community engagement, education, wide collaborations, risk communication, and the integration of gender and social perspectives. An effective approach for strengthening DRR networks is community-based disaster risk management (CBDRM), which emphasises the active involvement of local communities in planning, preparedness, and response efforts.

Social networks play a crucial role in facilitating communication, resource sharing, and collaboration among stakeholders involved in DRR in Pakistan. The presence of **strong networks among NGOs and community organisations** have been shown to enhance disaster response capabilities across the country (Shah et al. 2022; Akbar & Aldrich 2017), as discussed in this case study.

With frequent disasters, particularly in disaster-prone areas of Pakistan, many CSO networks have begun to play a very prominent role in DRR activities themselves, with different groups focused on immediate response, advocacy, awareness-raising, and capacity-building activities. As a result, from 2018 - 2021, the country has seen the formation of **several coalitions and networks aimed at strengthening DRR efforts through collaborative approaches**. This included several CSOs launching community-based DRR projects or introducing permanent programmes aimed at enhancing local resilience. Others started focusing in Early Warning Systems in flood-prone areas, as well training and capacity-building programmes to train local leaders and communities in disaster preparedness and response.

The intersection of climate change and DRR is also a critical area for Pakistan as it is particularly vulnerable to the impacts of climate change that exacerbates the frequency and intensity of natural disasters (Ullah, 2016; Farooq & Fatima, 2022).

Therefore, **integrating climate change adaptation strategies into DRR frameworks** is essential for building long-term resilience, which relies largely on strong networks and collaboration across the whole of society, formal or informal. Integration also requires a multi-faceted approach that encompasses policy reform, community engagement, and capacity-building at all levels of **governance** (Ullah, 2016; Farooq & Fatima, 2022).

A 2022 review of **government structures** working on disaster preparedness and response suggested that despite a web of actors working within government networks on disasters management, there are no **formal mechanisms** for CSOs/NGOs to engage with government. Experiential learning from the 2022 floods also reveals ad hocism and short-termism across governance structures while CBOs/NGOs having better access to these nodes (often due to mutual dependencies) to get their demands across. Further, while some large CSOs and NGOs are formally connected with District Administration working on DRR, systematic engagement with smaller, informally connected CBOs (peripheral nodes) tends to vary and is sporadic (PDNA, p. 119).

Nevertheless, various social movements across Pakistan that are discussed in this study suggest a growing public demand for climate justice, emphasising the need for inclusive policies and decision-making that protect the most vulnerable and natural and man-made disasters.[3] Social movements or informal networks of activities and social and political workers have, through collective action, spurred conversations on reparations, where new collectives are using both grassroots mobilisation and organising to raise demands for just compensations, protection of natural resources, and lifestyle changes (adaptation) in the face of climate change.

Movements on climate change in Pakistan have also spawned loose clusters of young, energetic, and innovative activists, development professionals and academics across cities (including in Karachi as noted in this report), who position themselves in systematic advocacy and policy-related work across networks. Some have started their own NGOs or are working/consulting in the development, human rights and academic sectors.

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[3] The 18th Constitutional Amendment in 2010, which brought powers to Federating Units, i.e., the provinces, to not only make their own laws but also enter bilateral agreements where needed, has allowed provinces to fill parts of the funding gaps in the annual National Finance Commission Awards.

Study Purpose and Methodology

This study is an attempt to identify DRR networks in Pakistan and document key approaches and challenges to inclusion used to effectuate change in governance and/or at grassroots levels. It explores the role that networks are playing in DRR efforts in Pakistan by identifying spaces in which these networks operate or could potentially operate, and their work in strengthening and amplifying the voices of local communities, especially those among oppressed, marginalised, and at-risk populations. In doing so, it aimed to identify relevant issues in relation to the overall research questions (detailed below).

The study began with the development of a Concept Note shared with the Centre for Poverty Analysis (CEPA) for review. Incorporating inputs from the research assistant in Pakistan, a thorough mapping was conducted of existing DRR and climate networks in Pakistan (see Annex A). A list generated was used during interviews for case studies to assess which ones the respondents were connected to or working with, and how. Due to the vastness of nodes connected with the case studies, a quantitative analysis was avoided, as were measurements in the strength and direction of nodal connections between social organisations and organisers/ NGO workers. A rapid assessment was also made of existing government structures, laws, and policies (see Annex B), which was similarly used in interviews to ascertain levels of awareness, coordination, and collaboration (see Annex C), inferred through described collaborations or working relations.

A research associate was engaged to conduct the interviews and develop the three case studies, one each on the Fisherfolk Forum, HANDS, and the Climate Justice Movement. Interviews were conducted at the interviewee's homes, workplaces, or a location of their choice within Karachi. The Areas of Inquiry served as the study questionnaire, along with mapping lists of DRR networks and organisations. Interview guidelines were provided to the associate by the lead researcher, along with a detailed orientation on the study's purpose, methodology, and data presentation.

Theoretical framework and praxis

Social Network Analysis (SNA) is both a theoretical and methodological approach that examines the relationships and 'flows' between actors within a network. In the context of DRR and climate justice, SNA allows for a systematic exploration of:

- How organisations are connected.
- How resources and information circulate.
- How influence is distributed across the network.

At its core, the SNA theory posits that the structure of a network – comprising of nodes (actors) and edges (connections) – influences the behaviour and effectiveness of its participants. Key touchpoints in the framework include:

- **Node Centrality:** The degree to which an actor or group of actors occupies a central position in the network, influencing its capacity to access and disseminate resources.

- **Bridging**: The role of certain actors in connecting otherwise disconnected parts of the network, facilitating the flow of information and resources across different sectors or clusters.

- **Clustering**: The tendency of actors to form tightly knit groups, often based on shared objectives or geographical proximity.

This study used the SNA framework to critically assess the structure, relationships, and power dynamics within Pakistan's DRR networks, and (in some instances) climate justice networks, as they populate the landscape and form critical nodes of engagement, connecting communities with governance structures and decision-making bodies. By integrating both theoretical and practical dimensions of SNA, the study provides insights into how these networks function and interact, particularly in the context of international (donor) collaborations and local implementation, and the challenges to their work. Based on the study's findings, some recommendations are presented that could strengthen and amplify the voices of local communities, especially vulnerable and marginalised groups.

Apart from interviews, the SNA framework was applied to all data gathered on DRR and climate justice in Pakistan, focusing on interactions between local, national, and international networks and governance structures and communities, and within pre-set research parameters, i.e., the research questions developed by Duryog Nivaran (DN) and the Asian Disaster Risk Reduction Network (ADRRN), prior to study initiation.

The process of themes identification and subsequent coding was based on running auto-codes in NVivo to determine both key common and unique words, phrases, and collection of ideas expressed by interviewees as well indicated/discussed in the literature collected and processed thought Citavi for this paper. Literature was coded for themes discussed and summaries/abstracts summarising key learnings and evidence, and interpreting data from a SNA lens whilst organising information or analysis on any of the pre-determined sub-themes. For the sub-themes of analysis, NVivo Codes and Citavi Categories for data, see Annex D at the end of the report.

Study Approach

The study used an exploratory mixed-methods approach, primarily qualitative, with an overall interpretive framework to examine case studies and review available literature on existing DRR networks in Pakistan. Convenience and purposive sampling were used for primary data collection.

For ethical reasons, and to avoid potential harm to participants in this study amongst the interviewees, their individual names have been kept confidential. To avoid generalising on the basis of a small sample of interviews, effort was made in particular, to speak with multiple members of the case studies discussed.

Primary Data

This involved conducting in-depth interviews with selected network members in Karachi (a total of 9 interviewees in group discussions) between September 7-11, 2024, to address the main research questions (see Annex E for Areas of Inquiry). The research questions provided by CEPA were adapted to context and translated into Urdu for ease of communication and comprehension by interviewees. The purpose of the study and the research questions were shared before the interviews, and the interviews were recorded and securely stored (digitally).

The interviews were treated as case studies and examined as critical nodes in DRR networks across Karachi, Pakistan, and the broader Asian region. They explored the forms of social organisation concerning relationships with other nodes in DRR networks, connectedness, work with other nodes, and the implications of these relationships for participatory DRR. The organisations/ social networks examined included:

- HANDS (established 1979)
- Pakistan Fisherfolk Forum (established 1998)
- Climate March (first held in Karachi, 2019)

These three were selected based on their distinct approaches to social organisation, mobilisation, accountability, and inclusion in DRR and climate issues, their prominence (node centrality) in contemporary DRR networks, and their bridging and clustering roles within smaller local and larger regional and international networks working on DRR in Pakistan.

Secondary Literature

The study reviewed DRR and climate change related laws, policies, plans, official reports, UN reports, and journal articles from Pakistan and the South Asian region (where relevant), as well as other grey literature. Themes emerging from both sets of data (using a grounded approach) were processed using Citavi 6© for knowledge organisation.

Keywords for online searches included:

- Inclusive DRR in Pakistan
- Role of DRR networks in Pakistan
- DRR network members/ DRR collaborations in Pakistan
- DRR network analysis – Pakistan
- Existing government and civil society DRR networks in Pakistan

For analysis, interviews with case study respondents were set against available literature using the main themes (research questions and those emerging from data) and processed using NVivo14©. In addition, the study drew on experiential learnings of the lead researcher's involvement in conducting and reporting on a social impact assessment study in the immediate aftermath of the 2022 floods across Pakistan (PDNA, 2022).

Limitations

This paper if based on an analysis of available literature, which mainly pertains to organisations, government and non-government, in DRR. Analysis of whole networks and their effectiveness is relatively scarcer, or document structural nuances on smaller scales.

In addition, while primary data has been systematically collected and analysed, many would-be nodes of interest were not interviewed or engaged. Time constraints also limited the available choices for more in-depth primary and grounded exploration.

Last, while this paper uses a social network analysis lens to connect and interpret different sources of information and data, it does not use a sophisticated method of quantitative measurement on the strength and direction of ties between different nodes working on DRR in the small area of study in Karachi, province of Sindh. This choice is made consciously given the lack of complete information on active connections of nodes reported connected to the case studies: Pakistan Fisherfolk Forum, HANDS and Climate March.

Discussion

1.How do networks strengthen and amplify community voices and concerns in disaster risk reduction efforts? Lessons and challenges

Who's involved, playing what role within networks?

Discussions with leaders in disaster risk reduction and climate change in Pakistan, as well as related literature, highlight the critical role of certain nodes, bridging actors, and clusters that assert centrifugal force in shaping multiple DRR networks' structure, representativeness, and reach. While the integration of international actors further enriches existing DRR networks, it also introduces challenges of navigating power dynamics and negotiating with the political economies of development and sustainability. As Pakistan continues to navigate the dual challenges of disaster risks and climate change, insights from the SNA carried out for this paper point to various cliques that operate within DRR networks with varying access to funding, connectivity with communities, and representativeness. These cliques have different approaches to collaboration, either working with or against government systems in terms of demanding higher accountability.

