Annual Report 2022

Edited by Sarah Jeal, Peter Sammonds and Xiao Han

www.ucl.ac.uk/risk-disaster-reduction
The UCL Institute for Risk and Disaster Reduction (IRDR) was launched in 2010 with a mission from the Provost to lead transdisciplinary research, teaching and knowledge exchange in risk and disaster reduction in the UK and internationally. In those 12 years, economic globalisation has gone into retreat with increases in protectionism and economic nationalism, heightening tensions between economic blocks as Phil Mullan has pointed out (spiked, 7/3/22). According to the World Trade Organization, protectionist measures are now imposed on 10% of trade by G20 countries – up ten-fold since the 2008 global financial crisis. While COP-26 in many ways was a success, in other fields international co-operation is in retreat.

Coordination of a global response to the Covid-19 pandemic was largely ineffective according to a World Health Organization (WHO) report that blamed the inadequate leadership by the UN, G7 and G20. The WHO itself was embroiled in disputes over its independence and unable to lead a global response. Geopolitics stops any resolution of the Rohingya Exodus. The invasion of Ukraine by Russia may set a pattern for increasing global conflict between rival blocks. The war again has shown the weakness of international institutions to prevent it.

The IRDR has increasing developed its research and public engagements in conflict and disasters, forced migration driven by conflict and environmental change, and humanitarian action. So the launch in 2021 of our Global Humanitarian Studies BSc programme, an exciting multidisciplinary programme that aims to educate and train future generations of humanitarian leaders in the theory and practice of humanitarian action, is an important step. We believe there is a real need for such a programme. Sixty students from 24 countries joined this international and internationalist programme. With the launch of the BSc, the IRDR has gone through an unprecedented expansion. Ten academic and teaching staff joined the IRDR this year, taking us to 22 in total. But this has also been my last year as IRDR Director, a post I have held since 2010 when we launched with a just two staff. Dr Joanna Faure Walker, our first academic appointment in 2011, will now take over as Director and Head of Department in September.

Our mission remains to develop the IRDR themed around disaster resilience, cascading crises, natural hazards, humanitarian crisis response, conflict and migration, climate change adaptation, health emergencies, and gender responsive resilience, in order to integrate education, research, innovation and enterprise for the long-term benefit of humanity. There is so much work to be done. If our vision appeals to you, we welcome you to join us: www.ucl.ac.uk/risk-disaster-reduction

Peter Sammonds
Director and Head of Department, UCL Institute for Risk and Disaster Reduction
Below we highlight some of the developments and achievements within the IRDR during 2021–22:

- Global Humanitarian Studies BSc started in September 2021 with 60 students. Half of BSc students are international students coming from 24 countries.
- In an unprecedented expansion of the IRDR, we are delighted that Dr Philip Cunliffe has joined us as Associate Professor, Drs Sonja Ayeb-Karlsson, Roberto Gentile, Estella Carpi, Lisa Danquah, Saman Ghaffarian, Ting Sun, Yasmine Sabri, Megnaa Mehta and Aeron O’Connor as Lecturers and Victoria Maynard as Teaching Fellow. Pamila Bhatia and Afsana Begum joined us as professional service staff.
- IRDR Master's programmes continue their popularity with 90 students.
- Moved back to in-person teaching from hybrid teaching with most students returning to London.
- Professor David Alexander, Professor Ilan Kelman, Professor Maureen Fordham and Dr Bayes Ahmed have been listed in the world’s top 2% of scientists in their respective fields.
- Professor David Alexander completed ten months Specialist Adviser to the House of Lords Select Committee on Risk Assessment and Risk Planning.
- Launched the Warning Research Centre as a joint centre with the Department of Science and Technology Studies.
- Congratulated Claudia Sgambato, Gillian Dacey, and Justine Uyimieshi, graduating with PhDs, whilst welcoming Christiana Iliya, Ava Sullivan, Aimee Colgate, Zerong Li, Umut Lagap, Musaad Almuthaybiri, Zhu Yu, Dan Thompson and Mhari Gordon as new IRDR research students.
- More than 400 participants attended IRDR online events.
- Published over 130 papers and articles
A key aim of the IRDR is to engage in public debate on issues in risk and disaster reduction, creating a space for academic discourse in the public policy and political arenas, and raising the profile of UCL.

To achieve this, we organise discussion meetings, lectures, symposia and an annual conference open to the UCL community and the general public, as well as organising workshops with local communities as part of our research projects and participating in external public engagement events.

With the new Global Humanitarian Studies BSc now under way, we have continued to engage with Year 12 students, their parents and teachers, and welcomed applicants to a series of special events. We have held a number of taster days for prospective students to give them a taste of the degree programme, the sector and the IRDR. We have also worked with secondary schools and hosted an event for more than 100 East London secondary school pupils as part of Careers Week 2022.

Our 2021/22 monthly Master’s seminar series, which is livestreamed to our YouTube channel, has covered a broad range of topics including a sociological perspective on Covid-19 by Dr Frank Furedi, natural flood management (NFM) by Dr Megan Klaar, and crisis communications in a multi-lingual setting by Professor Federico M. Federici.

Our public engagement programme has been enhanced through events hosted in collaboration with other partners. In September, the Space Health Risks Research Group hosted a symposium exploring the interrelations between space health, disaster risk reduction and other related topics. For World Water Day in April, Dr Mohammad Shamsudduha chaired a seminar on the role of groundwater in securing water supplies in South East England with the South East and London (SEAL) Water Alliance. In May, we co-hosted the UK Shelter Forum with the Norwegian Refugee Council for a full-day conference on shelter and climate change.

Public Events in 2021-22

- In June 2021, we held our two flagship events online. First, the IRDR Humanitarian Summit on Interrogating changing risks, which focused on how climate change, conflict and other global phenomena are shaping both the humanitarian sector and humanitarian studies as a field of research and teaching, and vice versa.
- The IRDR 11th Annual Conference on Why Warnings Matter followed, with keynote speaker Mami Mizutori (United Nations Office for Disaster Risk Reduction (UNDRR)) launching the UCL Warning Research Centre.
- In September 2021, the Space Health and Disaster Risk Reduction symposium explored the interrelations between space health, disaster risk reduction and other related topics.
- In May 2022, the Humanitarian Institute Evening Conference asked whether the humanitarian shelter sector is ready for the impacts of climate change, and how it can respond.
- In June 2022, the UCL Humanitarian Summit will consider human displacement in the context of extreme weather events and climate change.
- The 12th Annual Conference will be themed around disaster risk, loss and damage and action in the focus of climate change, with keynote speakers Professor Lucy Easthope and Ugandan climate justice activist Vanessa Nakate.
- In addition, monthly seminars and many of these public events were made freely available on YouTube: www.youtube.com/c/IRDRUCL/
In the IRDR, we aim not only for our research to advance understanding and knowledge in the area of risk and disaster reduction, but also for those findings to have an impact on reducing those disaster risks in the real world.

Professor David Alexander was Specialist Adviser to the House of Lords Select Committee on Risk Assessment and Risk Planning. He has also been working for the UK Cabinet Office and the National Preparedness Commission and testified to the House of Commons Select Committee on the Use of Defence Resources During the Pandemic. Further, he has been a member of the EU Advisory Committee on Crisis Management and has written a report for the Council of Europe.

Dr Mohammad Shamsudduha has contributed to the recently published Sixth Assessment Report of the Intergovernmental Panel on Climate Change and the UN’s World Water Development Report 2022 on Groundwater: Making the invisible visible. Dr Bayes Ahmed continues working closely with the Bangladesh Meteorological Department (BMD) and other implementing stakeholders to institutionalise landslide early warning systems in Bangladesh. He has also produced, published and widely disseminated Bangladesh’s first ever cartoon booklet on creating landslide disaster risk awareness among the primary school children of the Chittagong Hill Districts. The work of Rozana Himaz and Mohamed Shamsudduha featured in two REF2021 impact case studies.

