

STATUS OF **SCIENCE AND TECHNOLOGY** IN **DISASTER RISK REDUCTION** IN ASIA-PACIFIC



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2.3

Regional Status of Capacities and Higher Education

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Introduction

Asia and the Pacific encompass regions characterised by high and interlinked levels of disaster risk. Despite sustained, concerted efforts and investments by national governments, regional bodies, international agencies, academic/science groupings and civil society organisations, both regions foresee intensifying and increasingly complex risk configurations into the 21st Century. These risks are driven by powerful and interlinked global forces, that include wide-ranging environmental change (including climate change), urbanisation, growing economic interdependence and increased population mobility.

Such concern resonates globally, with urgency for enhanced management of disaster risk underlined in the 2015 landmark agreements, the

Sendai Framework, 2030 Agenda for Sustainable Development and Paris Agreement, as well as 2016's Agenda for Humanity and New Urban Agenda. Regionally, the role of disaster risk reduction as a development imperative has been repeatedly stressed, most recently at the 2018 Asian Ministerial Conference on Disaster Risk Reduction in Ulanbataar, Mongolia. The field will receive heightened attention in 2020 at the forthcoming Asia-Pacific Ministerial Conference on Disaster Risk Reduction to be hosted in Brisbane, Australia.

Both implicit and explicit calls for strengthened attention to disaster risk and resilience is the need for new skill-sets that are 'future-fit' for development under rapidly changing and interlinked global risk conditions. This especially applies to developing countries and those in fragile contexts (e.g. SIDS,¹ LLDCs,² LDCs,³ (post)-conflict areas and young democracies) that face complex, interlinked pressures and threats. However, it is equally relevant to both regions' more economically developed economies, many of which anticipate rising disaster losses due to climate change.

1 Small island developing states

2 Land-locked developing countries

3 Least-developed countries

This brief discussion document presents argument for **fast-tracking the skilled capacity** to address Asia and Pacific's changing risk profile into the 21st Century. It foregrounds the urgency to better harness the higher education enterprise as a purposeful investment in resilience-building across both regions. This is so that civil society, as well as government services and the private sector in Asian and the Pacific regions are not 'caught short' in the near future, lacking the requisite skills, research capacity and expertise to navigate conditions of increasing risk that compromise development commitments and investments.

Skilled Human Capital Development for Disaster Risk Reduction in Asia and the Pacific: Role of Higher Education

Many of Asia and the Pacific's more developed economies have already prioritised the advancement of skilled human capital to strengthen disaster risk and resilience capacity. These investments, primarily through national higher education and research institutions, have included support for post-graduate research and science in risk-related fields, as well as tertiary-level ca-

As elsewhere, higher education and research institutions in both regions are crucial actors in advancing disaster risk reduction.

capacity building across a wide range of professions. A similar pattern has emerged in mid-level developing and some least developed countries, including Bangladesh, Indonesia, Malaysia, the Philippines and Sri Lanka, where (sub) national universities increasingly play pivotal roles in providing skilled expertise in advancing disaster risk-related science, policy and practice.

Such investments augment more than three decades of capacity-building efforts through complementary regional initiatives. Examples include sustained engagement by the Asian Disaster Preparedness Centre (ADPC) in Bangkok, Thailand and the Asian Disaster Reduction Centre (ADRC) in Kobe, Japan. They also include sup-

port by the APRU-IRIDeS Multi-Hazard Program whose hub is in Sendai Japan, and UNDRR's Global Education and Training Institute for DRR in Incheon, Korea.

Despite these efforts however, progress has not been even across all Asian and Pacific states. Many of the countries most exposed to complex, recurrent and interlinked threats still lack the very foundational capabilities in skilled human capital to meet their day-to-day development needs – let alone access to the evolved, future-ready and cross-disciplinary skill-sets that underpin the aspirations of the Sendai Framework and the 2030 Sustainable Development Agenda.

Such shortcomings were underlined at the September 2019 ASEAN High Level Meeting on Human Capital Development. The deliberations particularly underscored the need for accelerated investment in people, especially children and youth to address entrenched disparities in "life expectancy, job productivity, and education quality across the region" despite rapid economic growth. Similar calls for strengthened human capital were made in the Pacific and at APEC, where APRU foregrounded the urgency for new skill-sets across the region to optimise opportunities in an increasingly digital global economy.

As elsewhere, higher education and research institutions in both regions are crucial actors in advancing disaster risk reduction. They are at the forefront of advancing contextually grounded disaster risk knowledge and scholarship, as well as relevant and robust disaster risk-related science policy advice and innovation. They also carry the remit for sustainably supplying the skilled human resources that underpin (sub) national and local disaster risk-related service delivery by government, the private sector and civil society organisations.

Asia and the Pacific's more developed economies have long institutionalised these capabilities for vigorous university involvement in the disaster risk and resilience domains. Yet, similar actions have not occurred in its most at-risk, least developed states – those that stand to benefit most from investment in the national institutions tasked with building skilled human capital. Bangladesh and Nepal represent noteworthy exceptions, with established disaster risk-related post-graduate programmes, while other countries across the

region have introduced disaster risk-related post-graduate programmes, often aligned to the environmental or engineering fields.

Way Forward

The following path is proposed for strengthening the skilled human capacities for DRR:

1. Overview

This slow pace of institutionalising the disaster risk field in universities and other tertiary institutions is not limited to Asia and the Pacific. Despite high demand for HEI DRR services in many regions, especially by many local and (sub) national authorities, the disaster risk domain has still to gain traction across the global higher education enterprise. This is due to its status as a relatively new domain of scholarship with a complex, cross-disciplinary identity. While academic fields such as geography or engineering have long given attention to natural hazards (as one example), the wider disaster risk domain crosses a diverse range of disciplines, and incorporates applied, as well as conceptual elements. This is challenging for higher education institutions, both for teaching and research.

