



Dealing with Disasters, GCRF, UK Alliance for Disaster Research, Disasters Research Group and UK Collaborative for Development Research

# DwD-GCRF-UKADR-DRG-UKCDR International Conference, 2019

17<sup>th</sup>, 18<sup>th</sup> and 19<sup>th</sup> July @ Northumbria University, Newcastle upon Tyne, UK

# New points of departure in transitioning disaster reduction and sustainability challenges



# Programme

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# **1** Introduction

The conference aims to stimulate debate and advance thinking around 'New Points of Departure in Transitioning Disaster Reduction and Sustainability Challenges' building on the progress made in the recent United Nations Global Platform 2019 and in anticipation of the forthcoming Climate Summit. New points of departure are needed in relation to science and technology, political will and behaviour to bring systemic changes to the way people take on disaster threats and sustainability challenges, to survive and to thrive.

Multiple examples of attempts to address disaster risk and sustainability have been well represented to date across the many institutions networked within the organisations of this event. This reflects a wide range of advances in research, policy and practice ideas influential globally. However, an expansive array of challenges demand greater and more urgent transitions into safer, more interconnected impacts if rates of progress are to be improved.

The theme of this event is driven by scholarly work and extensive experience from a multidisciplinary array of allied fields of disaster management, emerging from wide-reaching contributions including via Dealing with Disasters conferences over the years. The Dealing with Disasters series associated with the **Disaster and Development Network (DDN)** at Northumbria began in 2006 and has been hosted by various partners in the UK, Africa and Asia.

Supported by the Resilience portfolio of the UKs Global Challenges Research Fund (GCRF) the occasion combines the 12<sup>th</sup> Dealing with Disasters (DwD) and 3<sup>rd</sup> UK Alliance of Disaster Research (UKADR) Conferences, Disaster Research Group (DRG) and UK Collaborative for Development Research (UKCDR) in examining current advances and future research needs. The event celebrates the 10<sup>th</sup> Anniversary of the Disasters Research Group (DRG).

## Structure of the event

The conference includes 100 presentations, five workshops and a symposium structured into six plenary and 18 parallel sessions.

Plenary sessions reflect the following aspects of the conference topic:

- Setting the scene why we need new points of departure for disaster reduction and sustainability
- Facing changing challenges of disaster management policy and implementation
- Transitioning health and well-being in Disaster Risk Management
- Future systemic challenges
- Action and hope in transitioning from disaster scenarios to sustainable futures
- New points of departure in transitioning disaster reduction and sustainability challenges



The parallel presentation sessions, workshops and symposium included in the programme are as follows:

- Advancing hazard impact assessment and modelling
- Vulnerability, engagement & disaster risk management
- UNDRR / ISC Hazards Working Group Workshop
- Institutional and intersectional disaster risk, sustainability and governance
- Culture, values and perception-based departures in preparedness, response and reaction to risk
- UN STAG Data Working Group Workshop
- WHO Thematic Platform for Health Emergency and Disaster Risk Management Research Network Symposium
- Progressing change in disaster management planning for critical infrastructures
- DRR and preparedness for very extreme scenarios Alliance to Feed the Earth in Disasters Workshop
- GCRF Research Hubs; 'Tomorrow's Cities and Living Deltas' Workshop
- Advancing impact assessment, preparedness and early warning
- Technology Enhanced Disaster Risk Reduction and Response
- The Youth Voice Workshop
- Environmental sustainability, demands on science and people in resisting critical harm
- Technical disasters, human Induced seismicity, hydraulic fracturing and crime
- Concatenated urban / high density risk and recovery
- Strategic local level interventions and resiliency responses to crises

The event includes the Annual General Meeting of the United Kingdom Alliance for Disaster Research (UKADR) as scheduled in this programme. This meeting is open to all participants of the conference.

# 2 Conference Outline

Date:	17 <sup>th</sup> -19 <sup>th</sup> July
Venue:	City Campus East, Northumbria University, Newcastle upon Tyne, UK
Accommodation:	Local Hotels
Host:	Northumbria University
Chair:	Professor Andrew Collins, Leader of the Disaster and Development Network, Co-Chair of United Kingdom Alliance for Disaster Research, Department of Geography and Environmental Sciences, Faculty of Engineering and Environment, Northumbria University, UK



# Conference Committee:

- Andrew Collins (Northumbria University, UKADR and GADRI)
- Mark Pelling (Kings College London, UKADR, GCRF and DRG) Conference Co-Chair
- Virginia Murray (Public Health England, UKADR and DRG) Conference Co-Chair
- Adrian Bucher (UKCDR and DRG) Conference Co-Chair
- John Rees (British Geological Survey, UKADR, GCRF and DRG) Conference Co-Chair
- Mark Ashley Parry (Northumbria University)
- Becky Richardson (Northumbria University)
- Richard Kotter (Northumbria University)
- Simon Griffiths (Northumbria University)

# Administration

- Barry Nicholson (Campus Services, Northumbria)
- Rachel Cottiss (Campus Services, Northumbria)
- Alison Vipond (Research and Innovation Services, Northumbria)
- Maureen Edwards (UK Research and Innovation)

# Supporting

Organisations:

Public Health England (PHE) Integrated Research on Disaster Risk (IRDR) University of Bristol Cabot Institute Collaborating Centre for Oxford University and Chinese University of Hong Kong for Disaster and Medical Humanitarian Response (CCOUC) United Nations Office for Disaster Risk Reduction WHO Thematic Platform for Health Emergency and Disaster Risk Management Global Alliance of Disaster Research Institutes (GADRI)







With Public Health England





Collaborating Centre for Oxford University and CUHK for Disaster and Medical Humanitarian Response CCOUC <u>災害與人道救援研究所</u>



# Conference Features:Short abstracts are provided in the form of an abstract proceedings<br/>document online. A conference report will be produced by the end of<br/>August.Local Organizer:Disaster and Development Network, Department of Geography and<br/>Environmental Sciences, Faculty of Engineering and Environment,<br/>Northumbria UniversityDedication:In memory of Dr. Bernard Siambabala Manyena 1968 - 2018



# New Points of Departure in Transitioning Disaster Reduction and Sustainability Challenges

#### Tuesday 16<sup>th</sup> July, 2019

15:00 - 17:00Registration: Main Foyer, City Campus East17:00 - 18:00Meeting of Conference Host and Co-Organisers - Room 018, City Campus East

