

The 6th International Forum on Big Data for Sustainable Development Goals

FBAS 2026

6-8 September, 2026 Beijing China

Programme



Host:



Organizers:



FBAS and FBAS 2026

FBAS is an annual international conference initiated and hosted by the International Research Center of Big Data for Sustainable Development Goals (CBAS). In 2021, President Xi Jinping sent a congratulatory letter to the founding conference of CBAS and the first FBAS, expressing hope that all parties would fully utilize the CBAS platform and the forum to support sustainable development through big data, enhance international cooperation, and contribute to the implementation of the 2030 Agenda and the promotion of a shared future for humanity.

The FBAS aims to establish a global high-level exchange platform, promote the sharing of methodologies, technical research, application cases, and experiences related to big data and digital technologies, and support mechanisms that facilitate the achievement of global sustainable development goals.

To date, the FBAS has successfully held five sessions, attracting nearly 3,500 international experts from more than 100 countries and regions. It has become a vital international exchange platform for relevant UN agencies, domestic and international research institutes, government departments, enterprises, and international organizations to engage in scientific and technological cooperation.

The year 2026 marks a pivotal juncture of continuity and transition, signifying our official entry into the final sprint toward achieving the Sustainable Development Goals (SDGs). However, the global progress in implementing the SDGs is now characterized by unprecedented systematic and complex challenges, necessitating a broader scientific vision and more precise technological interventions. In recent years, digital technology has evolved from an "important tool" for SDG monitoring and evaluation into a "core engine" driving sustainable development. The explosive growth of big data and artificial intelligence (AI) has provided us with a "golden key" to unravel these complex systems.

From 2021 to 2025, the International Forum on Big Data for Sustainable Development goals (FBAS), hosted by the Chinese Academy of Sciences, has been successfully held for five consecutive years. The sixth International Forum on Big Data for Sustainable Development goals will be held in Beijing from September 6 to 8, 2026. This forum will bring together top scientists, policymakers, industry leaders, and practitioners from around the world to engage in diverse exchange activities, collectively exploring how digital technology can chart new pathways for sustainable development beyond 2030, injecting renewed momentum and wisdom into global sustainable development.

Hosted by



Chinese Academy of Sciences (CAS)

Organized by



International Research Center of Big Data for
Sustainable Development Goals (CBAS)



Aerospace Information Research Institute (AIR),
CAS

Supported by



United Nations

Department of
Economic and
Social Affairs

United Nations Department of Economic and
Social Affairs



United Nations Educational, Scientific and
Cultural Organization, UNESCO



United Nations Development Programme



UNOOSA

United Nations Office for Outer Space Affairs



Food and Agriculture Organization of the United
Nations



United Nations Convention to Combat
Desertification



United Nations Human Settlements Programme



The World Academy of Sciences for the advancement
of science in developing countries



World Federation of Engineering Organizations

International Partners

(Listed in no particular order)



UN Science-Policy-Business Forum on the
Environment



Committee on Data of the International Science
Council



Panafrican Agency of the Great Green Wall



International Center for Integrated Mountain
Development



The Alliance of National and International Science
Organizations for the Belt and Road Regions



International Society for Digital Earth



Integrated Research on Disaster Risk



International Centre on Space Technologies for
Natural and Cultural Heritage under the auspices
of UNESCO



Digital Belt and Road Program



CAS-TWAS Centre of Excellence on Space
Technology for Disaster Mitigation

Co-Organizers

Asian Institute of Technology, Thailand

Beihang University

CAST-UN Consultative Committee on Disaster Risk Reduction

China Population and Development Research Center

Chongqing University

East China Normal University

Institute of Oceanology, CAS

Institute of Tibetan Plateau Research, CAS

Institute of Agricultural Resources and Regional Planning, Chinese
Academy of Agricultural Sciences

International Science and Technology Organization in Beijing

Keio University, Japan

Land Information and Management System-Centre of Excellence,
Pakistan

National Key Laboratory of Microwave Imaging

National Key Laboratory of Target Cognition and Application
Technology

Norwegian University of Science and Technology, Norway

Pengcheng Laboratory

Peking University

Shanghai Ocean University

Shenzhen Institutes of Advanced Technology, CAS

South African National Space Agency, South Africa

State Key Laboratory of Remote Sensing and Digital Earth

State Key Laboratory of Transducer Technology

China Agricultural University

The University of Hong Kong

Tongji University

Tsinghua University

University of Bonn, Germany

CONTENT

Welcome Message / 02

01

Organization / 04

02

Keynote Speakers / 10

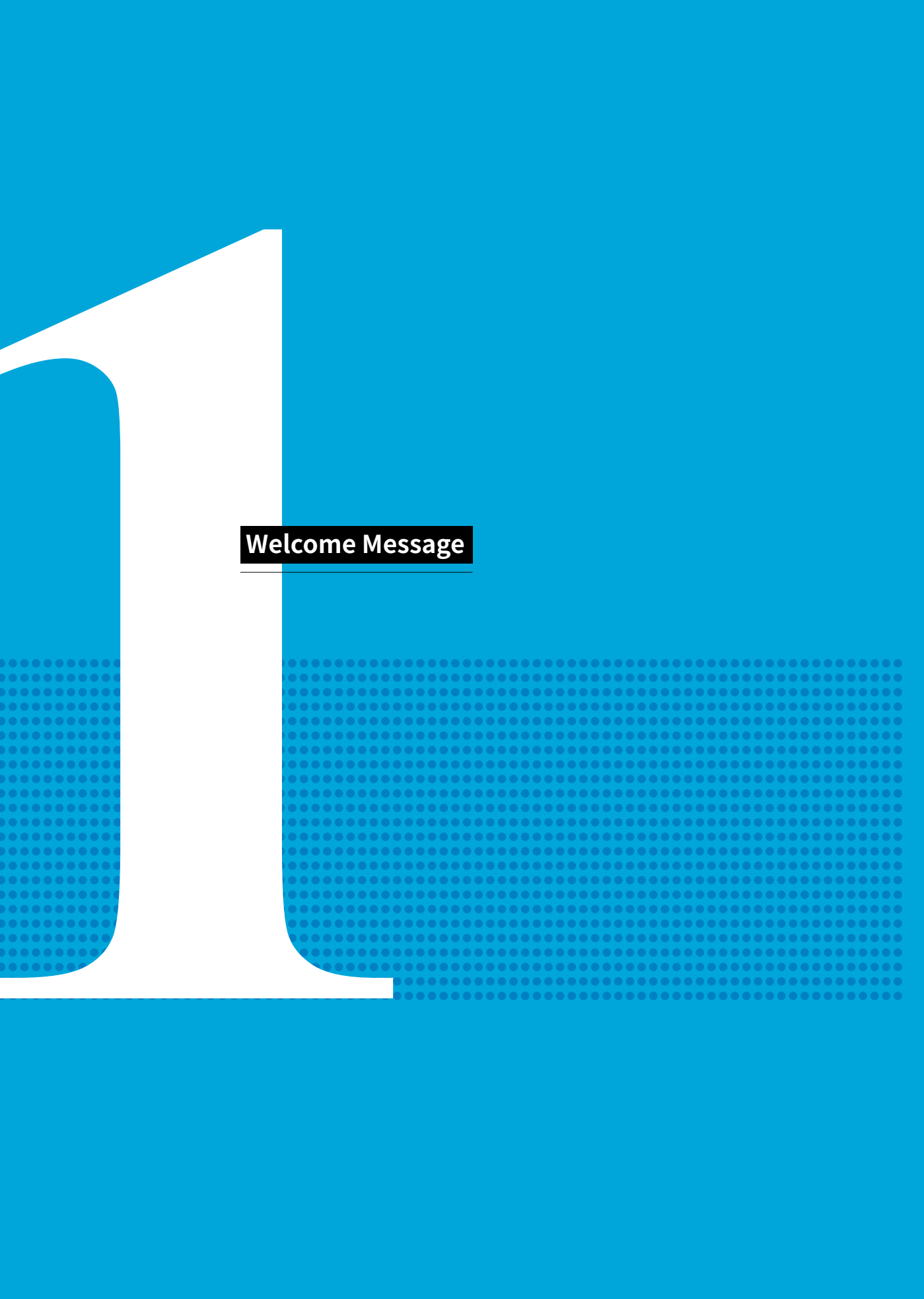
03

Programme at a Glance / 20

04

Basic Convention Information / 84

05

A large white number '1' is positioned on the left side of the image. The background is a solid blue color. A horizontal band across the middle of the image features a pattern of small, light blue dots. A black rectangular box with the text 'Welcome Message' in white is located on the right side of the image, overlapping the dotted band.

