

IRDR Young scientist program action plan

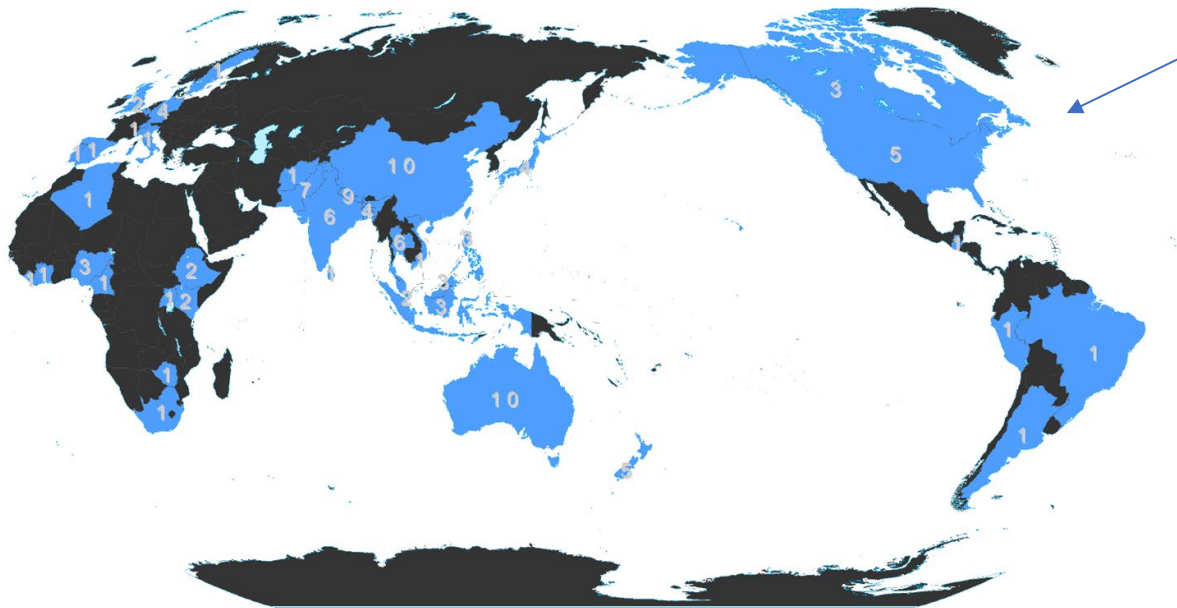
Proposal for 2026 onward
Khamarrul, Yu Lei, Rahma, Fang

Chengdu, SC28 | 16 October 2025

Modalities: IRDR Young Scientists Programme

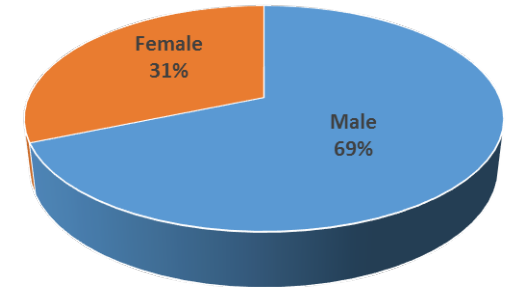
Batch 1-5: in total 200 IRDR YS | 40+ countries

Batch 6: 41 applicants, 15 will be selected



Batch 1-4: 163 YS

Gender



IRDR Action Plan 2025-2026

3.6 Empowerment of young DRR professionals. Two actions are planned.

No.	Specific Actions/Deliverables	IRDR role and the actors	Partnerships	Timeframe	
15	<p>Rejuvenating IRDR Young Scientists Programme</p> <ul style="list-style-type: none"> - Expansion of IRDR YSP network under the renewed ToRs and promotion - Studies of YSP geared with the local needs and requests for DRR solutions and mentorships - Compilation of best practices and benchmarking reports and publications for the global impacts of IRDR YS programmes 	SC and IPO (lead) NCs, ICoEs, YSP	IRDR co-sponsors, donor and IPO host, IRDR partners	2025 - 2027	
16			<p>Alliance with DRR youth initiatives and networks</p> <ul style="list-style-type: none"> - Official partnership established with young professional networks in DRR - IRDR Young Scientists Lumos and IRDR Youth Podium - Establish programs that enables Dialogues, knowledge sharing, codesigning DRR proposals and projects in a multidisciplinary-transdisciplinary and cross-borders collaboration 	<p>YSP (lead) SC and IPO</p> <p>IRDR Co-sponsors, IRDR partners</p>	2025 - 2027

