

ICoE Collaboration Plan, 2017

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"... the role of the ICoEs is seen as crucial for providing access to sites to enable 'cross-disciplinary research, community outreach (and their inclusion in research), comparative analyses, longitudinal studies, and resilience building'. (IRDR Formative Review, 2017: P15, citing the IRDR Science Plan 2008)

"... in the absence of clear alignment with, and between the nodes of this [ICoE and National Society] network, and some coordinated action within a larger strategic plan, it is a network in theory rather than action. Without clear inspiration or incentives for collective action, this situation is unlikely to change." (IRDR Formative Review, 2017: P15)

These two statements capture well the potential and challenges facing the IRDR ICoEs and the motivation for this ICoE Collaboration Plan, 2017.

Introduction

The Integrated Research on Disaster Risk (IRDR) project proposed the designation of International Centre of Excellence (ICoE) in its Founding Science Plan (2008). As IRDR approaches its second half of a ten-year period of activity, the ICoE family has an opportunity to reflect on its status, progress, and future aims. The family of ICoEs offers a global network of research centres. This opens new scope for collaboration and for leadership in the wider IRDR community and beyond.

This short note discusses the implications of the emerging ICoE network for research and capacity building. Its purpose is to foster collaborative planning amongst ICoEs; an activity that will benefit IRDR in meeting its mission as well as enhancing host institutions.

The ICoE Collaboration Plan, 2017 summarises guidance from IRDR for ICoE activity and reviews the scope of the existing ICoE network. Drawing on the various foci of the ICoEs and the IRDR science objectives, specific aims and activities are proposed to accelerate ICoE contributions to the IRDR network. This is a live document, where new ICoEs, science, and policy needs will require adaptation in the strategies and contributions of ICoEs and the wider network. The aim is not to be prescriptive but to open debate amongst ICoEs.

IRDR mission, objectives, projects and legacy:

IRDR's Science Plan includes a set of concrete statements that together provide guidance for ICoE focus.

The IRDR mission is clear that IRDR's contribution is to support science that is both **integrated and applied**: "to develop trans-disciplinary, multi-sectorial alliances for in-depth, practical disaster risk reduction research studies, and the implementation of effective evidence-based disaster risk policies and practices".

The IRDR Science Plan (2008) extends these two core interests through three Research Objectives (1) the **characterisation of hazards, vulnerability and risk**, and the development of the capability to forecast hazardous events and their consequences; (2) **understanding decision-making in complex and changing risk contexts**, on human decisions and the

pragmatic factors that constrain or facilitate such decisions, and; (3) **reducing risk and curbing losses through knowledge-based actions**, this requires the integration of outputs from the first two objectives in real world cases.

At the international level four projects help address these objectives and structure IRDR activities: (1) AIRDR aims to undertake the first systematic and critical global **assessment of integrated research on disaster risk**; (2) DATA intends to establish an overall **framework for disaster loss data**, to establish nodes and networks for databases to ensure some level of comparability; (3) FORIN will develop **root cause analysis** in disaster research that seeks to identify and explain the underlying causes of disasters, and; (4) RIA will focus on the question of **how people make decisions**, individually and collectively, in the face of risk.

Cross-cutting these projects IRDR seeks to build communities of practice and **build capacity** for integrated and coproduced science and to **advocate and support international processes** especially the Sendai Framework and Sustainable Development Goals and to develop real world collaborations with **practical outcomes**, where projects can integrate learning from across the range of IRDR science to enhance DRM practice.

Capturing this guidance, IRDR's aspired legacy is to contribute to "a shift in focus from response–recovery towards prevention–mitigation strategies, and the building of resilience and reduction of risk, and learning from experience and avoidance of past mistakes" (Science Plan, 2008, pg. 18).

An important part of the legacy would be the **systematic repository of coordinated and integrated global data** and information sets across hazards and for vulnerability and loss.

The ICoE commitment:

The IRDR Science Plan commits ICoEs to:

- provide regional and research foci for the IRDR programme;
- embody an integrated approach to disaster risk reduction;
- collaborate to provide global contributions towards achieving the IRDR legacy;
- enable regional scientific activities through geographically-focused contributions based on more localised inputs, and;
- be visible centres of research to motivate participation in the IRDR programme.