Welcome Message

Welcome Message

In 2026, we stand at a historic juncture of continuity and transition. Having systematically reflected on the decade-long journey of the 2030 Agenda for Sustainable Development in 2025, the year 2026 marks our official entry into the sprint phase of achieving the SDGs while also inaugurating forward-looking planning for global sustainable development beyond 2030.



We understand that the global challenges of sustainable development are complex. The approaching climate tipping points, cascading ecosystem impacts, and disparities in regional development remind us that we need broader strategic perspectives, deeper scientific understanding, and more precise technological innovations to comprehend the interactions between human activities and the Earth's natural environment and to take targeted actions. The explosive growth of big data and artificial intelligence (AI) has provided a "golden key" to addressing bottlenecks in global sustainable development.

Over the past six years, FBAS has witnessed a shift in how the perspective about digital technologies for SDGs have transformed from "important tools" for monitoring and evaluation, to being "core drivers" of sustainable development. Today, advancements in AI hold tremendous potential for SDGs as it unlocks new ways of understanding our planet, shifting from passive data analysis towards intelligent prediction, and from single-factor assessments to more integrated view of socio-economic-environmental systems.

This year's forum, under the theme "Inheriting the Future: Innovations in Digital Intelligence for Global Sustainable Development" will delve into six major scientific topics: 1) accelerating the transformation and realization of global sustainable development goals through digital intelligence technologies; 2) strengthening the scientific foundation of big data for SDGs monitoring and evaluation; 3) exploring research paradigms for AI-driven sustainable development; 4) enhancing the critical role of global partnerships in accelerating SDG achievement while breaking down data barriers and bridging the digital divide; and looking ahead to summarize the progress of sustainable development goals and co-create new pathways for global sustainable development beyond 2030. The forum also features the SDGs Youth Stage, recognizing that young people are not only beneficiaries of a sustainable future but also co-creators of the present.

With only four years remaining until 2030, time is pressing, but the potential for progress is substantial. We must examine the present with scientific rationality and embrace the future with fearless innovation. On behalf of the forum, I extend a heartfelt invitation to scientists, policymakers, entrepreneurs, and young minds worldwide to gather with us. Let us transcend disciplinary and national boundaries to contribute solutions to the urgent challenge of achieving the SDGs and, together, shape the blueprint for long-term sustainable development with digital intelligence and collective strength.

Let us look to the future, advance hand in hand, and illuminate the path to sustainable development for 2030 and beyond with the light of digital intelligence!



Chair of the 6th International Forum
on Big Data for Sustainable Development Goals

A large, stylized white number '2' is positioned on the left side of the page. The background is a solid yellow color. A horizontal band across the middle of the page features a pattern of small, light-yellow dots. The word 'Organization' is written in white, bold, sans-serif font, centered within a black rectangular box that is placed over the white '2' and the dotted band.

Organization

Chair



GUO Huadong
Director General of the International
Research Center of Big Data for Sustainable
Development Goals (CBAS)

Scientific Committee

Co-Chairs



XU Guanhua
Former Minister of Ministry of Science and
Technology of the People's Republic of
China



Csaba Kőrösi
President of the 77th United Nations General
Assembly

Members

(Alphabetical order by last name)

Quarraisha Abdool Karim	The World Academy of Sciences
Alessandro Annoni	International Society for Digital Earth
Thomas Blaschke	University of Salzburg, Austria
Irina Bokova	International Science Council's Global Commission on Science Missions for Sustainability
Valery Bondur	Russian Academy of Sciences
CHEN Deliang	Tsinghua University
CHEN Ge	Ocean University of China
CHEN Jingming	The Academy of Science of the Royal Society of Canada
Johannes Cullmann	77th United Nations General Assembly
Ameenah Gurib-Fakim	The Government of the Republic of Mauritius

Jay Famiglietti	Arizona State University, USA
Hiromichi Fukui	Chubu University, Japan
FU Kun	Aerospace Information Research Institute, CAS
Gregory Giuliani	University of Geneva, Switzerland
GONG Jianya	Wuhan University
GONG Ke	Nankai University
GONG Peng	The University of Hong Kong
Matthew Hansen	University of Maryland, College Park, USA
HE Changchui	Digital China Research Institute
Simon Hodson	Committee on Data of the International Science Council
Natarajan Ishwaran	International Union of Geological Sciences
Gretchen Kalonji	CBAS
Markku Kulmala	University of Helsinki, Finland
LI Deren	Wuhan University
LI Yuanyuan	International Water Resources Association
LIN Hui	Jiangxi Normal University
LIU Congqiang	Tianjin University
Vanessa Mcbride	International Science Council
MENG Xiaofeng	Renmin University of China
Graciela Metternicht	Western Sydney University, Australia
Mihaly Szabolcs	Hungarian Society of Surveying, Mapping and Remote Sensing
Stefano Nativi	Consiglio Nazionale delle Ricerche, Italy
PIAO Shilong	Peking University
Abbas Rajabifard	The University of Melbourne, Australia
Simon Redfern	Nanyang Technological University, Singapore
Barbara Ryan	World Geospatial Industry Council
Jeffrey D. Sachs	Columbia University, USA
Igor Savin	RUDN University, Russia

SHI Jiancheng	National Space Science Center, CAS
Ibrahim Thiaw	United Nations Convention to Combat Desertification
TONG Qingxi	Aerospace Information Research Institute, CAS
WANG Hao	China Institute of Water Resources and Hydropower Research
WANG Jian	Zhejiang Lab
WANG Qiao	Satellite Application Center for Ecology and Environment, Ministry of Ecology and Environment of the People's Republic of China
WU Guoxiong	Institute of Atmospheric Physics, CAS
WU Yirong	Aerospace Information Research Institute, CAS
XIA Jun	Wuhan University
ZHANG Bing	Aerospace Information Research Institute, CAS
ZHANG Renhe	Fudan University
ZHU Min	Institute of Vertebrate Paleontology and Paleoanthropology, CAS

Organizing Committee

Chair

CHEN Fang	International Research Center of Big Data for Sustainable Development Goals (CBAS)
-----------	--

Vice-Chairs

YAN Dongmei	CBAS
LIU Jie	CBAS

Members (Alphabetical order by last name)

B. Burcak Basbug	Committee on Data of the International Science Council
DING Yixing	CBAS
FU Wenxu	CBAS
GAO Le	Institute of Oceanology, CAS

GAO Maofang	Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences
HE Dan	China Population and Development Research Center
HUANG Lei	CBAS
JIAN Hongdeng	CBAS
KANG Tingting	Peking University
LI Xiaosong	CBAS
LI Xiaoting	CBAS
LIU Jian	CBAS
LIU Huiying	CBAS
LIU Min	East China Normal University
LIU Bin	Shanghai Ocean University
LU Linlin	CBAS
LUO Lei	CBAS
Farzane Mohseni	University of Bonn, Germany
Nale Mudau	South African National Space Agency, South Africa
Vilas Nitivattananon	Asian Institute of Technology, Thailand
Robert Brian O'Hara	Norwegian University of Science and Technology, Norway
PAN Xiaoduo	Institute of Tibetan Plateau Research, CAS
Amber Ren	Tongji University
Rajib Shaw	Keio University, Japan
SUN Liquan	Shenzhen Institutes of Advanced Technology, CAS
TANG Yixian	CBAS
WANG Jie	Pengcheng Laboratory
WANG Lei	CBAS
WANG Lizhe	Tsinghua University
WANG Shenglei	CBAS