From the Centre for Gender and Disaster, the GRRIPP project provided concrete support to their awardee, the Instituto Mulheres das Amazônia (IMA), by financing the administrative regularisation of one of their members, the Association of the Traditional Midwives of the Forest, in the Amazon region. This will allow them to apply for funding and build partnerships for a better sustainability of their activities. There was also policy impact through supporting their demand to the local council to provide them with an office space. Louisa Acciari co-organised the first Latin American Congress on Domestic Work with the RITHAL network, attended by over 100 participants from both the academic and activist worlds.

The IRDR maintains a high-profile media strategy, providing both immediate comment during disasters, and features for documentaries and magazines.

IRDR staff provided expert commentary on the evolving Covid-19 pandemic and its impact, the international political effects, the consequences of lockdown, and digital epidemiology.

In the wake of COP26 and the UN’s Intergovernmental Panel on Climate Change (IPCC) report published in February, staff have been interviewed in the press, published commentaries and appeared on podcasts to

early warning systems in Bangladesh. He has also produced, published and widely disseminated Bangladesh’s first ever cartoon booklet on creating landslide disaster risk awareness among the primary school children of the Chittagong Hill Districts. The work of Rozana Himaz and Mohamed Shamsudduha featured in two REF2021 impact case studies.

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At IRDR Enterprise and Innovation, we are motivated by our passion for bridging the gap between academia and practice.

Dr Gianluca Pescaroli devised and ran a masterclass with the United Nations Office for Disaster Risk Reduction (UNDRR) and The Resilience Shift on stress testing for infrastructure resilience. The event was attended by more than 100 practitioners from multiple sectors across the globe and was the pilot for a future series of similar professional workshops.

The UCL IRDR Centre for Digital Public Health in Emergencies (dPHE)’s Zika project (real-world deployment of mobile surveillance app for early warning with local public health authorities in Brazil) and award-winning GADSA (real-world prescription app with impact on behaviour change evaluated in surgeons in three hospitals in Nigeria) are excellent examples of research impact of changing health outcomes through innovative technology. Both these projects have been expanded this year, with the Zika project now extended to Madeira, Portugal to monitor mosquito populations in the island in collaboration with the local university and Regional Health Directorate. GADSA is being localised and evaluated in the NHS in the UK. The award-winning My Lockdown/Activity Journal app (helping citizens to improve their wellbeing through journaling in lockdown periods and throughout the pandemic) has been also piloted with citizens living with obesity to support involvement in physical activity.

Careers and Students

At UCL IRDR, we provide our students with not only academic excellence but also practical knowledge and training to support their career development.

As part of our Enterprise events series, Emily Warburton-Brown (Risk, Disaster and Resilience MSc 2015–17), led a career-focused session on how business continuity is managed in commercial estates such as Canary Wharf and the London Metal Exchange. We also welcomed Kirsty Johnson and Kristen Krystowski (both Risk, Disaster and Resilience MSc, 2019–20), who shared their experiences of working in the public sector in the UK and USA. Students also attended a workshop on entrepreneurship in the humanitarian sector, which encouraged them to identify and develop entrepreneurial skills that could be employed across a range of sectors and careers.

We held the annual IRDR Careers and Opportunities Fair on campus again. Specifically targeted at opportunities in risk and disaster reduction, recruiters, students and alumni find this event useful for making connections with each other and finding out more about the opportunities available throughout the sector. We also offered networking opportunities at our conferences and hosted the IRDR Alumni Mixer event, where current students and alumni can meet, share experiences, and help build the global IRDR network. We are proud to see so many of our Master’s students prospering in careers. Recent graduates have found jobs in government departments such as the Cabinet Office and FEMA, companies such as Amazon, PwC and RMS, and NGOs such as British Red Cross, while others have gone on to further study.

"The Careers and Opportunities Fair has really helped my career path, given me a vision and helped relight my passion for this sector."
Ayala Trinder, Risk, Disaster and Resilience MSc
The Humanitarian Institute is a UCL Provost’s Strategic Initiative, launched at the 2017 UCL Humanitarian Summit. Its mission is to mobilise UCL’s research, expertise and teaching to impact global humanitarian challenges and to promote education for global citizenship. It is led by Professor Peter Sammonds, Dr Bayes Ahmed and Dr Rosanna Smith.

Research

With research funding from the British Academy, the Royal Society, and UCL’s Global Challenges Research Fund allocation, Professor Sammonds and Dr Ahmed are building a growing research team investigating the historical and contemporary perspectives of Rohingya journeys, their experiences of gendered violence, and ensuring resilient futures for the Rohingya stateless people. Dr Ahmed is working with the University of Dhaka and partners in Bangladesh to develop and institutionalise the country’s first landslide early warning system. He is also leading a project, supported by UCL’s Global Engagement Funds, to initiate the "Disaster Displacement Research Hub" in partnership with the Internal Displacement Monitoring Centre (IDMC).

Teaching

Following an exercise in the summer of 2018 to map existing teaching at UCL in humanitarian issues, we found that UCL has a strong suite of thematic Master’s programmes that cover a range of aspects of humanitarian studies, and that there were many undergraduate modules that address or could be applied to humanitarian issues and contexts. However, there was no existing undergraduate programme to bring this together, yet there was an identified need from employers for undergraduates trained in this area. It is also an area that we believe many aspiring UCL students would like to pursue. As a result, we proposed a new UCL undergraduate degree in Global Humanitarian Studies, which was subsequently approved by UCL in October 2019. Since April 2020, we have organised more than 80 virtual and in-person events related to BSc promotion and recruitment (e.g. taster lectures, subject talks, offer-holder events, and open days). We recruited more than 60 undergraduate students in the first cohort in September 2021 and will be welcoming the second cohort of students in September 2022. We invite students, teachers, educational professionals, practitioners, diplomats and employers who are interested in being involved to get in touch. Find out more about the BSc on page 13.

Humanitarian public events

We run public events with the aim of providing a platform to develop humanitarian themes and networks. Despite the Coronavirus pandemic restrictions, we ran and have organised a number of events:

- Academics at Risk – the 1971 Dhaka University Genocide in Bangladesh, July 2022
- UCL Humanitarian Summit, June 2022, on the theme of Human displacement in the context of extreme weather events and climate change
The Centre for Gender and Disaster (CGD) is a trans-disciplinary research centre aiming to develop awareness of and responsiveness to gender in humanitarian contexts, through excellence in research and teaching.

The CGD team, together with their UK and international partners, have been working hard on GRRIPP Gender Responsive Resilience and Intersectionality in Policy and Practice, UKRI Collective Fund award 2019–2023 www.grripp.net. This project aims to disrupt mainstream development discourse on gender and intersectionality and to support resilience and capacity development in South–South, South–North and North–South collaborations.

Throughout 2021 and 2022, the GRRIPP project team have managed disruption to their plans because of the COVID-19 pandemic and also from the UK Government cuts to development assistance and the cuts in grants with an ODA funding component, such as GRRIPP. However, the project has bounced back and now has 22 commissioned projects underway or completing across its three regions: Africa, Latin America and Caribbean and South Asia. More are planned in the remaining time of the project. We also curated five online events on Engaging with the Feminist City www.grripp.net/copy-of-events and an e-magazine on this will be coming out soon.

Two Centre staff (Louisa Acciari and Nadia Jackson) have been working with the GRRIPP LAC team on have designed and delivered a three-day training in project management, attended by 20 women from the Amazon region, for one of the GRRIPP funding’s awardee, the Instituto Mulheres da Amazônia.

The Centre also has two other projects running currently:

- RiskPACC Integrating Risk Perception and Action to enhance Civil protection-Citizen interaction, 2021–2024, EU Horizon 2020 Framework Programme www.riskpacc.eu (Co-I Maureen Fordham); and

- Who Cares? Rebuilding Care in a Post-Pandemic World 2022-2025, (UK PI Louisa Acciai), which will analyse six countries with differing welfare regimes, level of inequalities, social organisation of care, and health systems in Brazil, Canada, Colombia, France, United Kingdom and United States funded by the Trans-Atlantic Platform, Social Sciences and Humanities.

