Outcomes and Resolutions of the 7th Global Summit of the Global Alliance of Disaster Research Institutes

Converging Disaster Research and Stakeholder-Engagement for Resilience

Lory Student Center, Center of Excellence for Risk-Based Community Resilience Planning, Colorado State University, Fort Collins, Colorado, USA from 21st to 23rd July 2025

1. The Summit affirms that:

1.1 GADRI members maintain their commitment to improving engagement between science and technology, policy and all levels of stakeholders in accelerating the implementation of the Sendai Framework for Disaster Risk Reduction: The eight areas identified in The Geneva Call for Disaster Risk Reduction, June 2025 will be given special attention. We are committed to this agenda indefinitely beyond the current 2030 timespan of United Nations agreements.

1.2 In respect of the Sendai Framework Targets, members recognise the need to orientate their specialist knowledge to addressing the ongoing issues of; i) unabated rises in numbers of disaster affected people, ii) higher economic losses and iii) failing infrastructure.

1.3 The global context of increasing conflict, unmitigated climate change, ecosystem degradation, shortfalls and reductions in financial and political investment into resolving these issues strengthens our resolve to enable evidence-based and action orientated risk-informed decision making in disaster prevention and response.

1.4 There is a specific need to support, and seek to identify, innovative ways of getting disaster data and information sharing to better contribute to reducing disaster risk, strengthening disaster resilience and informed policymaking through collaboration, community engagement, ethical data practices, and innovative technologies.

1.5 Data for DRR needs to be disaggregated, well communicated, open source, accessible usable and used. Work is needed on integrating research data inputs across different methodologies and data formats.

1.6 Disaster research, policy and practice will adhere to principles of inclusivity and to bring about investment that addresses risk reduction more equitably, particularly for

marginalised, minority and low-income groups, supporting all of society approaches and intergenerational equity in disaster prevention.

1.7 A disciplinary, methodological and institutional convergence approach, particularly when grounded in participatory processes, supports interdisciplinary contributions to disaster research capacity and impact. This includes through field study experimentation using mixed data sets, software engineering processes and modelling, and whereby different disciplines better collaborate in solving critical problems.

1.8 Participatory convergence that advances scientific inquiry and societal problem-solving requires trust building and mutually beneficial actions in research.

1.9 DRR and disaster recovery processes, orientated by post disaster needs assessments and effective data reconnaissance requires research and engagement that accounts for multi-hazard, multi-vulnerability, cascading and compounded systemic risk environments and principles of good risk governance.

1.10 Build Back Better is a holistic approach requiring innovation, inclusivity, forward planning, and strong science-policy-practice linkages to build resilient societies in the face of complex disasters.

1.11 Building back better lacks assessment through research that monitors and evaluates its effectiveness in terms of physical infrastructures, improvements to well-being and societal impact. Principles of building back differently and of building up early need to be better included in these assessments. Nature based solutions need to be explored as part of this and the wider DRR agenda.

2. Based on Panel Discussion Session 1:

Priority Area 1: Understanding disaster risk,

2.1 Urban expansion and land use change produces wildfire and other risks particularly where the higher vulnerability of immigrant communities unveils latent and deeper societal conflicts. Reconstruction risks include re-creating vulnerabilities mismatching response and prevention motivation.

2.2 Historical events and response plans have led to a lack of trust whereby institutionalised DRR and Climate Change vulnerability reduction has not been effective. Meanwhile, integrating indigenous traditional knowledge into DRR Strategies reduces this effect increasing trust and resilience (Zimbabwe examples have shown this).

2.3 Incorporating indigenous traditional knowledge into DDR has added benefits of re-connecting modern societies to nature and brings valuable perspectives on risk and resilience.

Priority Area 2: Strengthening disaster risk governance to manage disaster risk

2.4 Understanding the role of governance requires a clear theoretical framework. In particular, it is critical that we understand that governance unfolds at multiple levels from 'self-governance' at the individual level to the societal level. Such a theoretical framework is key because it shapes what we see (and don't see) in the context of disaster risk reduction.

2.5 Whilst we have made incredible progress in terms of gathering and publishing data that could inform disaster risk governance, much data are not being used effectively, not understood, or not easily available (usable) by people who need these data to make critical decisions before, during, or after disaster.

2.6 There continues to be limited integration of science into policy - this has been well documented. What this panel spotlights however is that there are examples - from the local to national where data and research *have* informed policymaking. These stories need to be captured and shared.

2.7 The fact that there are political and institutional constraints to disaster risk reduction has also been well documented. There needs to be more integration of practitioners, policy makers, local champions, advocates, and others from the outset (the design and conceptualization stage) of research. This is critical if the research is going to be used and taken up in the policy making process.

Priority Area 3: Investing in disaster reduction for resilience

2.8 Financial investment in DRR initiatives needs to be from more varied sources using innovative technologies and research collaborations to enhance disaster resilience and build effective partnerships amongst diverse stakeholders.

2.9 Policies, governance frameworks, and institutional arrangements need to be re-prioritized for DRR investments. There are multiple sources that can assist this process (e.g. World Bank Global Rapid Post-Disaster Damage Estimation (GRADE) Report, The Austrian Science Plan for Disaster Risk Reduction 2030+ and others).

