

**International Training Workshop on Resource & Environment  
Scientific Data Sharing and Disaster Risk Reduction Knowledge  
Service along the Belt and Road**

# **Workshop Programme**

**28– 31 Oct., 2021**

**On-line (Zoom)**

**International Knowledge Centre for Engineering Sciences and**

**Technology under the Auspices of UNESCO (IKCEST)**

**China-Pakistan Joint Research Center on Earth Sciences**

## **Overview:**

Resource and environmental data sharing in the era of big data is an increasingly urgent global issue. The “Belt and Road” region has a complex resource and environment pattern. The research on several major scientific issues and the coordination and formulation of global governance plans are inseparable from a common data sharing foundation.

The International Training Workshop on Resource & Environment Scientific Data Sharing and Disaster Risk Reduction Knowledge Service along the Belt and Road is planned for October 28 - 31, 2021 on-line.

This program is aims at providing technical training for pushing the resources and environmental data sharing along the Belt and Road Initiative. By so doing, to establish resources and environment data sharing system to serve cooperation in larger scope, and improve the ability of disaster risk and reduction knowledge services. In the meantime, this program will contribute to the talent pool of the Alliance of International Science Organizations along the Belt and Road Region, provide fundamental data for international collaborative research, and promote the regional disaster risk reduction and sustainable development capacity.

## **Hosts**

International Knowledge Centre for Engineering Sciences and Technology under the Auspices of UNESCO (IKCEST)

China-Pakistan Joint Research Center on Earth Sciences (CPJRC)

## **Organizers**

Institute of Geographic Sciences and Natural Resources Research, CAS

Institute of Mountain Hazards and Environment, CAS

## **Co-Sponsors**

Integrated Research on Disaster Risk International Programme Office (IRDR IPO)

Alliance of International Science Organizations (ANSO)

National Earth System Science Data Center

World Data Center for Renewable Resources and Environment (WDC-RRE)

## Venue (on line)

Zoom ID: 937 7314 4946

Meeting Code: 2021DRR

Zoom link: <https://zoom.us/j/93773144946>

**Test Time:** 27 October ( UTC+8) 13:00-17:00

Zoom tools download: <https://www.zoom.us/download>

## Contact information

**Yuelei Yuan** E-mail: [yuanyl@lreis.ac.cn](mailto:yuanyl@lreis.ac.cn), Tel: +86 13693170987

## Agenda and registration

Participants are invited to register through the link or QR code below by 28 October 2021.

<http://drr.ikcest.org/training202110.html>.



(Agenda)



(Registration)

## Programme

<i>28 Oct. On-line (Beijing time UTC+8)</i>			
<b>13:00-14:00</b>	<i>Opening Ceremony 开幕式</i> Ms. LIU Chang, Mr. HONG Tianhua, Mr. ZHANG Ming		
<b>14:00-14:50</b>	Big data support Disaster Risk Reduction in the Belt and Road Economic Corridor  大数据助力“一带一路” 经济走廊防灾减灾 灾	Prof. WANG Juanle  王卷乐研究员	Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences  中国科学院地理科学与资源研 究所
<b>15:00-15:50</b>	UNESCO's contribution to DRR and resilience-Focusing on AI and Nature based solution  联合国教科文组织对 防灾减灾和恢复力的 贡献，重点是人工智 能和基于自然的解决 方案	Mr. Soichiro YASUKAWA  Soichiro YASUKAWA 先生	Programme Specialist, Coordinator for Disaster Risk Reduction and Resilience, Section on Earth Sciences and Geo-hazards Risk Reduction, Natural Sciences Sector, UNESCO  联合国教科文组织自然科学 部，防灾减灾领域项目专家
<b>16:00 - 17:00</b>	<i>Short break</i>		
<b>17:00-17:50</b>	Geological disaster monitoring and disaster resilience planning along China-Nepal corridor  中尼走廊地质灾害监 测及其防灾规划	Associate Prof. TIAN Bingwei  田兵伟副教授	Sichuan University-The Hong Kong Polytechnic University, Institute for Disaster Management and Reconstruction  四川大学-香港理工大学灾后 重建与管理学院

