IRDR
Integrated Research on Disaster Risk

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2025

International Cooperation for Climate Change

Session @ 2025 DRR Conference

PROGRAMME

28-29 April, Hangzhou

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1. RATIONALE

The 2025 Disaster Risk Reduction Conference is organized by the China Association for Disaster Prevention and is scheduled to be held at the Hangzhou International Expo Center from April 28 to 29, 2025. The theme of this conference is "Empower Disaster Risk Reduction Innovations, Promote New Quality Productive Forces", which aims to promote the innovation and application of DRR technologies and enhance global disaster risk management capabilities through exchanges and cooperation in various fields.

IRDR and UNESCO will co-organise a sub-forum entitled “International Cooperation for Climate Change”. The session will discuss the impact of climate change on social vulnerabilities, including culture (both tangible and intangible cultural heritage) and public health, explore the research priorities for international scientific cooperation, promote the localization of the international agenda with multi-stakeholders, and enhance the overall social resilience.

2. AGENDA

Day 1 AM

9:00-10:30 **Session 1: Frontier research and insights**
Moderator: Robert Walker, IRDR Senior Science Advisor

1. Welcome (10 min)
- Marco Toscano-Rivalta, Chief of UNDRR Regional Office for Asia and the Pacific
- Shahbaz Khan, Director of UNESCO Regional Office for East Asia
- Saini Yang, Executive Director of IRDR

2. Presentations of cases (60 min)
- Min Li, Senior Researcher of Ritsumeikan University (Japan)
  Disaster Risk Management at World Cultural Heritage Sites: Exploring Local Challenges and Insights, Lessons from Climate Change-Related Disasters, and Strategic Directions for the Future
- Tao Ye, Professor of Beijing Normal University (China)
  Disaster Risk Research in Beijing Normal University: Climate Change and International Collaboration
- Otgonpurev Sukhbaatar, Associate Professor of Mongolian University of Life Sciences (Mongolia)
  Resilience and Risk: Mongolian Traditional Pastoral System under a Changing Climate
- Binwei Tian, Associate Professor of Sichuan University (China)
  Climate Resilience Of Earthquake Affected World Heritages
- Donghyun Kim, Professor of Jeonju University (Republic of Korea)
  Cases of Cultural Property Damage Severity and Due to Climate Change and Forest Fires in Korea
- Weihong Lai, PhD Candidate of Beijing Normal University (China)
  Folk Tradition about Natural Disasters: Folkloristic Perspectives

3. Q&A and discussion

10:30-11:00 ***Break***

11:00-12:30 **Session 2: Roundtable Discussion**
Moderator: Qunli Han, IRDR Senior Science Advisor

4. Introduction of current efforts (45 min)

5. Discussion on the research gaps (45 min)

Day 1 PM

14:30-18:00 Opening Ceremony and keynote session of Main Conference

Day 2 AM

9:00-12:30 **Session 3: Discussion on the research priority (Close door)**
Moderator:
Saini Yang, Executive Director of IRDR;
DU'O'NG Bích Hanh, Programme Specialist for Culture of UNESCO Regional Office for East Asia

3. REGISTRATION AND LOGISTICS

IRDR will facilitate the registration for the participants.

Hotel
- Hangzhou Tianyuan Intelligence Hotel
  Address: 27-35F, Intelligence Building, Xiaoshan District, Hangzhou, Zhejiang Province, China
- Reservation Name: IRDR
  Room type: Deluxe standard room, 450CNY/room/night, breakfast included
  Reservation number: 2503190031
- Contact: Yuhan
  Email: yuhan.hao@irdrinternational.org

Meeting Venue
- Hangzhou International Expo Centre
  Address: No.353, Benjing Avenue, Qianjiang Century, Xiaoshan District, Hangzhou, Zhejiang Province, P.R. China
- Meeting Room : Vip2-2, 2nd. Floor

Meals
- Meal coupons for lunch and dinner buffet could be purchased at the restaurant entrance, with our negotiated price 150 CNY/meal.

Collection of badges and conference materials
- Participants can collect their badges and conference materials at the meeting venue.