Action Plan 2026 onward

1. Strengthening the YS governance:

- Co-chair (2 persons woman & man), representatif from region, working group
- Quarter online meeting, chair by the co-chair, have MoM
- Observers during SC meeting

2. Mentorship and Capacity building

- Mentorship and leadership: peers and mentors from IRDR community
- Training, Summer School, Through ICoEs
- Proposal development

3. IRDR YS visibility, activities and publication

- **Podium:** Online platform for young professionals to share their insights or innovations via articles or videos.
- **Lumos:** 5 webinar on each IRDR topic priority (and can include extra topic, eg indegenous knowledge, etc).
- **Book/global case study series** on YS 2026-2030
- **Participation in global/regional events:** eg. IDDDR, Commemoration on 20 years Yogyakarta Earthquake (26 Mei 2026), with partners.
- **Promote IRDR at social media:** eg. #IRDR, #IRDRYoungScientists

Continuing and leveraging ongoing activities: Lumos and Global Event Participation



Pre-Event for 2025 GPDRR and
2025 IRDR Young Scientists Lumos (1st)

LOCALIZATION OF THE GLOBAL AGENDA: DRR SOLUTIONS FROM YOUNG PROFESSIONALS



Bernhard Garn
Speaker



Fatemeh Rezaei
Speaker



Jeevan Madapala
Speaker

Moderator: Fang Lian (IRDR)
Saran Prakash (U-INSPIRE Alliance)

Commentator: Nuraini Rahma Hanifa
(BRIN/IRDR/U-INSPIRE Alliance)

1 JUNE 2025 AT 16:00 BEIJING TIME

REGISTER





Call for presenters: 2025 IRDR Young Scientists Lumos (3rd)

The IRDR Young Scientists Lumos focusing on the intersection of cultural heritage, climate adaptation, and disaster risk reduction



Continuing and leveraging ongoing activities: Podium and Training

IRDR Youth Podium

Empowering Communities and Protecting Lives: Trona Bay Enterprise's Hygiene Solution

16 April 2025

Cynthia Akpene Adjorlolo from Trona Bay Enterprise introduced their efforts to help develop good hygiene practices in the local area.

> 1 **2** 3 >

Nyamwamba or the People

07 January 2025

Through the 2022 Media Saving Lives Initiative, Jenipher Asilimwe participated in a continental co-production project and assessed the truthfulness of the statement.

Applying Disaster Risk Assessment Results in Territorial Planning and Development Policies

30 December 2024

This is a parallel session at IRDR International Conference 2024. In the session, several young scientist gave relevant presentations.

TRAININGS

Call for application: ADPC's 1st Training Course on "Monitoring and Evaluation (M&E) in Disaster Risk Reduction"

02 August 2019

Download for details: [download id="14171"] Schedule: 2-6 September 2019 | Bangkok, Thailand Course Overview: Monitoring and Evaluation (M&E) is an essential management process and tool that allow project/program managers to track progress of project activities

Call for Application: Institute of Advanced Studies in Climate Extremes and Risk Management

21 March 2019

Nanjing, China, 21 October - 1 November 2019 Understanding disaster risk will enable climate experts to generate more tailored climate knowledge and information for risk reduction and management. Similarly, understanding past and future changes and uncertainties

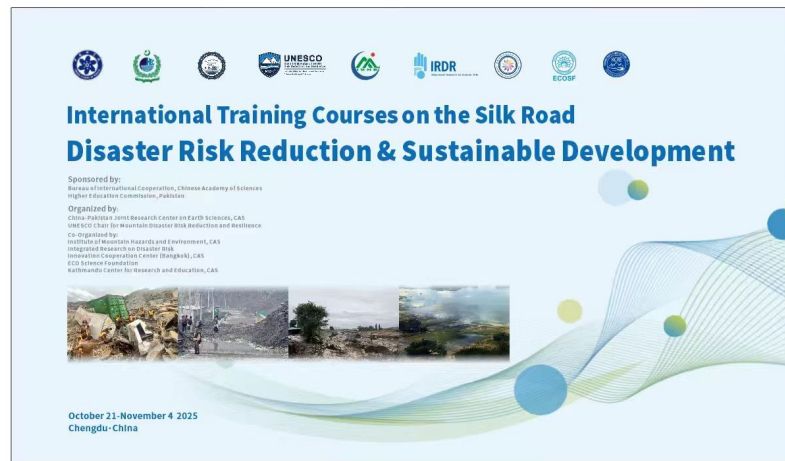
IRDR Young Scientists in IRDR ICoE-CCOU Research Summit