The Centre for Gender and Disasters www.ucl.ac.uk/rdr/cgd has produced a number of publications and communications including academic journal articles, blogs and the very successful Reference Guide on Gender and Disaster Series www.gdnonline.org/resources in collaboration with the Gender and Disaster Network.
Since 2020, the dPHE team has expanded initiatives to combat the COVID-19 challenge and won a number of prestigious awards and prizes.

This year, we have expanded our MEWAR and GADSA initiatives to new countries. Our current projects include:

- **ZIKA MEWAR Project**: a mobile app improving surveillance of mosquito populations workers and web app for managers to combat ZIKA virus in Brazil and newly in Madeira, Portugal
- **GADSA**: decision support mobile gamified app for antibiotic prescription behaviour change in Nigeria, and newly in the NHS, UK
- **DR-TB**: decision support app to empower doctors in South Africa to manage drug resistant Tuberculosis (DRTB)
- **My Activity Journal**: a wellbeing app and research project and app launched in response to COVID-19 and was piloted with users living with obesity
- **iNRIC**: International Resource for Infection Control – an invaluable resource for health and infection control professionals globally
- **Zoom or not to Zoom**: longitudinal survey of citizens lifestyle changes since the March 2020 lockdown, continues with peer-review publications
- **VAERS adverse reactions to COVID-19 vaccination study**

In addition to our award-winning research project, the dPHE Centre is sharing a passion for digital global health through postgraduate teaching and student supervision, dPHE public engagement, Frontiers in Digital Public Health journal, Conference for Digital Public Health, along with our newsletter and growing followers on social media.

The third anniversary event on 6th July 2022, “One Health in the era of Global Warming”, will bring together the international experts from the MEWAR project in Brazil and Portugal, speakers from UCL, EcoHealth Alliance, Imperial College, and more.

**UCL Warning Research Centre**

The UCL Warning Research Centre (WRC), a joint venture between IRDR and UCL’s Science and Technology Studies, is unique in bringing together global expertise to explore the role of warnings in managing vulnerabilities, hazards, risks, and disasters.

Founded in 2020, the WRC brings together expertise already established at UCL with warning expertise at universities globally to work with businesses, government, nongovernmental, and intergovernmental organisations to address the growing need for effective warning and alert systems via cutting-edge research, policy guidance, applications, and collaborative expertise. WRC transforms research into warnings and alert solutions by being strongly interdisciplinary and innovative. The WRC has 25 core members from across UCL and 28 affiliates from all over the globe, bringing a wealth of expertise to the Centre. In 2022, the WRC has run webinars, hosted interns, embarked on several new research projects, and launched the report “Enhancing Warnings” for the UK’s National Preparedness Commission.
The IRDR Cascading Disasters Research Group has been very active in the last year, as a consequence of the increased awareness of cascading effects and systemic risks caused by the COVID-19 pandemic.

The group contributed to impact-oriented publications including the 2021 UNDRR/ISC Sendai Hazard Definition and Classification Review Technical Report (definition of power outages/blackouts by Pescaroli and Galbusera 2021), and the 2022 UNDRR GAR (Pescaroli et al. 2022). There has been an increased work focus on stress testing critical infrastructure toward the promotion of a new masterclass in partnership with UNDRR and Resilience Shift held in December 2021 and new collaborations with research groups in the United States (see Linkov et al. 2022).

Moreover, the group is continuing to develop its strategic collaboration with the colleagues of IRIDeS at Tohoku University (see Suppasri et al. 2021) and the Joint Research Center of the European Commission (Pescaroli et al. 2021). New members include the appointment as visiting professor at IRDR of Mr Ewan Haggarty and Dr Chris Needham Bennett to maximise the leverage of this research cluster.

UCL Space Health Risks Research Group is a multidisciplinary community of researchers and practitioners who investigate health in space to benefit life on Earth.

During the past year, the group has grown to a global membership of more than 30 people. There are a variety of projects; however, the most ambitious being an analogue space research mission – the first simulated space mission in the UK. The mission simulated the human exploration of another planet, during which realistic healthcare scenarios (based on our 2021 symposium) were enacted as case studies. The simulation was achieved by the mission taking place on a remote and uninhabited island in Scotland. The analogue astronauts, who are a variety of healthcare practitioners or first aiders, provided care to the simulated patients during the mission, knowing that there was no resupply of (simulated) medical equipment and no option for evacuation.

The research group and UCL Centre for Outer Space Studies won funding for an artist-in-residence, who attended the mission and designed the mission badge (below). The mission took place 20–23 May 2022.
Education and Training

Education and training are part of the core mission of the IRDR: We develop leaders and experts in disaster risk reduction and humanitarianism research, education, and practice.

We have established teaching in hazards, risk, resilience, and disaster risk reduction as an integrated discipline as well as global humanitarian studies at UCL. In 2021–2022 we have run three Master's programmes with 90 Master's students and welcomed 60 undergraduate students in the inaugural intake of the Global Humanitarian Studies BSc.

We are committed to teaching excellence; fundamental to our Master’s teaching and learning environment are multidisciplinary and holistic viewpoints, research and evidence based approaches, and interactive and inclusive teaching and learning. As in previous years, our teaching methods and diverse student body brought a richness to in-class discussion and debate, challenging us all to think, analyse, question and progress.

We have several successes through awards, award nominations and Higher Education Authority (HEA) Fellowship recognition. For this year’s MAPS Faculty Education Awards, Dr Punam Yadav won an Individual Award for Innovation and transformation and has been nominated for a Provost Education Award in this category, while Dr Joanna Faure Walker achieved Highly Commended for Individual Excellence. Elsewhere, IRDR staff were also recognised with nominations in the UCL Student Choice Awards, which are run by the UCL Students’ Union. We received nominations, as voted by students, in Active Student Partnership for Dr Bayes Ahmed, in Exceptional Feedback for Drs Joanna Faure Walker and Mohammad Shamsudduha, and in Inspiring Teaching Delivery for Professor Ilan Kelman.

In addition, we congratulate Dr Joanna Faure Walker for achieving the status of Senior Higher Education Fellow. We look forward to continuing to deliver teaching and learning excellence in 2022–2023.

Doctoral Training

The IRDR has a well-established and respected Doctoral Research Centre, with over 30 PhD research students who conduct interdisciplinary, wide-ranging, and international research.

From migration to healthcare, and emergency management to seismic and flood hazards, our PhD programme in Risk and Disaster Reduction generates extensive UK and international interest. All of our doctoral candidates contribute to the vibrancy of IRDR life and support the IRDR's mission. Many of our PhD students have supervisors from different disciplines and from different universities, extending their knowledge, networks, and contributions. Some work part-time for governments, nongovernmental organisations, and businesses.

Our PhD training programme – including participation in the IRDR PhD Student Forum, Spring Academy, and Annual Conference – fosters a new type of graduate student who is comfortable working across sectors. We also continue our fortnightly Wednesday Discussion Forums and weekly IRDR Coffee meetings.
Our graduates can benefit from the core themes taught across all our programmes as well as the programme-specific topics across our taught postgraduate courses.

All the IRDR Master's programmes cover four central themes:

**Understanding Vulnerability**
Covering topics from fragility curves describing damage of buildings to social vulnerability of individuals and society.

**Quantifying Risk**
- What is risk and how do we measure it?
- Components of risk: exposure, hazard, vulnerability.

**Multidisciplinary Holistic Approaches: Theory to Practice**
- Integrating scientific knowledge into disaster risk reduction research, policy and practice.
- Communicating with stakeholders.

**Managing Disasters**
- How to apply plans to manage real emergencies.

Our programme-specific themes cover a range of additional topics:

**Risk and Disaster Reduction MRes:**
Evidence-based research
- Identify current questions in the field of risk and disaster reduction.
- Learn how to conduct research.
- Develop detailed studies to propose solutions.