Contact
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For logistics:
Lang Lang, IRDR Administrative Officer, lang.lang@irdrinternational.org

4. LIST OF IMPORTANT GUESTS, MODERATORS, SPEAKERS AND PARTICIPANTS OF ROUNDTABLE DISCUSSIONS

UNESCO

- Shahbaz Khan, Director of UNESCO Regional Office for East Asia
- DU'O'NG Bích Hanh, Programme Specialist for Culture, UNESCO Regional Office for East Asia
- Yunheng Zeng, Programme Assistant for Culture, UNESCO Regional Office for East Asia

UNDRR

- Marco Toscano-Rivalta, Chief of UNDRR Regional Office for Asia and the Pacific

IRDR

- Saini Yang, IRDR Executive Director
- Robert Walker, IRDR Senior Science Advisor
- Qunli Han, IRDR Senior Science Advisor
- Fang Lian, IRDR Science Officer

China Association of Disaster Prevention (CADP)

- Hongyang He, Executive Board Member
- Mingzhou Jing, on behalf of the Hua Xu, Executive Board Member
- Ji Ma, Board Member
- Ya Qu, Board Member
- Yonggang Ge, Board Member

Beijing Normal University

Tao Ye

Tao Ye is a Professor at the Faculty of Geographical Science, Beijing Normal University, China. He was trained as a geographer and Beijing Normal University, and obtained his Ph.D degree at Disaster Prevention Research Institute, Kyoto University, Japan. His research focuses on agricultural production risk under climate change, food security, and producers' resilience. He currently serves as board members of Chinese Society of Geography, and Chinese Society of Insurance. He also serves as an editorial board member of International Journal of Disaster Risk Science, and advisory board member of Environmental Research Letters.

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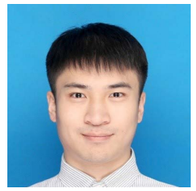

Weihong Lai

Weihong Lai is a PhD candidate from the School of Chinese Language and Literature of Beijing Normal University, specializing in the folkloristic study, folklore literature and Intangible Cultural Heritage (ICH). His recent research interests lie in the fields of Performance Theory, American folklore studies and the sustainable development of ICH.

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Sichuan University

Baofeng Di

Dr. Di Baofeng, full Professor, PhD supervisor, dean of the Sichuan University - Hong Kong Polytechnic University Institute for Disaster Management and Reconstruction, High-level Science and Technology leading talent of Ministry of Natural Resources of PRC, Academic and Technology leading scholar of Sichuan province, vice director of Ministry of Emergency Management Key Laboratory for Mountain Disaster Risk Early Warning and Control, recipient of 2024 Baosteel Outstanding Teacher Award. He also serves as the council member of China Society of Emergency Management, vice director of Sichuan Society of Emergency Management. He is committed to research and teaching in the field of disaster risk management, integrated community disaster mitigation, interaction between disaster and culture evolution using remote sensing (RS), geographic information system (GIS) and machine learning (ML).

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Bingwei Tian

Dr. Bingwei Tian, Associate Professor, currently serves as an Assistant Dean and Department Chair of Urban Safety, Health and Management at the Institute for Disaster Management and Reconstruction (IDMR), Sichuan University-The Hong Kong Polytechnic University, China. He earned his Ph.D degree in Remote Sensing and Urban Engineering from Kyoto University, Japan. He is doing research in the fields of International Disaster Risk Reduction and Resilience, Integrate Disaster Education, Mapping and Remote Sensing and Natural Disasters. He has served as the Principal Investigator (PI) for over 20 projects, including prestigious sources such as the National Social Science Fund of China and the National Natural Science Foundation of China. He published more than 50 papers, edited 5 monographs, authored 1 book, and participated in the compilation of a disaster atlas.

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Wei Xie

Dr. Wei Xie is an Associate Professor of Institute for Disaster Management and Reconstruction (IDMR) at Sichuan University, specializing in evacuation dynamics and crowd management. She earned her Ph.D. and conducted postdoctoral research at City University of Hong Kong. With 30+ publications in leading journals (e.g., Safety Science, International Journal of Disaster Risk Reduction), she serves as Guest Editor for Fire-Switzerland. A recipient of National Natural Science Foundation of China, Dr. Xie currently leads AI-driven Crowd Evacuation Lab and supervises 4 graduate students. Her work bridges computational models and emergency protocols.

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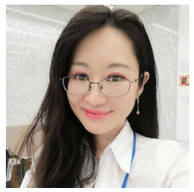
Ritsumeikan University



Li Min

Dr. Li Min is a Senior Researcher at the Institute of Disaster Mitigation for Urban Cultural Heritage (DMUCH), Ritsumeikan University. Her research focuses on disaster risk management and the conservation of architectural and urban heritage. She develops disaster risk management models tailored to the physical and social characteristics of cultural heritage, including community involvement. Dr. Li has conducted research in Japan, Taiwan, Cambodia, and China on disaster prevention in historical districts and villages. Currently, she is developing models for World Cultural Heritage sites, aiming to address existing disaster risks and contribute to their protection from multiple hazards and climate change.

