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A Study into the Role of International Collaborations in Higher Education to Enhance Research Capacity for Disaster Resilience

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Abstract

International collaborations in the context of Disaster Resilience (DR) is pivotal due to several reasons. It helps to propose ways to create more coherent international approaches on disaster risk reduction, climate change adaptation and resilience strengthening; it helps to enhance risk management capabilities by bridging the gap between science and legal/policy issues; it helps to address the issue of efficient management of trans-boundary crises. The need to optimise international cooperation in relation to resourcing research, capacity building to undertake research and facilitating its uptake is mentioned throughout the Sendai Framework for disaster risk reduction 2015-2030 (SFDRR). Given their different capacities, as well as the linkage between the level of support provided to them and the extent to which they will be able to implement the SFDRR, developing countries require an enhanced provision of means of implementation, including adequate, sustainable and timely resources, through international cooperation and global partnerships for development, and continued international support, so as to strengthen their efforts to reduce disaster risk. The purpose of this paper is to examine the level of engagement of Higher Education Institutions (HEIs) in developing countries in Asia in international collaborations to improve their Research and Innovation (R&I) capacities in DR. Based on a project entitled ASCENT (Advancing Skills Creation and Enhancement), the findings of the paper focuses on three Asian countries, i.e. Bangladesh, Sri Lanka and Thailand. Other than an extant literature review, the paper findings are drawn from a questionnaire survey carried out in eight HEIs from the said countries. There are already several regional initiatives that promote collaboration among HEIs towards building resilience. These networks should be supported and encouraged to grow. These global networks should collaborate with existing bodies to ensure that the role of higher education is understood and can be made use of. Findings of this paper supports the need for an enhanced international partnership to improve the science-policy interface in DR and to achieve the objectives of the SFDRR.

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Keywords: Barriers; Disaster Resilience (DR); Higher Education Institutions (HEIs); International Collaboration; Research and Innovation (R&I)

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1. International collaborations and EU's role

The first collaborative scientific paper was published in 1665 [1] and the number of collaborative papers has increased ever since, first slowly, then dramatically after the middle of the eighteenth century [2]. Beaver and Rosen noted collaborative linkages across national borders as early as the nineteenth century [1]. These linkages increased toward the end of the century, and international collaboration has grown in importance throughout the present century [2]. International collaboration in science can be considered as a communications network that is different from national systems and has its own internal dynamics [3]. International collaboration in research can take many forms; the sharing of unique data sources, correspondence by mail, exchanges of ideas at conferences, visits to foreign laboratories, exchange of papers and collaborate in writing research papers [4], and corresponding and exchanging ideas through ICT – Information and Communication Technologies (e.g. e-mail, Skype, teleconferencing).

As scientific capacity continues to grow around the world, and more links are made among countries, the flow of knowledge among them may also grow [5]. International collaborations help cross border strategic decisions making while creating win-win situations to all parties involved. Shared understanding, trust and commitment of the parties involved act as enablers for the success of international collaborations. However, international collaboration is not without criticism. For an example, according to a recent research, Africa's heavy dependency on international collaboration may be stifling research individualism and affecting the continent's research evolution and priorities, e.g. single author articles appear to be "on the verge of extinction" [6].

National systems have policies and institutions that mediate scientific communication, while at the global level the network exists primarily as a self-organizing system. The exception here is the European Union (EU), where specific incentives exist to encourage formal international linkages among member countries [5]. EU has a long history in promoting research cooperation across borders. Established in 1954, the European Organization for Nuclear Research (CERN) is a research centre of excellence and the world's largest particle physics laboratory, attracting top scientists. Since 1986, the Treaties explicitly identify cooperation with third countries as a key activity of the Union's research policy. The Framework Programmes have gradually been opened up to participation by third countries, with support for international cooperation fully mainstreamed within FP7. One of the conclusions of the FP7 interim evaluation [7] stated that there needs to be an '*intensification of international cooperation*' activities focused on '*engaging with partners outside of Europe on equal terms and in programmes and activities of high mutual interest*'. The same report [7] recommended the '*coherent strategic development*' of the Union's policy for international cooperation in research and innovation. While this progress is welcome, critical mass is lacking in many cases and the strategy driving the development of the actions is not always clear. There has been growing recognition of a need to enhance international cooperation on activities focused on '*engaging with partners outside of Europe on equal terms and in programmes and activities of high mutual interest*' [7]. The need for linkages with Asian countries has been emphasized given the region's rapidly growing research and innovation (R&I) on capacities and the urgency to address global challenges.

British Council [8] examines the barriers that prevent South Asian experts from linking up with research colleagues across the globe to create opportunities for collaborative research, and recommends action to address them. Based on a series of interviews conducted with global experts in 2014, the paper aims to be a guide for researchers and policy makers interested in unlocking the region's collaborative research potential. Universities, institutes and local research and development (R&D) agencies in the South Asian region lag behind their counterparts in the rest of Asia in terms of R&D and technological enhancement activities, confirming the need for governments and firms to rethink their policies and strategies in this regard [8]. The need for linkages with Asian countries was particularly highlighted given the region's rapidly growing research and innovation capacities and the urgency to address South Asia, which is home to more than 40% of the world's absolute poor, will contribute nearly 40% of the growth in the world's working-age population over the next several decades. The potential remains very strong and South Asia continues to represent an exciting 'frontier market' for international research institutions. Priorities for EU-South Asia cooperation in research and innovation can include a wide ranging opportunities for real breakthrough research and radical innovation on in response to societal challenges for example [10]. Situation is equally true in Thailand too.

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