**Risk, Disaster and Resilience MSc:**
Physical and Social Science of Natural and Anthropogenic Hazards
- What is known and unknown.
- Current research and uncertainties.

**Building Resilience**
- What are the barriers to risk and disaster reduction and how do we overcome them?
- Developing a common language to communicate complex concepts in an accessible way.

**Risk, Disaster and Resilience MSc: Management Pathway**
- Integrating management theory to plan for disasters.

**Risk and Disaster Science MSc:**
**Science of Earth and Space Hazards**
- Analysing different hazard risks: seismic and triggered events, space weather, epidemics, conflict and climate.
- Scenarios and case studies drawn globally providing breadth of experience.

**Statistical and Modelling Tools**
- Statistical treatment of risk.
- Bringing together data and theory.

**Scholarships**
The IRDR awarded one full-fee and ten fee-reduction scholarship awards to MSc and MRes students studying in the 2022/23 academic year.
The IRDR BSc programme in Global Humanitarian Studies is unique in the UK. This multidisciplinary programme aims to educate and train future generations of humanitarian leaders and researchers in the theory and practice of humanitarian principles and action.

The breadth and multidisciplinary nature of the programme means that we recruit students across the humanities, natural and social sciences, geography, mathematics, business studies, economics, and computing. We welcomed our very first cohort of students to the 2021–22 academic year. The BSc students have come to us from diverse academic and cultural backgrounds as they represent 25 nationalities.

The core competencies of the Global Humanitarian Studies BSc programme are based on a framework developed through an on-going process of consultation with global and national employers in the humanitarian sector, and with international researchers and practitioners. Humanitarian organisations and employers have emphasised the need to professionalise the sector. Our Global Humanitarian Studies BSc programme covers research-led academic teaching and skill development through core and specialisms optional modules. The core modules include broad-ranging subject areas including humanitarian history, understanding and analysis of humanitarian crises, conflict, disaster, migration, natural hazards and climate risks, humanitarian policy, legal framework and aid economics, emergency and crisis response, communications, quantitative and qualitative research methods and managing projects, and ethical, historical, and political contexts. Our specialism optional modules aim to train students in a broad spectrum of soft and technical skills grounded in theory and practical examples from around the world. Humanitarian specialism pathways include social anthropology, management, digital science and global health.

Humanitarian organisations and employers have emphasised the need to professionalise the sector. The core skills in the degree programme are based on a framework developed through on-going consultation with global and national employers in the humanitarian sector. Our extensive networks give students access to practitioners across the sector.

Career opportunities in the sectors:

• National and local government agencies
• International organisations
• Inter-governmental organisations
• NGOs and charity organisations
• International consultancies
• Private sectors
• Humanitarian enterprises

BSc students’ home countries
Research Achievements

Our public engagement, research impact and graduate teaching are underpinned by excellent academic research.

In the last year, IRDR researchers have produced over 130 publications, had work translated to Chinese, presented at leading international conferences, been invited to speak at prestigious academic institutions, organised international meetings and conferences and have won distinguished awards and substantial research funding.

Most of the challenges to research and field work experienced in the previous year due to the Covid-19 pandemic eased in 2022 and we were delighted to double our number of academic and research staff through new appointments. The range of expertise now covered by the IRDR extends to human rights law, economics, humanitarian logistics, meteorological hazards, catastrophe risk modelling and geospatial science.

Professor David Alexander was recently appointed Visiting Professor at Yamaguchi University in Japan. Ilan Kelman joined the editorial board of Tourism Geographies. Punam Yadav has been appointed as the Section Co-Chair of the Feminist and Gender Studies Section (FTGS) of the International Studies Association (ISA), (2021-2023) and as an advisor for a national level research-based NGO in Nepal called Centre for Social Change, Kathmandu, Nepal.

Estella Carpi won the UCL Research Culture Award 2022 for “Transnational Healthcare Networks from the Middle East to the Americas”.

In 2021–22, the IRDR continued to see success in securing research funding with academic and research staff winning several funding awards:

- Louisa Acciari won the T-AP Recovery award, £310k for “Who cares? Rebuilding care in a post-pandemic world”, in partnership with universities in Brazil, Canada, Colombia, France and the UK.
- Louisa Acciari secured the LASA Special Grant, US $ 12.5k to support the organisation of the first Latin American Congress on Domestic Work (12,500 USD), event held from 26 to 28 March 2022.
- Patty Kostkova won an EPSRC IAA grant : GADSA for the NHS (Gamified Antimicrobial Stewardship (AMS), follow on grant 2022, £100k.
- Supporting the building of a stronger relationship between the IRDR Centre for Gender and Disaster and Tohoku University, Maureen Fordham and Punam Yadav secured £10k from UCL-Tohoku University Strategic Partner Fund.
- Rozana Himaz brought in as co-I, £45k, for the project ‘Future Indonesian Tsunamis: Towards End-to-End Quantification of Risk’ co-funded by the Lloyds Tercentenary research Foundation and the Lighthill Risk Network.
- Mohammed Shamsudduha won as PI, £20k, NERC award for ‘Climate change and adverse pregnancy outcomes: a data-driven global-scale investigation’ and as co-I, £10k, UCL Grand Challenges award for “Advancing and sustaining progress towards UN SDGs in African drylands – crossing disciplinary and international boundaries”

Louisa Acciari presenting the GRRIPP Network.
Credit: Lucas Maná, IMA
Dr Bayes Ahmed is Lecturer in Risk and Disaster Science. He is establishing a globally unique and pioneering research hub in collaboration with the Internal Displacement Monitoring Centre (IDMC). It will focus on the complex nexus between climate-induced migration, disaster risk reduction (DRR) and sustainable development. The principal aim of his ongoing research is to help build resilient futures for the Rohingya refugees and local host populations in Cox’s Bazar district, Bangladesh, through research and practical solutions to reduce hydro-meteorological disaster risks, particularly landslide risks. Specific objectives of the research are: 1) Develop effective DRR tools of landslide susceptibility maps and a dynamic landslide early-warning system (LEWS) at a local scale. 2) Improve awareness in vulnerable communities and strengthen capacity of Cox’s Bazar authorities in order to inform policy makers and practitioners on long-term strategic planning with short-term preparedness.

Professor David Alexander is Professor of Risk and Disaster Reduction. His research throughout 2021 has primarily focussed on cascading disasters and the development of theory and practice in DRR. This has included work to improve policy in organising civil protection systems. David has recently published papers, book chapters and reports on critical infrastructure, cascading impacts, the role of evidence in DRR, disasters and people with disabilities, and emergency preparedness. Forty years after the 1980 southern Italian earthquake he wrote an autoethnographical study of his experiences of this event, which was published in a commemorative book in 2021. His most recent book on emergency planning is currently being translated into Chinese by the Government of the People’s Republic. During 2021, David was Specialist Adviser to the House of Lords Select Committee on Risk Assessment and Risk Planning. He has also been working for the UK Cabinet Office and the National Preparedness Commission. He continues his strong collaboration with other Japanese institutions, including Tohoku University in Sendai and his visiting professorships in Sweden and Portugal.

Estella Carpi is Lecturer in Humanitarian Studies. Estella’s interests include identity politics and humanitarianism; urban humanitarianism and South–South humanitarianism. Between 2017 and 2022, she has worked as a Research Associate in

Cartoon booklet for creating landslide disaster risk awareness among primary school children in Bangladesh

Photograph: Prof. David Alexander and the tsunami wall at Miyako, Iwate Prefecture, Japan.
Dr Gianluca Pescaroli is Lecturer in Business Continuity and Organisational Resilience. His research investigates how to build and improve the ability to maintain operations during disruptive events, how to minimise their impacts, and how to increase the resilience of the public and private sectors. This includes learning to understand complex challenges, such as cascading risks, critical infrastructure failures, and compound dynamics.