<b>18:00-18:50</b>	<p>A Flood and Drought Monitoring and Forecasting System over China</p> <p>中国洪水和干旱监测预报系统</p>	<p>Prof. TANG Qihong</p> <p>汤秋鸿研究员</p>	<p>Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences</p> <p>中国科学院地理科学与资源研究所</p>
<b>19:00-19:50</b>	<p>Framework for Global Science in support Risk-informed Sustainable Development and Planetary Health - a brief introduction</p> <p>支持基于风险的可持续发展和行星健康的全球科学框架 - 简要介绍</p>	<p>Prof. HAN Qunli, Ms. LIAN Fang</p> <p>韩群力研究员, 连芳</p>	<p>The Integrated Research on Disaster Risk (IRDR-IPO)</p> <p>灾害风险综合研究国际项目办公室执行主任</p>
<b>29 Oct. On-line (Beijing time UTC+8)</b>			
<b>13:00-13:50</b>	<p>Strategies for Strengthening International Collaboration on Disaster Risk Reduction on the Belt and Road</p> <p>加强“一带一路”防灾减灾国际合作战略</p>	<p>Prof. Gretchen KALONJI</p> <p>Gretchen KALONJI 教授</p>	<p>Dean of Sichuan University-The Hong Kong Polytechnic University Institute for Disaster Management and Reconstruction</p> <p>四川大学-香港理工大学灾害管理与重建学院院长</p>
<b>14:00-14:50</b>	<p>Urban Flood Risks and Emerging Challenges in The Greater Bay Area: The Case of Coastal Megacities</p> <p>大湾区城市洪水风险与新挑战：以沿海特大城市为例</p>	<p>Associate Prof. Faith, Ka Shun CHAN</p> <p>Faith, Ka Shun CHAN 副教授</p>	<p>School of Geographical Sciences, University of Nottingham Ningbo China</p> <p>宁波诺丁汉大学地理科学学院</p>

<b>15:00-15:50</b>	Urban climate hazards: dynamic risk assessment and management  城市气候灾害：风险 动态评估与管理	Associate Prof. XU Lilai  徐礼来副研究 员	Sichuan University-The Hong Kong Polytechnic University, Institute for Disaster Management and Reconstruction  四川大学-香港理工大学灾后 重建与管理学院
<b>16:00 - 17:00</b>	<i>Short break</i>		
<b>17:00-17:50</b>	Automatic Data Matching for Geospatial Models: a new paradigm for geospatial data and models sharing  地理空间模型数据自动 匹配研究：一种地理 空间数据—模型共 享的新范式	Prof. ZHU Yunqiang  诸云强研究员	Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences  中国科学院地理科学与资源研 究所
<b>18:00-18:50</b>	Data management, analysis and service for Earth observation and simulation  地球观测数据和地球 模拟数据的管理、分 析和服务	Prof. BAI Yuqi  白玉琪教授	Department of Earth System Science, Tsinghua University  清华大学地球系统科学系
<b>19:00-19:50</b>	Big Earth Data in Support of LDN tracking  地球大数据支撑土地 退化零增长	Prof. LI Xiaosong  李晓松研究员	Aerospace Information Research Institute, Chinese Academy of Sciences  中国科学院空天信息创新研究 院
<b>30 Oct. On-line (Beijing time UTC+8)</b>			
<b>13:00-13:50</b>	Three Polar Tourism: Acclimatization Problems and Decisions During	Prof. Elena A. GRIGORIEVA  Elena A. GRIGORIEVA	Institute for Complex Analysis of Regional Problems Far Eastern Branch Russian Academy of Sciences