26 July 2018

IRDR Young Scientists Dr. Ranit Chatterjee and Dr. Raju Sarkar participated the Research Summit on Health-related Emergency and Disaster Risk Management (H-EDRM) on 9-10 July. This summit was organized by IRDR ICoE-Collaborating Centre for Oxford University

Upcoming Training

- 22 Oct to 4 Nov 2025, Chengdu
- 2 YSP from Iran and Nepal



**International Training Courses on the Silk Road
Disaster Risk Reduction & Sustainable Development**

Sponsored by:
Bureau of International Cooperation, Chinese Academy of Sciences
Higher Education Commission, Pakistan

Organized by:
China-Pakistan Joint Research Center on Earth Sciences, CAS
UNESCO Chair for Mountain Disaster Risk Reduction and Resilience

Co-organized by:
Institute of Mountain Hazards and Environment, CAS
Integrated Research on Disaster Risk
International Cooperation Center (Bangkok), CAS
ICDR Research Institute
Kathmandu Center for Research and Education, CAS

October 21-November 4 2025
Chengdu-China

Activities and Products of IRDR Young Scientists

IRDR Young Scientists
Methods, Approaches and Practices

Riyanti Djalante
Mizan B. F. Bisti
Rajib Shaw *Editors*

Integrated Research on Disaster Risks

Contributions from the IRDR Young Scientists Programme



Chapter 2 Application of a Machine Learning Technique for Developing Short-Term Flood and Drought Forecasting Models in Tropical Mountainous Catchments

Paul Muñoz, Johanna Orellana-Alvear, and Rolando Célleri

Abstract wide. The tropic climate c implement emerging tainous as a consideri available spatio-ter the tropic availabili of ML, tex to its sim used a ste models fc the Ecuac time perc

P. Muñoz (Departame Cuenca, Ec e-mail: pau@i-o.orellana.com;

Keywords Tropical cyclone · Storm surge · Clin Bay of Bengal

Chapter 3 Increasing Trends in Tropical Cyclone Induced Surge Impacts Over North Indian Ocean

Md. Abdus Sattar and Kevin K. W. Cheung

Abstract Tropical cyclone (TC) is a well-known much of a society, environment, economy and Indian Ocean (IO) is one ocean basin that has to huge human casualties in densely populated coastal Myanmar around the Bay of Bengal (BoB) region to analyse the impacts of TC-induced storm surge climatic scenarios for better preparation. This study potential impacts of TCs from storm surge future (2075–2099). To fulfil research objective, fit from the U.S. Geophysical Fluid Dynamics Laboratory RCP warming scenarios. Then, DMA-MRI storm s estimating TCs induced surge heights. While also made landfall around the BoB region, climate i intense TCs over the AS, which indicates larger an around the coastal areas of the AS. It is also from the eastern part to the western part of both b storm surge model estimates twice the size of the over the AS. Furthermore, spatial variation of T surge heights are found which largely depends on conclusion, it is expected that higher maximum s over the AS basin will occur if the projected TC ac crucial information that can be used for short-act

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Chapter 9 Understanding Social-Mediated Disaster and Risk Communication with Topic Model

Xianlin Jin

Abstract To aid mitigating disaster and risk, this chapter concentrates on identifying the complex disaster and risk communication patterns with a particular focus on open discussions about disasters on social media. It reviews the literature on disaster and risk communication along with the introduction of the Crisis and Emergency Risk Communication model (CERC). This chapter highlights the importance of utilizing big data tools to unpack the conundrum of social-mediated disaster and risk communication. Lastly, it includes a case study that aims to understand the communication patterns that emerged from the Hurricane Maria resolution stage. Topic modeling, semantic analysis, content analysis, and word-cloud were integrated to capture five topics related to Hurricane Maria: food support, mental and physical health, fatalities, government's responses, and water supply. Findings suggest that the public was concerned about inadequate support for the victims of Hurricane Maria and worried about how the affected community could recover from the disaster. Government and emergency management agencies should advance social media use in future management plans to initiate interactive communication. These institutions should utilize social media to recognize the public's concerns, communicate remediation, and offer relief responses in a timely manner.