Central and peripheral nodes in the Disaster Risk Reduction networks

Pakistan's DRR governance is characterised by a complex interplay between governmental agencies, NGOs, CBOs, and international aid agencies. The **NDMA** serves as the apex body for disaster management in the country, coordinating efforts across various sectors and levels of government while also partnering with NGOs and local CBOs. Governmental bodies such as the NDMA undeniably act as central nodes in the national DRR network spread across Pakistan. However, they are heavily reliant on vital support from a wide but fragmented network of NGOs and CBOs working across Pakistan to support communities in terms of both disaster preparedness and action.

Central nodes include the NDMA at the federal level, but also the **Provincial Disaster Management Authorities (PDMAs)** at the provincial and district levels with their respective sub-committees. Some key international NGOs (INGOs) and NGOs, such as the **Sustainable Development Policy Institute (SDPI)** and the **Civil Society Coalition for Climate Change (CSCCC)**, operate across a wide network of local and international NGOs and with government policymaking bodies. Networks like the SDPI and CSCCC play a pivotal role not so much in coordinating disaster response and expanding community preparedness, but rather by creating knowledge and creating essential flows of information and resources for both communities and the government, aiming to influence policy to drive practicable change. The work of such types of institutions working on DRR generally attempt to bridge top-down, with bottom-up approaches to DRR and CC, and usually operate across 'high-level' forums.

Additionally, institutions like the **Institute of Business Administration (IBA),** the **Karachi Urban Lab (KUL),** and **The Knowledge Forum (TKF)** have been instrumental in providing technical and academic support to enhance the capacity of local organisations involved in DRR and sustainable and inclusive development. The KUL in particular supports participatory action research on issues around urbanism, conflict, violence and human rights. Their involvement helps to bridge the gap between academic research and practical applications in the field, undertaking problem analysis, supporting compilation of effective interventions and supporting policy-level dialogue and the policymaking process. **TKF** in Karachi, for instance, has been instrumental in contextualizing the Sindh Climate Change Policy, first drafted in 2018, to the reality of CC in Sindh of recurring disasters of varying proportions, by arranging civil society dialogues in collaboration with the **National Commission on Human Rights**' Sindh office.

Further, during the highest points of the COVID-19 pandemic across Pakistan, and the 2022 floods various informal networks were not only quickly activated but were also pulled into action due to close betweenness with communities.[4] NGOs with more experience also acted more swiftly than the government, at all levels. The same national networks are currently partnering with national, provincial and government entities to identify beneficiaries amongst disaster-affected communities and for climate resilience and adaptions projects. Much of the larger projects with multi-stakeholder forums are funded through loans by international financial institutions.

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[4] For an assessment conducted by the author for the National Ministry of Health in 2020, visit link.

Community Bridges and Ties with Neighbours

The effectiveness of community networks often hinges on their ability to act as bridges between marginalised communities and larger governance structures. CBOs and informal networks facilitate communication and mobilization within communities, linking local voices to national and international platforms. For instance, during the 2022 floods, CBOs provided critical information on community needs to government agencies and international organisations, ensuring that responses were more relevant and effective.

In recent years (2019 onwards), Pakistan has witnessed several significant **social movements** related to climate justice and inclusive DRR, much like the rest of the world. Inspired in large part by Greta Thunberg's haunting speech at the UN, which questioned countries' inaction on climate crises despite numerous funded projects, a new generation of youth leaders has taken to the streets. Others have collaborated with leaders in academia and legal disciplines to include disaster-affected communities in governance and policymaking spaces, study impacts and policy options. Others have pursued collective actions such as protests or public interest litigation.[5] For example, NGO workers considered independent experts associated with the **World Wildlife Fund (WWF)** and the **SDPI** in Pakistan have been appointed by courts as respondents in cases involving government initiatives that exacerbate or offset climate change. Small NGOs such as the **Gender Interactive Alliance (GIA)** in Karachi and the **Forum on Dignity Initiative (FDI)** in Islamabad also undertake or support relief work across Pakistan through connections within their respective social or professional networks, specifically working with the transgender and Khawaja Sira communities in various parts of the country.

While CBOs often lack formal recognition and resources compared to their larger counterparts, their role as bridging actors as well as key ties, whether directed or otherwise, is vital in disaster response coordination. They can channel information and resources directly to the communities where they are embedded, as well as the support from larger networks directed at vulnerable populations. Research from Pakistan shows that when CBOs engage effectively with local communities, they can improve disaster preparedness and response, fostering greater overall community resilience (Khan et al., 2021).

Nevertheless, **commonality of aims, goals, political ideology, and mutual trust** are all critical components that can enhance or adversely impact meaningful collaborations between diverse stakeholders or nodes operating inside DRR networks. For instance, fragmentation within social networks like the Climate March and Pakistan Fisherfolk Forum (PFF) in recent years has divided energies but also created off-shoots within climate and DRR networks.[6] This fragmentation has, in many ways, created new opportunities for niche expertise to emerge (as in the case of legal support for disaster and climate affectees), engaging and influencing governance structures at different levels.

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[5] With regards to increased litigation on climate and disaster related issues, globally writers have called for a careful review of some of the legal actions being brought against governments and private companies that do not necessarily align with climate goals and have different motives and objectives and to also pay attention to litigation with potential negative impacts for climate action and policy, which is also a growing phenomenon. (Joana Setzer and Catherine Higham 2021, p. 15)

Some of these groups, such as the **Karachi Bachao Tehreek (KBT)** (which further split into two groups: KBT and **Sindh Bachao Tehrik** – SBT), and the **Indigenous Rights Alliance (IRA)** in Karachi, work alongside communities, particularly those affected by homelessness and forced evictions/displacement[7] in a more concerted way than the Climate March (CM) itself can as a loose network. A major point of convergence for these networks was the historic flooding of the Karachi city in 2020 and 2021, all the while anti-encroachment and demolition drives were being carried out across parts of the city (as well as in Islamabad), especially against poor households living around the Gujjar & Orangi nullah, adding insult to injury. This combined with groups demanding protection of the Malir Nadi (Mali River) and communities relying on it for livelihood, and agitations for the rights of residents.[8]

Community Accountability

At the local level, DRR governance systems remain vulnerable, with limited capacities and attention to devolved functionality. Interactions between district administrations and civil society groups as well as communities are widely reported as haphazard and ineffectual in centering community needs. This has raised significant issues of community accountability. For instance, certain communities may be excluded from disaster relief efforts based on political affiliations and social identities as indicated in reports during the 2022 floods where relief goods were siphoned and hoarded, later distributed only to voters of specific political parties, while religious charity networks refused to serve religious minorities. The lack of engagement with local communities through local systems established for that very purpose thus contributes to distrust, social conflict, and resentment, which impacts how DRR organisations operate during crises (Akbar & Aldrich, 2023).

The effectiveness of the local DRR governance structures in Pakistan is widely questioned in literature (Atta-ur-Rahman & Shaw, 2014; Cheema, 2021) and affirmed through interviews, particularly regarding their ability to engage communities in decision-making processes. The problems of exclusion and non-centering of communities becomes more acute where local communities are not organised, may be recovering from a disaster as in displaced communities, or where few other formal networks are present to support them in accessing governance structures. Studies indicate that the **top-down approach** is still prevalent in networks especially at the local levels, often marginalising community voices and leading to ineffective recovery and resilience-building efforts (Ali et al. 597-614; Hussain et al. 117-132). Local governance systems have also been noted as **inconsistent and vulnerable to disasters with weak capacities to plan, manage and spend funds across the country.**[9] It appears through interviews that while additional layers of governance have been added over the years, local interactions between district administration are often rushed with clubbed meetings where decisions rather than discussions happen, and with little room for dissent.[10]

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[6] Some of these off-shoot groups are also reportedly driven by disagreements over which issues fall within the climate change agenda, and which pertain to other human rights issues such as right to housing, clean water, sanitation, health, etc. This splintering has inadvertently also affected the visual impact of climate-related protests that has spread across Pakistan from 2019 onward, despite its obvious intersections with DRR and opportunities for expansion. Reportedly, the political nature of these protests makes some NGOs working with the government (including HANDS), or dependent on approval from the Economic Affairs Division to carry out operations and receive funding, wary of co-organising with these networks and their communities-of-focus.

[7] See https://karachibachaotehreek.org/docs/gujjar-orangi-nala-housing-survey.pdf.

[8] In an interview with the then Climate Change Advisor to the Sindh Government, it was learnt by the author of this paper of a rather ill-conceived tree plantation along the Lyari riverbank that felled and backlogged rainwater into the city, an initiative led by said Advisor. (Interview dated: 16.06.2021, in Karachi)

In line with the Sendai Framework for Disaster Risk Reduction Research, the work of organisations like PFF and HANDS indicate that **involving local citizens and communities in disaster risk management is a laborious yet crucial task, which is often tokenized both by government and civil society groups alike** (see also: Adeel Mukhtar Mirza 2020). Representatives of HANDS suggest that people are excluded due to the lack of social organising at the local level against pre-existing power hierarchies in rural and agricultural settings, while loose social network members working on DRR and climate claim gatekeeping by certain nodes within networks and denial of open access to all levels of decision-making for communities.[11]

Inclusivity within Disaster Risk Reduction networks

National networks like the **Pakistan Climate Action Network (PCAN)** and the **Pakistan Humanitarian Forum (PHF)** attempt to address these gaps by creating awareness, engaging marginalised communities, and collaborating with government bodies to ensure climate and DRR strategies are inclusive and gender sensitive. However, the top-down nature of these networks, especially at local levels, continues to present challenges for local actors, whose voices are often excluded. Research from Pakistan indicates that while some networks are highly inclusive, allowing for diverse stakeholder participation, others tend to be cliquish, limiting engagement to a select group of actors (Idrees & Khan, 2018). This applies to advocacy and research organisations working to influence policy with very limited connection to the communities they claim to serve.

While the centralisation of crisis management was effective in Pakistan (and other countries) during COVID-19, DRR planning also requires zeroing in on **local conditions** and tapping into **local resources** to reduce and manage risks, minimise and mitigate impacts and mobilise quick support. As government services not only thin out in rural and peri-urban settings, which are[12] also the first to be hit is disasters due to low upkeep and climate sensitivities in Pakistan, harnessing the local resources including tapping and including the right **networked persons/ social organisations** or nodes (such as CBOs, and the various DMAs and climate change authorities), and building social and political capital are essential to prepare for and respond to disasters effectively. The cases of CM (or Aurat or Student Solidarity Marches) show that movements (including those based on informal networks of peoples) can push boundaries. Creating spaces for formally structured/registered NGOs/CBOs/CSOs to further push the rights agenda within policy spaces, in the process of issue and affected communities' identification as well as for linking up.[13]

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[9] According to PDNA, 2022 report, despite orders of the Supreme Court to functionalize local government to work before, during and after disasters, they are not formally established (p. 118).