Existing ICoE capacity and focus

Twelve ICoEs have been established to date (see Annex 1). These offer some geographical and subject diversity though with key gaps – in particular in Latin America and the Caribbean, sub-Saharan Africa and the Middle East and North Africa. No small island development states are included (though Singapore and Taiwan have some common experience). Existing science strengths are in hazard, risk and vulnerability modelling with an urban/infrastructure/building design focus. Institutional and psychological approaches, and medical sciences are along with capacities in applied disaster risk-related teaching programmes such as food insecurity, agricultural risk management, disaster risk management and public health.

The 2017 Formative Review of IRDR included several comments relevant to ICoEs.

Positive observations confirmed the potential offered by ICoEs and the presence of a desire for collective working based on reported:

- collaboration with research projects (AIRDR, DATA, FORIN and RIA).
- opportunities for inclusion, notably for young scientists.
- greater profile and credibility through association with IRDR.
- desire for more networking for research, impact and capacity building.

But, potential was challenged by:

(1) ICoE procedures:

- a) no systematic branding of IRDR outputs associated with ICoEs
- b) no indication of the types of local access ICoEs can provide

(2) a lack of basic support from IRDR:

- a) the IRDR website should link to ICoE websites, and provide dedicated support for visibility, dissemination and community management.
- b) there is no support form IRDR for ICoE networking, student exchange, collective fund raising or advocacy.

(3) a lack of IRDR-ICoE collective strategy:

- a) there is no clear plan or systematic alignment between ICoEs
- b) there is no inspiration nor are there incentives for collective action amongst ICoEs.

These constraints are self-reinforcing: with limited support from IRDR, ICoEs have little incentive and no capacity to brand or report beyond the personal efforts of staff. With no coordinated voice, advocacy for strategic planning and dedicated basic support is difficult to achieve.

Proposals for enhanced ICoE collaboration:

The challenges identified above are ones of coordination. They suggest conversation is needed

(1) between the ICoEs to identify actual levels of capacity and ambition amongst the membership and scope for collaboration, and

(2) between the ICoEs, IRDR IPO and co-sponsors, to identify what support is needed, how this can be met and the joint development of a strategic approach for collaboration going forward.

As interest in IRDR grows some tightening on the processes for new ICoE membership and for retaining ICoE membership may be helpful. It is important that the value of the designation is maintained, that the network does not become so large that it is unwieldy, and that only active members are encouraged to continue their participation. This will require conversation with the IRDR IPO and Scientific Committee who currently control these processes with no formal process for ICoE input (though individual ICoE leads also sit on the IRDR Scientific Committee).

There is also an over-arching conversation needed on how the systematic engagement/mobilisation of the ICoEs conceptually and strategically contributes to advancing the IRDR mission. This has internal institutional dimensions (eg ICoE-IRDR

IPO; ICoE-ICoE). However, it also has external thematic dimensions (eg how ICoEs mobilise within their respective disciplinary/thematic/science constituencies) and geo-political dimensions (eg how the ICoEs engage at national, sub-national, regional and global levels ...the degree to which they interact/advocate with UNISDR for instance, or with national/regional government and donor groups). When there is visible multi-scalar coherence in the IRDR message, this is clearly reinforcing (eg because the ICoE REaL supports UNISDR in Africa, it is included in continental and sub-regional political DRR consultative processes).

Logically, the specific projects, activities and resource mobilisation choices of the ICoEs should flow from their strategic contribution to the IRDR mission. We shouldn't be 'chasing' money or opportunistically 'branding' our activities as IRDR-related, if they don't cohere with a broader, integrated strategy and mission.

The May 21-27 2017, Cancun IRDR Science Advisory Board meeting/UNISDR Global Platform, provides an opportunity for concrete discussions. A one-day meeting ICoE meeting, including a closed session for ICoEs will allow inclusive discussion and the agreement of a collaboration plan with specific action points and responsibilities. National and Regional IRDR groups might also be invited.

If there is support for this proposal the ICoEs can approach ICSU to support travel for non-IRDR Science Committee ICoE leads.

Specific activities that can assist ICoE collaboration that might be discussed at Cancun:

Strategic Orientation:

- ICoE's to endeavour to be part of Future Earth Knowledge Action Networks to advance transdisciplinary research and be an active voice for IRDR (see <http://futureearth.org/knowledge-action-networks>).