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Wang Min

Wang Min holds degrees from Peking University (B.A. & M.A. in International Relations) and the University of Tokyo (M.A. & Ph.D. in Human Security Studies). Her academic focus lies in international relations and non-traditional security issues. Her doctoral research examined the evolution of disaster relief operations by the Chinese PLA and Japan's Self-Defense Forces in the post-Cold War era. She is currently a research fellow at the Institute for Disaster Mitigation of Urban Cultural Heritage, Ritsumeikan University. Her academic interests include disaster risk reduction for cultural heritage and climate change responses involving military actors.

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Shiga University

Kano Kei

Kei Kano, PhD in life science, is a professor in the Science Communication Laboratory, Faculty of Education, Shiga University, Japan. He is also a visiting fellow at the Australian National Centre for the Public Awareness of Science at ANU. He has been involved in developing two science education TV programs by NHK. He has twice (2017 and 2014) won the Prize for Science and Technology for his science communication practices and research by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) in Japan. His current research topics are "Re-innovation with Japanese Way of Knowing Nature: the Case of Kakishibu (Fermented Astringent Persimmon Juice)" and "Practice on ELSI/RRI of Educational Technology / AI in Education."

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Jeonju University

Kim Donghyun

Prof. Donghyun Kim is a multifaceted expert in forestry, disaster management, and ecosystems services. He started his career at the National Institute of Forest Science from 2003 to 2015, then earned a Ph.D. in Japan in 2010. Since 2012, he has served as a senior researcher at IIASA, and since 2015, he has been a professor at Jeonju University. Additionally, he holds multiple government advisory positions and leads the Cultural Heritage Disaster Prevention Research Institute. With over 100 patents and more than 50 publications, his work emphasizes enhancing safety and preserving cultural heritage through interdisciplinary research and active policy engagement.

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Mongolian State University of Arts and Culture

Mijiddorj Ganjargal

Ganjargal earned her bachelor's degree in Cultural Studies from Kazakh National University and completed her master's degree at Mongolian National University. Her doctoral research examines the formation and expression of ethnocultural identity among Mongolian children. Ganjargal's research interests focus on child-centered rituals, cultural education, the promotion of cultural heritage awareness, and the preservation and safeguarding of cultural heritage. The traditional lifestyle of rural herders—rooted in a rich nomadic heritage—is undergoing significant changes due to technological advancements and environmental and climatic challenges. Her future research will be on these issues. She currently serve as a senior lecturer in the Department of Cultural Studies at the University of Culture and Arts. In addition, Ganjargal is an active member of two national project teams focused on cultural heritage.

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Mongolian University of Life Sciences

Sukhbaatar Otgonpurev

Dr. Otgonpurev Sukhbaatar is Chair of the Department of Chemistry at the Mongolian University of Life Sciences. Her research focuses on plant bioactive compounds, ruminant nutrition, and enteric methane emissions. She leads projects on the role of native grasses in reducing GHG emissions from sheep. As a recipient of multiple national research awards, she has published widely and led international collaborations in the U.S., China, Korea, Poland, and Germany. With a Ph.D. in Agricultural Science and over 15 years of academic experience, she is dedicated to advancing sustainable livestock systems and mitigating environmental impacts through innovative plant-based approaches.

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5. ACKNOWLEDGEMENT

The participants appreciate the technical support from the staff from organizer and co-organizers, especially:

Qing Niu, Business Manager of CADP Cooperation and Development Department ; Lang Lang, IRDR Administrative Officer; Jing Yang, IRDR IPO Programme Assistant; Baolin Wu, IRDR IPO Research Assistant; Zhihao Wang, IRDR IPO Office Assistant; Yuhan Hao, IRDR IPO Operation Intern; Ruiyi Zhu, IRDR IPO Communication Intern; William Edusei-Mensah, IRDR IPO Communication Intern; Jenipher Asiimwe, IRDR IPO Communication Intern

6. APPENDIX: PROFILE OF RESEARCH FOCUS

Beijing Normal University: Disaster Risk Science Team

The Disaster Risk Science Group at Beijing Normal University (BNU) is a pioneering interdisciplinary initiative dedicated to advancing resilience through education, cultural awareness, and community empowerment. Leveraging BNU's strengths in pedagogy, psychology, geography, and social sciences, the group addresses the intersection of disasters, human behavior, and societal systems, with a focus on fostering preparedness and adaptive capacities in diverse populations. The Academy of Disaster Reduction and Emergency Management is one of the earliest research institute on DRR and is globally known for its academic achievements and science-policy nexus.