[10] Discussions with PFF, HANDS and CM members.

[11] Interviews with PFF, HANDS and CM members.

[12] For instance, a World Bank report notes that the 2022 floods across Pakistan not only hit Sindh the hardest (being downstream), in terms of human displacement, it damaged at least a third of the Government Dispensaries (GDs). At the community level, the Sindh population largely replies on either GDs or Basic Health Units due to proximity, although GDs are closer to more settlements than BHUs by numbers.

[13] For instance, during COVID-19, the 2022 floods, and the 2021 locust attacks across Pakistan, different assessments by the author of this paper for national and provincial governments across Pakistan revealed that local people's social networks moved quickly to highlight the exclusion of the trans community from COVID-19 vaccine and treatment access (see report that documents case of small issue-based NGOs like GIA and FDI), used mosques for warnings on approaching floods, mobilised volunteers and self-help groups to identify and evacuate persons with disabilities affected by floods (2022 PNDA report), and used community pest surveillance groups that took turns to track locust movement in order to protect community crops from an attack, while the government had carried out unplanned pesticide dumping (see here for locust assessment details). Some of these findings were later integrated into different project designs, strengthening networking between local administration and disaster-prone or affected communities.

Furthermore, **hybrid networks** provide more flexible solutions to climate and DRR challenges, including in Pakistan. By blending formal and informal structures of citizen-state engagement, **hybrid** networks such as those set by government, or regional DRR networks (e.g., various UN agencies - see Annex A) facilitate engagement with local communities while also leveraging support from established institutions. This allows for the establishment of more adaptive and responsive governance mechanisms that can better address the unique vulnerabilities of diverse communities who may be reached directly at the village and individual level. Access of course varies by region in Pakistan, with blockades or less proliferation to civil society organising under Economic Affairs Division (EAD) regulations. As an interviewee noted: "*Acquiring as No-Objection Certificate to operate from the Economic Affairs Division (EAD) has restricted NGOs ability to access international funding, a move seen as an attempt to silence some organisation's radical stance and critique on the States' anti-people policies.*"

Fragmentation in response efforts

The institutional framework for disaster management in Pakistan has evolved significantly since the 2005 earthquake, with the establishment of disaster management authorities (DMAs) at all levels complimented by CC coalitions and official bodies (see Annex B). Coordination between these agencies and local governments, however, remains weak. While coordinated efforts among government and non-government actors prior to, during, and after disasters lead to better resource allocation and improved outcomes, fragmentation in the immediate aftermath of events like the 2022 floods multiplied manifold the problems and losses faced by already marginalised and vulnerable communities in Sindh, This has resulted in the duplication of efforts (or uneven distribution) and wasted resources, while some communities are completely missed (Shah et al., 2022).

Case studies from past disasters illustrate fragmented approaches between both government ministries and departments and NGOs/CSOs, who compete for limited resources from provincial and national resources, via bilateral loans, and donor funding. The lack of coordination during the 2022 floods, for example, led to gaps in disaster preparedness and response. This was due in large part due to the unprecedented levels of the floods.

Rebuilding and expanding Social Capital through Networks

The 2022 floods in Pakistan revealed significant impacts on social capital and cohesion, as families were separated spatially and forced to cohabit with extended family members or strangers in camps after losing their homes and livelihoods. This created challenges for women and children and persons with disabilities in particular, including issues related to privacy, the increased burden of caregiving (for children out of school, the injured, and older family members), and heightened violence (PDNA, 2022). In many cases, damage to communication and road infrastructure left communities completely cut off from social support systems and government relief camps. The impact of trauma was severe, yet there are very few organisations across Pakistan, or strong networks focusing on mental health and trauma recovery.

Social capital – the networks of support within communities – plays a vital role in disaster recovery. Strengthening these social ties through community-building initiatives enhances collective resilience, helping communities recover more quickly and effectively from disasters (Akbar & Aldrich, 2017; Pfefferbaum et al., 2015). Informal local social networks can provide critical support during and after disasters, facilitating the sharing of resources and information among community members. An old example can be traced to the **Shirkat Gah – Women's Resource Center** (SG) setting up **safe spaces for women affected** by the 2010 and 2011 floods and carrying out community-based participatory <u>studies</u> with affectees communities on climate change in Pakistan, working through its network of CBO partners. Many of these CBOs, were assisted with their startups through local leadership development by SG.

However, participation in organised networks requires resources, including time, making it difficult for communities struggling to stay afloat to join active formal groups. With social media and other isolating technologies, people's cultural gathering has also shrunk over time. Strengthening informal social networks through community-building initiatives can thus enhance collective resilience and improve recovery outcomes (Akbar & Aldrich, 2017), and facilitate better preparedness through social capital and cohesion.

2. How does this translate into meaningful change on the ground?

The outcomes of DRR networks in Pakistan vary significantly based on their **structure and inclusivity**. Successful networks that foster collaboration among diverse stakeholders are noted to achieve better disaster preparedness and response outcomes. For instance, studies have shown that communities with strong social capital and cohesive networks tend to be more resilient and better equipped to manage disasters (Akbar & Aldrich, 2017; Zurita et al., 2017). Conversely, networks that lack inclusivity (or where individuals become the whole, as reported during interviews), result in fragmented responses and missed opportunities for effective resource mobilisation (Hussain et al., 2020; Cheema et al., 2016).

In Pakistan, local NGOs have successfully **mobilised communities to develop disaster response strategies tailored to their unique vulnerabilities** (Hussain et al., 2020). By tapping into local knowledge and resources, these participatory approaches not only improve disaster resilience but also foster stronger social cohesion and a sense of collective responsibility. As **public education** is a cornerstone of effective disaster preparedness in Pakistan, integrating disaster risk education into school curricula in parts of the country has been shown to increase awareness and readiness among students and their families (Jaffar, 2024; Shah et al., 2018). In rural Pakistan, for instance, educational institutions have incorporated DRR themes into extracurricular activities, which has reportedly enhanced students' and families' understanding of potential risks.

Beyond schools, community workshops and training sessions on disaster preparedness have also been shown to significantly improve risk reduction knowledge and skills, thereby strengthening overall community resilience (Kelly, 2021; Hussain et al., 2020). These are carried out by various organisations and networks working in different parts of Pakistan. The issues of knowledge equity and nuance, however, remain significant problems in the overall impact of this type of work with high levels of illiteracy and lack of social connectivity between purely rural and urban DRR networks operating as significant barriers to inclusive decision-making (Anmol Irfan, 2023).

Effective disaster risk management in Pakistan has also benefited from **collaborations and partnerships** between government agencies, NGOs, and community groups or CBOs working with different networks. For example, the NDMA has spearheaded various collaborations with local NGOs (e.g., by establishing the National Humanitarian Network - NHN, for national level NGOs working on humanitarian response) and community groups that enhance the impact of DRR initiatives across the country (Kelly, 2021; Hussain et al., 2020). Such partnerships reportedly facilitate **resource sharing, knowledge exchange, and a more coordinated disaster response**. Local NGOs and their CBO partners in turn have played an integral role in implementing projects that directly address specific vulnerabilities within communities within such partnerships, such as in flood-prone areas, by working alongside the NDMA and other key stakeholders in identifying and reaching out to affected communities.

Risk communication, particularly during emergencies, is a vital aspect of disaster preparedness, and effective communication ensures that timely, accurate information reaches at-risk communities, enabling them to take appropriate actions during crises. In Pakistan, media platforms, particularly social media, have emerged as powerful tools for real-time communication prior to and during disasters (Batool et al., 2024). Leveraging these platforms allows for immediate updates, creating avenues for community engagement and promoting a culture of preparedness, even among populations with limited connectivity in parts of the country. In turn, community-based organisations have played a significant role in disseminating risk information and mobilising local resources during emergencies, enhancing the effectiveness of risk communication strategies (Kelly, 2021; Hussain et al., 2019).

At the local level, **risk assessment** exercises have been carried out by Rural Support Programs (RSPs) such as the **Aga Khan Development Network (AKDN)** in small cities and districts in Gilgit Baltistan (GB) and Khyber Pakhtunkhwa (KP) as pilot versions as early as 2004, for zoning reconstruction areas to enable the estimation of seismic risks and related phenomena in the 2005 earthquake reconstruction programme. On the informal side, in Gilgit-Baltistan, the **Glacier Protection Movement** (2021) comprises a group of local communities that have mobilised to protect the fast-melting glaciers up north, which also add to seasonal flooding across the country. The movement has involved both public demonstrations and advocacy for stronger environmental protection laws to preserve the region's fragile ecosystem. Furthermore, the **Geographic Information Systems (GIS)** has also been instrumental in identifying vulnerable areas, while mobile phone-based early warning systems have proven effective in alerting communities at risk (Kelly, 2021; Hussain et al., 2019). Technological networks have significantly strengthened disaster preparedness and mitigation efforts across the country. It helps that NGOs/CSOs such as HANDS are members of the **Sindh Meteorological Department's** important committees and other forums.

Similarly, while many DRR network members sprang into action following the 2022 floods, there was very little focus on rebuilding social networks and capital, especially for the more vulnerable and affected communities like women, children, gender minorities, and persons with disabilities. The **number of women working within government District Disaster Management Authorities (DDMAs)** was astoundingly low, with female staff either not hired or at home taking care of their families.

Nevertheless, networks (both formal and informal) were mobilised into action, helping to provide immediate relief to the most vulnerable, have a roof over their heads, dry beds, and a means to get around, enabling them to recover more quickly.

Integrating social and gender perspectives into DRR efforts is also increasingly recognised as a best practice, ensuring that the needs and vulnerabilities of women and marginalised groups are addressed. In Pakistan, existing social inequalities mean that women often face disproportionate impacts during disasters. By involving women in DRR planning and decision-making, strategies used by NGO networks in Pakistan have been shown to become more inclusive and effective (Ullah et al., 2020).

Programmes that empower women through training and leadership opportunities on the other hand, as in the Gilgit-Baltistan province, have for example shown significant success in enhancing overall community resilience, with women working closely with men in the community. Additionally, initiatives that promote women's participation in local disaster management committees have improved the effectiveness of DRR interventions in the northern regions of Pakistan (Ullah et al., 2020; Khalid et al., 2021). This is due not just to the efforts of larger networks like the **AKDN** but also due to small social organisations (CBOs/NGOs) that reach those not reached by centralised programmes and those left furthest behind. In Karachi, similar work is done by HAND and PFF, but with different constituencies and within distinct community clusters. The AKDN 's work in GB province is, in turn, further bolstered by efforts of, for example, the **Sarhad Rural Support Program,** the **National Rural Support Program,** the **Rural Support Programs Network**, various UN agencies (**UNHCR, UNOPS, UNICEF**) and others who actively work on community and infrastructure development, often coalescing in common forums, or through shared funding or knowledge and technical support exchanges in support of government.