Management agreements:

- To request the IRDR IPO develop a searchable database to describe the capacity, interests, and access to local practical partners for each ICoE. This is aimed to support targeted grant applications and networking for research and capacity building.
- ICoEs to collaborate in the search for sponsorship for exchange fellowships between ICoE members.
- ICoEs to collaborate in the search for funding to support PhD student exchanges and 'master classes in interdisciplinarity'.
- ICoEs to collaborate in risk and loss data collection and management. This will facilitate systematic analysis and application of diverse methodologies in different risk, loss and capacity contexts opening opportunities for a strategic approach to capacity building amongst the ICoEs and elsewhere and for feeding into the data needs of the Sendai Framework and related processes
- ICoEs to collaborate and share lessons in working to support national and regional implementation of Sendai Framework through various activities.

- ICoEs might create in cooperation with the IPO an exchange and information channel (e-mail group) to enhance information sharing, encourage broader ICoE representation at events and support collaborative teaching.

Annexe 1: ICoE scope and activity

ICoE Name contact email and webpage	Host Organisation	Geographical interest	Leading science	Examples of research and advocacy activity	Examples of capacity building activity
ICoE-Taipei chliu2@gate.sinica.edu.tw sclung@rcec.sinica.edu.tw	Academy of Sciences, Taipei, China	Asia-Pacific Region			Integrated transdisciplinary research and practices for DRR; Capacity Building in DRR in the Asia- Pacific Region; Training workshop; Advanced institute; Seed grant; Visiting scholar; Networking; Collaborative Research.
ICoE in Vulnerability and Resilience Metrics (IRDR ICoE-VaRM) scutter@sc.edu http://artsandsciences.sc.edu/geog/hvri/international-center-excellence	University of South Carolina, USA	USA	Vulnerability and risk indicators	-provided social vulnerability metrics for post-flood allocation of recovery resources for 3 states in the US -produced downscale social vulnerability metrics for entire US for FEMA and state-level risk management planning	MA/MSc and PhD degrees in GIScience and Geography; Masters in Public Administration (MPA), with concentration in Emergency Management; pre- Doctoral visiting scholars
ICoE in Community Resilience david.johnston@gns.cri.nz	Massey University, Wellington, New Zealand	New Zealand	Psychology, community- based DRM, Citizen Science and decision-	- Convened workshops citizen science and DRM; - hosted 4th International Conference on Urban Disaster Reduction (4ICUDR)	Graduate Certificate in Emergency Management; Graduate Diploma in Emergency

			making	- partners in community-based East Coast Lab http://www.eastcoastlab.org.nz/	Management; Postgraduate Diploma in Emergency Management; Master of Emergency Management; PhD in Disaster Risk Reduction and Emergency Management
ICoE in Understanding Risk & Safety (IRDR ICoE-UR&S) odcardonaa@unal.edu.co	National University of Colombia, Manizales City, Colombia	Colombia/Latin America and the Caribbean	Hazard and Risk modelling, Vulnerability and risk metrics, Holistic approach	- Country disaster risk profiles for IDB; Global Risk Model for GAR reports and Atlas of multi-hazard risk; DRM indicators; - risk assessment (CAPRA) and risk communication in LAC and other regions; - Holistic risk assessment for action plan of CC adaptation in La Mojana for the Colombian Government; global drought risk model for international consortium.	MSc/PhD. DRM
ICoE for Risk Education and Learning (IRDR ICoE-REaL) ailsaholloway@sun.ac.za	Stellenbosch University, South Africa (Periperi U/ICoE REaL Secretariat)	Africa (12 universities in Algeria, Ethiopia, Kenya, Tanzania, Uganda, Mozambique, Madagascar, Senegal, Nigeria, Ghana, Cameroon, South Africa)	Disaster risk-related capacity building and research	Recent Advocacy only: Multi-scalar engagement (eg convened pre- and side-events at Africa Regional Platform in DRR November, 2016). Also active engagement in Africa Working Gp on DRR –representing STAC constituency. Sub-regional egs include UBuea representation at ECCAS platform and Ardhi engagement at EAC sub-regional platform	Postgrad Dip. in DRM and Dev. Studies (ABU) MSc in DRM and Dev.Studies (ABU) M.DRM (Ardhi) MSc. DRM (Ardhi) MSc DRM & Sust. Dev. (BDU) MSc Climate Change & Dev. (BDU) MSc Prevention and Managemnt of Food Insecurity (GBU)