	<p>Trans-Boundary Travels</p> <p>三个极地地区旅游： 跨界旅行的适应问题 与决策</p>	教授	俄罗斯科学院远东分院区域问 题综合分析研究所
14:00-14:50	<p>Paying for Green: Payments for Ecosystem Services in China</p> <p>中国的生态补偿研究 与实践</p>	<p>Prof. ZHEN Lin 甄霖研究员</p>	<p>Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences 中国科学院地理科学与资源研 究所</p>
15:00-15:50	<p>Progress of the “Belt &amp; Road” Initiative and Collaborative Disaster Governance for China- Pakistan Economic Corridor (CPEC)</p> <p>“一带一路” 倡议进 展与中巴经济走廊 (CPEC) 灾害协同治 理</p>	<p>Prof. LIU Hui 刘慧研究员</p>	<p>Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences 中国科学院地理科学与资源研 究所</p>
16:00 - 17:00	<i>Short break</i>		
17:00-17:50	<p>Resource, Environmental, Economic Patterns and Green Development Modes of the Belt and Road</p> <p>“一带一路” 资源、 环境和经济格局与绿 色发展模式</p>	<p>Prof. DONG Suocheng 董锁成研究员</p>	<p>Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences 中国科学院地理科学与资源研 究所</p>
18:00-18:50	<p>Heat Wave Risk and Impact Assessment in The Belt &amp; Road</p> <p>一带一路高温热浪风</p>	<p>Associate Prof. YANG Fei 杨飞副研究员</p>	<p>Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences 中国科学院地理科学与资源研</p>

	险及影响评估		究所
<b>19:00-19:50</b>	Open Source GIS Application Practice: Using Python Language 开源 GIS 应用实践: 基于 Python 语言	BU Kun / Senior Engineer 卜坤正高级工程师	Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences 中国科学院东北地理与农业生态研究所
<b>31 Oct. On-line (Beijing time UTC+8)</b>			
<b>13:00-13:50</b>	CSTCloud and the Global Open Science Cloud Initiative 中国科技云与全球开放科学云计划	ZHANG Lili / Senior Engineer 张丽丽高级工程师	Computer Network Information Center, Chinese Academy of Sciences 中国科学院计算机网络信息中心
<b>14:00-14:50</b>	Open Science for Geographical Indications Environment and Sustainability 地理标志环境和可持续性的开放科学	Prof. LIU Chuang 刘闯研究员	Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences 中国科学院地理科学与资源研究所
<b>15:00-15:50</b>	Leaf Area Index (LAI): Field Measurements, Remote Sensing Estimation and Product Validation 叶面积指数 (LAI): 田间测量、遥感估计和产品验证	Prof. FANG Hongliang 方红亮研究员	Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences 中国科学院地理科学与资源研究所
<b>16:00 - 17:00</b>	<i>Short break</i>		
<b>17:00-17:50</b>	Chinese Earth Observation Data Sharing and international Services	Prof. LI Guoqing 李国庆研究员	Aerospace Information Research Institute, Chinese Academy of Sciences



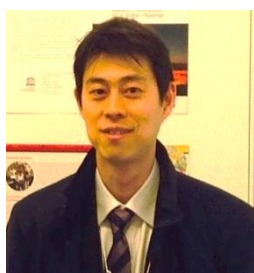
	中国地球观测数据共享与国际服务		中国科学院空天信息创新研究院
<b>18:00-18:50</b>	1. Questionnaire 2. Online examination 调查问卷、在线考试	Ms. YUAN Yuelei, Ms. SHAO Yating 袁月蕾, 邵亚婷	Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences 中国科学院地理科学与资源研究所
<b>19:00-19:50</b>	<i>Summary &amp; Closing Ceremony</i> 总结、闭幕式 Dr. AI Likun, Dr. WANG Juanle		