Capacity-building is another critical element for strengthening DRR networks in Pakistan, particularly at the governance level. Training programmes for local government officials, community leaders, and other stakeholders on disaster risk management principles can greatly enhance the effectiveness of DRR initiatives (Kelly, 2021; Hussain et al., 2019). Capacity-building efforts have equipped these key actors with the skills necessary to manage disaster risks, where training often includes simulations and drills to prepare communities for real-life disaster scenarios, improving their readiness and response capabilities. For example, the Sindh government at present is recruiting and training a new cadre of emergency rescue workers, with similar capability to prepare for future disasters. Its 1122 emergency and rescue call service has a gender-based violence component, which is linked to a vast network of other government helplines, and survivor support services for women and socially vulnerable groups, children, and persons with disabilities. Its network comprises of both NGOs, private companies, and public service providers across Sindh working on gender-based violence (GBV). This initiative has been made possible through programmatic integration and networked approaches to disaster emergency and rescue, worked out commonly between the World Bank and the Government of Sindh.

Knowledge production, timely sharing and equity: Further, within the realm of knowledge communication, the role of technology in strengthening DRR networks cannot be overstated. The integration of early warning systems (EWS) into disaster management practices is essential for timely responses to impending disasters. Research from Pakistan indicates that effective EWS can significantly reduce vulnerability by providing communities with the information needed to prepare for, and respond to, disasters (Zia & Wagner, 2015; Anjum et al., 2023). However, the implementation of such systems must again be accompanied by capacity-building initiatives to ensure that local communities can effectively utilise the information provided (Zia & Wagner, 2015). The CM, PFF, and HANDS, in Karachi, are able to leverage EWS technologies in different ways:

Outside of formal EWS, networks such as the PFF have their own indigenous systems of issuing warnings to fishers and mobilising quick action for rescue and recovery. These informal networks have been used over centuries by the coastal communities organised by and leading PFF, including in difficult times when transnational maritime laws and systems were murky, and fishers were hauled up and incarcerated across borders by both India and Pakistan. A significant aspect of this work connected with the transborder issue of arbitrary and protracted imprisonment of fishers caught by both Pakistani and Indian governments, with hundreds of detentions sometimes lasting over decades. The PFF 's contribution to this was to not only organise fishers to engage with the government on the issue of imprisonment across borders, but also working with social networks across the border to communicate and mobilise on incidents of mass arrests.[14] The work of the Pakistan–India People's Forum for Peace and Democracy (PIPFPD) is significant in bringing the disparate pieces together across borders.

The Climate March in 2019, by its own fashioning in Pakistan, gathered a few thousand people, including communities affected by disasters or living in extreme precarity in various parts of Karachi and its peripheries. The PFF was a close ally in organising the march, with local fundraising and appeals to philanthropy. Due to **proximity to policymakers** in the city, along with greater media awareness and coverage, the CM humanized intersecting issues by amplifying strong voices from within communities and among both new and seasoned activists, united under the singular banner of the CM.

Policy changes resulting from network activities: Discussions with members of CM and PFF suggest that some nodes within these loose social networks in Pakistan have, at times, directly questioned policy implementation and raised demands for accountability by assisting/accompanying communities in asserting their legal rights and in access to basic public services using public interest litigation.[15] In some instances, members have taken up important positions in local governance structures (e.g., PPF, or the Gender Interactive Alliance - GIA members in Karachi).[16] In response to the former, significant court judgments have also called for universal discussions on climate change (if not explicitly on disaster risk reduction). For instance, in 2024, a high-level conference featuring top judges, environmentalists, diplomats, lawyers, civil society representatives, and policymakers convened in Islamabad to deliberate on making climate change a 'mainstream' public issue. The discussions emphasised the need for localised action, effective mapping of vulnerabilities, strengthening local governments, and coordinating adaptation and mitigation programmes in collaboration with non-state actors (Malik Asad, 2024).

Organisations that were studied closely for this paper have also made contribution to policy that are pro-poor and promote equity. For instance, both PFF and HANDS influenced the National Disaster Management Act of 2010 by actively participating in government and civil society consultations and undertaking advocacy to highlight the importance of integrating health and nutrition considerations into disaster management policies. HANDS also influenced the **National Health Emergency Preparedness and Response Network (NHEPRN),** which developed <u>standard operating procedures</u>.

in 2020 with the government, spelling out crucial coordination mechanisms for predicting and improving health responses during disasters, and undertaking vulnerability assessments. The organisation has advocated for the inclusion of community health workers and local NGOs in emergency response plans, highlighting their vital role in delivering health services and information to affected populations This advocacy has led to DRR policies that promote community engagement and capacity-building, as essential for effective disaster response. Furthermore, it has supported the government in the development of DRR strategies at both the provincial and national levels based on community research and assessments.

For its part, the Climate March has influenced the government's own **<u>Clean Green Pakistan Movement</u>** launched in 2018, that aims to address environmental challenges of deforestation, create better waste management, and promote clean energy projects. The CMs across cities have also advocated for provincial governments to prioritise environmental sustainability in its policies across sectors. The CM in Karachi has also set up the **<u>Climate Action Center</u> (CAC)** to organise groups of subject specialists, who were invited by the Mayor of Karachi to discuss the [17] **Karachi Urban and Climate Change Action Plan**, alongside other more seasoned stakeholders such as the NGO **<u>Urban Resource Center</u> (URC)** and the **<u>Karachi Urban Lab</u>** of the IBA University, Karachi.

3. What is the added value of networks vis-à-vis other modalities, and how can they improve in better serving local communities?

An inclusive approach to DRR involves three key elements: (1) valuing diverse knowledge whether from experts or local communities; (2) engaging in action at all levels of society; and (3) encouraging collaboration with different stakeholders such as government agencies, community organisations, and businesses (Gaillard & Mercer, 2012).

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[14] See for instance, <u>https://pulitzercenter.org/stories/fight-release-detained-fishermen-india-and-pakistan</u>, which describes how journalists and activists from both India and Pakistan came together to advocate for the fishermen and providing essential aid and access to resources

[15] See Urban Resource Center, Karachi's resources on litigation around the Malir Expressway in Karachi - <u>https://urckarachi.org/affectees-to-drag-malir-expressway-into-court/#comment-895</u>.

[16] GIA is an NGO based in Karachi whose members voluntarily help co-organise the Aurat and Climate Marches in the city, provide inputs into policy, and directly serve transactivists, Khawaja Siras and non-binary communities through knowledge sharing, capacity-building, health and livelihood option, in Karachi and some other parts of Sindh.

[17] See: <u>https://www.undp.org/pakistan/press-releases/climate-action-plan-karachi-city-kickstarts-rapid-strategic-appraisal-visioning-workshop</u>.

The example of CM is important when it comes to bringing together or bridging a very diverse set of actors to listen to each other and act in concert. Although it is difficult to say that the entire crowd that comes to these marches is advancing the DRR agenda, like most networks they have a few key leaders who mentor network members and plug community demands into policymaking processes in their own fields of work and in collaboration with other connected nodes, and as members of important local, national and regional networks.

Discussion with individuals involved in social organising in DRR suggest that loose social networks working in Pakistan on DRR or climate can break the traditional silos of bureaucracy that are embedded in both large NGOs and government DRR structures despite their presence at the local levels. Social networks that operate outside the typical moorings of organisations (NGOs) are also able to not only be more agile in respone to disasters by highlighting both present needs and past lessons, but also to counter uneducated or misinformed state policies that do not address vulnerabilities, are contextually unsuited or fail to centre peoples. For instance, in 2020, with the nationwide lockdown in Pakistan under COVID-19, the **Women's Action Forum (WAF)**, was amongst the first women's groups to identify issues related to exclusion and mismanagement by the government during cash handouts. This included the way these were given (that led to the deaths of over half a dozen women in different parts of Karachi), and the overall exclusionary policies within the Ehsaas social protection programme launched in 2019 by the Federal government.

Evidence suggests that **loose or informal social** networks, are also better positioned to systematically take the government to task by mobilising citizens in the form of large protests, class suits (for instance, in favour of land rights), and through public interest litigations. Being nested in the communities themselves as a form of social organising, their incentive systems are based on validation from the ground. NGOs, particularly large ones, on the other hand, who partially rely on government and donor funding or partnerships, are unable to follow suit, driven also by the precariousness of their registration status. While NGOs are increasingly coming under pressure by entities such as the EAD to open their work to government scrutiny and control, informal or non-formal networks are able to skirt such restrictions, including on the issues they may raise, whether they do it via protests (with or without No-Objection Certificates from the district administration), by publishing critical articles in newspapers themselves or through media networks and using social media (see e.g., the **Pakistan Maholiati Tahaffuz Movement's** X account, which is an offshoot from the **Climate Action** group in Karachi, which also has roots in the **Climate March**), and other innovative means involving the expansion of social capital.

By the same token, however, the looseness of informal networks implies the need for greater outreach, organising, connectivity, and building access to strategic decision-making forums that decide the distribution of resources and information, without compromising on principles of inclusion and equity. While informal networks may have smaller outreach compared to structured NGOs, they have **wider audiences** captured through innovative slogans and artistic expressions, that are spread through key nodes both in government and within communities and online using social media.

The diversity withing loose and local social networks also gives them a wider perspective on the intersections of disaster impacts and resource pools, and their interconnected modalities also allow them to get a bird's-eye view in the face of disasters by tapping relevant members who may be spatially removed or be more active amongst other clusters working on aspects of DRR. These activists, as they may be categorised, are unhindered by project logical framework matrices (LFMs).

In addition, loose or informal community-based networks are also better able to reinvent themselves, by including or activating specific clusters or edges for meaningful engagement, ultimately contributing to greater transitivity or resilience of the collective, and the perseverance/inclusion of more relevant nodes within the network. The strength of ties or synergy with edges and neighbouring nodes in these networks (e.g., between young professionals' groups, older activists and CSOs that bring experience and passion), are visible through reciprocal solidarity actions (e.g., Table 1 provides an overview of the number of social actions/movements PFF and CM work closely with). However, without synergies within networks and an expanded ability to engage structurally with DRR decision-making bodies, the capacity within these networks may not grow in a manner that speaks to the 'how' of policy planning in DRR.