# Wednesday 17<sup>th</sup> July, 2019 (Day One)

08:00 - 08:45 Registrations in main Foyer of City Campus East – breakfast refreshments

#### 08:45 - 09:15 Opening Session: Lecture Theatre 002 Chair: Andrew Collins, Northumbria University

- Welcome Address: Lucy Winskell OBE, Pro Vice-Chancellor (Employability and Partnerships), Northumbria University
- UK Disasters Research Group (DRG): John Rees, United Kingdom Research and Innovation (UKRI), Global Challenges Research Fund (GCRF) Challenge Lead
- UK Collaborative for Development Research (UKCDR): Adrian Bucher, Research and Policy Officer
- UK Alliance for Disaster Research (UKADR): Andrew Collins, Co-Chair of UKADR, Disaster and Development Network (DDN)

#### 09:15 - 10:45 Plenary Session One: Lecture Theatre 002

'Setting the Scene – Why we need new points of departure for disaster reduction and sustainability'

#### Presentation 1: Global Assessment Report and the Global Risk Assessment Framework

**Ricardo Mena**, Chief of the UNDRR Supporting and Monitoring Sendai Framework Implementation Branch, representing the Special Representative of the United Nations Secretary-General (RSG) for Disaster Risk Reduction and Head of UNDRR, Geneva

#### Presentation 2: DFID concerns and interests

**Roger Bellers**, Senior Humanitarian Adviser, Department for International Development (DFID)

*Presentation 3: Research investment that responds to global challenges* **Ruth Kelman**, Head of Resilient Environment, UKRI Natural Environment Research Council (NERC)



## 10:45 - 11:00 Tea and Coffee

Lecture Theatre 002	Seminar Room 223b	Seminar Room 213
Session: <b>'Advancing hazard impact assessment and modelling'</b> Chair: <b>Qiuhua Liang</b> , Loughborough University	Session: 'Vulnerability, engagement & disaster risk management' Chair: Wenying Fu, Northumbria University	Workshop: 'UNDRR / ISC Hazards Working Group' Chair: Virginia Murray and Lucy Fagan, Public Health England
1. Rapid post disaster damage mapping with satellite imagery, citizen scientists and machine learning	1. Narratives of vulnerability: how institutions shape everyday perceptions of a disaster	This session will comprise:
Olga Isupova, Danil Kuzin, University of Oxford, UK, Brooke Simmons, University of Lancaster, UK and Steven Reece*, University of Oxford, UK	Anshu Ogra*, King's College London, Amy Donovan, University of Cambridge, George Adamson, King's College London, UK	i) A presentation relating to new points of departure in the identification of hazards categorisation in the disaster risk nexus
2. Estimation of Snow Cover and climatic variability using MODIS	2. Policies, politics and practices of landslide risk management in post-earthquake Nepal: Perspectives from above and below	ii) Group discussions about hazard classification.
ata of Teesta river basin Sikkim, India Jaydeo K. Dharpure <sup>*</sup> , Ajanta Goswami, Institute of Technology Roorkee, India, Anil V. Kulkarni, Indian Institute of Science, India	Katie Oven*, Durham University, Shubheksha Rana, Kathmandu, Nepal, Nick Rosser, Durham University, Gopi Basyal, Durham University and National Society for Earthquake Technology, Nepal, Mark Kincey and Alex Densmore, Durham University, UK	iii) Opportunity to contribute to the process of implementing th Sendai Framework for Disaster Risk Reduction.
3. Using expert judgement and expert elicitation to assess or forecast natural hazards: a systematic review Shreyasi Choudhury*, Bruce D. Malamud, King's College London, Amy Donovan, University of Cambridge	3. 'Everyday-life preparedness': case studies and applicability Kaori Kitagawa, UCL Institute of Education, UK	
4. Hydrodynamic modelling Glacier Lake Outburst Floods (GLOFs) and impact in Nepal	4. Socioeconomic vulnerability to wildfires in NW Spain María-Luisa Chas-Amil, University of Santiago de Compostela, Jeffrey P. Prestemon, USDA Forest Service, North Carolina, United States, David Butty, Natianal Instituto of Standards and	
<b>Qiuhua Liang</b> , Loughborough University, UK	States, <b>David Butry</b> , National Institute of Standards and Technology, Gaithersburg, United States, <b>Julia Touza</b> , University of York, UK	
	5. The making of man-made disasters: corruption and law violations as catalyst in increasing vulnerability <b>Ayesha L Khalil</b> , University College London, UK	

13:00 - 14:00 Lunch

**14:00 – 15:30 Plenary Session Two:** Lecture Theatre 002

'Facing changing challenges of disaster management policy and implementation' Chair: Jane Entwistle, Faculty Pro Vice-Chancellor (Research and Innovation), Engineering and Environment, Northumbria University



*Presentation 1: Strengthening European disaster management through rescEU and the Union's Civil Protection Mechanism* Julia Stewart-David, Head of Unit, Civil Protection, European Commission - ECHO

*Presentation 2: The UK Space Agency on increasing resilience to disasters in developing countries* **Caroline Harper**, Lead Science Programme Manager, UK Space Agency

Presentation 3: Supporting more equitable resilience Helen Rogers, Senior Portfolio Manager, Economic and Social Research Council, UKRI (by remote link up)

Presentation 4: Bringing communities together for disaster risk reduction **Daryl Oprey**, The International Emergency Team UK