WANG Ning	CBAS
YANG Guijun	Chang'an University
YE Jia	Chongqing University
ZHANG Tingting	CBAS
ZHANG Weidong	United Nations Development Programme (UNDP) China
ZHANG Hongsheng	The University of Hong Kong
ZHENG Fu	Beihang University
Muhammad Abukar Zia	Land Information and Management System-Centre of Excellence, Pakistan
ZUO Lijun	CBAS

Secretariat

Secretary-General

WANG Lei

Members (Alphabetical order by last name)

DIAO Junjie / FU Wenxue / GUO Lili / JIAN Hongdeng / JIANG Peiyi / LUO Lei /
TANG Yixian / WANG Ning / WANG Shuo / YANG Aqiang / YE Huichun / ZHANG Tingting



Keynote Speakers

Keynote Speakers



Quarraisha Abdool Karim

President of the World Academy of Sciences (TWAS)

Topic: From Promise to Prediction - Reimagining the SDGs in an era of Augmented Intelligence

Time: 9:50-10:15, 7th September

Abdool Karim, is an infectious diseases epidemiologist whose seminal contributions spanning over three decades have shaped the global HIV prevention landscape, notably in prevention technologies for women. She demonstrated that ARVs prevent sexually transmitted HIV that laid the foundation for HIV pre-exposure prophylaxis (PrEP); and has provided insights in Africa and globally on the impact of Covid-19 on HIV and in the evaluation of Covid-19 vaccines and therapeutics. Abdool Karim is the President of the World Academy of Sciences (TWAS). She is an elected member of the National Academy of Medicine (USA); and Fellow of The World Academy of Science, Royal Society of South Africa, Academy of Science of South Africa and the African Academy of Science. Her research contributions have been recognized nationally and internationally with over 30 honors including South Africa's Order of Mapungubwe, 2014 TWAS-Lenovo Prize; the John Dirks Canada Gairdner Global Health Award; the 2020 Christophe Mérieux Prize; and the 4th Hideyo Noguchi Africa Prize for Medical Research. She is the Associate Scientific Director of CAPRISA; Professor in Clinical Epidemiology, Columbia University; and Pro-Vice Chancellor for African Health, University of KwaZulu-Natal, South Africa.



Driss El Hadani

Deputy Director for Space Science and Education at the United Nations Office for Outer Space Affairs (UNOOSA)

Topic: From Space Data to Global Action: UNOOSA's Vision for Inclusive Geospatial Information, Responsible AI and Sustainable Development

Time: 9:00-9:25, 8th September

Since September 2023, Dr. Driss El Hadani has served as Deputy Director / Senior Adviser for Space Science and Education at the United Nations Office for Outer Space Affairs (UNOOSA). In this role, he provides expert strategic advice and leads research initiatives in the fields of space science and education, supporting various programmes and activities implemented by UNOOSA. He also oversees the Office's engagement with United Nations-affiliated Regional Centres for Space Science and Technology Education, ensuring alignment with global capacity-building goals.

Driss has over 30 years of experience in space technology applications, remote sensing, and international space policy development. He has built extensive expertise in space diplomacy, having negotiated with international cooperation agencies and contributed to multilateral mechanisms. He previously served as Director of the Moroccan Royal Center for Remote Sensing (1998-2023) and played a pivotal role in advancing national and regional space initiatives.

At the international level, Driss has been actively involved in United Nations affairs, serving as First Vice-President of the UN Committee on the Peaceful Uses of Outer Space (COPUOS) from 2000 to 2004. He continues to represent UNOOSA in high-level meetings, negotiations, and policy discussions related to space science, education, and international cooperation.

As Deputy Director, he plays a key leadership role within UNOOSA, supporting the strategic planning of the Office, coordinating activities across different sections, and representing the Director at high-level forums. He also leads capacity-building initiatives, strengthens cooperation with Member States, and oversees fundraising efforts for educational programmes.

Driss holds a Master's Degree in Physical Sciences with a focus on Applied Remote Sensing from Pierre et Marie Curie University in Paris, an Engineering Degree from the Mohammed V University in Rabat, a Master's Degree in Business Administration and Management from the Higher Institute of Commerce and Business Administration in Morocco, and a Bachelor's Degree in Law.



GAO Wen

Director of Pengcheng Laboratory; Boya Chair Professor at Peking University

Topic: China Computing Power Network and International Cooperation

Time: 9:25-9:50, 7th September

GAO Wen is a member of Chinese Academy of Engineering, ACM Fellow and IEEE Fellow. He is the founding director of Pengcheng Laboratory (Shenzhen, China). He is also a Boya Chair Professor at Peking University. He is currently a deputy to the 14th National People's Congress. He used to be a member of the 10th, 11th and 12th CPPCC National Committee, the vice president of National Natural Science Foundation of China, the chairman of China Computer Federation and the chief editor of Chinese Journal of Computers.

He earned seven State Awards in Science and Technology Achievements as the first accomplisher. He received the IEEE Innovation in Societal Infrastructure Award (2025), National May 1 Labor Medal (2023), Wu Wenjun AI Highest Achievement Award (2023), the Special Prize on Scientific and Technological Progress of the Guangdong Province Science and Technology Award (2023), the Prize for Scientific and Technological Progress of Ho Leung Ho Lee Foundation (2022), the Outstanding Contribution Award of Guangdong Province (2021), the CCF Wang Xuan Award and the title of "2005 China's Top Ten Educational Talents".

GAO Wen has engaged in the research of artificial intelligence, multimedia, computer vision, pattern recognition, image processing, and virtual reality. He published six books and over 300 papers in international journals in the above areas.



GUO Huadong

Director General of the International Research Center of Big Data for Sustainable Development Goals (CBAS)

Topic: Digital Technologies Advancing Global Sustainable Development

Time: AM, 6th September

GUO Huadong is the Director General of the International Research Center of Big Data for Sustainable Development Goals (CBAS), an Academician of Chinese Academy of Sciences (CAS), a Foreign Member of the Russian Academy of Sciences, a Foreign Member of the Finnish Society of Sciences and Letters, and a Fellow of TWAS. He presently serves as Honorary President of the International Society for Digital Earth (ISDE), Director of the International Center on Space Technologies for Natural and Cultural Heritage under the Auspices of UNESCO, Chair of the Digital Belt and Road Program, and Editor-in-Chief of the International Journal of Digital Earth and the journal of Big Earth Data. He served as a member of the UN 10-Member Group to support the Technology Facilitation Mechanism for SDGs (2018-2021), Chairman of the International Committee of Remote Sensing of Environment (2017-2020), President of ISDE (2015-2019), and ICSU Committee on Data for Science and Technology (CODATA) (2010-2014). He specializes in remote sensing, radar for Earth observation, and Digital Earth science. He is the Principal Investigator of Moon-based Earth Observation Research Project of National Natural Science Foundation of China and the Chief Scientist of the Big Earth Data Science Engineering Project of CAS. He has published more than 500 papers and 24 books, and is the awardee of 18 domestic and international prizes.



Csaba Kőrösi

President of the 77th UN General Assembly; Strategic Director of the Blue Planet Climate Protection Foundation

Topic: Inheriting the Future Innovations in Digital Intelligence for a Post-2030 Sustainable Development Agenda

Time: 9:00-9:25, 7th September

As a career diplomat, he has spent his entire professional life in public service, combining national duties with assignments received from various international communities.