His current research involves stress-testing scenarios for operational continuity and resilience, including concurrent and cascading risk, and hybrid threats. He is collaborating with research groups in the United States, Europe, and Japan. In the last year, Gianluca had an increased visibility being featured by BBC, and being invited speakers in major events including, for example, the DRI Resilience Excellence Summit (USA), World Humanitarian Forum (UK), International Society for the Integrated Disaster Risk Management (Japan), CIR resilience series (UK). Gianluca had also guest lectures at the EBS business school (Germany), the University of Virginia (USA), and University of Bologna (Italy). His key achievement included the development of a Masterclass on stress testing critical infrastructure resilience in Partnership with the UNDRR and Resilience Shift, while he is exploring further collaborations to maximise the impact and enterprise engagement of our department.

Professor Ilan Kelman is Professor of Disasters and Health and has a wealth of experience including integrating climate change into both, through (i) disaster diplomacy and health diplomacy and (ii) island sustainability for safe and healthy communities in isolated locations including the polar region. His research programme combines disaster research and health research, including the integration of climate change challenges and opportunities into both topics. Two main locations are priorities: islands and archipelagos, and the poles,
so the Arctic and the Antarctic. Specific research questions relate to three main areas. First, disaster diplomacy and health diplomacy including the role of science diplomacy. Second, how climate change will impact physical, mental, public, and environmental health. Third, how to better connect sustainability and development topics, including health, disasters, and climate change. Intersections occur with island studies, tourism research, polar research, gender studies, and disability studies among other topics. 2021–2022 highlights are publishing a new edited book *Antarcticness* with UCL Press, co-editing the book *Small Island Developing States: Vulnerability and Resilience under Change*, and launching the report *Enhancing Warnings*, led by by Dr Carina Fearnley who directs the Warning Research Centre, the UK’s National Preparedness Commission. A new research project is Land Body Ecologies as the Wellcome Trust’s Hub Award examining intersections of environmental change, violence, and mental health. He aims to continue to bridge gaps to bring together people, sectors, and topics for working with all of us experiencing health and disaster challenges.

Ilan’s popular science book ‘Disaster by Choice’ (Oxford University Press) was released in paperback.

Dr Jessica Field was Lecturer in Humanitarian Studies, 2020–2021 and is now a Research Fellow. Her research project is Gender Responsive Resilience and Intersectionality in Policy and Practice (GRRIPP). GRRIPP is a global collaboration and knowledge-exchange project led by Prof Maureen Fordham that promotes a gender-responsive approach to disaster management and development. On GRRIPP, Jessica works with global partners on research communication and dissemination. Jessica’s research interests include humanitarian policy, humanitarian history, and social science research methods and ethics. She has worked for the past five years on international and local responses to the Rohingya genocide and refugee crisis in South Asia, highlighting increasing discrimination faced by Rohingya refugees in India. Jessica has participated in national consultations around strengthening India’s humanitarian system, consulted as a research and writing mentor for refugee activists/researchers, and supported the documentation of refugee rights abuses in South Asia.

Dr Joanna Faure Walker is Associate Professor in Earthquake Geology and Risk and Disaster Reduction. Her research teams aim to improve disaster resilience through allowing a better understanding and quantification of risk, encouraging informed evidence-based decision-making.
In particular, Joanna’s research helps to (1) improve quantification of earthquake hazard through improved understanding of earthquake fault behaviour, and (2) calculate the efficacy of risk reduction measures including post-disaster shelter and housing, household and individual response to warning systems, and micro(insurance), utilising tools such as catastrophe modelling. Joanna studies faults in the Earth’s continental crust to better understand the physical processes controlling earthquake locations, timing and generation. Her principal publications have demonstrated the importance of fault geometry and rates of motion in understanding fault interactions, fault growth and the dynamic forces controlling these. Her research combines fieldwork data and modelling to advance fault-based seismic hazard assessment. She is Co-I on the NERC Standard grant: “Active fault slip-rates and earthquake recurrence controlled by stress transfer and viscous flow”. Joanna leads the central Apennines laboratory of the Fault2SHA ESC Working Group the Fault2SHA Learning Series to help collaboration across disciplines to increase the use of faults in earthquake hazard and risk assessment. Joanna is an Associate Editor for Frontiers in Earth Sciences (Geohazards and Georisks) and Natural Hazards.

Dr Katerina Stavrianaki is Lecturer in Risk Analysis, focused on the risk from natural hazards and infectious diseases in the Caribbean. She is also interested in hazard and risk modelling, forecasting and rock mechanics. Her current work focuses on a multi-hazard risk assessment in the island of Dominica in the Caribbean looking at both the risk form natural hazards and infectious diseases. This is achieved by applying an Analytical Hierarchy Process (AHP) methodology and in collaboration with local stakeholders and community through interviews and workshops. The AHP will be run with both expert knowledge and local knowledge gained through community engagement.

She is also interested in flood and earthquake hazard using both a statistical and a geophysical approach. Her research aims to improve current forecasting and seismic hazard approaches and flood hazard assessments. She is interested in the modelling of spatiotemporal point processes, hazard and risk analysis, short term magnitude incompleteness and forecasting.
Dr Lisa Guppy is Lecturer in Global Humanitarian Studies with a background in humanitarian policy and practice, as well as environmental and natural resource issues in crisis settings. Key work currently includes finalising an analysis for UNDP Yemen on water-related conflict in several districts of the country. Key issues, highlighted in the associated photo, point to the widespread damage and destruction of water infrastructure throughout Yemen, resulting from the conflict conditions that prevail in the country. A lack of water in this arid environment can lead to water-related conflicts at a local level, which need more innovative methods to manage into the future under projected climate changes.

![Damaged irrigation infrastructure in Yemen, March 2022. Taken by: Mr Sadeq Alnabhani (permission granted for the report).](image)

Dr Louisa Acciari is a Research Fellow and Co-Director Centre for Gender and Disaster. She is also the coordinator Gender Responsive Resilience and Intersectionality in Policy and Practice (GRRIP). Louisa’s research focuses on Gender, Work and Livelihoods. She examines the connexions between paid and unpaid care work and how these create gender inequalities at home and in the labour market, especially in the context of the pandemic crisis. Feminist scholars have been analysing the connexion between productive and reproductive labour, paid and unpaid work, for decades, and have shown that the hierarchies and inequalities that underly these activities are deeply gendered and raced. Indeed, jobs that relate to the reproduction of human life, such as care and domestic work, are still perceived as ‘feminine’ tasks, and as a consequence, they remain largely underpaid, undervalued and under-protected compared to other sectors of activities. The pandemic crisis has also made more visible than ever before the burden of unpaid care work (cooking, cleaning, home-schooling and taking care of sick or elderly people) that falls onto women in their homes and families. Thus, within the thematic area of Gender, Work and Livelihoods developed by the Centre, she examines the dynamics that create such inequalities, gender roles and expectations in the labour market and at home, and how those dimensions impact the lives of women in situations of crisis or disaster.

![Meeting with the Association of the Traditional Midwives of the Forest in Marechal Thaumaturgo, Acre, Brazil, 5 May 2022](image)

Professor Maureen Fordham is Professorial Research Associate and Centre Director of the IRDR Centre for Gender and Disaster. Her main research focus is on the gender and disaster nexus, exploring complex understandings of gender beyond simple binary definitions. This encompasses intersectional analyses across axes of social difference. Recent
(GRRIPP and RiskPACC) has reinforced the need to continually monitor slippage in gender equality advocacy and in commitments to democratic and participatory processes. Both projects include research concerned with collaborative, participatory and decolonial practice, all of which is challenging to undertake. In GRRIPP the team is concerned with creating and facilitating opportunities for collaborative research engagement across career stages and disciplinary or practice boundaries across three world regions. The RiskPACC project is exploring concepts, strategies and solutions for facilitating two-way dialogue between Civil Protection Authorities and citizens. A major task going forward is to maintain interest in and concern about gender and related inequalities when past successes incorporating gender in disaster risk reduction make it seem that we have already addressed this challenge. For those of us working in the gender and disaster field, we know that we have only just begun to create meaningful change. The policy preference for gender mainstreaming risks making gender equality concerns invisible if it does not maintain standalone intersectional gender actions alongside ensuring a gender component is threaded throughout policy interventions. So how do we ensure that gender continues to be visibly on the agenda?