15:30 – 15:45 Tea and Coffee

#### 15:45 – 17:45 Parallel Sessions

Lecture Theatre 002	Seminar Room 223b	Seminar Room 213
Session: 'Institutional and intersectional disaster risk,	Session: 'Culture, values and perception-based departures in	Workshop: 'UN STAG Data Working Group'
sustainability and governance'	preparedness, response and reaction to risk'	Chair: Andrew Collins and Becky Richardson, Northumbria
Chair: Jacob Miller, Northumbria University	Chair: Christine M. Kenney, Massey University, New Zealand	University
1. Climate information services for resilient smallholder agriculture Alison Sneddon*, Mirianna Budimir and Sarah Brown, Practical	1. Love in a time of terror: Revisiting an indigenous love story in Christchurch New Zealand	This session will comprise:
Action	Christine M. Kenney and Suzanne R. Phibbs, Massey University, New Zealand	i) A presentation on new points of departure for Action Data in disaster risk reduction and resilience.
2. Missing voices: An intersectional approach to understanding		
gender and disaster risk	2. Perceptions on coping and adaptation strategies to	ii) Group discussions regarding the improved role of data for
Sarah Brown*, Mirianna Budimir and Alison Sneddon, Practical A.	environmental and climate stressors in Caribbean coastal communities	disaster risk reduction.
3. The growth of municipalities and risk governance in Nepal	Julia Touza*, University of York, Carmen Lacambra, Grupo Laera,	iii) Opportunity to contribute to the process of implementing the
Hanna Ruszczyk, University of Durham	Colombia, <b>Alexandra Kiss, Rosa Mato Amboage</b> , Instituto de Investigaciones Marinas y Costeras (INVEMAR), Colombia, <b>Paula</b>	Sendai Framework for Disaster Risk Reduction.
4. Civil Society: Top down & Bottom Up	Sierra, Martin Solan, Tom Spencer, University of Southampton,	
4.1 Top down: Making aid agencies work: potential and challenges	Piran C. L. White, University of Cambridge	
for civil society organizations supporting transitioning disaster		
reduction and sustainability	3. Developing a "culture of preparedness" – lessons from the	
4.2 Bottom up: DRR to development: Local level perspectives in	CARISMAND project	
bridging the practitioner / academic divide	Sandra Appleby-Arnold*, University of Edinburgh, Noellie	
Terry Gibson, Inventing Futures	Brockdorff, University of Malta	



5. <i>DRR related legal and institutional structures of Nepal</i> <b>Dilli Poudel</b> , Southasia Institute of Advanced Studies, Nepal	4. Yonmenkaigi System Method as an educational framework for Climate Change within the United Kingdom: A pilot study Mark Ashley Parry, Northumbria University, UK	
	<ul> <li>5. Disaster risk perception of the Rohingya Refugees in Cox's Bazar, Bangladesh</li> <li>Bayes Ahmed*, Peter Sammonds, Shamrita Zaman, IRDR, University College London, Taifur Rahman, Health Management BD Foundation, Bangladesh</li> </ul>	

18:00 – 19:30 Welcome Reception at Conference Venue

# Thursday 18<sup>th</sup> July (Day Two)

- 08:15 09:00 Breakfast refreshments (main foyer outside Lecture Theatre 002)
- 09:00 10:40 Plenary Session Three: Lecture Theatre 002 'Transitioning health and well-being in Disaster Risk Management' Chair: Ryoma Kayano, WHO Kobe Centre, Japan

Presentation 1: WHO's Health Emergency and Disaster Risk Framework (Address by remote link up) Jonathan Abrahams, Disaster Risk Management Focal Point, World Health Organization Emergencies Programme, WHO Geneva

Presentation 2: Thematic Platform for Health Emergency and Disaster Risk Management Research Network Ryoma Kayano and Virginia Murray, Head of Global Disaster Risk Reduction, Public Health England

Presentation 3: *Health communication in Hong Kong's civil unrest* Gloria K.W. Chan, Deputy Director, Collaborating Centre for Oxford University and Chinese University of Hong Kong for Disaster and Medical Humanitarian Response (CCOUC), Hong Kong

Presentation 4: *Prevention and treatment of acute malnutrition in humanitarian emergencies: A multi-organisation collaboration to increase access to synthesized evidence* **Ben Heaven Taylor**, Chief Executive Officer, Evidence Aid

Northumbria University NEWCASTLE

Dealing with Disasters-GCRF–UKADR–DRG-UKCDR (2019): New points of departure in transitioning ...

# 10:40 – 11:00 Tea and Coffee

Lecture Theatre 002	Seminar Room 223b	Seminar Room 213
Symposium: WHO Thematic Platform for Health Emergency and Disaster Risk Management Research Network	Session: 'Progressing change in disaster management planning for critical infrastructures'	Session: 'DRR and preparedness for extreme scenarios - workshop with ALLFED, Alliance to Feed the Earth in Disasters'
Chair: Gloria Chan, CCOUC, Hong Kong	Chair: Derek Johnson, Northumbria University	Chairs: <b>Peter Alexander</b> , GCRF rugs-project.uk, <b>Sonia Cassidy</b> and <b>Ray Taylor</b> , ALLFED
1. Ryoma Kayano, WHO Kobe Centre, Japan	1. Shared leadership in dangerous contexts: The implication for emergency response teams	THEMES:
2. Enhancing H-EDRM research and education for urban community resilience – the case of Mangkhut	Merrel Knox and Richard Kotter, Northumbria University	UK, Asia and global resilience to abrupt scenarios
Carol Ka-Po Wong, CCOUC, Hong Kong	2. Becoming a recognised 'good practice' case study for urban risk management: An analysis of critical junctures for institutional	Cases: Naples/Tambora eruptions; 2 years without rain
3. Health impact of flood disaster: experience of children from a	development in Manizales, Colombia	Multiple Breadbasket Failure (MBBF)
slum community in Lagos State, Nigeria	Julia Wesely* and Cassidy Johnson, The Bartlett Development	
Ruth Ochanya Adio-Moses, University of Ibadan, Nigeria	Planning Unit, University College London	International responses to extreme scenarios
4. Innovative communication and engagement for children's hand	3. Cascading effects on Overhead Line Equipment (OHLE) of	Resilience via large scale alternative foods
washing behaviour in high risk environments Becky Richardson, University of Northumbria, UK	extreme wind and flood events Chayut Ngamkhanong*, Sakdirat Kaewunruen and Charalampos	Media and communication
becky kichardson, oniversity of Northumbha, ok	Baniotopoulos, University of Birmingham, UK	
5. Food security and climate adaptation on South Sudan	Sumotopoulos, enversity of Birmingham, en	Inter-discipline DRR + GCR (Global Catastrophic Risk)
Kennedy Odhiambo Onjweru, South Sudan Development Agency,	4. Disaster Adaptation to Mitigate Storm Surge (DAMSS) – A	
South Sudan	framework proposal towards storm surge resilience	Financing GCR preparedness and resilience
6. Antimicrobial resistance	Anitha Karthik*, Sean R. Smith, Naren Gupta, Edinburgh Napier University, UK	Research funding + priorities for GCR resilience
Scott Barret, Northumbria Health Care Trust, UK		Research running - priorities for Gen resilence
	5. Community needs of host and displaced communities following	Participants can focus on their priority theme
	a disaster and conflict-induced mass displacements: a review of literature	
	R.R.J.C Jayakody*, C. Malalgoda, Dilanthi Amaratunga and	
	Richard Haigh, University of Huddersfield, UK	