He has held several high-ranking positions, including Deputy State Secretary in charge of security policy, multilateral diplomacy and human rights; Vice-President of the UN General Assembly (2011-12); State Secretary for Environmental Sustainability, Office of the President of Hungary (2015-2022).

As Director (State Secretary) of the Office of the President of Hungary, he was involved in the High-level Panel on Water, co-convened by the Secretary-General and the President of the World Bank Group; in the Water and Climate Leaders Panel, co-convened by the Secretary-General of the World Meteorological Organization and the President of UN-Water.

He was co-chair of the UN intergovernmental process (Open Working Group of the General Assembly on Sustainable Development Goals) tasked with producing the 2030 Agenda for Sustainable Development and the Sustainable Development Goals at its heart.

He is a founding member of the Hungarian Scientific Panel on Climate Change, a member the Presidential Committee on Sustainable Development at the Hungarian Academy of Sciences.

Csaba Kőrösi is Distinguished Fellow of the Japan International Cooperation Agency Ogata Sadako Research Institute, Fellow of the International Research Center of Big Data for Sustainable Development Goals, Chinese Academy of Sciences, and Honorary Fellow of the International Science Council.



Simon Redfern

President's Chair in Earth Sciences, Nanyang Technological University, Singapore

Topic: Counting What We Remove: Digital Intelligence for Post-2030 Climate Goals

Time: 9:50-10:15, 8th September

Simon Redfern is President's Chair in Earth Sciences at the Asian School of the Environment and Earth Observatory of Singapore, Nanyang Technological University (NTU). A mineralogist and geochemist by training, he connects the properties of Earth materials with pressing challenges in climate mitigation and sustainable development.

He completed his PhD at the University of Cambridge in 1989, held a lectureship at the University of Manchester, and returned to Cambridge in 1994, rising to professor of mineral physics and then Head of the Department of Earth Sciences from 2016 to 2019. He remains an Emeritus Fellow of Jesus College, Cambridge. From 2019 to 2025 he was Dean of the College of Science of NTU Singapore.

His research focuses on harnessing natural silicate mineral weathering to remove carbon dioxide from the atmosphere at scale. He investigates enhanced rock weathering and ocean alkalinity enhancement as carbon removal pathways, combining field measurements, geochemical modelling, and machine learning to constrain rates, permanence, and co-benefits for agriculture and ecosystems. Much of this work is oriented towards tropical and Southeast Asian environments, where the potential for integration with food systems and land management is significant. He is co-founder of Carbonsynk, a spin-off developing robust monitoring, reporting, and verification frameworks for carbon removal in the voluntary carbon market.

Beyond carbon removal, he contributes to broader sustainability science through work on the geochemical cycling of nutrients, the role of big data and AI in tracking environmental change, and the development of science-based tools to support progress towards Sustainable Development Goals.

He is a Fellow of the Mineralogical Society of America and the Geological Society of London, and the sole recipient of both the Max Hey and Schlumberger Medals of the Mineralogical Society of Great Britain and Ireland, and recipient of the European Mineralogical Society's Medal for Research Excellence.



Seng-Chuan TAN

President of the World Federation of Engineering Organization

Topic: Harnessing Big Data and AI: Engineering Pathways for Global Sustainability Beyond 2030

Time: 10:15-10:40, 7th September

Dr. Seng-Chuan Tan is a distinguished sustainability professional whose career bridges technical excellence, environmental stewardship, and global leadership. He holds a Bachelor of Engineering (Civil), a Master of Science (Building Science), and a Professional Doctorate in Sustainable Infrastructure and ESG Technology. He is registered in Singapore as a Professional Engineer (Civil) and Chartered Engineer (Sustainability, Environment & Water). He is also accredited as a GHG Lead Verifier by the National Environment Agency, a GRI Certified Sustainability Professional, and a Senior Practicing Management Consultant (Sustainability) certified by the Singapore Business Advisors and Consultants Council.

Dr. Tan's professional expertise spans sustainability, climate change, environmental management, water and wastewater, energy and power, built environment and infrastructure, chemical and petrochemical, oil and gas, and other industrial sectors across the Asia-Pacific region. As Managing Director of TEMBUSU Asia Consulting Pte Ltd, he leads one of Asia's foremost environmental and sustainability consultancies, supporting organizations in advancing the United Nations Sustainable Development Goals. TEMBUSU Asia is accredited by the Singapore Accreditation Council (SAC) and recognized by the Asia Carbon Institute (ACI) as an accredited Validation & Verification Body. Dr. Tan was invited to international standards development, serving on the SAC Working Group for ISO 14064-2 and participating in frameworks such as the Verified Carbon Standard (VCS) and the Gold Standard for the Global Goals (GS4GG).

Beyond consultancy, Dr. Tan has played a pivotal role in advancing the engineering profession globally. He is Emeritus President of the Institution of Engineers, Singapore (IES), having served as President from 2006 to 2008. He was President of the Federation of Engineering Institutions of Asia and the Pacific (FEIAP) from 2007 to 2011, Chairman of the APEC Engineers Coordinating Committee, and a member of the International Engineering Alliance (IEA) Governing Board from 2015 to 2019. In October 2025, he assumed the presidency of the World Federation of Engineering Organizations (WFEO), where he continues to champion engineering excellence, sustainability, and international collaboration.