2.10 Methods of evaluating countermeasures in disaster risk reduction for resilience consider direct physical damage reduction. These countermeasures also need to contribute to quicker recovery that reduces higher order impacts to the economy. Novel approaches of evaluating the benefits of these measures should be developed with empirical evidence. There needs to be improved methods of evaluating business continuity, including through exposure and recovery curves that better model DRR.

Priority Area 4: Enhancing disaster preparedness for effective responses to “Build Back Better” in recovery

2.11 Pre-disaster community-led recovery and resilience planning is a powerful mechanism to achieve transformative enhancement in disaster risk reduction while also achieving accelerated restoration of community functioning.

2.12 Insurance mechanisms, disaster safety frameworks, and sound economic policies are enablers of Build Back Better, whilst partnerships between authorities and the private sector at both local and national levels are essential to mobilizing finance.

2.13 A value-based approach is needed, allowing end-users and investors to define and justify investments in Build Back Better. Build Back Better extends beyond rebuilding infrastructure to include processes and systems that improve emergency response and long-term recovery.

2.14 There are challenges in timely decision-making under uncertainty and scarce resources, and the cognitive gap between planning and real-world situations. A combination of normative and adaptive approaches and promoting pre-disaster recovery planning using advanced digital tools like AI, Digital Twins, and the Metaverse should be pursued.

2.15 Enhancing community resilience is central to Build Back Better. Concepts like “Build Forward Better” emphasize not only post-disaster recovery but also proactive capacity building. Predictive models such as DFRM, CCM, and DAM can inform anticipatory action. The use of Living Labs is suggested to capture ground-level needs and challenges, ensuring recovery strategies are context-sensitive.

2.16 Innovation, collaboration, and knowledge sharing through multi-stakeholder collaboration are key drivers. Bridging the gap between scientific research, evidence-based decision-making, and practical policy implementation is vital: institutions such as GADRI can facilitate global knowledge exchange and partnerships, translating research into actionable strategies for resilient communities.

Panel Discussion Session 2

A. Convergence approaches in research and implementation

2.17 There is a need to promote collaborative research, including through encouraging funding agencies and institutions to support long-term convergence-focused research initiatives.

2.18 Data and tool sharing should create more interoperable data formats, validation tools, and open platforms that facilitate integration across different methodologies.

2.19 There needs to be more support for educational training including development of educational programs and workshops that train the next generation of researchers in convergence science, systems thinking, and community collaboration.

2.20 Stakeholder engagement can be strengthened through actively involving community members, policymakers, and practitioners in the research process to ensure that outcomes are actionable and widely adopted.

B. Focus on engagement, partnerships, communication, and resulting policies: Strengthening societal resilience for disasters

2.21 Resilience is shaped by the interplay of science, values, politics, and lived experiences, as especially emphasised with reference to the Asia-Pacific context. The concept of a dynamic "resilience-scape" underscores how science and technology, such as early warning systems, remote sensing, risk mapping, and digital twin cities, enables adaptive resilience.

2.22 Community engagement has a transformative role whereby local knowledge complements scientific research, facilitated by multi-actor partnerships.

2.23 Scenario simulations can be a tool for inclusive policy dialogue and deliberative recovery planning. Post-disaster recovery is complex and non-linear, often shaped by community-defined priorities and changing expectations, as evidenced in the Kobe (1995) and East Japan (2011) earthquakes amongst others.

2.24 Artificial Intelligence augmented scenario design should be able to support flexible, inclusive decision-making processes.

2.25 Integrated models can combine physical, socio-economic, hazard, and recovery data to enhance resilience planning. However, key challenges, include unclear definitions, data complexity, and usability barriers. The IN-CORE project is an example of a platform facilitating convergence between disaster research and stakeholder engagement to address these barriers effectively.

2.26 Ethical, inclusive, and timely data use is particularly needed in emergencies. UNESCO-CODATA Data Policy for Times of Crisis (DPTC) initiative provides factsheet guidance and checklists to align data use with Open Science principles. The framework, based on FAIR, CARE, and TRUST principles, supports ethical and efficient data mobilization across scientific, humanitarian, and policy sectors, relevant to crises ranging from pandemics to climate-induced disasters.

C. Underscoring the need for fundamental research and focuses on advances in disciplinary and transdisciplinary research

2.27 We need to continue, and always do, post-disaster reconnaissance following extreme events: this is also a critical training ground for students, early career researchers and other learning, fueling motivations and making measurements compelling for change.

2.28 We must work to close the disconnect between government agencies and government aid programs using evidence-based best practices, and research: this requires

transdisciplinary collaboration with practitioners, advocacy agencies, government agencies, and academic researchers, and being clear about what we are targeting.

2.29 GADRI and those with power and more stability in their positions need to continue to help align academic institutions – education, training, degree programs, academic award systems – with the most critical problems. However, before setting research agendas for disciplinary or transdisciplinary work, scholars should see what is already out there and stop "reinventing the wheel". They can then identify which existing problem-based approach (whether disciplinary or transdisciplinary) best solves the problem identified.

3. In response to these points recorded from the Summit, GADRI resolves to:

Bring all the above affirmations, findings and outcomes to its Board of Directors as GADRI resolutions.