Beijing Normal University: Research and Development Center for Intangible Cultural Heritage

1. Research on Natural Disasters in Chinese Mythology

Principal Investigator: Prof. Yang Lihui

- Prof. Yang Lihui, specializing in Chinese mythology and heritage tourism, has conducted systematic studies on disaster-related myths across multiple ethnic groups in China. Her work identifies core motifs in these myths, arguing that they form the ethical foundation of Chinese disaster narratives and continue to shape contemporary societal responses to disasters.

Key Contributions:

- Presented at the interdisciplinary forum "Geologic Stabilization and Human Adaptations in Northeast Asia" (hosted by Tohoku University, Japan), focusing on the workshop "Natural Disaster and Religion/Mythology."
- Edited Intangible Cultural Heritage Academic Essentials: Knowledge and Practices Related to Nature and the Universe, which highlights traditional ecological knowledge and its relevance to climate change adaptation.

2. UNESCO Intangible Cultural Heritage Policy System Research

Principal Investigator: Associate Prof. Tang Lulu

- This project critically examines the 20-year evolution of UNESCO's intangible cultural heritage (ICH) policy framework, exploring its alignment with China's ICH protection practices.

Key Contributions:

- Clarifies the legal, political, and cultural foundations of UNESCO's ICH policies.
- Provides theoretical and policy insights to bridge international norms (e.g., the ICH Convention) with localized practices in China.

3. Intangible Cultural Heritage Safeguarding and Sustainable Development

Principal Investigator: PhD. Candidate Song Jiaqi

- This ethnographic study adopts UNESCO's "community-centered" approach to investigate the interplay between ICH safeguarding and rural sustainable development in China.

Case Study:

- Analyzes straw weaving (listed in Jilin Province's ICH inventory) as a practice embedding ecological wisdom, economic resilience, and social cohesion.
- Demonstrates how traditional crafts contribute to environmental stewardship and community identity.

4. Diverse Environmentalisms Research Team (DERT)

Principal Investigator: Dr. Sue Tuohy (Adjunct Researcher, Indiana University, USA)

- DERT investigates the role of expressive culture (e.g., songs, rituals, crafts) in environmental governance and climate adaptation.

Key Output:

- Published Performing Environmentalisms: Expressive Culture and Ecological Change (University of Illinois Press), exploring how localized practices empower communities to manage ecological transitions.

Sichuan University: Institute for Disaster Management and Reconstruction (IDMR)

As a collaborative endeavor between Sichuan University (SCU) and the Hong Kong Polytechnic University (PolyU), the Institute for Disaster Management and Reconstruction (IDMR) is a pioneering academic institution dedicated to integrated research, education and service provision on all aspects of disaster risk reduction, response, recovery and reconstruction. IDMR has developed a comprehensive research agenda focusing on the protection of cultural heritage, enhancement of human settlements, and innovative risk governance in vulnerable regions.

Key Achievements:

- Big Data and 3S Technologies for Heritage Risk Monitoring

IDMR utilizes remote sensing, GIS, and big data analytics to monitor climate threats and assess risks to cultural heritage sites. These technologies support early warning systems and risk-informed conservation.

PI: Dr. Bingwei Tian

- Cultural Landscape Protection and Livable Environment Enhancement

Our team has contributed to sustainable urban-rural development and high-quality living environment construction. Emphasizing heritage-sensitive approaches in reginal planning projects, ensuring resilient and culturally meaningful recovery in disaster-affected areas.

PI: Dr. Qiushan Li

Current Foci:

- Climate-Resilient Urban and Rural Planning

We are advancing resilient urban design and rural safety planning frameworks that embed cultural heritage protection and climate change adaptation. This includes scenario-based simulations and participatory planning tools.

PI: Dr. Lilai Xu

- Borderland Heritage and Resilience in the Himalayas

Focusing on Himalayan frontier ports, our research explores the resilience of cultural heritage and local communities to cross-border natural hazards under climate stress.

PI: Dr. Bingwei Tian

- Evacuation Planning for Heritage-Rich Areas

With increasing extreme weather events, we are developing people-centered evacuation strategies tailored to vulnerable people and heritage regions.