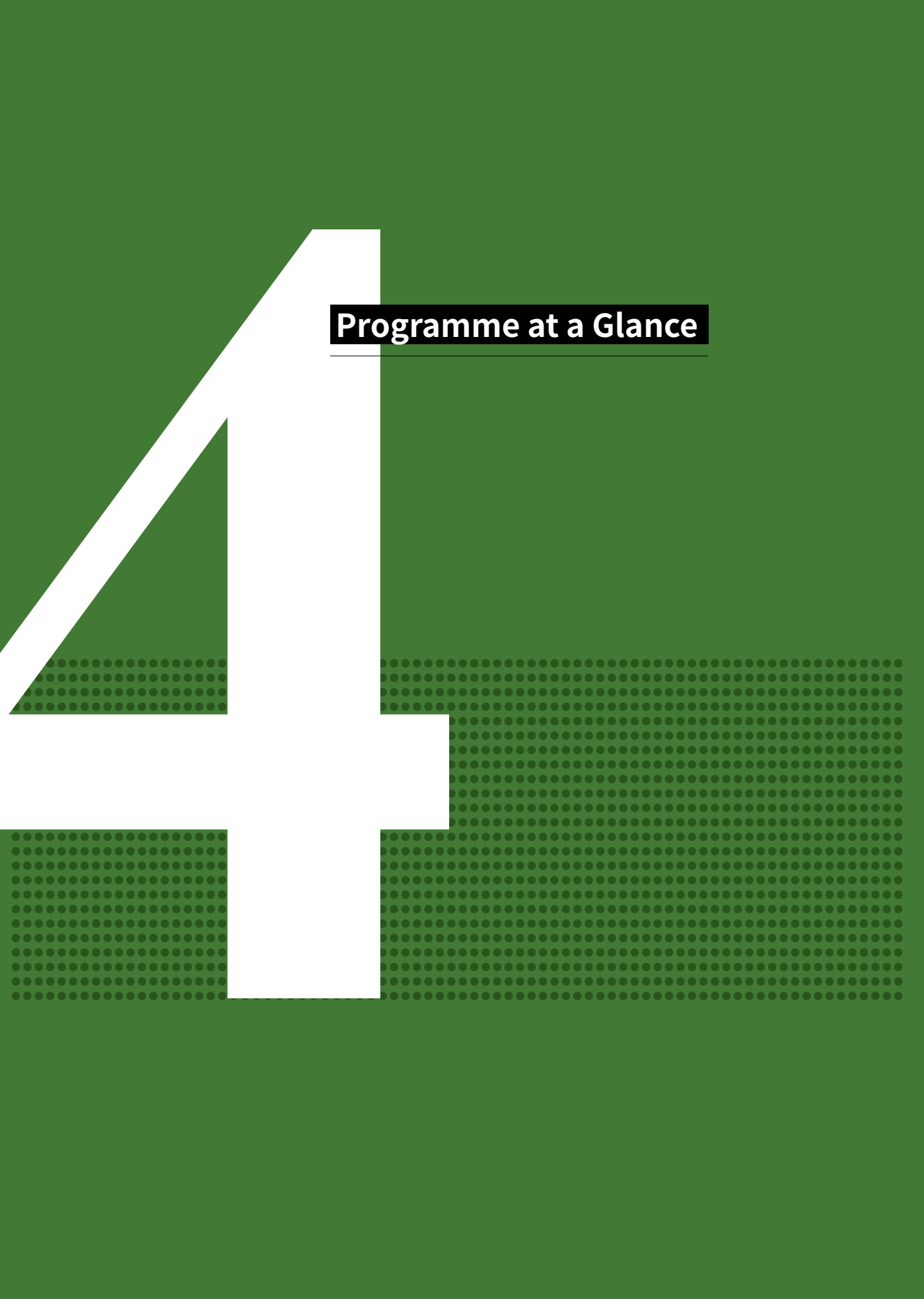
Moctar Touré

President of the Senegal Academy of Science and Technology; Vice President of ANSO

Topic: The Role of Academies of Science in a Fast-Moving, Multipolar and Globalized World: An African Perspective

Time: 9:25-9:50, 8th September

Dr. Moctar Touré is currently President of the Senegalese National Academy of Sciences and Technics, and Vice President of ANSO. He is a founding member of the African Academy of Sciences and first-generation member of the World Academy of Sciences (TWAS). He earned his PhD in soil sciences and has consistently used his energy, talents, and scientific abilities to promote science-based sustainable agriculture development in Africa. He held leadership positions in several science-based institutions in Senegal, and abroad. For more than 32 years he has played a pioneering role in building national and regional scientific institutions across the African continent. In Senegal, he held several positions ranging from field scientist up to Director General of the National Agricultural Research Institute. At regional and international levels, he worked at the World Bank, holding several lead positions, including Executive Secretary of the Special Program for African Research, Lead Specialist for agriculture and land management and finally Team Leader for Land and Water Resources at the Global Environment Facility. He was instrumental in the establishment of regional agricultural research coordination bodies in West and Central, East Africa and Southern Africa. He was actively associated with the CGIAR, served on a dozen of Boards of Trustees of International Agricultural Research Centers. Since retiring from the World Bank in 2006, he has remained actively engaged in promoting the interface between science, policy, environment, and sustainable development.

A large, stylized white number '4' is positioned on the left side of the page. The background is a solid green color. A horizontal band of small, dark green dots runs across the middle of the page, partially overlapping the number '4'.

Programme at a Glance

Programme at a Glance

	September 6th	September 7th	September 8th
AM	Opening Ceremony	Plenary Sessions	Plenary Sessions
	Plenary Sessions	Tea Break	
	Panel Discussion	Parallel Sessions	Parallel Sessions
		Lunch	
PM	Parallel Sessions	Parallel Sessions	Parallel Sessions
		Tea Break	
	Parallel Sessions	Parallel Sessions	Closing Ceremony

Programme on September 6th, 2026

Time/Site	AM					
	Conference Room 1					
9:00-12:00	Opening Ceremony					
	Keynote Speech 1: GUO Huadong (Topic: Digital Technologies Advancing Global Sustainable Development)					
13:30-15:00	High Level Panel Discussion					
	PM					
15:30-17:00	Room 302	Room 305A	Room 305B	Room 305C	Room 305D	Room 307
	F1: Youth Session	B3: Population and Big Data at the Science-Policy Interface of Sustainable Development	B2: Advances in Soil Mapping and Monitoring for Sustainable Fertility Management	C4: AI4Science in Marine Fishery: Evolution and Forecasting	B13: Big Earth Data for WEEF Nexus and Ecosystem Services Modeling— Integrating Water, Energy, Food and Ecosystems for Sustainability	B10: Improving Monitoring for Better Integrated Climate and Biodiversity Approaches, Using Environmental and Earth Observation S1: DSP Special Session: Building Global Partnerships for Digital Sustainable Development
15:30-17:00	Break					
	B1: Agricultural Monitoring by Multi-Source Remote Sensing Techniques	A1: Big Data and Artificial Intelligence Underpins the Sustainable Development of Agriculture	B2: Advances in Soil Mapping and Monitoring for Sustainable Fertility Management	B8: Big Earth Data for SDG 13 Climate Action Monitoring and Forecasting	B13: Big Earth Data for WEEF Nexus and Ecosystem Services Modeling— Integrating Water, Energy, Food and Ecosystems for Sustainability	B10: Improving Monitoring for Better Integrated Climate and Biodiversity Approaches, Using Environmental and Earth Observation S1: DSP Special Session: Building Global Partnerships for Digital Sustainable Development

Programme on September 7th, 2026

Time/Site	AM				
	Room 307				
9:00-9:25	Plenary Session 2: Csaba Körösi (Topic: Inheriting the Future Innovations in Digital Intelligence for a Post-2030 Sustainable Development Agenda)				
9:25-9:50	Keynote Speech 3: GAO Wen (Topic: China Computing Power Network and International Cooperation)				
9:50-10:15	Keynote Speech 4: Quarraisha Abdool Karim (Topic: From Promise to Prediction - Reimagining the SDGs in an era of Augmented Intelligence)				
10:15-10:40	Keynote Speech 5: Seng-Chuan Tan (Topic: Harnessing Big Data and AI: Engineering Pathways for Global Sustainability Beyond 2030)				
Time/Site	Break				
	Room 305A	Room 305B	Room 305C	Room 305D	Room 305E
10:50-12:20	A3: Digital Intelligence Technologies Driving Urban Sustainability Transformation and High-Quality Development	B14: Leveraging Aerial and Space-Based Data Ecosystems for Sustainable Development Goals	D4: The High-level Experts and Leaders Panel on Water and Disasters (HELP)	A9: Digital Infrastructure for DSP: Satellites, Platforms, and Foundation Models	C3: AI for Climate-Resilient and Sustainable Cities
10:50-12:20	D2: Enhancing SDG 6 Implementation through Digital Indicator Systems: Science, Data and Country Practices				
Time/Site	PM				
	Room 305A	Room 305B	Room 305C	Room 305D	Room 305E
13:30-15:00	B7: Advancing SDG 11 Monitoring through Geospatial Data: Insights for Housing Measurement and Policy	B12: Precision SDG Monitoring and Evaluation Using Multi-Source Big Data	D4: The High-level Experts and Leaders Panel on Water and Disasters (HELP)	A8: Computability of SDGs and Digital Indicator Framework	S6: Digital Intelligence Driving Sustainable Development—Youth Action
15:00-15:30	Break				
15:30-17:00	B5: Energy Infrastructure Survey Based on Remote Sensing Big Data	D1: Developing Indicators and Baseline Assessment for Sustainable Development of Urban Regions: Lessons from Bangkok Metropolitan Region and Eastern	D4: The High-level Experts and Leaders Panel on Water and Disasters (HELP)	B11: Big Earth Data in Support of Land Degradation Neutrality	S6: Digital Intelligence Driving Sustainable Development—Youth Action
15:30-17:00	D3: Research Frontiers and Open Issues in Aerospace Information				