Keywords CERC · Social media · Disaster and risk communication · Topic modeling

Chapter 4 Classifying the Forest Surfaces in Metropolitan Areas by Their Wildfire Ignition Probability and Spreading Capacity in Support of Forest Fire Risk Reduction

Artan Hysa

Abstract The main objective of this work is to develop a cost-free and rapid method for categorizing the forest surfaces in metropolitan areas based on their Wildfire Ignition Probability Index (WIFI) and Wildfire Spreading Capacity Index (WSCCI). The original method applies a multi-criterion (social, environmental, and physical) framework and utilizes commercial software for spatial analysis and collecting environmental data. Instead, this study utilizes QGIS as an open-source software during all geospatial analytical phases. At this stage, the method is tested on the metropolitan area of Tirana (Albania), relying on a variety of open-source geospatial databases. First, the forest surfaces are identified based on Urban Atlas land cover and are translated into regular point grid (100 m). Each point is loaded with unique values regarding each criterion. The diversity among values of different criteria is normalized by redistributing them into 10% classes based on Jenks-natural break method. Class values of each criterion are introduced into the indexing equation multiplied by their respective impact factor as weighted via Analytical Hierarchy Processing. Finally, each representative point is calculated as a final WIFI and WSCCI value. The locations possessing relatively highest values indicate areas of significant wildfire ignition and spreading likelihood. The results of the study validate a rapid and cost-free method for forest fire risk assessment being applicable and reproducible on similar study areas at metropolitan scale. The method presented in this chapter is aimed to support efforts for forest fire risk reduction agendas at local level in the developing countries.

Keywords Forest fire risk assessment · Wildfire ignition probability · QGIS · Urban atlas · Analytical hierarchy process · Albania

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Chapter 10 Preparation and Adoption of Risk Sensitive Land Use Plans in the New Federal Context of Nepal

Chandra Laxmi Hazra, Rajib Shaw, and Anil Pokhrel

Abstract Nepal is one of the most disaster-prone countries in the world. Increase in frequency and severity—particularly for floods, landslides, and fires—and unavailability of disaster events such as earthquakes, is storm-helting Nepal's disaster risk. Limited disaster risk reduction and management (DRRM) capacities and impeding sustainable development progress. Rapid urban growth fueled by migration, high levels of poverty and inequality, unregulated urban development, climate change, and a continually pervasive sense of fatalism are the key reasons for increased disaster risk in Nepal. Despite the increased awareness about risk preparedness plans, programmes and projects on DRRM, the levels of risk continue to grow. To reduce risk, there are a number of disaster resilient planning techniques, such as the Risk Sensitive Land Use Planning (RSLUP) has been recognized as an evidence-based tool to understand risk, plan and to reduce risk. In Nepal, until now, only eight RSLUPs have been prepared, but its use as a planning tool is increasingly getting popular. In the new federal structure, the municipalities have been given full responsibilities for developing the policy legislations, standards for local level development plans and projects. Further, there has been tremendous growth in the generation of hazard, exposure, and vulnerability data fundamental to the preparation of RSLUPs. In this context, it is important to look at an evidence-based land use planning approach as a one element for better development in municipal governments to understand risk while undertaking land use planning, and to integrate RSLUP into the municipal planning process including sectoral plans. This chapter would focus on how to effectively enhance collaborative, participatory, and interactive approaches for risk-sensitive land use planning, and fully integrate into a mandatory planning process. The research is to constitute a framework that enables collaborative, participatory and iterative approach for the implementation of the RSLUP through integration in

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Hastoro Dwintanjung, Hasti Widyasumatri, Milla Karamillah, and Sakko Kanbara

Chapter 12 Climate Change Adaptation Strategies in Primary Health Care

Hastoro Dwintanjung, Hasti Widyasumatri, Milla Karamillah, and Sakko Kanbara

Abstract Global climate change has already had observable effects on the environment. Floods in Semarang, Indonesia are caused by a combination of coastal floods and flood tides due to climate change. Key health impacts of climate change are considered from the perspective of extreme weather events, infectious diseases, and drought-related problems. The aim of the study was to explore the adaptation strategies the Kemijen communities take to reduce the negative effects of floods on human health. An exploratory case study approach was carried out from April to June 2018 in Kemijen, Semarang. Data were obtained through field survey, face-to-face in-depth interviews, observations, and literature studies. In total, 102 health cadres were chosen through total sampling. Twenty-three percent of health cadres reported the period in which they were suffering from floods already lasted for more than 8 years. Types of illnesses due to floods in their areas were diarrhoea, dengue fever, skin diseases, and leptospirosis. Community program led by Municipal Health Office, Puskesmas Karangdoro and health cadres have been implemented to monitor dengue fever cases. Public kitchen was provided through Dase Wisesa. Medical supplies and assistance needed to recover from flood-related diseases were provided through Pousada. We concluded that primary health care (PHC) implemented by health cadres plays an important role in preparing for extreme events, monitoring and responding to infectious disease outbreaks due to changing patterns of vector- and waterborne diseases by providing extra support for communities. Insights into the integration of PHC adaptation strategies and strengthening the role of health cadres