PI: Dr. Wei Xie

- Critical Technologies for the Conservation and Transmission of Cultural Landscapes Heritage

Projects employ community-driven approaches, Scenario Simulation, and Public Participation Geographic Information Systems (PPGIS) to assess local perceptions of place identity, historical continuity, and cultural values. Emphasis is placed on culturally sensitive conservation strategies and resilience enhancement for cultural landscapes, particularly historic settlements facing disaster risks.

PI: Dr. Qiushan Li

Planned Priorities

- We aim to collaborate with local and international stakeholders to promote policy integration, ensuring that cultural heritage is embedded within climate adaptation and disaster risk reduction agendas.

PI: Prof. Baofeng Di

IDMR remains committed to fostering global partnerships and knowledge exchange to safeguard cultural heritage in the context of climate change and disaster risk.

Ritsumeikan University

Ritsumeikan University has a specific research focus on the linkage between heritage and climate change. The university's Institute of Disaster Mitigation for Urban Cultural Heritage (R-DMUCH) leads this research. R-DMUCH's research aims to protect the originality of cultural heritage and historic cities, creating knowledge that integrates disaster prevention and mitigation skills into the community. It integrates disciplines from humanities, science, and engineering to tackle new research themes related to cultural heritage disaster mitigation and historic city disaster mitigation.

The school’s planned research projects include collaborations with various organizations, such as the Art Research Center at Ritsumeikan University, to make the best use of information technology in archiving cultural materials. R-DMUCH is also authorized as the only UNESCO Chair in the field of cultural heritage risk management, conducting research and developing educational programs to enhance disaster risk management capacity for cultural heritage. Through its International Training Course (ITC), it promotes the study and field research of disasters affecting cultural heritage worldwide.

Additionally, R-DMUCH is involved in specific projects addressing climate change at World Heritage Sites, focusing on African and Asian cultural heritage sites to understand local challenges and develop mitigation and adaptation strategies. These efforts demonstrate Ritsumeikan University's commitment to preserving cultural heritage in the face of climate change.

Shiga University

Kei’s research focus and plan, supported by Shiga University, center around exploring the traditional Japanese knowledge to support transformative innovation in the social and environmental good facing climate change. The research aims to understand how different stakeholders perceive the histories, purposes, and designs of Kakishibu production, as well as the material infrastructure and expertise needed to support production at various scales. It also seeks to illustrate the specific future pathways imagined for Kakishibu, given its increasing interest due to its biodegradable and non-toxic properties, which make it a potential substitute for environmentally harmful petrochemical-based plastics.

To achieve these aims, the research plan involves conducting semi-structured focus group and qualitative interview-based research with a diverse group of experts, including the CEO and CTO of a small-scale Kakishibu factory, a professor who discovered the chemical structure of persimmon tannin, engineers involved in strengthening and mass-producing Kakishibu paper, and policymakers.

The interviews will explore themes such as the relationship between work and Kakishibu, its potential to replace petrochemicals, and the role of science and technology in its development. Ultimately, the research aims to contribute to the discussion on green innovation beyond techno-fixes and the dominant social order, emphasizing the coexistence of the Japanese way of knowing nature and Eurocentric sciences in developing sustainable solutions to global challenges.

Mongolian State University of Culture and Arts

Key research priorities of Mongolian State University of Culture and Arts include the study, recognition, promotion, and dissemination of folk culture and art; the preservation of tangible and intangible cultural heritage, the analysis of state cultural policy implementation; the coexistence of nomadic and sedentary cultures, and the exploration of factors driving changes in nomadic culture. From this perspective, the tangible and intangible heritage associated with pastoralism—the heart of Mongolian nomadic civilization—has been continuously studied through the collaborative efforts of students, educators, and researchers. We also aim to further examine the evolution of pastoralist cultural values and the ways in which nature and climate shape and influence them.