Programme on September 8th, 2026

Time/Site	AM					
	Room 307					
9:00-9:25	Keynote Speech 6: Driss El Hadani (Topic: From Space Data to Global Action: UNOOSA's Vision for Inclusive Geospatial Information, Responsible AI and Sustainable Development)					
9:25-9:50	Keynote Speech 7: Moctar Touré (Topic: The Role of Academies of Science in a Fast-Moving, Multipolar and Globalized World: An African Perspective)					
9:50-10:15	Keynote Speech 8: Simon Redfern (Topic: Counting What We Remove: Digital Intelligence for Post-2030 Climate Goals)					
Time/Site	Break					
	Room 302	Room 305A	Room 305B	Room 305C	Room 305D	Room 307
10:30-12:00	C1: AI for Nature: Integrating Spatiotemporal Modeling and Multi-modal AI for Automated Auditing of Nature-based Solutions	A7: AI and Big Data for Greening Global Shipping Routes	F2: Youth Session	A5: New Earth Data Intelligence Technologies and Applications for SDGs	F3: Youth Session	A2: Advancing Sustainable Ocean Development through Big Ocean Data and Artificial Intelligence S4: International Collaborations on Earth Observations, Big Data and Artificial Intelligence for Water Security
Time/Site	PM					
	Room 305A	Room 305B		Room 305C	Room 305D	Room 307
13:30-15:00	A4: Big Data and AI for Driving Sustainable Development: Methods and Pathways	C2: Advancing FAIR Metadata Ecosystems for SDGs: AI-Driven Quality Assessment, Discovery, and Interoperable Environmental Data Systems		E1: The CODATA IDPC 2030 Vision——Promoting Open Data in Crisis and beyond	B9: Digital Technology for Disaster Risk Reduction and SDGs	S2: Leveraging Big Data and Artificial Intelligence to Strengthen National Science Technology and Innovation (STI) Roadmaps for the SDGs (13:15-15:00) S4: International Collaborations on Earth Observations, Big Data and Artificial Intelligence for Water Security
15:00-15:30	Break					
15:30-17:00	Closing Ceremony (Room 307)					

	Co-Chairs	Session	Room	Time
S1	Quarraisha Abdool Karim, Huadong Guo, Csaba Kőrösi	DSP Special Session: Building Global Partnerships for Digital Sustainable Development	307	13:30-17:00, 6th September
S2	LIU Wei, WANG Lei, LIANG Dong, SUN Zhongchang	Leveraging Big Data and Artificial Intelligence to Strengthen National Science Technology and Innovation (STI) Roadmaps for the SDGs	305E	13:15-15:00, 8th September
S4	Gretchen Kalonji, CUI Peng, Tibor Biro, LU Shanlong	International Collaborations on Earth Observations, Big Data and Artificial Intelligence for Water Security	307	10:30-15:00, 8th September
S6	CHEN Fang, CHEN Min, REN Huazhong, YU Bo	Digital Intelligence Driving Sustainable Development — Youth Action	305E	13:30-17:00, 7th September
A1	GAO Maofang, HUANG Jianxi, LI Xing	Big Data and Artificial Intelligence Underpins the Sustainable Development of Agriculture	305A	15:30-17:00, 6th September
A2	WANG Fan, LI Xiaofeng	Advancing Sustainable Ocean Development through Big Ocean Data and Artificial Intelligence	305E	10:30-12:00, 8th September
A3	LIU Min	Digital Intelligence Technologies Driving Urban Sustainability Transformation and High- Quality Development	305A	10:50-12:20, 7th September
A4	NIE Xiaowei, PAN Xiaoduo	Big Data and AI for Driving Sustainable Development: Methods and Pathways	305A	13:30-15:00, 8th September
A5	WANG Jie, HUANG Huabing, WANG Xiaoyi	New Earth Data Intelligence Technologies and Applications for SDGs	305C	10:30-12:00, 8th September
A7	ZHAO Pengjun, KANG Tingting, ZHANG Caixia, MA Tianyu	AI and Big Data for Greening Global Shipping Routes	305A	10:30-12:00, 8th September
A8	HAN Qunli, LIU Jie	Computability of SDGs and Digital Indicator Framework	305D	13:30-15:00, 7th September
A9	LI Jianhui, DOU Changyong, DU Xiaoping	Digital Infrastructure for DSP: Satellites, Platforms, and Foundation Models	305D	10:50-12:20, 7th September
B1	SU Wei, YANG Guijun	Agricultural monitoring by multi-source remote sensing techniques	302	15:30-17:00, 6th September

	Co-Chairs	Session	Room	Time
B2	ZUO Lijun, CHIOZZA Federica, LUOTTO Isabel, LI Lifeng	Advances in soil mapping and monitoring for sustainable fertility management	305B	13:30-17:00, 6th September
B3	HE Dan, JIANG Leiwen	Population and Big Data at the Science-Policy Interface of Sustainable Development	305A	13:30-15:00, 6th September
B5	SUN Liquan, WU Mingquan, CHEN Yuehong, ZHANG Jianpeng	Energy Infrastructure Survey Based on Remote Sensing Big Data	305A	15:30-17:00, 7th September
B7	Robert Ndugwa, SUN Zhongchang	Advancing SDG 11 Monitoring through Geospatial Data: Insights for Housing Measurement and Policy	305A	13:30-15:00, 7th September
B8	HUANG Lei, PETER Smmond	Big Earth Data for SDG 13 Climate Action Monitoring and Forecasting	305C	15:30-17:00, 6th September
B9	WANG Lizhe, XU Chong, XUE Yong, YAN Jining, FENG Ruyi	Digital Technology for Disaster Risk Reduction and SDGs	305D	13:30-15:00, 8th September
B10	MEI Linlu, Robert Brian O'Hara, YAO Xiaojing, LIU Yalan	Improving monitoring for better integrated climate and biodiversity approaches, using environmental and Earth observation	305E	13:30-17:00, 6th September
B11	LI Xiaosong, Barron Joseph Orr	Big Earth Data in Support of Land Degradation Neutrality	305D	15:30-17:00, 7th September
B12	Shahina Tariq, WANG Xinyuan, LUO Lei	Precision SDG Monitoring and Evaluation Using Multi-Source Big Data	305B	13:30-15:00, 7th September
B13	ZHANG Li, SUTRISNO Dewayany	Big Earth Data for WEEF Nexus and Ecosystem Services Modeling— Integrating Water, Energy, Food and Ecosystems for Sustainability	305D	13:30-17:00, 6th September
B14	Mohamed-Slim Alouini, Jia Ye	Leveraging Aerial and Space- Based Data Ecosystems for Sustainable Development Goals	305B	10:50-12:20, 7th September
C1	Amber Ren, ZHANG Hongshen, Loic Pelliser,	AI for Nature: Integrating Spatiotemporal Modeling and Multi-modal AI for Automated Auditing of Nature-based Solutions	302	10:30-12:00, 8th September

	Co-Chairs	Session	Room	Time
C2	Farzane Mohseni, GUAN Linlin	Advancing FAIR Metadata Ecosystems for SDGs: AI-Driven Quality Assessment, Discovery, and Interoperable Environmental Data Systems	305B	13:30-15:00, 8th September
C3	ZHANG Hongsheng, CHEN Bin, Amber Ren, ZHOU Yuyu	AI for Climate-Resilient and Sustainable Cities	305E	10:50-12:20, 7th September
C4	CHEN Xinjun, LIU Bin	AI4Science in Marine Fishery: Evolution and Forecasting	305C	13:30-15:00, 6th September
D1	Vilas Nitivattananon, Michele Melchiorri, LU Linlin	Developing Indicators and Baseline Assessment for Sustainable Development of Urban Regions: Lessons from Bangkok Metropolitan Region and Eastern	305B	15:30-17:00, 7th September
D2	ZHANG Weidong, LU Shanlong, Zhumaliev, K. M.	Enhancing SDG 6 Implementation through Digital Indicator Systems: Science, Data and Country Practices	307	10:50-12:20, 7th September
D3	ZOU Xudong, ZHENG Fu, FENG Jing	Research Frontiers and Open Issues in Aerospace Information	307	13:30-17:00, 7th September
D4	Kenzo Hiroki, Gretchen Kalonji	The High-level Experts and Leaders Panel on Water and Disasters (HELP)	305C	10:50-17:00, 7th September
E1	ZHANG Lili, Virginia Murray, Burcak Basbug Erkan	The CODATA IDPC 2030 Vision—Promoting Open Data in Crisis and beyond	305C	13:30-15:00, 8th September
F1	ZHANG Tingting, TIAN Chao	Youth Session	302	13:30-15:00, 6th September
F2	LU Linlin, SUI Yue, Aqil Tariq	Youth Session	305B	10:30-12:00, 8th September
F3	LIU Jian, HE Haixia	Youth Session	305D	10:30-12:00, 8th September