Dr Mohammad Shamsudduha (‘Shams’) is Associate Professor in Humanitarian Science. His research area includes water risks and security, and WASH (water, sanitation and hygiene) provisions in humanitarian and development contexts. His research looks at geographic distribution and variability in global freshwater through field investigations, computer modelling to Earth Observation satellites in order to provide equitable access and promote sustainable development of water resources in humanitarian and wider development contexts. He is a geoscientist by academic training and educational background and deeply interested in global water cycle and the geographic distribution of earth’s freshwater resources, particularly groundwater. His research areas include assessment of water risks and resilience to land-use and climate change, water quality risks to human health, hydrometeorological and climatological hazards, hydroinformatics and geospatial science, and sustainable development with a particular geographic focus on the Global South.

Map showing areas prone to flash-flood and river-flood hazard risks in Bangladesh
**Research Profile**

**Professor Patty Kostkova** is Professor of Digital Health and Emergencies and the Director of the UCL IRDR Centre for Digital Public Health in Emergencies (dPHE). Her research investigates a number of aspects of digital health – Covid-19 initiatives include journaling app and survey to understand behaviour change in lockdown, social media discourse and epidemic intelligence, mobile gamified training app and early-warning system for predicting mosquito populations to combat the zika virus in Brazil and since last year also in Portugal, gamified mobile app to support decentralised management of DR-TB in South Africa, and strengthening antibiotic stewardship using game-based training in Nigeria and in the UK. Her research lies in the most topical discipline since the COVID-19 pandemics: digital health interventions, Big Data surveillance, early-warning and predictions of outbreaks, pandemics and emergencies. The Centre for Digital Public Health in Emergencies (dPHE) brings together experts from UCL and external stakeholders leading on interdisciplinary research, training and policy advice to improve global public health through use of digital technologies and data systems. dPHE received the prestigious Team of the Year 2020 Award from Computing Rising Starts Awards for the innovative My Lockdown/Activity Journal app.

**Professor Peter Sammonds** is Professor of Geophysics and Director and Head of Department, Institute for Risk and Disaster Reduction. Peter’s work focuses on increasing resilience to environmental hazards in conflict zones and in particular the forced Rohingya Exodus from Myanmar. He is working on a new project on multi-hazard hurricane and epidemic risk assessment for Dominica. He works at the interface of natural and social sciences. His research and knowledge exchange is on natural hazard risks, disasters and recovery. He has worked on research council, British Academy and Royal Society-funded projects on Increasing Resilience to Environmental Hazards in Border Conflict Zones and Resilience Futures for the Rohingya Refugees. This year his work has focused on increasing resilience to environmental hazards in conflict zones. Peter has been working on joint projects between the natural and social sciences on the forced Rohingya Exodus from Myanmar. He has also worked on the confluence of natural hazard risks and the Covid-19 pandemic. In particular, he is working on a new project on multi-hazard hurricane and epidemic risk assessment for Dominica. He is the Gender and Intersectionality Ambassador on the UKRI network GRRIPP project, Gender Responsive Resilience in Policy and Practice.

*Participatory workshop in Domenica on multi-hazard perceptions*
Dr Punam Yadav is Lecturer in Humanitarian Studies and Co-Director of the IRDR Centre for Gender and Disaster. An internationally renowned scholar of Gender, Peace and Conflict, contributing to the field of Feminist International Relations, Peace and Conflict Studies, Political Science and Disaster Risk Reduction, Punam has made outstanding contributions to scholarship in the following four areas: i) theorising social transformation through a gender lens (see Yadav 2016); ii) theorising women’s agency in war and post-war contexts (see Yadav, 2021); iii) Critical perspective on UN Security Council Resolution 1325 and the Women, Peace and Security Agenda (see Yadav 2017, 2021); iv) theorising a feminist vision for transformative change in DRR (Yadav et al, 2021). Her other research contributions include theorising gender, disaster and conflict as a continuum (Yadav and Horn, 2021; Yadav and Fordham (2022)) and theorising feminist genealogy of peace research (Lyytikäinen et al., 2021). Her work is also developing around political quota and women’s representation in politics.

Dr Roberto Gentile is Lecturer in Crisis and Catastrophe Risk Modelling. His research aims at advancing catastrophe risk modelling using and developing statistical and probabilistic tools. He is also interested in advancing the seismic assessment and design of building and infrastructure, with particular reference to concrete building and bridges. He is interested in a direct loss-based seismic design methodology, aiming at structures that would achieve, rather than be bounded by, a given earthquake loss under the relevant seismic hazard.

Dr Rozana Himaz is Associate Professor in Humanitarian Economics. One of her key research interests is to see how better quantification of risks from future hazards can inform anticipatory action. Recent work has looked at how ‘non-conventional’ aspects such as impacts on livelihood and health can be incorporated in a catastrophe modelling framework as a part of the ‘Future Indonesian Tsunamis: Towards End-to-End Quantification of Risk’ project core funded by the Lloyds Tercentenary Research Fund and the Lighthill Risk Network (2019-2022). The modelling uses secondary data sources and an open-source platform allowing the innovation to become a part of mainstream risk quantification. Other work has looked at how welfare impacts of shocks on individuals and households evolve over time and how program/policy impacts can be evaluated. This has been used by the World Bank and the International Labour Organisation in ‘what works?’ debates, toolkits and to support general education modernisation projects. Rozana is also on the Advisory Board of Verity Research Asia.
advise for Sri Lanka, inter alia, as it goes through a major debt crisis and civil protest following the pandemic.

Protests in Colombo, Sri Lanka, April 2021, in the face of debt crisis.

Dr Sonja Ayeb-Karlsson is Lecturer in Climate, Policy and Intersectionality. Her research area is broad and interdisciplinary with a particular focus on the interconnections between climate change, policy and intersectionality, and their overlaps with human (im)mobility and migration, or health and mental wellbeing. At the moment, she is particularly interested in furthering our understanding of psychologically and legally ‘trapped’ populations, the mental health impacts of the Covid-19 pandemic and other humanitarian disasters, and Non-Economic Loss and Damage in the context of the UNFCCC and the climate negotiations. Over the past year, besides publishing 15 peer review articles (of which, three in the Lancet and another three in the Nature publishing group), she was also awarded just over €180K as the Principal Researcher for the Protecting the wellbeing of migrants in India during the Covid-19 pandemic. She has three post-docs and three research assistants working on this project, which is due to wrap up in September this year. She also finalised two UN policy related projects with a UNEP and UNFCCC policy context which final reports will be published this year. She currently has two PhD candidates working in the area of Loss and Damage, which suitably is the topic of IRDR’s 2022 annual conference. Besides this, she also appeared on the first ever UN panel on immobility and trapped populations that was organised by IOM, IDMC and PDD. Finally, she appeared on national TV in Sweden twice and was interviewed by the Guardian among many other news outlets about her research.

Dr Virginie Le Masson is Research Fellow, Global M&E Coordinator for GRRIPP, and Co-Director of the Center for Gender and Disaster. Her research interests are gender inequality; gender-based violence in the context of crises, disasters and climate change. She supports the UCL team to manage the GRRIPP project, focusing on monitoring and evaluation. She draws on research experience in gender-responsive programming in disaster risk reduction to monitor the activities of scholars and practitioners to integrate gender and intersectionality in their work on resilience.