#### 14:00 – 16:00 Parallel Sessions

Lecture Theatre 002	Seminar Room 223b	Seminar Room 213	Seminar Room 222
Symposium: WHO Thematic Platform for Health	Session: GCRF Research Hubs; 'Tomorrow's Cities	Session: 'Advancing impact assessment,	Session: 'Technology Enhanced Disaster Risk
Emergency and Disaster Risk Management	and Living Deltas'	preparedness and early warning'	Reduction and Response'
Research Network	Facilitators: Hugh Sinclair, Edinburgh University	Chair: David Gleeson, Faculty Pro Vice-	Chair: Terrence Fernando, University of Salford,
Chair: Virginia Murray, Public Health England	and Andy Large, Newcastle University	Chancellor, Arts, Design and Social Sciences,	UK
	Chairs: Kate Crowley, Edinburgh University and	Northumbria University	
	Louise Bracken, Durham University		
1. The inverse response law: A global gaze on	Hugh Sinclair, Edinburgh University	1. Reflections on flood early warning systems in	1. The use of satellite technology for predicting
institutional failure in the aftermath of disaster	Andy Large, Newcastle University	Nepal and Peru	landslides
Suzanne Phibbs and Christine M. Kenny, Massey		Mirianna Budimir, Sarah Brown, Alison Sneddon,	Andrew Iwanoczko, Telezpazio Vega UK Ltd
University, New Zealand	Andrew Collins, Northumbria University	Practical Action	
	Brian Golding, Meteorological Office, UK		2. Assessment of the impact of floods through
2. Bringing US long-term care and skilled nursing	Dilli Poudel, Southasia Institute of Advanced	2. Collaborative Early Warning System: An	modelling and simulation support
facilities up to acceptable levels of emergency	Studies	integrated Framework for mitigating impacts of	Neil Entwistle, AquaUS – Salford University
preparedness compliance	Jenni Barclay, University of East Anglia	natural hazards in the UAE	
John J. Walsh Jr, Vanderbilt University Medical	Louise Bracken, Durham University	Abdulla Al Hmoudi, Abu Dhabi Police Emergency	3. Multi-agency collaboration platform for
Center, USA	Qiuhua Liang, Loughborough University	Department and Rabdan Academy, UAE	supporting disaster risk reduction and response
	Sophie Blackburn, Kings College London		Terrence Fernando, THINKlab, University of
3. Health and well-being of displaced population		3. Global food security impacts of abrupt shocks,	Salford, UK
in disaster settings: victims and survivors		and research priorities	
reactions to losses and refugees' trauma		Peter Alexander, GCRF rugs-project.uk, Aron	4. Challenges in implementing a digital approach
Amer Hosin, University of Ulster, UK		Mill, ALLFED Berlin, Ray Taylor, ALLFED, Simon	to multi-agency collaboration in DRR: UK
		Day, UCL, David Denkenberger, Alaska, Fairbanks	Perspective
4. Tackling persistent exclusion of older people		A Committee descentions of forthis	Ian Everall, MirrorWorld Technologies Ltd
and people with disabilities in humanitarian		4. Communities' perspectives on effective	
responses: Towards critical capacity building of		community participation in Disaster Risk	
humanitarian organisations		Reduction (DRR)	
Supriya Akerkar, Oxford Brookes University, UK		Subhajyoti Samaddar*, Hirokazu Tatano, Disaster Prevention Research Institute (DPRI),	
5. Mental Health in Complex Emergencies: Brief		Kyoto University, Japan	
Overview of Issues and Controversies			
Jane Gilbert, Consultant Clinical Psychologist, UK			
6. Please mind the crap between the train and the			
platform edge: the sanitary systems of railways:			
perception, reality and behaviour			
Anthony Corkin, Northumbria University			



#### 16:00 – 16:15 Tea and Coffee

- 16:15 17:15
   Plenary Session Four: Lecture Theatre 002

   'Future systemic challenges'

   Chair: Phil O'Keefe, Emeritus Professor, Northumbria University, UK
  - *Presentation 1: Why we need to invent stewardship cities* **Peter Taylor**, Emeritus Professor, Northumbria University, UK

*Presentation 2: Existential Threats – modern agile conflict* **Maitland Hyslop**, DDN Affiliate, Northumbria University, UK

- 17:15 18:30 UKADR Annual General Meeting: Room 002
- 19:00 21:30 Conference Dinner The Great Hall, Sutherland Building, Northumbria University

# Friday 19<sup>th</sup> July (Day Three)

08:15 – 09:00 Breakfast refreshments (main foyer outside Lecture Theatre 002)

09:00 - 10:40 Plenary Session Five: Lecture Theatre 002 'Action and hope in transitioning from disaster scenarios to sustainable futures' Chair: Adrian Bucher, UK Collaborative for Development Research

> *Presentation 1: Challenges of interagency collaboration in emergency response in Nigeria* **Tajudeen Akanji**, Institute for Peace and Strategic Studies, University of Ibadan, Nigeria

Presentation 2: Interdisciplinary approaches to community-led disaster risk reduction: time to open up citizen science? Jenni Barclay, M. Teresa Armijos, University of East Anglia, Anna Hicks, British Geological Survey, UK

*Presentation 3: Influencing policy and practice agendas through disaster risk, resilience and climate change research into action* **Sarah Blackburn** and **John Rees**, UKRI, GCRF