Session Details

Session S1	DSP Special Session Building Global Partnerships for Digital Sustainable Development	
Time	13:30-17:00, 6th September	Room: 307
Co-Chairs	Quarraisha Abdool Karim (President of the World Academy of Sciences (TWAS))	
	Huadong Guo (Director-General of CBAS)	
	Csaba Kőrösi (77th President of UN General Assembly)	
	Event 1: Presentations (30 minutes)	
	Prof. Huadong Guo (Director-General of CBAS)	
	Prof. Toshio Koike (Executive Director of International Center of Water Hazards and Resilience under the auspices of UNESCO (ICHARM), Tsukuba)	
	Simon Redfern (Dean of the College of Science and President’s Chair in Earth Sciences, Nanyang Technological University, Singapore)	
	Event 2: Round Table Discussion (90 minutes)	
	Topics: From Scientific Cognition to Global Action: Building Partnerships for Digital Sustainable Development	
	Moderator: Quarraisha Abdool Karim, President of TWAS	
	Panel Speakers:	
	● Ameenah Gurib-Fakim, Former President of Mauritius	
	● Driss El Hadani, Deputy Director of UNOOSA	
	● Csaba Kőrösi, 77th President of UN General Assembly	
	● Ibrahima Thiaw, Former Under-Secretary-General of UN	
	Moctar Touré, President of the Senegalese National Academy of Sciences and Technics	

Session S2	Leveraging Big Data and Artificial Intelligence to Strengthen National Science Technology and Innovation (STI) Roadmaps for the SDGs	
Time	13:15-15:00, 8th September	Room: 305E
Co-Chairs	LIU Wei (UN IATT Division for Sustainable Development Goals, UN DESA)	
	WANG Lei (International Research Center of Big Data for Sustainable Development Goals)	
	LIANG Dong (International Research Center of Big Data for Sustainable Development Goals)	
	SUN Zhongchang (International Research Center of Big Data for Sustainable Development Goals)	
	Event 1: Opening Remarks	
	Brief UN framing of STI Roadmaps and session objectives (3 min)	
	LIU Wei (UN IATT, Division for Sustainable Development Goals, UN DESA), Moderator	
	Host welcome, CBAS and FBAS context (5 min)	
	GUO Huadong (Director General, International Research Center of Big Data for Sustainable Development Goals (CBAS))	
	SIDS perspective: science, data and resilient blue-economy development (5 min)	
	Ameenah Gurib-Fakim (Former President of the Republic of Mauritius)	
	Event 2: Framing Presentation	
	Topics:	
	National STI Roadmaps in the Age of AI: Governance, International Cooperation and the Science–Policy Interface	
	LUO Hui (Executive Secretary for International Affairs, China Association for Science and Technology (TBC)), Keynote speaker	
	Rita Orji (Canada Research Chair in Persuasive Technology; Member of the UN Independent International Scientific Panel on AI; Full Professor at Dalhousie University, Canada; Member of Global Young Academy)	
	Event 3: Round Table Discussion	
	Topics:	
	Panel I — From Data to Decisions: Big Data, AI and Geospatial Intelligence across the National STI Roadmap Cycle	

AI strategy, governance and responsible use in national STI systems

GONG Ke (Former President, WFEO; Executive Director, Chinese Institute for the New Generation Artificial Intelligence Development Strategies)

Inclusive AI governance, governance of emerging technologies

Ammar Younas (Research Fellow and Director of the Center for Cultural Governance at the Beijing Institute of AI Safety and Governance (Beijing-AISI))

STI Policy and AI governance

LIANG Zheng (Deputy Director, China Institute for Science and Technology Policy at Tsinghua University (CISTP); Vice Dean of Institute for AI International Governance of Tsinghua University (I-AIG) (TBC))

Big Data, AI and Geospatial Intelligence across the National STI Roadmap Cycle

HAN Qunli (CBAS Professor, Former Executive Director of the Integrated Research Programme on Disaster Risk (IRDR)), Discussant

Big Data, AI and Geospatial Intelligence across the National STI Roadmap Cycle in SIDS context

Sandro José Ferreira Semedo (Geospatial Information Officer, United Nations Global Geospatial Knowledge and Innovation Centre (UN-GGKIC), Deqing, China (TBC)), Discussant

Defining and applying analytical and methodological tools to design and implement STI roadmaps, policies, and action plans aligned with the SDGs

Angela Sarcina (Economic and Policy Analyst at the Joint Research Centre (JRC) of the European Commission), Discussant

Event 4: Round Table Discussion

Topics:

Panel II — From Digital Intelligence to Resilient Economic Transformation, Investment and Decent Jobs

STI Roadmaps, national development priorities and international cooperation

ZHOU Taidong (Vice President, Center for International Knowledge on Development (CIKD); Associate Research Fellow, Development Research Center of the State Council)

productivity, investment allocation, development finance and economic resilience

Ayumi Konishi (Senior Advisor to the CEO, Multilateral Cooperation Center for Development Finance (MCDF); Former Special Senior Advisor to the President, Asian Development Bank (ADB))

Digital Intelligence and the Architecture of Industrial Transformation: Connecting AI, Big Data and STI Roadmaps to Productivity and Economic Resilience

XU Zhengzhong (Professor, Department of Management Science and Engineering, Shanghai University)

innovation systems and science & technology policy in China and East Asia

Erik Baark (Senior Visiting Fellow at the Lise Meitner Research Group "China in the Global System of Science" at the Max Planck Institute for the History of Science in Berlin, Germany), Discussant

AI governance and international science, technology and innovation cooperation

HE Guangxi (Director of the Institute of Science and Technology Governance and Innovation Culture, Chinese Academy of Science and Technology for Development (CASTED)), Discussant

From Digital Intelligence to Inclusive Economic Transformation and employment: Productivity, Employment and Resilience

Sarah Cook (Professor in Economics, School of Economics, University of Nottingham Ningbo China (TBC)), Discussant

Event 5: Closing

Synthesis of panel takeaways and next steps — CBAS-DESA 3rd Global Capacity Building Workshop for SIDS (2026): Strengthening National Capacities for ABAS and SDGs through AI-powered Big Earth Data

SUN Zhongchang (Head of Cooperation & Development Office, CBAS)

Session S4

International Collaborations on Earth Observations, Big Data and Artificial Intelligence for Water Security

Time

10:30-15:00, 8th September

Room: 307

Co-Chairs

Gretchen Kalonji (CBAS; the initiative of the Alliance of National and International Science Organizations (ANSO) on Disaster Risk Reduction, ANSO-DRR)

CUI Peng (Institute of Geographic Sciences and Natural Resource Research (IGSNRR), CAS; the initiative of the Alliance of National and International Science Organizations (ANSO) on Disaster Risk Reduction, ANSO-DRR)

Tibor Biro (Ludivica University of Public Service, Budapest)

LU Shanlong (CBAS)

AM

Section 1: Introductory Section

- Goals and structure of the Special Session: Co-Hosts, Profs. Gretchen Kalonji and Cui Peng
- Welcome remarks from FBAS 2026 host: Prof Chen Fang, Deputy Director General, CBAS

Keynote speech from HE Csaba Kőrösi, President of the 77th Session of the UN General Assembly; Blue Planet Foundation, CBAS Fellow: “Reflections on water security in the 2030 Sustainable Development Agenda, and prospects for moving forward post-2030”