## Short introduction of speakers:



**WANG Juanle**, received a Ph.D. degree in 2005 from University of Chinese Academy of Sciences and a B.S and a Master degree from China University of Mining and Technology. He is currently a professor and deputy director of department of Geodata Science and sharing at Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences, director of World Data Center

for Renewable Resources and Environment in World Data System of the International Science Council, executive director of sub center of Knowledge Service for Disaster Risk Reduction in IKCEST of UNESCO, member of national expert group of “Man and the Biosphere” in China, editorial board of “Data Science Journal” (CODATA), “Data” (MDPI), “Regional Problem” (RUSSIA), “China Science & Technology Resources Review” (CHINA) and “China Scientific Data”(CHINA). His recent main research interests are data sharing of resource and environment science, spatial information system of One Belt One Road and disaster risk reduction knowledge service. He published more than 100 papers, 4 monographs and 2 atlases nearly 5 years. He was awarded the Second prize of National Science and Technology Progress Award of China in 2014, and the Third prize of outstanding map award of China in 2018. E-mail: wangjl@igsnr.ac.cn



**Soichiro YASUKAWA**, is the programme specialist for the disaster risk reduction and resilience (DRR) at the Section for Earth Sciences and Geo-Hazard Risk Reduction. He joined UNESCO in 2013 and has been in charge of geo-hazards risk reduction and coordination of DRR activities across different Sectors in UNESCO to promote multi-disciplinary, multi-stakeholder and multi hazard approach.

Before joining UNESCO, he worked at the Ministry of Land, Infrastructure, Transport and Tourism, and the Cabinet Office of the Japanese government on DRR, urban/territorial planning and international cooperation. He obtained a master degree in architecture from Kyoto University, Japan and a master degree in public administration from Columbia University, U.S.A. E-mail: s.yasukawa@unesco.org



**TIAN Bingwei**, is an Associate Professor and holds a PH.D in Engineering of Remote Sensing and Urban Engineering from Kyoto University and an M.S. from the Institute of Mountain Hazards and Environment, University of Chinese Academy of Sciences. He currently works at the Institute for Disaster Management and Reconstruction (IDMR) at Sichuan University.

Dr. Tian is doing research in the fields of International Disaster Risk Reduction Education, Disaster Mapping, Disaster risk information and big data science, Remote Sensing and Natural Disasters. He has participated in more than 30 scientific research projects, published more than 30 papers, edited five monographs, published one book, and participated in the compilation of a disaster atlas. He was awarded the "Nepal disaster Reconstruction for China-Nepal Friendship Award" by the ambassador of Nepal to China for his contribution to reconstruction after the 2015 Nepal Earthquake. E-mail: [bwtian@scu.edu.cn](mailto:bwtian@scu.edu.cn)



**TANG Qihong**, is the Director of the Key Laboratory of Water Cycle and Related Land Surface Processes and a professor at the Institute of Geographic Sciences and Natural Resources Research at the Chinese Academy of Sciences. He received his bachelor's degree in hydraulic engineering (2001) and his master's in hydrology and water resources (2003) from Tsinghua University. He received his PhD in civil engineering from the University of Tokyo (2006). E-mail: [tangqh@igsnr.ac.cn](mailto:tangqh@igsnr.ac.cn)



**HAN Qunli**, is currently the Executive Director of the Integrated Research on Disaster Risk (IRDR-IPO). He was a former staff member of UNESCO (1990-2017) and served at different positions, including Programme Specialist on environmental sciences, Deputy Director of Asia-Pacific Science Bureau, Director of Tehran Cluster Office (Afghanistan, Iran, Pakistan and Turkmenistan),

Director of Executive Office UNESCO's Natural Science Sector. His last duty in UNESCO was the Director of the Division of Ecological and Earth Sciences and the Secretary of the Man and the Biosphere (MAB) Programme (2013-2017), during which he was responsible for the development of UNESCO's MAB Strategy 2015-2025 and the Lima Action for the World Network of Biosphere Reserves (WNBR) 2016-2025. Since May 2017, he has been the Chair of GPC/IPL of the International Landslides Consortium (ICL). He started the current position in IRDR in September 2017. E-mail: [qunli.han@irdrinternational.org](mailto:qunli.han@irdrinternational.org)