Dr Virginie Le Masson in conference, photographer: Migal Van As
Dr Yulia Ioffe is Lecturer in Human Rights and Humanitarian Law. Her interests lie within international human rights law, forced migration, and children’s rights. Her primary focus is on the rights of children seeking asylum, non-penalisation and non-criminalisation of refugees and other migrants for illegal entry or stay, interpretation of human rights treaties by international bodies, reparation for human rights violations, and impact of international law on refugee protection.
<table>
<thead>
<tr>
<th>Student</th>
<th>Project</th>
<th>Funding</th>
<th>Synopsis</th>
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<tbody>
<tr>
<td>Aimee Colgate</td>
<td>'Flood modelling and climate change implications'</td>
<td>Self</td>
<td>Using flood modelling to determine vulnerability and risk alongside potential climate change implications.</td>
</tr>
<tr>
<td>Aisha Aldosery</td>
<td>“Internet of Things (IoT) based Surveillance System for Predicting Areas that are High-risk of Mosquito Infestation: A Case Study of Mosquitoes Surveillance at Madeira Island and Northeast Brazil” (Start: January 2020)</td>
<td>Royal Embassy of Saudi Arabia Cultural Bureau</td>
<td>This research aims to implement an IoT-Based surveillance system to predict the sensor-based areas that are at high-risk of mosquito infestation using surveillance mobile application and Machine Learning models, which considers the impact of the weather conditions and water parameters over a fine spatiotemporal scale.</td>
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<tr>
<td>Alexander Thompson</td>
<td>'Health system emergency preparedness, resilience and response: the case of wildfires'</td>
<td>Self</td>
<td>To evaluate a measure of maturity for the emergency preparedness, resilience and response activities of health systems (including all facets of health such as acute care, community care, primary care, public health, and pre-hospital care).</td>
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<tr>
<td><strong>Ava Sullivan:</strong> 'Characterising high-risk interfaces between animals and humans for the prevention and early detection of zoonotic disease emergence'</td>
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<tr>
<td>Funding: EcoHealth Alliance</td>
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<tr>
<td>Synopsis: The focus of my research is characterising interfaces between humans and animals which may provide exposure needed for zoonotic disease spillover. My research will be conducted in communities in rural South Africa living near bat species known to be natural reservoirs for viruses.</td>
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<tr>
<th><strong>Bernice Mufor Nkekeh:</strong> 'Community Emergency Preparedness and Response. A comparative analysis of the cases of Mount Cameroon and Mount Etna.'</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding: Self</td>
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<tr>
<td>Synopsis: This research aims to examine the similarities and differences between Mount Cameroon and Mount Etna Emergency Preparedness and Response systems related risks using qualitative and quantitative approaches.</td>
</tr>
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<tr>
<th><strong>Christiana Iliya:</strong> 'Desertification and the Covid-19 pandemic as contributors to food insecurity in Africa.'</th>
</tr>
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<tbody>
<tr>
<td>Funding: Self</td>
</tr>
<tr>
<td>Synopsis: Exploring the impacts of desertification and the Covid-19 pandemic as disaster risks and the challenge of increasing resilience to food insecurity in grassroots farming communities in Northern Nigeria.</td>
</tr>
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<tr>
<th><strong>Dan Tompson:</strong> “Resilient Energy Infrastructure?: The importance of private market solutions to understand the future of energy resilience.”</th>
</tr>
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<tbody>
<tr>
<td>Funding: Self</td>
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<tr>
<td>Synopsis: Partial or complete electrical infrastructure failure can produce outsized impacts. The current state of art has neglected the growing private market in developing buffering solutions to electrical failure. My project explores private markets that offer buffering solutions to understand changing in resilient behaviour, which could have theoretical and practical impacts for energy resilience.</td>
</tr>
</tbody>
</table>
| **David Gregory:** 'Fault action, interaction and Seismic Hazard in the Central Apennines system.' | Funding: CoreLogic  
Synopsis: Research centres on using fault geometry to measure the impact of stress build-up within a fault, and the stress impact of an earthquake on nearby faults and how this affects the overall regional seismic hazard setting. |
|---|---|
| **Emmanuel Agbo:** 'Disaster Mitigation and Emergency Response: A case of flood vulnerability in Nigeria.' | Funding: TETFund, Nigeria  
Synopsis: To approach Nigeria flood disaster management challenge from the vulnerability view point with aim to strengthen the existing disaster management framework, highlight the needed criteria for formulating an improved framework, and enumerate the socioeconomic importance of this proactive measure to national development. |
| **Jeremy Reynolds:** 'Learning from organisations regarding adaptive capacity and their relevance to urban resilience planning.' | Funding: London Fire Brigade  
Synopsis: The purpose of this research is to investigate if good organisational practice in adaptive capacity has significant lessons for urban resilience planning. It is expected that horizon scanning, risk management, attention to signals and learning of lessons will form part of the answer. |
| **Joshua Anthony:** 'Integrating Geophysical Models of Ancient Rivers Systems into Flood Risk Management.' | Funding: IRDR  
Here, subsurface models of buried river systems in the Somerset Levels are generated by applying forces to the ground and measuring responses from beneath. The 2-D images will reveal historical river processes under different degrees of human and natural influence. |
<table>
<thead>
<tr>
<th><strong>Kimon Pantelides:</strong></th>
<th>Developing a Consistent Approach to Ensuring Community Resilience to Risk during times of Financial Crisis: A study of Fire Services in Southern Europe and the importance of Quality Assurance systems.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding: Self</td>
<td><strong>Synopsis:</strong> 'understanding how fire services in Southern Europe, can continue to guarantee an adequate service to their communities during times of financial crisis, where funding has been substantially axed, limiting possibilities of any substantial progress.'</td>
</tr>
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<tr>
<th><strong>Lan Li:</strong></th>
<th>Research Topic – Addressing Vaccine Hesitancy: The Potential of Behaviour Change Theory-Based Social Media Interventions.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding: China Scholarship Council-UCL Joint Research Scholarship</td>
<td><strong>Synopsis:</strong> This research seeks to explore the possibility and evaluate the effectiveness of theory-based social media interventions to improve vaccine confidence and uptake. It will focus on the acceptance of influenza vaccination among Chinese college Students studying in the UK.</td>
</tr>
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<tr>
<th><strong>Mater Almehmadi:</strong></th>
<th>Post Disaster Waste Management Reducing Human Vulnerability when dealing with Toxic Wastes in Post Disaster Waste Management: The Case of Hurricanes.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding: Royal Embassy of Saudi Arabia Cultural Bureau</td>
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<tr>
<th><strong>Melodie Vanderpuye:</strong></th>
<th>Investigating Spatio-Temporal Randomness of Large Earthquakes</th>
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</thead>
<tbody>
<tr>
<td>Funding: Aon Benfield &amp; Qatar Re</td>
<td><strong>Synopsis:</strong> Whether large earthquakes are random in space and time is disputed. Framing this as a pattern recognition problem, this study de-clusters and incorporates uncertainty within the instrumental catalogue, applying an updated self-organisation algorithm to identify spatio-temporal clustering since 1904.</td>
</tr>
<tr>
<td>Name</td>
<td>Title</td>
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<tr>
<td>Mhari Gordon</td>
<td>'Displaced Populations and Hazard Risk.'</td>
</tr>
<tr>
<td>Mohamed Alwahedi</td>
<td>“Are earthquakes self-similar? How do observations of aseismic and seismic slip tell us about how the physical processes driving earthquakes scale with size?”</td>
</tr>
<tr>
<td>Musaad Almuthaybiri</td>
<td>'How Does GIS technology impact Emergency Medical Services in Saudi Arabia during Disaster?'</td>
</tr>
<tr>
<td>Myles Harris</td>
<td>'Prolonged field care: a grounded theory of prehospital health for risk reduction in remote environments.'</td>
</tr>
</tbody>
</table>
**Naïf Alrehaili: 'Assessing the Emergency Planning Requirements for Responding to Flash Floods in the Kingdom of Saudi Arabia.'**

Funding: Saudi Arabia Cultural Bureau in the UK.

Synopsis: The research aims to extend existing work on the emergency planning requirements for responding to flash floods in the KSA, beyond exploration and description, into assessing the requirements in order to develop a sound flash flood response. Thus, it seeks to fulfil the research's primary aim by exploring the current approaches in emergency planning for responding to flash floods, identifying the emergency planning requirements for responding to flash floods in the KSA, verifying Saudi civil defence officers' perceptions of the emergency planning requirements for responding to flash floods in the KSA, and creating a model of emergency response to flash floods in the KSA and examine how it could be made more effective.