Working with existing local networks can improve in serving local communities, which has to go beyond mere expansion of reach and connectivity. For social actions to translate into social change, participatory approaches to an expanded social capital, and community leadership development for each member of such networks is necessary. This includes building capacity to better link up with, and learn from, indigenous DRR methods, reflecting and building adaptive leadership. Critical pedagogy would be essential to such a system of linking, learning and transference that is applied at the local level by communities themselves, to demand affective policies and good governance.

4. What are the best and good practices for integrating gender equality and social inclusion (GESI) and protection mechanisms in disaster risk governance?

Key lessons documented by Kelly (2021) on Pakistan's disaster resilience programming include:
- Lack of clarity between roles of different government bodies to avoid overlapping capacities and conflicting goals between national and local governments,
- Capacity issues for local government, which is responsible for implementing DRR, but which often lacks funds and expertise, and
- The role of oversight and coordination among NGOs and different levels of government, as well as forums for NGOs to share best practices.

Anecdotal testimonies of interviewee and well as literature suggest that while successive governments have devolved DRR governance down to the district level, there are issues of funding, capacity and well as expertise, along with a peculiar absence of women and marginalised groups' representation in decision- making positions, and lack of connectivity to important forums. However, there are also some good practices for integrating GESI and protection Mechanisms in DRR governance.

For instance, in 2014, the NDMA developed its <u>National Policy Guidelines on Vulnerable Groups in Disasters</u> through its Gender & Child Cell, including guidelines for gender mainstreaming components (GBV) in vulnerability assessments with women, children, persons with disabilities, and other communities vulnerable to disasters. Provincial systems, though having reportedly low capacity for implementing these guidelines in full, are supported by organisations such as the UNODC, UNFPA and the UNHRC, etc., for better GESI integration and setting up of inclusion and protection systems (e.g., GBV response in humanitarian setting). This support may range from helping displaced populations in accessing relief goods, improving civic registration and enrolment in social protection programmes, reconstructing homes and lives, to supporting government in setting up warning systems and helplines for affected persons/ communities.

On the government's side in Sindh, for instance, there are some good examples of government including communities in different climate change and disaster preparedness projects. For instance, the Climate change Department in Sindh has been engaging CSOs in plantation drives and development of urban forests in select cities with women's active participation. There are numerous CSOs working on agriculture, farming, livelihoods, poverty alleviation, and rural development, with an increasing focus on women and girls sexual and reproductive health and rights (SHRH) and protection against GBV during and following disasters (**UNFPA**). Other **sectors such as forestry and wildlife, water and irrigation, and agriculture in Sindh are also concertedly targeting women** in their programmes, albeit through donor-funded projects, carrying out ground assessments including for social inclusion and safeguards during disasters and reconstruction work.

Further, in terms of health systems resilience to disasters, governments within Pakistan are taking different initiatives, to link community health systems' strengthening to local health outcomes. Diverse health infrastructure, including community-based health cadres like Community mid-wives, Lady Health Workers, Lady Health Visitors, Polio workers, etc., are being trained to act as bridges and change agents on the issue of CC and intersections with population health and welfare. This is done through partnerships with organisations such as **UNFPA, Pathfinder International, Rahuma Family Planning Association of Pakistan, Population Council**, etc., regarding aspects of evidence generation, training curricula, and standard operating procedures (SOPs), and working with local health systems to deliver better services to women, girls as well as poor and remote populations.

Considering the different ways in which DRR networks function and the programmes implemented by a wide array of stakeholders, some best practices have emerged:

- Fostering inclusivity in government and civil society network membership to ensure diverse stakeholder participation and representation starting from bottom-up.

- Enhancing communication and collaboration among governmental and non-governmental actors to improve coordination and resource sharing before and during disaster response efforts.

- Investing in capacity-building initiatives for local communities by expanding their social capital, promoting social cohesion, supporting linking, learning and education programmes, and empowering them to take an active role in DRR processes.

- Leveraging technological innovations, such as social media, to facilitate quicker and broader communication and information-sharing among network members, thus strengthening the overall DRR framework.

- Expanding NGO involvement in DRR activities and enhancing their engagement in mitigation and preparedness efforts to better advocate for policy changes.

- Supporting participatory, bottom-up Community-Based Disaster Risk Reduction (CBDRR) approaches and networking capabilities among civil society and government DRR networks, particularly in relation to effective early warning systems.

- Empowering DDMAs and local governance structures to reduce decision-making and resource mobilisation time, while improving the relevance and effectiveness of support provided through these networks.

Case Studies

Mobilising and Organising Communities

CLIMATE MARCH, Karachi (2019)

Profiles of Interviewees: Organisers of Climate March; Co-founders of Sindh Bachao Tehreek, Members of Women Democratic Front, Karachi and leads of Pakistan Maholiyati Movement; Founders of Climate Reach, Climate Action Committee and the Green Pakistan Collation.

"We started organising communities; we reached out to the trade unions, feminists collectives, student collectives, journalists, human rights activists as well. By 2023, the network became really diverse since we reached out to those communities who are the most vulnerable. We reached out to fisherfolk, indigenous communities, flood affectees, Internally Displaced People (IDP) and many more. After 2019's we realised it was difficult to work in a loose group to address the issues which require resources. So, we started resource mobilisation and established the Darya (River) Lab. We built an alliance with other like-minded networks such as The Knowledge Forum and named it as Alliance for Climate Justice and Clean Energy (ACJCE) since we all are working on climate justice and energy with a focus on renewable energy. Since I have been in activism for decades, I already knew people such as communities in Ibrahim Hyderi, Gadap, Lyari etc. since we knew each other for a very long time so we earned their trust and share a very strong relationship with them."

Inspired by the global Fridays for Future movement, Pakistani youth, led by climate activists and organisations such as Climate Action Now (CAN), Lahore Climate Alliance, and Youth for Climate Action, have organised multiple protests in cities like Karachi, Lahore and Islamabad. These protests have called for urgent government action on climate change, with a particular focus on including marginalised communities in climate adaptation plans, demanding stronger climate policies, a reduction in greenhouse gas emissions and greater investment in renewable energy.

Marches were organised by Fridays for Future Pakistan and Climate Action Pakistan and targeted **provincial Environmental Protection and Climate Change Departments and the Federal Government's Ministry of Climate Change**. Women's mobilisation for the Climate March (CM) in 2019 was significant, in which women-led movements across Pakistan were instrumental in highlighting the gendered impacts of climate change through artwork, postering and graffiti campaigns, and innovative social media engagement methods (e.g., spaces on X - formerly Twitter, etc.).

The March in Karachi led to the node arrangements as members went on to form and organise other activists and community members into distinct groups including the **Sindh People's Climate March in 2020**. This was a significant grassroots mobilisation where local communities, particularly from the coastal areas of Sindh, marched to demand government action on climate resilience especially amongst the poor and vulnerable communities living in disaster prone coastal areas, and called for inclusive policies.

Members of the Climate March relate to a variety of different nodes. During the Gujjar Nullah demolitions in Karachi in 2020, members started the **Karachi Bachao Tehrik (KBT)** a collection of activists and professionals working on providing relief to communities impacted by the lock-down and demolitions, along with the **Women Democratic Fund (WDF)**. Subsequently, members worked on the Gujjar and Orangi nullah cases as well in terms of mobilising and providing legal aid to the victims.

Its networks expand to various social groups and networks working for similar causes, like the **Indigenous Rights Alliance (IRA) working on land and water rights of Indigenous populations living in Karachi**. When development of the Malir Expressway was announced, it mobilised communities due to anticipated displacements. Since 2018, members have also collaborated with the **Aurat March** (Women's Rights' March) believing that women are at the forefront of these climate issues. It also works in informal alliance with the **Moorat March** (Trans Rights March) and the **Gender Interactive Alliance** on gender and climate intersections and DRR.

Members emphasise the importance of collaborations and solidarity actions to combat large issues like DRR and climate change and suggest that NGOs are better connected with government bodies and various networks working on DRR and climate change, which allows communities to better access information and policymaking processes. A central node which connects to different committees formed by the Ministry of Climate Change (MoCC) or National Disaster Management Authority (NDMA)/ Provincial Disaster Management Authorities (PDMAs) and numerous civil society groups and youth leaders, the CM is a central player in effectuating change by creating the momentum needed for change by influencing public opinion and bringing communities together, beyond geographic and political constituencies. Its members are currently working with the Karachi government on the Karachi Urban Plan.

Community-led Development

PAKISTAN FISHERFOLK FORUM (PFF), Karachi (1999)

Interviewees' Profile: Fisherfolk Leaders (male and female); Founder members of PFF; Member of Fishermen Cooperative Society (FCS); Human Rights Activists; Council Member Human Rights Commission of Pakistan; Labour Union of the Fishermen Cooperative Society (FCS) former employee; Members, World Forum of Fisher People (WFFP); Member, Town Municipal Committee, Karachi

"In my opinion, acquiring NoC [No-Objection Certificate] from Economic Affairs Division (EAD) has restricted our ability to access international funding, a move seen as an attempt to silence its radical stance and critique on anti-people policies by the state. PFF has been a vocal advocate for the rights of marginalised fishing communities, consistently challenging state-driven policies that prioritise corporate interests and environmental degradation at the cost of the livelihood of fisherfolk. We have always opposed the land grabbing on coastal land and unsustainable development practices, therefore we are not in the good books of those who consider us a threat."

Pakistan Fisherfolk Forum (PFF) is a community-centered, founded and led organisation. It has a community base of around 4 million fisherfolk (both seawater and fresh water) in Balochistan and Sindh provinces. It has a strong presence in the district of Gwadar (Balochistan) and in Thatta, Sujawal, Badin, Sanghar, Hyderabad, Sukkur, and Karachi in Sindh. PFF has been working to advocate for the social, economic, cultural, and political rights of the Indigenous fishing community in Pakistan for decades. PFF is also associated with the **World Forum for Fisher People (WFFP)** and has taken the lead at different global and regional forums.

The PFF was talking about with its regional connections and networks about the need for a loss and damages fund during natural disasters such as floods, cyclone, etc., as early as 2004. As a marginalised community, the fisherfolk running the PFF (an NGO based in Karachi) believe that those who make the least contribution to climate change are the most affected by its impacts. It believes that its continued advocacy campaign for years has yielded results in the form of the loss and damage fund to support communities, established at COP27 in 2022. It is also an active member and organiser of the Climate March, Karachi.

The PFF is recognised for its community-based and -led advocacy for the rights of small-scale fishers, against destructive fishing gear and deep-sea trawlers, and its struggle for the restoration of livelihood protection from and displacement of fisherfolk along with coastal belts of Sindh and Balochistan. Some of its founding leaders, fisherfolk of over 25 years, claim to understand the nature of the sea and delta, its ecology and biodiversity better than non-natives.