**Gretchen KALONJI**, currently serves as the Dean of the Institute for Disaster Management and Reconstruction (IDMR), located at Sichuan University in Chengdu, and operated in collaboration with the Hong Kong Polytechnic University. She brings to this work the experience of having served almost four years as the Assistant Director-General for Natural Sciences at UNESCO, where she had responsibility for several large scale international and intergovernmental

science programs and placed a strong emphasis on developing collaborations on disaster risk reduction across UNESCO's areas of competence. Prior to joining UNESCO, Kalonji held several high-level academic positions, including as Director of International Strategy Development for the 10-campus University of California

system (from 2005 – 2010), as Kyocera Professor of Materials Science at the University of Washington (from 1990 – 2005), and as Associate and Assistant Professor of Materials Science at MIT (from 1982 – 1990), where she earned her BSc degree in 1982 and her PhD in 1982. At IDMR she is focusing on building new interdisciplinary project-based models of integrating research and education on the theme of “Integrated Disaster Sciences and Emergency Management”, as well as on large-scale international alliances focusing on disaster sciences and sustainable development. E-mail: gretchen.kalonji@gmail.com



**Faith, Ka Shun CHAN**, is an associate professor at School of Geographical Sciences, and he holds a visiting professorship at SUSTech University, Shenzhen. He is a co-lead of the IAPS Environmental Security Research Priority Group at IAPS. He specialised in sustainable flood risk management, climate adaptations and urban resilience on Asian coastal megacities. He is currently funded by the Chinese National Research

Council (NSFC) as principal investigator on the microplastics and its impacts on urban rivers, he is also involved in two international research projects as a researcher in the Blue-Green Cities Consortium (funded by ESPRC and British Academy from the UK research council) and co-investigating in the flood risk and commercial properties (funded by RICS) project. He is also a principal investigator on three municipal-funded projects to investigate the surface water quality, typhoon-enhanced flood risk, and the development of a “Sponge City” pilot study in Ningbo. He has published more than 60 publications in top tier international peer-reviewed journals such Journal of Hydrology, Journal of Cleaner Production, Land Use Policy, Journal of Flood Risk Management, Nature Ecology and Evolution, Progress in Planning, Applied Geography, Nature Hazards, etc., book chapters and magazines. He is the Associate Editor of ASCE Natural Hazards Review Journal.”

<https://www.nottingham.edu.cn/en/Science-Engineering/People/Profile.aspx?id=94fc2a7b-b092-448c-8993-04bd185b8193&language=en-GB> Email: Faith.Chan@nottingham.edu.cn



**XU Lilai**, Associate Professor, Institute for Disaster Management and Reconstruction Sichuan University. Dr. Xu has accumulated extensive knowledge and skills in the field of urban climate hazards and adaptation. Especially in the last three years, he has conducted several influential empirical studies related to the impact, vulnerability and risk assessment of urban climate hazard, and the development of economically-viable engineering solutions as well as

the climate-smart urban land use planning for climate change mitigation and adaptation. He has published over 40 peer-review papers on high impact journals, including Environment International, Science of the Total Environment, Environment Research Letter, etc. He, as the principal investigator, is got involved in 5 national level and provincial level research projects. He was awarded the “1000 talents program of Sichuan province”. E-mail: lilaixu@scu.edu.cn



**ZHU Yunqiang**, Ph.D, Professor of the Institute of Geographical Sciences and resources, Chinese Academy of Sciences. Member of the Academic Committee of the Institute, and Key Technical Talents of Chinese Academy of Sciences. His researches focus on Geospatial Data Ontology and Data Sharing, eGeoScience and Geo-Knowledge Graph, Resources and Environmental Information System.

He is the Co-chair of the Facility Capacity sub-Group of CODATA-PASTD, the Deputy Director of the Geographic Big Data Working Committee of the Chinese Geographic Society, the Member of the National Geographic Information Standardization Technical Committee, the Member of the Academic Committee of the National Key Laboratory for Environmental Protection and Marine Ecological Environment Remediation & Restoration, and the Deputy Editor in Chief of the Global Change Scientific Data Publishing System. E-mail: zhuyq@igsnr.ac.cn



**BAI Yuqi**, is a research professor with the Department of Earth System Science, Tsinghua University. He has been engaged in geospatial data sharing and interoperability research for more than 20 years. He has published more than 50 SCI-indexed papers. He was the technical lead for a number of large-scale earth science data sharing systems, with international visits from 121 countries and regions.

