

Concept Note: Panel Discussion: Strengthening Disaster Risk Preparedness, Adaptation, and Insurance Mechanisms in Pakistan

(Focusing on Vulnerability, Response, and Recovery for a Resilient Future)

Background

Pakistan is one of the top ten most climate-vulnerable countries globally, repeatedly facing floods, droughts, and heatwaves that threaten livelihoods, infrastructure, and long-term economic growth. The 2022 floods, affecting 33 million people and causing over USD 30 billion in losses, demonstrated how climate-induced disasters can reverse years of development gains.

Although the country has developed national frameworks such as the National Adaptation Plan (NAP 2023), Disaster Risk Reduction (DRR) Policy 2021, and Living Indus Initiative, key challenges remain:

- Timely identification of the most vulnerable communities,
- Ensuring operational readiness and coordination when disasters strike, and
- Supporting post-disaster recovery through affordable insurance and resilient infrastructure.

This panel will bring together experts from the government, development agencies, financial institutions, and academia to explore practical solutions for building a climate-resilient Pakistan.

Objective

- To review Pakistan's current disaster risk assessment and preparedness mechanisms.
- To analyze how operational systems respond during and immediately after disasters.
- To identify pathways for rapid recovery through resilient growth, insurance, and financial protection tools.
- To promote cross-sectoral collaboration among national and international stakeholders.

Panel Subtopics

Subtopic 1 — Understanding Vulnerability: Assessment & Preparedness

Focus: How can vulnerable communities be better identified and protected through improved assessment systems?

- Role of NDMA, SUPARCO, and UNDP in vulnerability mapping.
- Community-based disaster data and early warning systems.
- Integration of GIS, AI, and satellite tools in risk profiling.

- Federal–provincial coordination challenges.
- Anticipatory action and community preparedness.

Subtopic 2 — Response: Operational Systems & Coordination

Focus: How are operational mechanisms mobilized during disasters?

- NDMA/PDMA SOPs and inter-agency coordination.
- Role of Pakistan Army, PRCS, and UN cluster system.
- Real-time communication and logistics challenges.
- Lessons from the 2022 Flood Response Plan.
- Gender and inclusion in emergency operations.

Subtopic 3 — Recovery & Resilience: Growth, Adaptation & Insurance

Focus: How can livelihoods be restored and protected through climate adaptation and insurance?

- “Build Back Better” infrastructure recovery.
- Climate-resilient reconstruction approaches.
- Crop/livestock insurance and financial inclusion for farmers.
- Role of SBP, SECP, and Insurance Association of Pakistan.
- Accessing Loss & Damage Fund and climate finance.

Subtopic 4 — Bridging Data & Communication Gaps

Focus: Enhancing resilience through improved data accessibility and communication.

- Addressing data and information-sharing gaps in vulnerable regions.
- Reliable, disaggregated data for evidence-based decision-making.
- Strengthened early warning systems and two-way communication.
- Technology and GIS for real-time monitoring.
- Inclusive participation of women, youth, and marginalized groups.

Subtopic 5 — Data Gaps & Coordination for Crop/Livestock Insurance

Focus: Strengthening data systems and coordination for agricultural insurance.

- Identifying data gaps in weather, yield, and farmer registration.
- Coordination among government, insurers, and research institutions.
- Digital tools, remote sensing, and GIS applications.
- Inclusive insurance models for smallholders and women farmers.
- Public–private partnerships for sustainability and coverage expansion.

Subtopic 6 — Climate-Induced Changes in Agriculture

Focus: Building agricultural resilience to climate change.

- Impacts of temperature and rainfall shifts on productivity.
- Climate-resilient farming practices and adaptive crops.
- Research and forecasting for informed agricultural planning.
- Efficient soil and water management.
- Farmer training and access to climate-smart technologies.
- Integrating adaptation strategies into agricultural policy.