After the 2010 floods, the PFF played a vital role in relief, recovery, and long-term advocacy. It implemented various DRR projects, with the help of Oxfam, WaterAid, WFP, UNDP, Malteser International, Action Aid, Save the Children, and others. PFF worked very closely with the government (PDMA, DDMA), in emergency response and recovery and provided 50 boats from the fishing communities to the government to accelerate rescue and evacuation processes. The PFF's efforts to promote DRR has been acknowledged and appreciated by the Minister of Relief Department, Sindh in 2012.

Through its historic and vast membership of fisherfolk living in the coastal areas around Karachi, PFF also advocated for the inclusion of fisherfolk in Provincial Disaster Management Plans, ensuring their voices were represented in disaster planning. In 2014 - 2015, it also implemented a project on early warning system development (Enhancing Tsunami Resilience in Pakistan) in the districts of Thatta, Sujawal, and Badin in collaboration with Oxfam.

When the COVID-19 pandemic hit the fishing communities, PFF raised funds along with the Edhi Foundation, Habib Bank Limited Foundation, Dawood Foundation, Aurat March, and other philanthropists, and distributed rations to around 8,500 families. Their services were formally recognised in a ceremony at the Governor House in Karachi.

Though PFF is currently not very functional due to internal issues that arose between membership and management, in terms of DRR, it did take an active part in stakeholder engagement meetings for post-disaster needs assessments after the floods in 2022. In the past, it has organised a series of workshops with media organisations, involving the Karachi Union of Journalists (KUJ) to sensitise them on the vulnerabilities and issues faced by the community, including conservation of mangroves to mitigate risks from potential cyclones and tsunami.

Through a Malteser-funded project, the PFF has organised and trained several women on disaster preparedness like first aid and emergency planning. It has also run projects in collaboration with the Free and Fair Elections Network (FAFEN) that organised mobile registration camps in Karachi and Thatta for fisherfolk without Computerized National Identity Cards (CNICs), enabling many women among the poorest to get their Benazir Income Support Program cards for steady income support.

Bridging to translate change on the ground:

HANDS (started 1979)

Interviewees profile: Social development, gender and DRR specialists; Member MET Committee at Provincial Metrological Department, Member National Disaster Management Authority (NDMA) Coordination Group, Elected Member National Humanitarian Network (NHN), Pakistan.

"In the 2010 super floods, our top management and governing body decided to be proactive. We jumped into the field and started helping people in need. We installed camps, distributed food rations, etc. There was no government institution active at that time, no NDMA and PDMAs. We installed our base camp in Sukkur (Sindh) and got our first funding from Medico International. Our base camp was in Sukkur. We got funding from a German organisation. In response, we started emergency rescue and evacuation services to save people's lives. We bought boats, and from there our DRR journey of learning started. We are the elected members of the steering committee of the National Humanitarian Network (NHN) for three tenures now. We are members of the Start Network Humanitarian Fund and are now falling in the third tier. Because of our systems, HANDS has been recognised as an international NGO standard category. We are now funding local NGOs on DRR."

HANDS is one of Pakistan's widest community-based networks. This also allows it to receive both early warnings and on-ground information from community leaders and CBO members that it trains, funds, and involves in DRR activities. It issues alerts to its district groups in real time and has wide connections with media outlets in print and electronic channels, including social media handles. It coordinates with small local groups and individual leaders via WhatsApp groups. Reciprocally, it disseminates the information further to government departments and back to communities swiftly, bridging the gap between communities and government machinery. It also promotes knowledge accessibility by privileging local languages in its communications with communities in all its outreach. It engages equally with the government on policy and development implementation.

HANDS has developed models for community outreach, education, health, shelter, and WASH projects, some of which are cited universally as revolutions in health equity (their Marvi workers, working on women and women & girls' SRHR), with dedicated trained personnel on community-based disaster risk management (CBDRM). It operates around 102 disaster rehabilitation projects through 12 disaster risk management centres. During the 2022 floods in Pakistan, it held around 8,000 medical camps and provided food rations to more than 400,000 households. Currently, HANDS is partnering with the Sindh Irrigation and Rehabilitation Departments on the Sindh Flood Emergency Housing Reconstruction Program across districts of Sindh (funded by the World Bank). It claims to have found numerous flood community members that used skills they had learned through training given by HANDS in helping themselves and in rescuing their families.

"Last year there was a threat of [a] cyclone in district Badin and Thatta. Karachi was also on [the] radar. We started taken pre-emptive measures in advance. Since I am on the MET [provincial meteorological department Sindh] committee, NDMA and PDMAs coordination committees as well, therefore I get such updates immediately. On the other hand, we have a very strong community-based network in place at HANDS. So when we receive such warnings, we issue alerts to our districts group in no time. We have connections with media outlets like print and electronic media, Radio, FM. We have created WhatsApp groups with our CBOs. In the same way, if anything happens on the ground, we receive first-hand information from our CBOs members and we disseminate the information further to government department. We are bridging the gap between communities and government machinery. For service delivery, we make sure that information is provided to [the] community in local language."

HANDS parallelly runs many projects that support women, refugees, and minority groups in accessing Computerized National Identity Cards, paving the way for women to become account holders, beneficiaries of social protection programmes, especially the Benazir Income Support Program, etc. During disasters and routinely, it provides assistive devices such as wheelchairs and walking aids, hearing and vision aids, artificial limbs, and surgical appliances, and communication aids for persons with disabilities across the country and assists both young and older citizens on Employees' Old Age Benefit information (EOBI) and registration.

HANDS if also part of a vast range of DRR networks, both inside and outside Pakistan *(see Table I below)*.

Table 1: Pakistan Case Studies – Node connectivity on Disaster Risk Reduction locally, nationally and in the Asian region		
Climate March (CM)	**Pakistan Fisherfolk Forum (PFF)**	**HANDS**
National/ Regional and International Networks Membership		
COP Climate Action Network South Asia (CANSA) Climate Justice Coalition (CJC) DW Frontliners Refugee Solidarity Network Center for Social Innovation in Developing Countries (CSIDC) Alliance for Climate Justice and Clean Energy (ACJCE) Pakistan Climate Action Network (PCAN)	COP World Forum of Fisher People (WFFP) United Nations Office for the Coordination of Humanitarian Affairs (OCHA) International Organization for Migration (IOM) Sustainable Development Policy Institute (SDPI) World Food Programme (WFP) ESCR-Net- International Network for Economic, Social and Cultural Rights Asia Pacific Forum on Women, Law, and Development (APWLD) Climate Justice Coalition (CJC) Global Campaign to Demand Climate Justice South Asia Alliance for Poverty Eradication (SAAPE) Alliance for Climate Justice and Clean Energy (ACJCE)	Pakistan Climate Action Network (PCAN) National Humanitarian Forum (NHF) Disaster Risk Reduction Network Pakistan (DRRNP) Pakistan Coalition for Climate Change (PCCC) National Disaster Risk Management Fund (NDRMF) member Pakistan Red Crescent Society (PRCS) United Nations Office for the Coordination of Humanitarian Affairs (OCHA) International Organization for Migration (IOM) World Food Programme (WFP) Asian Disaster Preparedness Center (ADPC)- membership in national coordination committee Climate Action Network South Asia (CANSA) United Nations Office for Disaster Risk Reduction (UNDRR) United Nations Environment Programme (UNEP) Global Network of Civil Society Organisations for Disaster Reduction (GNDR) member

Table 1: Pakistan Case Studies – Node connectivity on Disaster Risk Reduction locally, nationally and in the Asian region (cont.)

Climate March (CM)	Pakistan Fisherfolk Forum (PFF)	HANDS
Local civil society organisations/ NGOs (working with or interacting with frequently)		
Indus Consortium The Knowledge Forum Green Pakistan Collation Linked Things Air Quality Malir Bachao Tehrik (Save Malir Movement) Karahi Circular Railways Mutasareen (Affectees') Committee Karachi Urban Lab - Academia - Institute of Business Administration (IBA) Urban Resource Center Home-based Women Workers' Federation (HBWWF) National Trade Unions Federation (NTUF) Raana Liaqat Craftmen Colony (RLCC) Youth Climate Activist PK Indus Resource Center (IRC) Federation of Pakistan Chamber of Commerce and Industry (FPCCI) Rotary groups Urban Forest Group (Karachi) SUIT Hospital Indus Hospital Eidhi Foundation Al- Khidmat Foundation Lawyers groups and Bar councils	Pakistan Institute of Labour Education & Research (PILER) Aurat Foundation Human Rights Commission of Pakistan (HRCP) Joint Action Committee (0ver 60 CSO members in Karachi) SAFCO Support Foundation (SSF) – formerly Sindh Agricultural and Forestry Workers Coordinating Organization (SAFWCO) Rural Development Foundation (RDF) Home-based Women Workers' Federation (HBWWF) National Trade Unions Federation (NTUF) Climate Action Committee (CAC) Tehrik-e-Niswan (theatre group) Women's Democratic Front (WDF)	N/A

Table 1: Pakistan Case Studies – Node connectivity on Disaster Risk Reduction locally, nationally and in the Asian region (cont.)		
Climate March (CM)	**Pakistan Fisherfolk Forum (PFF)**	**HANDS**
People's Movements/ Informal Alliances & Community Networks		
Sindh Bachao Tehrik (Save Sindh Movement) Concerned Citizen Alliance Sindh Human Rights Defenders Indigenous Rights Alliance Aurat March Moorat March, Karachi (on rights of gender diverse and non-binary communities) Minority Rights March Women's Democratic Front Students Collectives/ Solidarity March Trade unions Women's Action Forum and other women's groups	Aurat March Climate March Trade unions Women rights groups	N/A
Governance DRR mechanisms and forums		
National Level: Ministry of Climate Change (MoCC) National Disaster Management Authority (NDMA) **Provincial Level:** Karachi Climate Action Plan Group Sindh Environmental Agency (SEPA)	**National Level:** National Disaster Management Authority (NDMA) **Provincial Level:** Fishermen Cooperative Society (FCS) Provincial Disaster Management Authority (PDMA) Sindh Commission on the Status of Women (SCSW) **Local Level:** Union Council and Local bodies	**National Level:** National Disaster Management Authority (NDMA) Ministry of Climate Change (MoCC) **Provincial Level:** Provincial Disaster Management Authorities (PDMAs) **Local Level:** PDMA's Community Engagement Units District Disaster Management Authorities (DDMAs) Union Council and Local Government Bodies Community-Based Organisations (CBOs) and NGOs (various)

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Annex A: List of civil society Disaster Risk Reduction Networks Operating in Pakistan

National Networks

1. Pakistan Climate Action Network (PCAN) (https://pcan.org.pk)

Advocates for climate justice in Pakistan through awareness campaigns, policy dialogues, and collaboration with government bodies. Also engages women and marginalised communities in climate action dialogues, ensuring their voices are heard in climate policy development, and collaborates with local NGOs to promote inclusive climate actions.