					Masters of Public Health Disaster Management (MDM) Makerere MPhil Disaster Risk Science & Dev (SU) MSc Multidisciplin. Disaster & Risk Management (Tana) MSc. in Natural Resource & Env. Managemnt UBuea) MSc in Technical Education, Dev & Disasters (UDM) MA GEOG.(Module): Applied Integrated Disaster Risk Reduction (IDRR) in Urban Ghana MSc Structural Dynamics & Earthq. Engineering
ICoE in Risk Interpretation and Action (IRDR ICoE-RIA) mark.pellng@kcl.ac.uk	King's College London	International	Institutional and political sciences for vulnerability, resilience and transformation.	- Convened workshops between humanitarian agencies and researchers to explore organisational constraints to learning and innovation - Initiated the UK Alliance for Disaster Risk community of practice to support UK Government and UK science activities under Sendai.	MA/MSc Disasters, Adaptation and Development; MA Climate Change: History, Culture, Society; MSc Climate Change: Environment, Science and Policy. PhD programme

<p>IRDR ICoE for Disaster Resilient Homes, Buildings and Public Infrastructure (IRDR ICoE-DRHBPI) gmcgillivray@iclr.org</p>	<p>Institute for Catastrophic Loss Reduction (ICLR) at Western University, London, Canada</p>	<p>International</p>	<p>Infrastructure design and planning</p>	<ul style="list-style-type: none"> - Published 'Insurers rebuild better homes', world's first program setting out actions that insurance companies can take to strengthen the disaster preparedness of homeowners by building back better homes after a disaster strikes - Published preliminary report into May 2016 wildfire in Fort McMurray, Alberta 'Why some homes survived: Learning from the Fort McMurray wildfire disaster' - Published 'Protect your home from earthquakes' outlining actions that homeowners can take to protect their homes from earthquake damage - Working with Canadian National Building Code Commission and National Research Council on adding resilience to the Canadian national model building code 	<ul style="list-style-type: none"> - Numerous initiatives in progress and planned as outlined in ICLR's new 'Strategic plan: 2017 to 2021' - Ongoing workshop program with ~11 webinars held per year - Active speakers' bureau, giving presentations to insurance groups, governments, builders etc. - Report publication series, releasing ~1 to 3 studies each year. - Publish numerous magazine articles, newspaper essays and other publications annually. - Active social media campaign.
<p>ICoE on Critical Infrastructures and Strategic Planning (IRDR ICoE-CI&SP)</p>	<p>University of Stuttgart</p>	<p>International</p>	<p>Urban planning</p>	<ul style="list-style-type: none"> - Convened workshops with national and international experts as well as organizations responsible for the management 	<p>International Master Of: Infrastructure Planning Infrastructure</p>

joern.birkmann@ireus.uni-stuttgart.de				and evaluation of critical infrastructures - Special issue on Critical Infrastructures and Strategic Planning in the Journal of Extreme Events (JoEE)	Planning; Participation and Planning; Environmental Engineering
ICoE for Collaborating Centre for Oxford University and The Chinese University of Hong Kong for Disaster and Medical Humanitarian Response (CCOUC) (ICoE-CCOUC) ccouc@cuhk.edu.hk gloria.chan@cuhk.edu.hk	Collaborating Centre for Oxford University and The Chinese University of Hong Kong for Disaster and Medical Humanitarian Response (CCOUC), Hong Kong	Asia	Humanitarian medicine, public health, health emergency disaster risk management (H-EDRM)	<ul style="list-style-type: none"> • Health emergency disaster risk management (H-ERDM), including disaster literacy and resilience building, disaster epidemiology and disaster management cycle • Climate change, environment and health • Humanitarian medicine in resource-deficit settings and of marginalised population 	<p>Master's and doctoral degree programme in public health;</p> <p>Credit bearing courses including disaster and humanitarian crisis, climate change and health, health and human security, emergency risk communication, field research methods, food security etc.;</p> <p>Non-credit bearing certificate courses like online courses on public health principles in disaster and medical humanitarian response;</p> <p>Disaster response capacity building activities in local communities in rural China and Asia;</p> <p>Train-the-trainer</p>