Currently he is a member of the Infrastructure Implementation Task Team of the Global Earth Observation (GEO), a member of the Infrastructure Implementation Board of the World Climate Research Program (WCRP), and the convener of the Working Group 7 of the International Organization for Standardization (ISO) Geographic Information Committee (TC 211). E-mail: yuqibai@tsinghua.edu.cn



**LI Xiaosong**, Deputy Director, Key Laboratory of Digital Earth, Aerospace Information Research Institute, Chinese Academy of Sciences, Coordinator of the SDG 15 in CBAS "Big Earth Data in Support of the Sustainable Development Goals" Report, Member of the Working Group of the Groups on Earth Observations Land Degradation Neutrality Initiative (GEO-LDN), Member of the Expert Group of UNEP "Measuring Progress" report.

He has been engaged in remote sensing application research on land degradation and forest/grassland disasters for a long time. He has undertaken more than 30 major projects, and has achieved a series of results in large-scale vegetation parameter extraction, land degradation assessment, forest fire monitoring, etc., and related results have been adopted by national leaders, the Ministry of Foreign Affairs, and the National Forestry and Grassland Administration many times. He has won 5 national science and technology awards, and published 95 high-level papers. E-mail: lixs@aircas.ac.cn



Elena A. GRIGORIEVA, is the leading researcher in the laboratory of regional social-economical systems, Institute for Complex Analysis of Regional Problems, Russian Academy of Sciences, Far Eastern Branch, Birobidzhan, Russia. Her research interests cover a number of themes in biometeorology, which include: Climate and human health, Environmental Health Threats by Climate, Human thermal acclimatization in extreme climates,

Human bioclimatic indices, Urban climate, Climate and Tourism, Climate and Agriculture. Elena was Fulbright scholar in 2011–2012 (University of Miami), and member of Fulbright Arctic Initiative (2021–2022). Dr. Grigorieva is a well-known bioclimatologist, an active member (2005–present) and Vice President (2014–2017, 2017–2020, 2020–2023) of the International Society of Biometeorology (ISB), and member of ‘Climate, Tourism and Recreation Commission’, and ‘Climate and Human Health Commission’ in ISB. Elena is a member of ‘Women in Science and Engineering Committee’ in ‘Association of Academies and Scientific Societies in Asia’ (2017–2019, 2019–2021). Elena serves as Editorial Board Member in “International Journal of Biometeorology”, Springer (since 2020), Topic Editor in Journal Topics Board of scientific journal “Climate”, MDPI (since 2020). Elena’s hobbies and interests are: outdoor adventures, hiking, tourism, recreation; reading.

E-mail: [eagrigor@yandex.ru](mailto:eagrigor@yandex.ru)



**ZHEN Lin**, is affiliated with the Institute of Geographic Sciences and Natural Resources Research of Chinese Academy of Sciences, and a chief professor at the University of Chinese Academy of Sciences. Her research is focused on the human-ecosystem interactions, with special interest on assessment of ecosystem service and function, payment for ecosystem services, and multifunctional land use.

Dr Zhen is currently leading a National Key Research and Development Program on ecosystem restoration, and the Priority Research Program of the Chinese Academy of Sciences on ecological carrying capacity assessment along the Belt and Road countries, and several other national and international collaboration projects. She has actively participated in international collaboration activities and developed partnerships with organizations in Asia, Europe, Latin America and Africa. She has published 12 books or chapters, around 200 scientific papers. She is currently a fellow of Scientific Steering Committee of Global Land Programme (GLP), director of International Joint Research Center for Environment and Sustainable Development of Mongolian Plateau, Chinese Director of Chinese-German Center for Impact Assessment, board member of China Society of Natural Resources and Chair of the Commission on Resource Ecology. E-mail: [zhenl@igsnrr.ac.cn](mailto:zhenl@igsnrr.ac.cn)