**Olafiyinfoluwa Taiwo: 'Multisectoral Approach to Planning for Resilience and Disaster Risk Reduction.'**

Funding: Self

Synopsis: This research aims to examine the integration of disaster risk reduction into urban planning through multisectoral approach for better decision making and to inform future urban planning in the Commonwealth with a focus on climate hazards. Additionally, it will identify the barriers to achieving this and how these barriers can be overcome.

**Rebekah Yore: 'Transitional phase(s) to disaster recovery: microinsurance, warning systems and shelter/temporary housing.'**

Funding: UCL-IRDR Impact Studentship with Rescue Global

Synopsis: A comparative case study approach to investigating the transitional phase(s) to disaster recovery through examining how preparedness, response and recovery are interrelated and interdependent, with a focus on warnings systems, temporary housing and microinsurance.

**Rhea Leung: 'Mitigation and disaster preparedness measures enacted in remote mountainous areas affected by earthquake-triggered geohazards.'**

Funding: Self

Synopsis: This research will investigate the post-2008 Wenchuan earthquake geohazard risk and to evaluate the effectiveness of subsequent mitigation and disaster preparedness measures in reducing geohazard risk exposure and alleviating vulnerability.
**Rob Davis:** 'Research into the use of scientific flood modelling and prediction to shape the evacuation methodology for riverine flood hazards.'

**Funding:** Self

**Synopsis:** If the evacuation methodology should fail, and we know it does fail for numerous reasons does this lead to a search and rescue need in that community?

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**Salma Al Zadjali:** 'Decadal Variability of Precipitation in Oman and the Assessment of Cloud Seeding in the Al-Hajar Mountains.'

**Funding:** Ministry of Higher Education, Research and Innovation

**Synopsis:** Understanding the contribution of the cloud seeding to the precipitation variability over the most prone area to natural precipitation in Oman (Al Hajar Mountains). This research aims to understand the interactions between cloud seeding and ongoing climate variability and climate change and assess the seeding project's reliability in Oman.

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**Sangita Thebe Limbu:** 'Indigenous Knowledge, Gender, and Climate Change.'

**Funding:** UCL IRDR

**Synopsis:** My study aims to understand – what constitutes indigenous knowledge? How is it gendered? What role does it play in climate change? How is it used in adaptation policies and programmes? I will explore these questions in the context of Nepal.

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**Umut Lagap:** 'Quantifying post-disaster housing stock resilience.'

**Funding:** The Ministry of National Education, Republic of Turkey

**Synopsis:** This study aims to investigate housing stock resilience after a possible disaster in a case study and to quantify the resilience index for temporary sheltering and housing reconstruction, both of which is neglected in the existing literature.

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Shinta Michika Puteri
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<thead>
<tr>
<th>Student Name</th>
<th>Project Title</th>
<th>Funding</th>
<th>Synopsis</th>
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<tbody>
<tr>
<td><strong>Xiao (Shaw) Han</strong></td>
<td>'Disaster Risk, Vulnerability and Development.'</td>
<td>Self</td>
<td>How the human-beings put themself into dangerous?</td>
</tr>
<tr>
<td><strong>Xuanrong Wang</strong></td>
<td>'How influential different strategies and initiatives can be in improving agricultural insurance penetration in China.'</td>
<td>CSC-UCL Joint Scholarship</td>
<td>Xuanrong is creating a model to determine the relative influence of different factors contributing to local adoption rates of agricultural insurance in selected Chinese provinces. The model is being created through interviews and surveys of influencers within the sector and local farmers.</td>
</tr>
<tr>
<td><strong>Zerong (Chelsea) Li</strong></td>
<td>'Integrated use of GIS, Space Syntax and structured interviews to investigate how well an ethnic group is integrated into its host city. A case study of London’s China Town.'</td>
<td>Self</td>
<td>To discover the relationship between the changing social function of Chinatown and its spatial morphology transformation through analysing the land use, street network characteristics and spatial configuration of the area over the past 300 years.</td>
</tr>
<tr>
<td><strong>Zhu Yu</strong></td>
<td>'To Build the Mandatory and Effective Response Framework to Cascading Disaster: Manage Hazard Materials as Case Study.'</td>
<td>Self</td>
<td>The objective of my research is to analyse the most vital shortcomings of existing cascading disaster and risk response mechanism of hazard materials management, and to propose a set of practical risk management preparedness for hazmat emergency.</td>
</tr>
</tbody>
</table>


Ayeb-Karlsson, S. (2021). ‘When we were children we had dreams, then we came to Dhaka to survive’: Urban stories connecting loss of wellbeing, displacement and (im)mobility. *Climate and Development* 13(4): 348-359.


Selected Journals and Books


**Sammonds, P.,** Shamsudduha, M., Ahmed, B., (2021), Climate change driven disaster risks in Bangladesh and its journey towards resilience, Journal of the British Academy, vol. 9 (s8), 55-77.


Selected Journals and Books


Calendar 2022–23

2022

11 October: Special Seminar
20 October: IRDR Centre for Gender and Disaster – Public Panel Event
Convener: Prof Maureen Fordham
21 October: Humanitarian Institute Masterclass
22 November: IRDR Alumni & Network Reception
For our graduates, members and students.
6 December: IRDR Christmas Party
For our staff and students.

2023

10 January: Special Seminar
18 January: IRDR PhD Student Forum and Reception
Convener: Prof Ilan Kelman
9 February: Humanitarian Institute SDG Evening Conference
10 February: Humanitarian Institute Masterclass
22 February: IRDR Careers and Opportunities Fair
23 March: IRDR Alumni Mixer Reception
24-25 April: IRDR Spring Academy for IRDR research staff and students
Convener: Prof Ilan Kelman
11 May: Humanitarian Institute SDG Evening Conference
12 May: Humanitarian Institute Masterclass
21 June: Humanitarian Institute Masterclass
humanitarian-info@ucl.ac.uk
22 June: UCL Humanitarian Summit
humanitarian-info@ucl.ac.uk
23 June: IRDR 13th Annual Conference (UCL)
irdr-enquiries@ucl.ac.uk
5 July: IRDR Centre for Digital Public Health in Emergencies Anniversary Event
Convener: Dr Patty Kostkova

Plus:
Monthly IRDR Invited Seminar Series
Monthly Humanitarian Institute Seminar Series
IRDR Discussion Forum Series
Informal - fortnightly
Convener: Dr Rozana Himaz

If you wish to get involved in an IRDR event

We have the following opportunities:

IRDR Forums with partners and funders to foster cross-disciplinary collaboration. The format is three lead presentations, brief talks by researchers, then open discussion followed by a reception.

Humanitarian Institute Evening Conference series on the UN Sustainable Development Goals, which are open to the UCL community, general public and media, are organised around a UN SDG theme, with engagement from developing countries. Contact humanitarian-info@ucl.ac.uk if you would like to lead one of these events and propose a theme.

Humanitarian Institute Masterclass series with expertise shared by researchers and practitioners from developing countries and UCL. For students, researchers and practitioners. Contact humanitarian-info@ucl.ac.uk if you would like to lead a masterclass.

IRDR Annual Conference sessions on a research theme. The format may be presentations, panel discussion, keynote lecture or “in conversation” interview.

IRDR Sponsorship of launch events, conferences, seminars or workshops at UCL.

For further information, please contact us on irdr-comms@ucl.ac.uk
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IRDR Deputy Director
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Zhu Yu
BECOME A MEMBER OF THE IRDR. Reducing global risks and disasters presents a colossal challenge that requires coordinated and collaborative action. UCL is uniquely well placed to respond to this challenge with at least 70 academics across 12 departments and seven faculties involved in world-class research, teaching and practice in the field. The IRDR aims to bring together this wealth of knowledge and expertise, and through research, teaching and knowledge exchange aims to overcome the barriers to understanding risk and reducing the impact of disasters.

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