# 10:40 – 11:00 Tea and Coffee

#### 11:00 - 13:00 Parallel Sessions

Lecture Theatre 002	Seminar Room 223b	Seminar Room 213
Symposium: <b>'The Youth Voice'</b>	Session: 'Environmental sustainability, demands on science and	Session: 'Technical disasters, human Induced seismicity,
Chair: Mark Ashley Parry, Northumbria University	people in resisting critical harm'	hydraulic fracturing and crime'
	Chair: Luke Parry, Lancaster University, UK	Chair: Paul Stretesky, Northumbria University
Presenters:	1. Strengthening capacities to manage flood risk in Senegal:	1. Natural, Technological, and Natech disaster research: toward a
	enhancing heavy rainfall and impact nowcasting, and reviewing	convergence of perspectives
Jonathan Nicholls, Werneth School, Stockport, UK	the communication and use of warnings	Duane Gill, Oklahoma State University
Alexander Virgili, Corpo Italiano di San Lazzaro, Italy and United	Steven J. Cole*, Centre for Ecology & Hydrology, UK, Emma	
Nations Major Group for Children and Youth	Visman, VNG Consulting, UK, Tanya Warnaars, Centre for Ecology	2. Perceptions associated with human-induced seismicity:
Francis Mcllhency and Robyn Miller, Disaster and Development	& Hydrology, UK, Mariane Diop-Kane, Moustapha Kamara,	qualitative findings from Oklahoma and Colorado
Society, Northumbria University, UK	Agence Nationale de l'Aviation Civile et de la Météorologie	Liesel Ritchie, Oklahoma State University)
South African Youth Centre for Disaster Risk Reduction, North-	(ANACIM), Senegal, Malick Diagne, GeoRisk Afric, Senegal,	
West University, Potchefstroom, South Africa	Seonaid R. Anderson, Christopher M. Taylor, Cornelia Klein,	3. A systematic review of the relationship between shale gas
	Centre for Ecology & Hydrology, UK	development and crime
Greta Thunberg Speech (video)		Paul Stretesky*, Northumbria University and Philip Grimmer,
Extinction Rebellion Review	2. Slow emergencies? Amazonian droughts, (dis)connecting jungle	University of Heidelberg
	cities and everyday harm	
Panel:	Luke Parry, Lancaster University, UK	4. Improving organisational resilience to the cascading effects of
- Alexander Virgili, Corpo Italiano di San Lazzaro		technological failures
<ul> <li>Mark Ashley Parry, Northumbria University, UK</li> </ul>	3. Towards a hybrid epistemology: Why social and physical	Gianluca Pescaroli*, Ilan Kelman, Rob Wicks, David Alexander,
<ul> <li>Peter McGowan, King's College London, UK</li> </ul>	science should work together in the El Niño Southern Oscillation	University College London
- Richard Kotter, Northumbria University, UK	research	
- Subhajyoti Samaddar, Kyoto University, Japan	George Adamson, Department of Geography, King's College	
<ul> <li>Virginia Murray, Public Health England, UK</li> </ul>	London	
	4. From man-made disaster to environmental hazard: Strategic	
	Design Intervention of a learning centre for Rohingya children	
	considering future reclamation of nature	
	AKM Sirajuddin, BRAC University and Yasmin Ara, Lancaster	
	University	
	5. Your disaster research is even more important than you think!	
	A global perspective on vulnerability to extreme, complex and	
	cascading scenarios	
	Aron Mill, ALLFED, Matthijs M Maas, Centre for International	
	Law, Conflict and Crisis, University of Copenhagen, Denmark	



13:00 - 14:00 Lunch

14:00 - 16:00 Parallel Sessions

Lecture Theatre 002	Seminar Room 223b
Session: 'Concatenated urban / high density risk and recovery'	Session: 'Strategic local level interventions and resiliency responses to crises'
Chair: Mike Deary, Northumbria University	Chair: TBC
1. Real time research and supporting urban self-recovery after disasters. The case of	1. Negotiating NGO-state relations for equitable resilience: evidence from the Andaman
Cyclone Idai, Beira, Mozambique	Islands
Holly Schofield, Care International, UK	Sophie Blackburn, Kings College London, UK
2. The 2019 contingency associated with increased volcanic activity at Popocatepetl	2. Towards measurement of resilience of educational communities
Volcano, Mexico	R Parajuli, M Xanthou, J Agarwal, A Sextos, University of Bristol, Maria G. Xanthou
Ana Lillian Martin Del Pozzo*, Carmen Jaimes-Viera, Sandra Gonzalez, Monserrat	University of Bristol, Harvard CHS, Hellenic Open University
Luna, Amiel Nieto-Torres, Mario Díaz, Fernando Franco, Alberto Paz and Natalie	
Guerrero	3. Building resiliency and capability in the wake of challenges, risks and vulnerability: The
Universidad Nacional Autónoma de México, México	UAE case example
	Ibrahim Almarzouqi, United Arab Emirates
3. Major air pollution incidents and a model for estimating the risk from acute	
particulate exposure on public health	4. Assemblage Theory and the future of Disaster Risk Management (DRM) in Kalimpong,
Simon Griffiths, University of Northumbria	India
	Peter McGowran, King's College London
4. A Flood Preparedness Model For Resilience Around Fluvial Disasters	
Isaac Dziya, University of Huddersfield, UK	5. Viewing community resilience in the South through the "eyes" of Mega Storms: A conceptual analysis
5. Construction Health, Safety & Resilience in post-Disaster/Emergency Response Simon Daly, O'Halloran & O'Brien Ltd	Henry Bang <sup>*</sup> and Lee Miles, Bournemouth University

#### 16:00 – 16:15 Tea and Coffee

 16:15 - 16:50
 Plenary Session Six: Lecture Theatre 002

 Facilitated Group Discussion
 Chairs: Andrew Collins et al.

 Topic: "New points of departure in transitioning disaster reduction and sustainability challenges"

**16:50 – 17:00** Closing: Conference Chairs – Lecture Theatre 002



# 4 **Conference Guidelines**

# Registration

Registrations must be completed by the start of the event on 17<sup>th</sup> July.

Registration includes the cost of conference documentation, reception, lunches and tea breaks. You can select to attend the conference dinner. If not booked for the conference dinner, it is possible to see one of the conference staff during the first two days as attendance may be still possible subject to places being available and a booking being made.

# **Oral Presentations**

All presentations should be concise and to the point. Unless an alternative arrangement has been made the maximum length of a plenary presentation is 20 minutes. Parallel session presentations should be no more than a maximum of 15 minutes. The timing is crucial so that there is time in every session for questions and open debate. PowerPoint facilities are provided in all session rooms. using lf PowerPoint, presentation you can email your to Rachel Cottiss rachel.cottiss@northumbria.ac.uk by 12:00 on Tuesday 16<sup>th</sup> July to have it preloaded. Alternatively bring it on a USB device for uploading in the room your presentation will take place in prior to the start of the session. Even if mailing it in advance please also bring it on a USB device as back up.