2. Pakistan Humanitarian Forum (PHF) (http://phf.org.pk)

Provides a platform for coordination among international NGOs operating in Pakistan, focusing on disaster risk reduction and humanitarian assistance. Also works on making DRR strategies inclusive of women, children, and persons with disabilities by incorporating their needs in disaster preparedness and response plans and works closely with local organisations such as HANDS and the National Disaster Management Authority (NDMA).

3. Disaster Risk Reduction Network Pakistan (DRRNP)

A coalition of CSOs working together to advocate for policy changes and implement community-based DRR projects.

4. Pakistan Coalition for Climate Change (PCCC)

Focused on integrating climate change adaptation into DRR strategies.

5. Civil Society Coalition for Climate Change (CSCCC)

CSCCC is a national coalition that advocates for climate policy through research, advocacy, and capacity-building. It collaborates with civil society, academia, media, and the private sector to enhance climate resilience in Pakistan. Its local Partners include Sustainable Development Policy Institute (SDPI), Pakistan Red Crescent Society, and local academic institutions, and founding members, which themselves have large networks within communities and government include: SDPI, Islamabad; Regional Institute of Policy Research & Training (RIPORT), KP; Strengthening Participatory Organization; Pakistan Green Building Council, Water Environment Forum, Islamabad; Society for the Conservation and Protection of the Environment (SCOPE), Karachi (got active in Malir Valley rehabilitation in 1988), with the University of Karachi (UoK) Geography Department; Mountain and Glacier Protection Organisation (MGPO), 2001 (voluntary social welfare agency- works very closely with communities) (CSCCC 2024)

6. Pakistan Humanitarian Forum (PHF) (https://phf.org.pk/)

PHF coordinates international NGOs working in Pakistan on disaster risk management, climate resilience, and humanitarian aid. Local Partners include Various INGOs like Islamic Relief Pakistan, Oxfam, and local NGOs.

7. National Disaster Risk Management Fund (NDRMF) (http://www.ndrmf.pk/)
NDRMF finances projects aimed at reducing disaster risks and adapting to climate change in Pakistan. Local Partners include government agencies, local NGOs, and international donors.

8. Pakistan Red Crescent Society (PRCS)
PRCS provides humanitarian assistance and disaster response services, and focuses on community-based disaster preparedness, response, and recovery. It conducts training sessions, drills, and awareness programmes for local communities.

9. Sustainable Development Policy Institute (SDPI) (https://sdpi.org/)
SDPI is involved in research and advocacy on environmental issues, including climate change adaptation and disaster risk reduction. Local Partners include CSCCC, various academic institutions, and policy think tanks.

Regional DRR Networks

1. Asia Pacific Climate Change Network (APCN) (https://www.apcnetwork.org)
Coordinates climate change initiatives across the Asia-Pacific region, emphasising sustainable development and resilience building and promotes gender equity and the inclusion of Indigenous communities in climate resilience programmes. APCN also advocates for capacity-building among women and youth in climate governance, and partners with organisations like the Sustainable Development Policy Institute (SDPI) in Pakistan to integrate gender and social inclusion in climate policy frameworks.

2. Asian Disaster Preparedness Center (ADPC) (https://www.adpc.net)
Works on building disaster resilience through capacity-building programmes, research, and policy advocacy across Asia. It implements a Gender and Disaster Risk Management programme, which promotes the involvement of women and marginalised communities in disaster risk planning and management. Within Pakistan, it engages with NDMA and provincial disaster management authorities to ensure inclusive disaster risk management practices.

3. Climate Action Network South Asia (CANSA) (http://www.cansouthasia.net)
Advocates for climate justice in South Asia, focusing on policy advocacy, capacity-building, and promoting sustainable practices. Promotes gender-responsive climate action, ensuring that women and vulnerable communities are integral to climate adaptation and mitigation strategies. In Pakistan, works with LEAD, Pakistan, SDPI, and other civil society organisations to advance inclusive climate policies.

4. Asia Pacific Climate Change Adaptation Network (APAN) (https://www.asiapacificadapt.net/)
APAN enhances climate change adaptation across Asia-Pacific, supporting Pakistan through knowledge-sharing and best practices in DRR. Local Partners include SDPI, Government of Pakistan, and local environmental NGOs.

5. Asia Pacific Forum on Women, Law, and Development (APWLD) (https://apwld.org/)
APWLD advocates for women's rights and climate justice, focusing on gender-responsive DRR in Pakistan. Local Partners include Roots for Equity, Shirkat Gah - Women's Resource Centre and other grassroots women's rights and labour organisations.

6. Asian Disaster Preparedness Center (ADPC) (https://www.adpc.net/)
ADPC works to enhance disaster resilience across Asia and the Pacific, including integrating climate change adaptation into DRR strategies in Pakistan. Local Partners include NDMA and Pakistan Meteorological Department.

International Networks and UN-affiliated Programmes

1. United Nations Office for Disaster Risk Reduction (UNDRR) (https://www.undrr.org)
Supports the implementation of the Sendai Framework for Disaster Risk Reduction, promoting global and regional DRR initiatives; It look to integrate gender and disability inclusion into DRR strategies by providing guidelines and tools to national governments and local organisations, including those in Pakistan, and collaborates with National Disaster Management Authority (NDMA), Pakistan Meteorological Department and the Pakistan Red Crescent Society to implement inclusive DRR strategies.

2. United Nations Environment Programme (UNEP) (https://www.unep.org)
Advocates for environmental sustainability and climate resilience worldwide, with a focus on policy development and capacity-building. It promotes gender equity in climate governance and providing training to women in renewable energy sectors, and mainly partners with the Ministry of Climate Change to incorporate gender considerations into national climate policies.

3. Global Network of Civil Society Organisations for Disaster Reduction (GNDR) (https://www.gndr.org/)
GNDR amplifies local voices in DRR governance and works closely with communities in Pakistan to collect data and influence policies. Local Partners include Community World Service Asia and National Humanitarian Network Pakistan.

4. International Federation of Red Cross and Red Crescent Societies (IFRC) (https://www.ifrc.org/)
IFRC works in Pakistan on community-based DRR initiatives, often in partnership with the Pakistan Red Crescent Society.

5. International Organization for Migration (IOM)
IOM supports disaster-affected communities through various programmes, including DRR. It focuses on improving community resilience by integrating DRR into migration and development strategies, providing training, and supporting community-based projects.

6. United Nations Office for the Coordination of Humanitarian Affairs (OCHA)
OCHA coordinates humanitarian response efforts and provides support for DRR initiatives. It works with government agencies, NGOs, and UN bodies to coordinate DRR efforts and ensure effective resource allocation during emergencies.

7. World Food Programme (WFP) (https://www.wfp.org/countries/pakistan)
WFP provides food assistance and supports livelihoods in disaster-prone areas. It incorporates DRR into its food security programmes by promoting sustainable agricultural practices, community asset building, and early warning systems.

Annex B: Government of Pakistan National and Provincial Disaster Risk Reduction and Climate Change Architecture, Roles and Functions

1. National Level

1.National Climate Change Council (NCCC)
Set up under the Pakistan Climate Change Act 2017.

Role:
- Policy Formulation (oversees the formulation and implementation of national climate change policies)
- Coordination (coordinates climate change activities across different sectors and levels of government)
- Integration (ensures integration of climate change considerations into national development plans).

Key Functions:
- Approving national climate strategies and policies.
- Monitoring the implementation of climate change initiatives.
- Providing guidance on climate financing and investments.

Members:
- Federal ministers from relevant sectors (e.g., environment, finance, planning).
- Experts and representatives from civil society and the private sector.

1.2. Pakistan Climate Change Authority (PCCA)
Established under the Pakistan Climate Change Act 2017.

Role:
- Technical Support (support and expertise on climate change issues)
- Regulation (develops and enforces regulations related to climate change adaptation and mitigation).

Key Functions:
- Developing sectoral policies and strategies.
- Conducting research and assessments on climate impacts.
- Ensuring compliance with climate change regulations.

1.4. Ministry of Climate Change (MoCC)

Role:
- Policy Leadership (leads national efforts on climate change and environmental protection).
- International Relations (manages international climate agreements and negotiations).

Key Functions:
- Developing and implementing climate change policies.
- Coordinating with international organisations and donors.
- Promoting public awareness and education on climate change.

2. Provincial Level

2.1. Provincial Disaster Management Authorities (PDMAs)
Established under the National Disaster Management Ordinance 2006.

Role:
- Local Coordination (coordinating disaster risk management and response at the provincial level).
- Plan Development (develops and implements provincial disaster management plans).
Key Functions:
- Conducting risk assessments and vulnerability mapping.
Organising training and preparedness programmes for local communities.
- Coordinating with NDMA and other stakeholders during disasters.

Membership:
- Provincial government representatives.
- Heads of relevant departments (e.g., health, education, transport).

2.2. Provincial Environment Protection Agencies (EPAs)

Role:
- Regulation (regulating and enforcing environmental protection laws and policies at the provincial level.
- Implementation (implementing provincial environmental policies and programmes).

Key Functions:
- Conducting environmental assessments and monitoring.
- Enforcing environmental regulations and standards.
- Promoting sustainable development practices.

Membership:
- Provincial environment ministers and officials.
- Representatives from civil society and the private sector.

2.3. Provincial Climate Change Working Groups and Provincial Climate Advisory Councils (PCACs)

The working groups include community representatives and are tasked with overseeing the implementation of climate change policies at the provincial level and these councils include representatives from vulnerable communities and provide input on the implementation of Nationally Determined Contributions (NDCs) at the provincial level.

2.4. Provincial Adaptation Task Forces (PATFs)

These task forces will include community representatives and oversee the implementation of the national action plan on climate change at the provincial level.

3. Government Local Level DMAs

3.1. PDMA's Community Engagement Units

Set up within the Provincial Disaster Management Authorities (PDMAs) to facilitate ongoing communication and collaboration with local communities.

3.2. District Disaster Management Authorities (DDMAs)

Established under the National Disaster Management Ordinance 2006.

Role:
- Local Response (managing disaster risk reduction and response activities at the district level).
- Community Engagement (engages with local communities to enhance preparedness and resilience).

Key Functions:
- Developing district-level disaster management plans.
- Coordinating local response efforts and resource allocation.
- Conducting awareness campaigns and training for communities.

Membership:
- District commissioners and local government officials.
- Representatives from local emergency services and NGOs.

3.3. Union Council and Local Government Bodies

Role:
- Community-Based Actions (implement local disaster risk reduction initiatives and community engagement activities).
- Local Planning (integrate disaster preparedness and climate adaptation measures into local development plans).

Key Functions:
- Conducting local risk assessments and vulnerability analyses.
- Organising community-based disaster preparedness programmes.
- Facilitating local response and recovery efforts during disasters.