The proposed approach below seeks to address these challenges through two complementary and mutually reinforcing pathways. The first aims to accelerate the pace of higher education engagement in the disaster risk domain (across multiple fields and knowledge domains). The second prioritises purposive development of tertiary-level disaster risk-related higher education and research capacity in high-risk countries either lacking, or with insufficient access to tertiary education services in this field.

In this context, the approach comprises two complementary components:

- Policy advocacy to bridge the higher education and disaster risk domains at regional and (sub) national scales.
- Academic integration and embedding of the disaster risk domain in higher education programmes/institutions (with focus on high risk developing and least developed countries).

2. Policy Advocacy to Bridge the Higher Education and Disaster Risk Domains

The policy advocacy pathway comprises a three-way thrust. It seeks to profile the potential of the disaster risk domain in sharpening and strengthening higher education's contribution to sustainable development. Similarly, it seeks to foreground the wide-ranging benefits of strategically investing in higher education to advance disaster risk reduction and resilience building. This pathway also aims at prioritising disaster risk-related tertiary education investment in those states with high and accelerating disaster risk levels, but constrained HEI capacity to meet (sub) national demands.

a) Profile Potential of the Disaster Risk Domain in Advancing Scholarship for Sustainable Development

This policy focus would emphasise advancing disaster risk-related education and research as legitimate domains of incisive, cross-disciplinary scholarship for HEIs, Ministries of Education and within national science agendas.

The first aims to accelerate the pace of higher education engagement in the disaster risk domain (across multiple fields and knowledge domains).

It would require specific advocacy with ministers of higher education, development partners and professional accreditation bodies to advance and support (sub) national HEIs to take this forward materially. As in other fields, strategic alliances involving higher education institutions can play key roles in advancing disaster risk-related scholarship – for instance, the successful Periperi U partnership in Africa, that has introduced a transformative suite of academic programmes related to disaster risk reduction. (See <https://www.riskreductionafrica.org/>).

b) Profile the Contribution of Higher Education in Advancing DRR

This policy focus aims at promoting the higher education enterprise as a crucial player in DRR education, capacity building and research, re-framing HEI engagement from its current and under-utilised position (especially in least developed countries). This would include incorporating scope to update targeted higher education programmes as an explicit component of post-disaster recovery and resilience-building post-disaster, introduce new degree programmes, as well as mechanisms for career-pathing or internships of graduates into government or NGO employment for retention of skilled youth.

c) Profile Specific Urgency for Embedding Skilled Capacity Development in Selected High-Risk Developing and Least Developed, At-Risk Countries (e.g. Afghanistan, Cambodia, Lao PDR, Myanmar, Solomon Islands, Timor Leste, Tuvalu, Vanuatu)

This policy focus aims at crafting a systematic, coherent regional approach to advancing higher education capability in the disaster risk and resilience domains in at-risk countries, including mobilising national and regional support and resources, as well as intergovernmental, multilateral and bilateral mechanisms.

3. Academic Integration and Embedding of the Disaster Risk Domain in Higher Education Programmes/ Institutions (focus on high risk developing and least developed countries)

This pathway involves a two-way thrust for HEI engagement across Asia and the Pacific. It explicitly acknowledges that issues of risk and resilience are not ring-fenced within the emergency and disaster management domains, but sit front and centre in both regions' prospects for sustainable development. The first HEI thrust proposes a more purposive integration of the disaster risk and resilience domains across a wider range of disciplines and professions. The second thrust calls for a strategic regional plan to introduce disaster risk-related scholarship into one HEI in four-six high-risk countries across both regions.

a) More Purposive Integration of the Disaster Risk and Resilience Domains Across a Wider Range of Disciplines and Professions

This focus foregrounds the need for greater disciplinary diversification beyond the historic tendency for the disaster risk field to be situated within environmental, engineering and geosciences or the emergency management professions. Investing in building future-ready skills and expertise implies a more deliberate incorporation of DR-related content/modules in fields as diverse as agri-sciences, development studies, health sciences/professions, economics and the tourism/hospitality industry. It also implies creation of new cross-disciplinary course configurations, along with opportunities for student progression from secondary school through post-graduate studies.

b) Development of A Strategic Regional Plan to Introduce Disaster Risk-Related Scholarship into One HEI in Four-Six High-Risk Countries

This focus aims to fast-track HEI capacity in four-six at-risk developing and least developed countries with high and accelerating disaster risk levels, but constrained HEI capacity to meet (sub) national demands. It anticipates a wide portfolio of potential interventions, including scholarship support to fast-track disaster risk teaching and research capacity, staff and student exchange visits between tertiary institutions, opportunities to participate in regional and global DRR science and policy events, funding support for curriculum development, and material support for equipment, as well as software.

Conclusion

Asia and the Pacific's increasingly complex risk environment calls for accelerated investment in skill-sets and expertise that are 'future-fit'. A shift in higher education policy framing, combined with fast-tracked human capital in the disaster risk and resilience fields could (within five years) advance national capacity, even in both regions' high-risk, least developed countries.

1 Afghanistan, Bangladesh, Cambodia, Bhutan, Kiribati, Lao PDR, Myanmar, Nepal, Solomon Islands, Timor Leste, Tuvalu, Vanuatu, Yemen