# Workshops

Flip charts are available for the workshops.



# 5 General Information

#### **Contact Information**

Please contact a member of the team if you have any questions regarding your event. Conferencing & External Hire Team – 07712237231

For all events after 5pm or at weekends when you are on campus, please call **Security**. Security and a first aider can be contacted 24/7 on 0191 227 3999

#### **Travel Enquiries**

Rail Enquiries Tel: +44 (0)8457 484 950 <u>www.nationalrail.co.uk</u> Airport Enquiries Newcastle International Airport Tel: +44 (0)871 882 1122 <u>www.newcastleairport.com</u>

#### **If Feeling Unwell**

Please notify the conference organiser, Security and a first aider can be contacted 24/7 on 0191 227 3999

#### **Taxi Numbers**

Noda Taxis: 0191 222 1 888 Blueline Taxis: 0191 262 6666

#### **Wi-Fi Access**

## Guest Wi-Fi

Here are the steps to get you setup and on your way:

- 1. From your device connect to the network WiFi Guest
- 2. Open a web browser

Note: If you received a Certificate notice, select Proceed Anyway to continue

- 3. From The Cloud landing page locate the box **Get online at Northumbria University** and click **Go**
- 4. Scroll down to select Create Account
- 5. Enter your details and your account will be created.

You will then be connected to WiFi Guest

#### Eduroam

Visitors to Northumbria can log on to our Wi-Fi network using the username and password from their home university or college, if their institution is an Eduroam member. Visitors should check out how to connect to Eduroam at their home university/college before arriving at Northumbria.



## **Drinks Reception & Conference Dinner**

A conference drinks reception will take place on Wednesday 17<sup>th</sup> July at 6pm in City Campus East foyer area.

If you have signed up to the Conference Dinner, it will take place Thursday, 18<sup>th</sup> July in The Great Hall, Sutherland Building.

# **ATM Machine**

There is an ATM machine located in the foyer area of the conference venue in City Campus East.



# 6 About UKADR, GCRF, UKCDR and DwD/DDN Northumbria

# United Kingdom Alliance for Disaster Research (UKADR)

The primary motivation for the UKADR (<u>www.UKADR.org</u>) is to bring together the UK's rich and diverse disaster research community. This facilitates collaboration and partnership to aid representation of the research community at government level in the UK, and, where appropriate, help with the implementation of the Sendai Framework for Disaster Risk Reduction.

The Alliance is independent and managed by voluntary contributions from the UK research community. Membership is open to staff and PhD students of any research-and-capacity-building institute based in the UK that is active in researching disaster risk and its management. This includes universities and other educational institutions, charitable trusts, think tanks and research departments within government agencies, private businesses or civil society organisations. Disaster risk reduction, prevention and preparedness, disaster response, reconstruction and recovery are all of interest.

The focus of the UKADR is all contexts and systems of disaster risk, recognising the UK's role in this field across an interconnected world. UKADR understands that the science of disaster risk and its management is interdisciplinary. There is an emphasis on integrated and applied dimensions of knowledge production that is also rooted in fundamental science. This includes work from the natural sciences, engineering and technology, medical and health sciences, agricultural science, social sciences and humanities, and includes information technology, economics and behavioural sciences. UK science on disaster risk is widely recognised as world leading. UKADR aims to support excellence in science and enhance opportunities for impact on policy and practice by acting as:

- an alliance of the academic disaster research community, to facilitate collaboration and partnership across the UK
- an advocate of UK science to UK Government
- a contact point for UK Government seeking the best UK science input
- a mechanism for UK Government to communicate emerging needs to the UK science community

To help meet these aims, UKADR also sits in the UK Disaster Research Group, a committee of research funders, government departments and charitable donors, which has been hosted by the UK Collaborative on Development Sciences (UKCDS), now UK Collaborative on for Development Research (UKCDR) since 2009.

The UK Government first called for improved interaction with the disaster science community in its 2011 Humanitarian Emergency Response Review. This was repeated in the 2012 Government Office of Science Foresight Report on Reducing the Risk of Future Disasters. In 2015, UK Government's responsibilities under the UNISDR Sendai Framework for Disaster Risk Reduction 2015–2030 placed renewed emphasis on science and on evidence-based policy and practice. In 2016, many from the international science community attended the United Nations Office for Disaster Risk Reduction (UNISDR) Science and Technology Conference on the implementation of the Sendai Framework for



Disaster Risk Reduction 2015–2030, and a roadmap for supporting Sendai was shared under the leadership of the UNISDR Science and Technology Advisory Group.

UKADR provides a national contact point for international efforts to coordinate scientific efforts to reduce the global impacts of disaster. It collaborates with other international agencies engaged in supporting Sendai. These include: International Council for Science (ISC), UNISDR-sponsored programme on Integrated Research on Disaster Risk (IRDR) and Global Alliance of Disaster Research Institutes (GADRI).

To date the UKADR has been fulfilling its aims through incremental involvement in helping to steer UKRI GCRF calls including through short review studies and a joint workshop, providing an impetus to the establishment of other regional Alliances – e.g. North American Alliance, African Alliance and European Alliance, also in collaboration with the Global Alliance (GADRI), and in establishing a conference series. The current conference if the third in the series following earlier ones at Kings College London (2017) and Bristol University (2018). The themes of these were:

(2017) What are the areas of data, knowledge and capacity that research funders should prioritize to maintain UK's international science leadership and responsibility under the Sendai Framework? (2018) Complex hazards, complex vulnerabilities

Leadership of the UKADR is through election amongst its membership. The constitution established during the start up period specifies that elections need to take place every three years. The current Co-chairs and positions were elected in 2017 following an interim start up period and therefore new elections need to take place for the period from 2020. The current roles are:

Co-Chairs: Mark Pelling (King's College London); Andrew Collins (Northumbria University) Membership Secretary: Amy Donovan (Cambridge University, formerly King's College London) Web Manager: Lina Hannaford (British Geological Survey), replacing Gemma Nash. Committee Members: Virginia Murray (Public Health England), Peter Sammonds (University College London), David Alexander (University College London), Louise Bracken (Durham University), Ryerson Christie (University of Bristol), Emily Wilkinson (Overseas Development Institute), Susanne Sargeant (British Geological Survey), John Reese (UKRI). The UKADR constitution is available in more detail at the website <u>www.UKADR.org</u>. Current core partner members include those indicated in the web screen image below.