Potential Panelists

Category	Suggested Panelists / Organizations
Government of Pakistan	NDMA (Director Preparedness & Response), PDMA (Provincial DG), SUPARCO (GIS/Risk Mapping), Ministry of Climate Change (Additional Secretary)
Development Partners	UNDP Pakistan (Climate Resilience Lead), UN OCHA (Humanitarian Coordinator), World Bank / ADB (Disaster Risk Finance Specialist), FAO (Climate-Smart Agriculture Lead), GIZ (Resilient Infrastructure Program)
Financial Sector	State Bank of Pakistan (Climate Finance Division), SECP (Insurance Wing), Insurance Association of Pakistan (Chairperson)
International Counterparts	Asian Disaster Preparedness Center (ADPC), IFAD, UNCDF, Global Shield against Climate Risks (G7 Initiative)

Category	Suggested Panelists / Organizations
Academia & Civil Society	SDPI, LEAD Pakistan, QAU, WWF-Pakistan, NDRMF

Panel Questions:

Subtopic 1 — Understanding Vulnerability: Assessment Mechanisms & Preparedness

1. How effectively are Pakistan’s vulnerability maps and risk atlases being used for policy and planning at the local level?
2. What technological or institutional gaps hinder accurate vulnerability assessment?
3. How can community-based early warning systems be better integrated into national preparedness frameworks?
4. What role can anticipatory action play in minimizing the impact of disasters on vulnerable populations?

Subtopic 2 — Response: Operational Systems & Coordination During Disasters

1. How well do NDMA and PDMA coordination systems function during large-scale emergencies?
2. What lessons from the 2022 Flood Response Plan can improve future operational readiness?
3. How can real-time communication and logistics support be strengthened, especially in remote areas?
4. How can gender and social inclusion be mainstreamed into emergency response operations?

Subtopic 3 — Recovery & Resilience: Growth, Adaptation & Insurance Mechanisms

1. What are the main obstacles to implementing the “Build Back Better” approach in post-disaster reconstruction?
2. How can Pakistan expand access to affordable crop and livestock insurance for small farmers?
3. What institutional or policy reforms are needed to integrate climate-resilient infrastructure into recovery efforts?
4. How can Pakistan effectively utilize the Loss & Damage Fund to support recovery and adaptation?

Subtopic 4 — Bridging Data & Communication Gaps in Preparedness and Recovery

1. What are the major data gaps that hinder timely disaster risk assessment and response?
2. How can technology and real-time data platforms improve coordination between institutions and communities?
3. How can local voices—especially women and marginalized groups—be included in early warning and recovery communication?
4. What steps can be taken to ensure better information-sharing among national and provincial agencies?

Subtopic 5 — Data Gaps and Coordination for Crop/Livestock Insurance

1. What key data challenges limit the effective implementation of crop and livestock insurance?
2. How can coordination between insurers, government, and research bodies be institutionalized?
3. What role can technology (GIS, remote sensing, digital tools) play in improving verification and claims processes?
4. How can inclusive insurance models be designed to reach smallholders and marginalized farmers?

Subtopic 6 — Climate-Induced Changes in Agriculture

1. What are the most critical climate threats currently impacting Pakistan’s agriculture sector?
2. How can farmers be supported in adopting drought- and flood-resilient practices?
3. What research and policy shifts are needed to promote climate-smart agriculture?
4. How can financial instruments like insurance and climate finance improve agricultural resilience?

Expected Outcomes

- Identification of policy gaps and practical solutions for preparedness and recovery.
- Recommendations for integrated disaster management and risk financing systems.
- Framework for expanding affordable insurance and resilience planning.
- Strengthened collaboration between government, private sector, and international partners on adaptation and recovery.

Lead & Collaborating Partners

- Lead Agency: National Disaster Management Authority (NDMA)
- Co-Lead: Ministry of Climate Change & Environmental Coordination (MoCC&EC)
- Collaborating Partners: UNDP, World Bank, ADB, FAO, UN OCHA, GIZ, NDRMF, Insurance Association of Pakistan
- Knowledge Partners: SDPI, LEAD Pakistan, Academia (QAU, LUMS), WWF-Pakistan