**LIU Hui**, Professor at the Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences (CAS), and post professor in the University of Chinese Academy of Sciences(2015- ); Consultant to the World Bank (2000-2005) for China's Urbanization projects and Asia Development Bank (2006-2008) for Gansu regional development strategy project ; Visiting Professor in Modern China Research Centre, French Academy of Human Sciences (2003), Guest expert for World-union Properties(2010-2012), and Guest Professor in the Northwest University (2009- ). She graduated from the Department of Geography, Northwest University, and received her B.A and M.A respectively in 1984 and 1987. Her study areas of interest are: (1) regional development inequality, (2) urbanization and regional development, (3) regional studies and regional sustainable development in China. In recent years, her research mainly focus on the "Belt and Road" Initiative and its impact on regional development both in China and other countries in the world. She has published more than 120 academic papers and won a number of prestigious academic awards, such as, Second Class Award for Science and Technology Progress, Ministry of Science and Technology (1992), Outstanding Science and Technology Achievement Prize of Chinese Academy of Sciences (2010). E-mail: liuh@igsnr.ac.cn



**DONG Suocheng**, Government Special Allowances Expert of the State Council of China, Core Professor of China Academy Science, Academician of Russian Academy of Natural Sciences, Director of Northeast Asia Sustainable Development Research Center, Institute of Geographic Sciences and Natural Resources Research, CAS, Leading Scientist of Key Project of the National Scientific and Technological Basic Resource Investigation, Executive vice Chairman and Secretary General of the International Scientists Union of the Belt and Road, and the member of Russia and China Ecological Council; laureate of 20 Awards, including Special government allowance of the State Council of China, National outstanding scientific and technological worker of China, National "five one" project Award, The second prizes of science and technology progress Award of CAS, Beijing science and technology progress Award, Outstanding contribution Award for natural management of Baikal lake by BINM SB RAS, International Cooperative Award of MAS. DONG Suocheng is a specialist in the field of regional economic geography, regional ecological economics, resource, environment economics and regional sustainable development. He majored in regularity of territorial differentiation and regionalization, ecological economic development modes, interactive mechanism between urbanization and ecological environment, regulation between economic growth and environmental pollution of China, resources & environment science expedition and green development on "the Belt and Road" and "China-Mongolia-Russia economic corridor", regional sustainable development planning, circular economy planning, and eco-tourism planning. Author and co-author of 407 scientific

works, including 355 scientific articles, 22 monographs, 37 government consultation proposals, six national invention patents and seven software copyrights. E-mail: dongsc@igsnr.ac.cn



**YANG Fei**, is an associate professor at Institute of Geographic Sciences and Natural Resources Research of Chinese Academy of Sciences. He mainly engaged in remote sensing (RS) and geographic information system (GIS) technology and method research, and its application in intelligent spatial monitoring and inspection of land resources, ecology and environment protection, natural disasters risk assessment,

geoscience big data mining and geospatial analysis. In recent years, his research works focused on the quantitative research of remote sensing big data products to evaluate the time and space risks of typical extreme weather events in the key areas of the Belt and Road, and to produce relevant data products, for proposing countermeasures. Based on remote sensing and geographic information technology, he studied the spatial and temporal changes of ecosystem resilience and vulnerability and diagnose the critical transforming threshold of the key parameters. For the first time, he studied the potential risk of the main agricultural non-point source pollution in China by 1km<sup>2</sup> grid pixel scale. He has published more than 50 scientific papers till now, which includes 20 SCI papers. E-mail: yangfei@igsnr.ac.cn



**BU Kun**, undergraduate study at the School of Population Resources and Environment of Shandong Normal University, majoring in geosciences, and got the bachelor's degree. Graduated at the University of Chinese Academy of Sciences, specializing in cartography and geographic information systems, and received the doctorate degree. Working at Northeast Institute of Geography and Agroecology

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