# Disasters Research Group (DRG)

The Disasters Research Group (DRG) is a forum convened by the UK Collaborative on Development Research (UKCDR) comprising of senior representation from 20 organisations in the UK that fund and/or support disaster risk reduction research including the Department for International Development, UK Research and Innovation and the Wellcome Trust, as well as national representatives of UNDRR, IRDR, IPCC, WMO, WHO and GEO.

The aim of the DRG is to enhance research and technology-based disaster risk reduction through improved coordination of UK and international funders, research providers and users as well as delivering components of the UK's commitment to disaster risk reduction. The group also serves to review trends in disaster risk reduction funding, identifying associated opportunities, and guiding direction of future funding.

In doing this, the key roles of the DRG include:

- The sharing of information on UK funding activities and encouraging collaboration between members;
- The providing of readily available and relevant information on research gaps and foci that may support relevant and/or associated mapping works to funders, research providers and users;
- The developing and recommending of processes to facilitate and sustain research uptake across multiple user communities;
- The influencing of international and national research and innovation agenda for DRR.

Since its establishment 10 years ago in 2009, the DRG has played an influential role in discussions surrounding disaster risk resilience – both at the national and international levels. Among the key achievements of the group was its role in advocating and promoting the inclusion of science and scientific evidence in the post-2015 development agenda for disaster risk reduction. With support from bodies such as the International Council for Science, UNESCO, and the World Health Organisation, the DRG led the way in calling for a coordinated approach and a unified agenda to strengthen resilience to disasters and extreme events, where research would be more actionable, coupled with more effective ways of providing evidence-based advice to support disaster policy and practice.

This work by the DRG earned recognition by the United Nations Office for Disaster Risk Reduction; the DRG was credited as one of the most influential bodies in framing the role of science and technology within the Sendai Framework for Disaster Risk Reduction - the latest global framework to strengthen disaster resilience.



# **Global Challenges Research Fund (GCRF)**

The Global Challenges Research Fund (GCRF) is a £1.5 billion fund announced by the UK Government in late 2015 to support cutting-edge research that addresses the challenges faced by developing countries. Alongside the other GCRF delivery partners we are creating complementary programmes that:

- promote challenge-led disciplinary and interdisciplinary research, including the participation
  of researchers who may not previously have considered the applicability of their work to
  development issues
- strengthen capacity for research, innovation and knowledge exchange in the UK and developing countries through partnership with excellent UK research and researchers
- provide an agile response to emergencies where there is an urgent research need.

GCRF forms part of the UK's Official Development Assistance (ODA) commitment, which is monitored by the Organisation for Economic Cooperation and Development (OECD). The GCRF delivery partners are: UK Research and Innovation, Scottish Funding Council, Higher Education Funding Council for Wales, Higher Education Division Northern Ireland, Academy of Medical Sciences, Royal Society, British Academy, Royal Academy of Engineering and UK Space Agency.

GCRF has three challenge areas, which are a vision for change and not intended to constrain innovative approaches in other areas that also address these aims.

## **Equitable Access to Sustainable Development**

Our vision is to create new knowledge and drive innovation that helps to ensure that everyone across the globe has access to:

- secure and resilient food systems supported by sustainable marine resources and agriculture
- sustainable health and well being
- inclusive and equitable quality education
- clean air, water and sanitation
- affordable, reliable, sustainable energy.

## **Sustainable Economies and Societies**

The pace, nature and patterns of economic growth are threatening the future of our climate and eco-systems and are placing a major burden on the Earth's resources. At the same time populations are increasingly shifting from rural to urban areas. Each of the five challenge areas listed above must be placed in the context of the need to create prosperous economies and societies. There is also a need to understand and address the local and global challenges of population growth and pressure on the environment and climate, as well as new socio-economic models based on enabling technologies such as digital technologies. The GCRF will also encourage research and innovation that in the longer-term, builds:



- sustainable livelihoods supported by strong foundations for inclusive economic growth and innovation
- resilience and action on short-term environmental shocks and long-term environmental change
- sustainable cities and communities
- sustainable production and consumption of materials and other resources.

# Human Rights, Good Governance and Social Justice

It is increasingly recognised that development, human rights, good governance and social justice are indivisible. Developing an understanding of the institutions that embed and promote human rights, good governance and social justice - and the means to strengthen these - is paramount. Progress against the pursuit of the Sustainable Development Goals (SDGs) has been particularly challenging in fragile and conflict-affected states, while multiple refugee crises are applying mounting pressure in countries of origin, transit and destination. The GCRF will also support research and innovation that enables us to:

- understand and respond effectively to forced displacement and multiple refugee crises
- reduce conflict and promote peace, justice and humanitarian action
- reduce poverty and inequality, including gender inequalities.

# United Kingdom Collaborative for Development Research (UKCDR)

The UK Collaborative on Development Research (<u>www.UKCDR.org</u>) is a group of government departments and research funders working in international development. For over a decade, it has brought UK research funders together to discuss priorities and coordinate efforts to garner maximum impact. The UKCDR is a neutral and impartial entity governed by the Strategic Coherence of ODA-funded Research (SCOR) Board.

## Vision

Accelerating global development through the power of research and knowledge.

## Strategy

At the core is a principal commitment to data mapping, analysis and foresight, with our remaining activities built upon this strong foundation of knowledge and evidence. We have four integrated and overlapping aims:

- Mapping, analysis and foresight
- Convening for collaboration and joint action
- Sharing information, learning and best practice
- A collective voice to shape policy



#### Motivation

In recent decades, there has been unprecedented global development progress. Since the 1990s, the world has managed to more than halve the numbers of child deaths and of people living in extreme poverty. But there is still much progress to be made, in a world that is rapidly changing and where major development, demographic and environmental transitions are bringing new challenges that require different transdisciplinary and innovative approaches. In 2015, recognising the complexity of the world in which we live, the UK along with 192 leaders across the world agreed on a set of 17 Global Goals to make the world a better place by 2030, by reducing poverty, ending hunger, halting climate change, strengthening global peace, and promoting prosperity.