3.4. Community Disaster Management Committees (CDMCs)

These are local bodies set up at the village or community level to actively engage in disaster preparedness and response.

3.5. Local Adaptation Forums (LAFs)

These forums provide a space for community members to contribute to the development and implementation of adaptation projects.

3.6. Climate Resilience Committees (CRCs)

Established at the provincial level, these committees include representatives from vulnerable communities to ensure their concerns are addressed in resilience planning.

3.7. Community Advisory Boards (CABs)

These boards are set up to provide a formal mechanism for community input into the implementation of climate change projects.

3.8. Local Resilience Platforms (LRPs)

Set up under the National Resilience Programme (NRP) 2017–2021, these platforms are designed to facilitate community involvement in resilience planning and implementation.

3.9. Resilience Monitoring Committees (RMCs)

Established at the district level, these committees include community representatives who monitor the progress of resilience-building initiatives.

3.10. Community-Based Organisations (CBOs) and NGOs (various)

Role:
- Grassroots Engagement (working directly with communities and in coordination with CDMCs to enhance disaster preparedness and climate resilience).
- Advocacy (for better policies and practices related to climate change and disaster risk management).

Key Functions:
- Implementing community-based DRR and climate adaptation projects.
- Providing training and capacity-building for local communities.
- Coordinating with government agencies and other stakeholders.

Structure of Local Government Systems in Provinces

Punjab	**Punjab Local Government Act, 2021 still under review - while 2013 act defunct** Metropolitan Corporation Municipal Corporation Tehsil Council Union Council System broadly defunct, DC office under administrative control Funds allocated on basis on PFC 2017 (PKR 528 billion 2022)
Sindh	**Sindh Local Government (Amendment) Bill 2021** Metropolitan Corporation Municipal Corporation District Council Municipal Committees Town Committees No PFC, a small component (fixed amount) distrbiuted evenly among districts (varies between 25-30 billion
KPK	**Khyber Pakhtunkhwa Local Government (Amendment) Act 2022 (main act is 2013)** Metropolitan Corporation District Councils Tehsils Union Councils /NCs/VCs Last PFC Award 2019/20, Award for 2020/21 determined (PKR 261.7 billion)
Balochistan	**Local Government Act, 2010** Metropolitan Corporation Municipal Corporation **Rural** District Council Union Council No PFC, fixed budget allocated, 50% shared equally and 50% on basis of population
Special Region	Local Government Act, 2024 **Urban** City Metropolitan Corporation Municipal Committee Town Committee **Rural** District Council Tehril Council Union Council

Source: Pakistan PDNA, 2022 (Government of Pakistan, Asian Development Bank, European Union, United Nations Development Programme, World Bank 2022, p. 119)

Annex C: Timeline and details of Disaster Risk Reduction laws and policies in Pakistan

- **Environmental Protection Act, 1997**: Early emphasis on public consultation:

Section 3: Establishes the Environmental Protection Agency (EPA) for the protection and conservation of the environment.

Section 12: Mandates public consultation for environmental assessments, highlighting the importance of community involvement in environmental decision-making.

- **National Environmental Policy, 2005**: Increased focus on public and NGO involvement.

Section 4.2.1: Promotes public participation in environmental decision-making processes.

Section 4.5: Encourages involvement of NGOs and community organisations in environmental protection efforts.

- **National Disaster Management Ordinance, 2006**: Establishment of inclusive disaster management structures.

Section 8: Establishes the National Disaster Management Authority (NDMA) and emphasises the importance of stakeholder involvement in disaster management.

Section 11: Requires the formation of District Disaster Management Authorities (DDMAs) which involve local stakeholders in disaster risk management.

- **National Climate Change Policy, 2012**: Stresses inclusive and participatory approaches in climate strategies, and the involvement of local communities in the planning and implementation of climate adaptation measures, particularly in regions most vulnerable to climate change impacts.

Section 2.1: Stresses the need for inclusive and participatory approaches in climate change adaptation and mitigation efforts, including holding of regular public consultations.

Section 3.4: Encourages involvement of local communities and stakeholders in the implementation of climate change strategies.

- **National Disaster Risk Reduction Policy, 2013**: Advocates for community-based approaches and inclusive governance, including the integration of local knowledge and practices in disaster management frameworks.

Section 5.2: Advocates for community-based disaster risk management and the inclusion of local knowledge in risk reduction strategies.

Section 6.4: Emphasises the need for inclusive governance structures at all levels of disaster management.

- **Framework for Implementation of Climate Change Policy (2014–2030):** The framework mandates that all climate change adaptation and mitigation projects must involve local communities in their design and implementation phases, and that "inclusive governance structures must be established at all levels to ensure that communities, particularly those most vulnerable to climate change, are involved in decision-making processes."

- **Pakistan Climate Change Act, 2017**: Establishes bodies for stakeholder engagement and emphasises inclusion.

Section 9: Establishes the Pakistan Climate Change Council and the Pakistan Climate Change Authority, with a mandate for stakeholder engagement in policy formulation and implementation.

Section 14: Calls for the inclusion of marginalised communities and women in climate change decision-making processes.

- **National Disaster Management Plan, 2017**: Focuses on community involvement and civil society roles.

Section 3.2: Focuses on inclusive disaster management practices and the involvement of local communities in planning and response.

Section 6.3: Highlights the role of civil society organisations and other stakeholders in disaster risk reduction and response activities.

- **National Environment Policy, 2021**: Reinforces public participation in environmental governance.

Section 5.4: Reinforces the importance of public participation in environmental governance and decision-making processes.

Section 8.1: Encourages collaboration with community-based organisations and NGOs in implementing environmental protection measures.

- **National Disaster Management Plan (Revised), 2022**: Emphasises gender inclusion and community feedback

Section 2.5: Emphasises the integration of gender and social inclusion into disaster management planning and implementation.

Section 4.2: Advocates for enhanced community involvement and the establishment of feedback mechanisms to ensure participatory governance.

Annex D: Sub-themes of research analysis framework

Themes	Sub-themes
Node (case being examined, e.g., HANDS, PFF or CM)	Degree: How many people reached by node? Betweenness: How likely is the node the most direct route between other nodes? (lies in connection paths between nodes)Closeness: How fast can the node reach every other node? (agility in mobilisation, sub-organisation, collectivism)Eigenvector: How well is the node connected to other well-connected nodes?
Bridging	Nodes and Edges (interactions, flow of information, social relations) that connect across groups, and involves intergroup communication, promotion of social cohesion, and possibly, innovation. Strong Ties or Edges between nodes in the network can lead to greater transitivity or resilience of nodes/ clusters of nodes, and their perseverance in the network. Strength of ties can be measured through frequency of interactions, reciprocity; types of interaction; social & power relations; or relationship with surrounding structures (or nodes in the neighbourhood)
Clustering	Network Clustering can be homophily ('like-mindedness'/ shared ideology/ identity/ homogeneity) or heterophily (clustering of diverse nodes) – density or close clustering and clique formation

NVivo Codes List

Code	Documents	References
Node Qs 1 case studies	5	20
Betweenness	2	5
Bridging (undirected, directed, or symmetrical edges - interactions, social relations, communication, cohesion, innovation, reciprocity, power distribution)	2	12
Case study write-ups - CM	2	7
Information on Interviewees	3	3
Closeness (agility to mobilise, collectivism)	3	4
Clustering (homophily, heterophily, density, cliques)	1	9
Degree - reach	3	8
Eigenvector (well-connectedness to other key nodes)	3	7
Qs 1 How are networks amplifying community voices concerns and inclusion in DRR	2	3
Bridging role between state and disaster affectees	3	8

NVivo Codes List

Code	Documents	References
Networks promoting accountability	3	6
Networks' strengthening	2	5
Network challenges & deficiencies	3	6
Potential role of networks or entry points	1	1
Node connections	6	7
Qs 2 How are networks translating change on the ground	1	2
Special circumstances making change possible	3	9
What are the accomplishments	3	4
What gained for communities through networking	3	8
Qs 3 Added value of networks over other modalities	2	4
What needs to change for more community inclusion in networks	3	4
Qs 4 Good practice examples	2	4

Citavi Categories - Themes

Civil society actions in Pakistan
- Sidelining of DRR over CC
- Networks in Pakistan – effectiveness, modalities, linkages
International developments post 2022 floods
- Loss and damages fund
- Judicial activism and PILs
- Legal action by Networks
Governance and DRR Networks
- Inclusion, indigenous knowledge
- Knowledge equity
- Responsiveness

Annex E: Areas of Inquiry

The following broad questions were examined in the Pakistan case study, with added prerequisite- understanding questions. Interview questions provided by Duryog Nivaran (DN) were expanded from the main research questions, that would help construct a storyline of each unit of analysis in terms of networking modalities, inclusive DRR efforts and limitations and opportunities thereof.

1.**How do/are networks (in Pakistan) strengthen/ing and amplify/ing community voices and concerns in disaster risk reduction efforts?** *Question involves seeing first who is involved, which forums exist, membership, mode and sites of engagement, etc. The sub-questions below will help answer this overall question.)*

1.1 Which community-led of community-focused DRR networks are operating in Pakistan that you know of? Where do they work, at what scale, reaching whom, doing what and working with whom? *(names of networks/nodes and their details)*

1.2 Which network is the interviewee connected with and in what way (*mode of engagement/flow of information and other exchange*)?

1.3 How does/do this/ these networks connect disaster affectees with governance actors (*in theory and in practice*)?

1.4 What role are networks playing in enhancing community inclusion and accountability on DRR in Pakistan? Can you give concrete examples?

1.5 Which **deficiencies/challenges/gaps** exist that limit community inclusion within networks?

1.6 What (*potential/ possible*) role can the network(s) play if deficiencies are filled?

1.7 How can networks be made:
  • Stronger
  • Accountable, and
  • Representative of disaster affected communities.

2. **How do networks translate into meaningful change on the ground in Pakistan?**

2.1 What have DRR networks in Pakistan accomplished for communities in recent past? How did they do it? (*see a. who else was involved and in what role – to bridge community-state gap, and b) track the process of and indicator of change*).

2.2 Did these efforts directly benefit communities?

2.3 Were there any special circumstances/conditions/catalysts that made change possible? What were these circumstances/conditions/catalysts? *(could range from having means, having the right people in the right places at the right time, having specific audiences), etc.*

3. What is the added value of networks vis-à-vis other modalities, and how can they improve in better serving local communities?

3.1 What needs to change/improve/expand/scale back in the way large DRR networks are working in Pakistan, to make them more inclusive?

4. What are good practices for:
- integrating gender and social inclusion and
- providing social protection
in DRR governance? (for women, transgenders, older persons, PWDs, PLW HIV/AID, migrants, IDPs, Indigenous peoples, youth, minority communities, etc.)