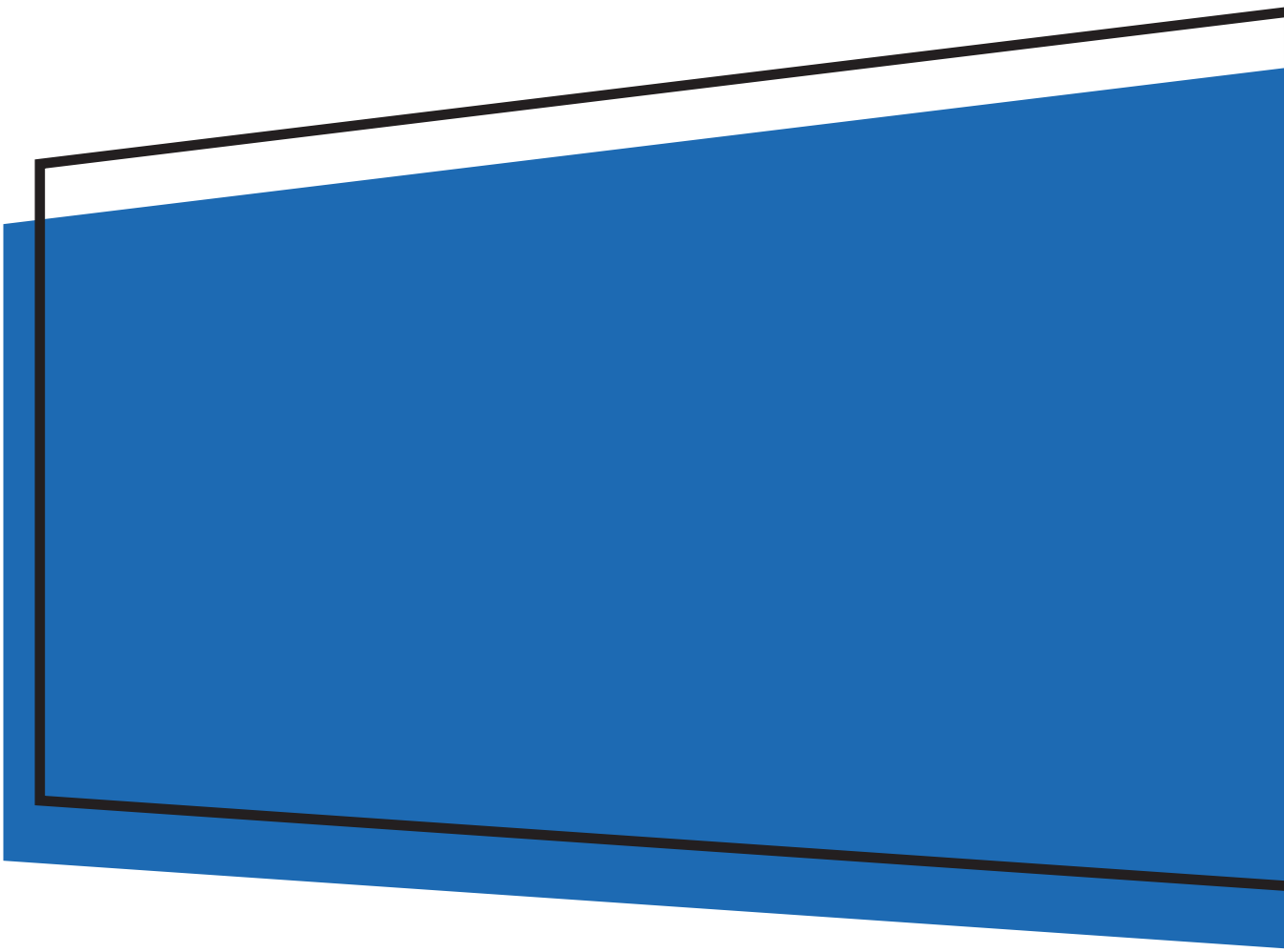
Mongolian University of Life Sciences

Supported by Mongolian University of Life Sciences, Otgonpurev’s research focuses on greenhouse gas emissions from livestock farming and their relationship to climate change. She’s currently affiliated with the Mongolian State Agricultural University—the only agricultural university in Mongolia—whose mission is firmly rooted in promoting sustainable development. Our leading research areas include animal husbandry, veterinary medicine, plant breeding, and environmental science.

Mongolia is one of the few countries in the world where a traditional nomadic pastoralist lifestyle remains central to our way of life. This livelihood is deeply intertwined with our cultural heritage. However, Mongolia is experiencing the effects of climate change at an alarming rate: the average temperature has already risen by 2.2°C, surpassing the global average. As a result, we are witnessing a dramatic increase in natural disasters. Most recently, in 2024, the dzud disaster claimed 9 million livestock—a devastating blow to our society, economy, and cultural identity. These challenges underscore the urgent need to rethink and adapt traditional pastoralist practices.

Jeonju University

Professor Donghyun’s current and planned research centers on cultural property risk assessment and damage prevention measures due to forest fires in relation to climate change. He is also active in the topic of regional customized forest fire risk assessment based on the FRAM model.



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