UK Universities and research institutes have a long tradition of outstanding work in, for and with developing countries. Recognising the value of research, in 2015 the UK government made a dramatic shift within its international development efforts – a yearly incremental rise in aid spend specifically for research from under £400 million in 2015 to over £1.2 billion in 2021. UKCDR firmly believes that research across disciplines and in partnership with low and middle income countries is essential to drive global development progress. This changing funding landscape provides a fantastic opportunity to address the global goals through generation of knowledge.

#### **History**

The UK Collaborative on Development Sciences (UKCDS) was established in 2007, in response to a House of Commons Science and Technology Select Committee inquiry into the use of science in international development. In March 2015, the UK government reaffirmed its commitment to spend 0.7% of its Gross National Income on Official Development Assistance (ODA). Since November 2015, it has taken a whole of government approach to its international development effort, leveraging wider expertise through the UK's world-leading science, research and development base to tackle global problems.

While the Department for International Development (DFID) is still the main delivery channel, more ODA funding for research and development is now administered by other departments to draw on their complementary skills. Given this new approach, and the uplift of ODA research funding in departments other than DFID, in July 2016 the House of Lords Science and Technology Committee recommended the creation of a coherence and coordination mechanism for government ODA-research funds. Following this recommendation, the Strategic Coherence for ODA-funded Research (SCOR) Board was established in 2017 to provide high-level coherence for UK ODA research. In June 2018, UKCDS rebranded to the UK Collaborative on Development Research (UKCDR) to reflect this diverse and changing landscape, with our new vision and aims under the strategic direction of the SCOR Board.



# Disaster and Development Network, Northumbria University

The Disaster and Development Network (DDN) through its research aims to develop teaching, learning, knowledge and skills to address hazards, disasters and complex emergencies. The Network facilitates research in disaster risk reduction, sustainable development and resilience building. It also addresses human security and wellbeing for individuals, groups and institutionally in contexts of current and potential crises.

In 2000, Northumbria University launched an acclaimed postgraduate programme in Disaster Management and Sustainable Development followed by the establishment of a Disaster and Development Centre until 2012 and becoming the Disaster and Development Network (DDN). This work has included research and education collaborations with stakeholders, including DFID, EU, World Bank, WHO, UNHCR, UNICEF, Research Councils, ELRHA and other local, national and regional actors. The network is made up of staff at Northumbria University together with affiliates from institutions internationally. Its research and engagement spans:

- Disaster Resilience and Human Security including; People Centred Disaster Reduction, Disaster Education and Communication, Sustainable Livelihoods, Natural Resources Management, Rights Based and Conflict Risk Reduction Approaches.
- Health Centred Disaster Risk Reduction including; Health Security, Infectious Disease Risk Management, and Integrated Food and Livelihood Security.
- Wellbeing in Disaster and Development including; Community Mental Health and Wellbeing, Social Care in Disaster and Development, Gender and Disaster, Migration and Displacement.
- Disaster Response and Adaptation including; Integrated Emergency Management, Energy Security, Relief and Restoration and Climate Change Adaptation.

Academic staff and affiliates connected to the Network have international research and engagement profiles, meaning that students studying the **MSc Disaster Management and Sustainable Development** and its associated studies become part of a global community, maximising potential for a career upon graduation through the contacts encountered. In 2012 the then Disaster and Development Centre (DDC) also launched the process of a multi-institution Disaster and Development Alliance (DDA) of institutional networks supported by then MPs, MEPs and several of the UK's academic and NGO entities including an early initiative to identify 'champions of change'. Early in its evolution this process subsumed alongside other initiatives leading to the establishment of the UKADR nationally and the Global Alliance of Disaster Research (GADRI) at world level.

As part of its mission to enhance integrated disaster and development initiatives worldwide a Dealing with Disasters Series of conferences was started in 2006 based on its hosting of several



successful pre-events in preceding years. The **Dealing with Disasters** series has comprised the following conference themes to date:

- 2006: 'Planning Response and Investigation' (UK)
- 2007: 'Resilience, Response and Investigation' (UK)
- 2008: 'Putting Resilience into Response' (UK)
- 2009: 'Resilience through Local Governance' (Nepal)
- 2010: 'Linking Disasters and Development: the next 10 years' (UK)
- 2011: 'Reflections on Recent Disasters: the last 10 years' (UK)
- 2013: 'From Opportunity to Action: Bridging the Gap between Disaster Reduction and Development through Science(s), Technology and People Centred Actions' (UK; jointly with IDRiM Society)
- 2014: 'Building Disaster Resilience is Everybody's Business' (South Africa)
- 2015: 'Health Centred Disaster Risk Reduction: a new agenda for a new era' (UK)
- 2016: 'Conflict Prevention, Post-Conflict Transformation, and the Conflict, Disaster Risk and Sustainable Development Debate' (Sierra Leone; jointly with IPRA)
- 2017: 'The Impact of Hazard, Risk and Disasters on Societies' (UK; jointly with Durham IHRR)
- 2019: 'New Points of Departure in Transitioning Disaster Reduction and Sustainability Challenges' (UK; jointly with UKADR, DRG, GCRF, UKCDR)

The DDN also supports a further initiative emergent at local levels on the Youth Voice in disaster and development, also referred to as the Youth Voice in Disaster Risk Reduction, in climate and variously. At the home of the DDN in Northumbria this is expressed as an entirely student owned **Disaster and Development Society (DDS)**.

The DDN is hosted by the Department of of Geography and Environmental Sciences which is situated within the Faculty of Engineering and Environment of Northumbria University. Northumbria University is committed to delivering ground-breaking interdisciplinary research which is responsive to the needs of society and communities, both nationally and internationally. It has invested considerably in eight new Multidisciplinary Research Themes, all of which seek to orient to addressing the world's grand challenges including Environmental and Global Justice, Extreme Environments, Integrated Health, Bio-Economy, Future Engineering, Digital Living and Critically Aware Design Innovation. These and the Universities overal commitment to **Take on Tomorrow** <u>www.northumbria.ac.uk</u> resonate well with disaster and development research, policy and practice going forward.



# 7 Host Organisation Contact Information

Conference website:www.northumbria.ac.uk/dwd2019Email:sz.dwdconf@northumbria.ac.uk

Northumbria University Disaster and Development Network (DDN) Department of Geography and Environmental Sciences, Faculty of Engineering and Environment, B308, Ellison Building, Newcastle upon Tyne NE1 8ST, United Kingdom

Telephone: +44(0)191 227 4215 Website: www.northumbria.ac.uk/ddn

# 8 Maps