					programme for secondary school teachers on disaster resilience and disaster risk literacy.
ICoE for Disaster Risk and Climate Extremes (ICoE-SEADPRI-UKM) joy@ukm.edu.my seadpri.event@gmail.com	Universiti Kebangsaan Malaysia, UKM (National University of Malaysia)	Southeast Asia	Multidisciplinary research development & training in the fields of climatic, geological and technological hazards for disaster risk reduction	<ul style="list-style-type: none"> • Technical support for National Disaster Management Agency including HFA monitoring [http://mydr.org], • Coordinating the Asian Network on Climate Science and Technology (ANCST), • Hosts the virtual network of ASEAN Partner Institutions on Climate Change Adaptation (ASEANadapt). • Risk and loss assessment • Policy and planning input for national and ASEAN region. 	<p>MSc/MA and PhD in Policy and Disaster Management, Climatic Hazards Studies, Geological Hazards Studies and Technological Hazards Studies.</p> <p>Specialised professional workshops include disaster risk reduction governance and management including foresight and futures thinking.</p>
IRDR ICoE for National Society for Earthquake Technology- Nepal (ICoE-NSET) adixit@nset.org.np	National Society for Earthquake Technology, Nepal	Nepal	Earthquake Risk Reduction through Policy advocacy disaster awareness, capacity building, assistance in DRR implementation and in disaster preparedness capacities.	<ul style="list-style-type: none"> • Implementing Earthquake Reconstruction program in 3 districts as an example of comprehensive resilient reconstruction post Gorkha Earthquake 2015 • Building Code implementation program in 30 municipalities ensuring <60 new construction complying to the national building code • Research collaboration with the Global Earthquake Model (GEM) as a member of the Governing Board; and with Durham 	<ul style="list-style-type: none"> •Development of training courses and implementation in countries of SAARC in Emergency Response Capacity • Development and implementation of more than 10 courses for engineers, technicians and masons on aspects of Earthquake Resistant

				<p>University plus about a dozen universities of UK, and Japan</p> <ul style="list-style-type: none"> • Joint program with USGS in capacity building and seismic monitoring using NSHAK network of strong motion accelerometers 	<p>construction of vernacular buildings, risk assessment</p> <ul style="list-style-type: none"> • Collaboration with Ehime University, ICUS/UTokyo for MS and PhD level education of Nepalese scientists • Aspiration to start a field-focused graduate program (MS and PhD) on disaster risk management in developing countries
<p>ICoE in Spatial Decision Support for Integrated Disaster Risk Reduction v.g.jetten@utwente.nl r.sliuzas@utwente.nl</p>	<p>University of Twente, the Netherlands</p>	<p>International</p>	<p>Model based decision support tools; Integrated hazard and risk analysis; Integrated Catchment Management (rural and urban)</p>	<p>Strategic ITC:</p> <ul style="list-style-type: none"> • Member of GEO and advise on Capacity Development in general, and DRM and Food security themes • Membership of UNISDR Urban Planning Advisory Group • Aim to become member of STAG <p>Research example projects:</p> <ul style="list-style-type: none"> • 35+ PhD research projects related to various aspects of DRR in urban management, food security, water security, risk assessments, natural hazards, collaborative planning and decision making. • EU research project examples: Post Disaster Rapid Damage Assessment 	<p>MSc and short courses Disaster related</p> <ul style="list-style-type: none"> • Hazards Risk and Engineering programme • Spatial Engineering (new MSc) <p>Distance Education:</p> <ul style="list-style-type: none"> • Multi-Hazard Risk Analysis • Environmental Impact Assessment and Strategic Environmental Assessment Using Spatial Decision Support Tools <p>Capacity</p>

				<p>(WWW.INACHUS.EU). Changing Hydro-meteorological Risks as Analysed by a New Generation of European Scientists (CHANGES)</p> <ul style="list-style-type: none"> • Outreach: • Mapathon for Malawi in cooperation with Red Cross Princess Margriet Fund and OSM • Several Red Cross initiatives in the Netherlands and international 	<p>Development projects:</p> <ul style="list-style-type: none"> • Caribbean hazard and risk (world bank): WWW.CHARIM.NET • Agriculture Africa STARS (Gates Foundation) http://www.stars-project.org/en/ • Kampala flood risk analysis (UN-HABITAT) • Risk Atlas Georgia (MATRA and NL Foreign Affairs)
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