DRR Practice from IRDR Young Scientists to close the gap between S&T at local level

An Agent-Based Approach to Integrate Human Dynamics Into Disaster Risk Management

LEI Yu
Key Laboratory of Mountain Hazards and Earth Surface Processes
Institute of Mountain Hazards and Environment, CAS

Multi-hazard risk assessment of rural municipalities of Nepal



Sharad Wagle
National Society for Earthquake Technology (NSET)

Climate Smart Schools: Case study of Sikkim, India

Dr. Shyamli Singh
Coordinator Centre for Environment and Climate Change
Indian Institute of Public Administration, New Delhi, India

Climate Change Effects and Smart Agricultural Practices in Goat Production

Godfrey C. Onuwa
Federal College of Forest Jos, Plateau state, Nigeria

Land Cover Conservation and Forest Fire Risk Management Arise in Ghana



Kueshi Sémanou DAHAN
Faculty of Natural Resources and Environment, Department of Environment and Sustainability Sciences, University for Development Studies, Tamale, Ghana.

Disaster and Climate Risk-sensitive Small and Medium Enterprises (SMEs) in the Northern and Eastern Provinces of Sri Lanka

A .M. Aslam Saja¹, Suresh Kanesh²
¹ Faculty of Engineering, South Eastern University of Sri Lanka, Oluvil
² Faculty of Arts, Eastern University of Sri Lanka, Vantharumoolai

Assessment of Gaps between Academia and Society in Landslide Risk Reduction

Sangeeta
Department of Civil Engineering
Punjab Engineering College
Chandigarh, India

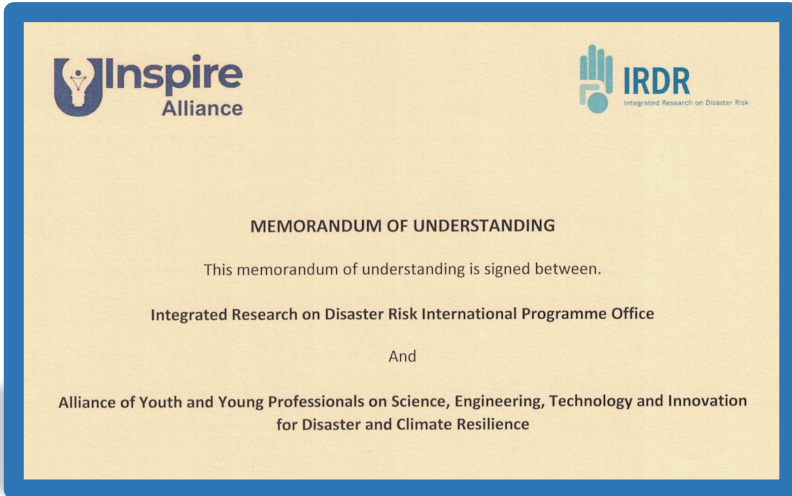
Fuzzy cognitive mapping application for communities exposed to severe cyclones accompanied by storm surges, floods and other climatic extremities in India

Shruthi Dakey
VNIT, Nagpur, India

Hydropower for Disaster Resilience Applications (HYDRA) in Greek

Spyros Schismenos
Humanitarian and Development Research Initiative (HADRI)
School of Social Sciences
Western Sydney University, Australia

Continue networking and collaboration with other YS-YYP network



U-INSPIRE Alliance is an alliance of youth, young scientists, and young professionals (YYP) working in Science, Engineering, Technology and Innovation (SETI) to support disaster risk reduction and resilience building, in line with SDGs and the Sendai Framework. This alliance has been facilitated and nurtured by UNESCO, together with UNDRR, UNMGCY, IDMR, IRDR, universities and DRR related stakeholder.



Explore engagement from YS-YYP network from other region: AYAB (Africa), CARIDIMA (Latin America),

Integrated Research for Disaster Risk Young Scientist Program Action Plan