Section 2: Laying the Groundwork: Short Remarks on Relevant Existing Efforts

- Toshio Koike, Executive Director, the International Research Center for Water Hazard and Risk Management under the Auspices of UNESCO (ICHARM): on the work of the UNESCO “Water Family”
- Moctar Toure, President, Academy of Sciences and Technology, Senegal, Vice President, the Alliance of National Science Organizations (ANSO): on the roles of science academies on promoting water security: examples from Senegal.
- Gong Ke: on Water Security in the “Engineering Capacity Building in Africa Program (ECBAP)” of the World Federation of Engineering Organizations (WFEO)
- Yang Min, Professor, Research Center on Ecology and Environment (RCEES), Chinese Academy of Science: on Innovations in rural drinking water security

- Jia Li, Professor, AIR/CBAS: on the water, food and energy security nexus
- Cui Peng, Professor, IGNNR/CAS, on the work of ANSO-DRR
- Kenzo Hiroki, Professor of the Graduate Research Institute of Policy Studies (GRIPS), and Coordinator of the High-Level Panel on Water and Disasters (HELP)

Tibor Biro and Teodora Szocs, Ludivica University of Public Service (LUPS): on the outcomes of the workshop in Budapest in March 2026, and expectations for the outcomes of this Special Session.

PM

Section 3: Sequential Sessions: on Floods, Drought, Water Quality

Floods:

- Scientific lead speaker: Prof. Toshio Koike, ICHARM
- Co-Leads: Prof. Koike, and Prof. Du Xiaoping, CBAS

Droughts:

- Scientific lead speaker: Prof. Jia Li, AIR/CBAS
- Co-Leads: Profs. Jia Li and Teodora Szocs, LUPS

Water quality:

- Scientific lead speaker: Prof. Yang Min, Research Center for Eco-Environmental Sciences(RCEES), Chinese Academy of Sciences
- Co-Leads: Prof. Lu Shanlong (CBAS) and Prof. Yang Min, RCEES

Section 4: Closing Session and Steps for Moving Forward

Session S6	Digital Intelligence Driving Sustainable Development—Youth Action	
Time	13:30-17:00, 7th September	Room: 305E
Co-Chairs	CHEN Fang (International Research Center of Big Data for Sustainable Development Goals (CBAS); CAS-TWAS Centre of Excellence on Space Technology for Disaster Mitigation (SDIM); TWAS Young Affiliates Network)	
	CHEN Min (Nanjing Normal University; ISDE Young Scientists Innovation Network)	
	REN Huazhong (Peking University; CNISDE Young Scientists Committee)	
	YU Bo (CBAS)	
	Event 1: Opening Remarks (13:30-13:40)	
	GUO Huadong (CBAS)	
	Quarraisha Abdool Karim (The World Academy of Sciences)	
	Event 2: Presentations	
	Retrieval of Sun-Induced Chlorophyll Fluorescence from Chinese Satellites	
	ZHANG Yongguang (Nanjing University)	
	Regional Precipitation Estimation: From Availability to Reliability	
	MIU Chiyan (Beijing Normal University)	
	Climate Impacts of Forest Disturbances	
	LI Wei (Tsinghua University)	
	Health geography: pathways to empowering sustainable development	
	JIA Peng (Wuhan University)	
	High-resolution remote sensing data supports the monitoring of desert and desert vegetation	
	REN Huazhong (Peking University)	
	Coastal Flood Exposure and Socioeconomic Risk Under Climate Change in Hong Kong	
	ZHANG Hongsheng (The University of Hong Kong)	
	Particulate air pollution undermines plant water-use efficiency by inhibiting photosynthesis	
	WANG Jian (Institute of Geographic Sciences and Natural Resources Research, CAS)	
	Spatiotemporal dynamics of African cropland over the 21st century	
	PENG Dailiang (CBAS)	

Session A1	Big Data and Artificial Intelligence Underpins the Sustainable Development of Agriculture	
Time	15:30-17:00, 6th September	Room: 305A
Co-Chairs	GAO Maofang (Affiliation Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences)	
	HUANG Jianxi (Southwest Jiaotong University)	
	LI Xing (Sun Yat-sen University)	
	Event 1: Presentations	
	A 10-m View of the World's Winter Rapeseed	
	QIU Bingwen (Fuzhou University, China)	
	Super-Resolution Cropland Mapping by Spectral and Spatial Training Samples Simulation	
	JIA Xiaofeng (Institute of Geographical Sciences, Hebei Academy of Sciences)	
	Advancing Africa’ s AI-Enabled Digital Soil Intelligence Infrastructure via the African Union Soil Observatory	
	Oluwole Fatunbi (Forum for Agricultural Research in Africa (FARA))	
	Deep Learning for automated multi-scale functional field boundaries extraction using multi-date Sentinel-2 and Planet Scope imagery: Case Study of Netherlands and Pakistan	
	Saba Zahid (Space Science department Institute of Space Technology Islamabad, Pakistan)	
	Harnessing Phenology-Based Stratification and Multi-Source Remote Sensing for Rice Field Waterlogging Monitoring toward Sustainable Water Management	
	LOU Jiaqi (Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences)	
	A novel domain adaptation with multiple classifiers for crop mapping	
	GAO Maofang (Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences)	

Session A2	Advancing Sustainable Ocean Development through Big Ocean Data and Artificial Intelligence	
Time	10:30-12:00, 8th September	Room: 305E
Co-Chairs	WANG Fan (Institute of Oceanology, CAS)	
	LI Xiaofeng (Institute of Oceanology, CAS)	
	Event 1: Presentations	
	Retrieval of Ocean Surface and Atmospheric Parameters from K- and Ka-Band Data Using a Physics-Informed Coupled Neural Network MAO Peng (Ocean University Of China)	
	SPPM-FT: Multiscale Decoupled Transformer for Station-Specific Precipitation Forecasting XIA Jiangjiang	
	Tracing Internal Waves Back to Their Topographic Sources HUANG Baoxiang	
	From the Global Tuna datasets to SDG Intelligence: Explainable AI for Climate-Sustainability Risk Mapping in Global Tuna Fisheries LIAN Peng (Chinese Academy of Fishery Sciences, Beijing, China)	
	Artificial Intelligence Extraction of Yellow Sea Green Tides by Coupling Knowledge and Big Data GAO Le (Institute of Oceanography, CAS)	

Session A3	Digital Intelligence Technologies Driving Urban Sustainability Transformation and High-Quality Development	
Time	10:50-12:20, 7th September	Room: 305A
Co-Chairs	LIU Min (East China Normal University)	
	Event 1: Presentations	
	Future Extreme Sea-level Exposure May Amplify Urban Inequality in a High-density Coastal Metropolis: Evidence from Hong Kong LIU Yan (Chinese University of Hong Kong, China)	
	SMARTS: Coupling Satellite Earth Observation with IoT for Intelligent Agricultural Water Management Rahul Dev Garg (Indian Institute of Technology (IIT) Roorkee, India)	
	DaYu-RCPAS: DaYu Radiation-Cloud-Precipitation Analysis System ZHANG Feng (Fudan University, China)	
	Estimating Global Anthropogenic CO ₂ Emissions Using Satellite Observations HUANG Bo (The University of Hong Kong, China)	
	A Lightweight Physics-Informed Artificial Intelligence Foundation Model for Extreme Precipitation Forecasting ZHANG Qiang (Beijing Normal University at Zhuhai, China)	
	AI-Enhanced Seasonal Rainfall Prediction over China using CAS-ESM and Machine Learning Technique LIN Zhaohui (Chinese Academy of Sciences, China)	

Session A4	Big Data and AI for Driving Sustainable Development: Methods and Pathways	
Time	13:30-15:00, 8th September	Room: 305A
Co-Chairs	NIE Xiaowei (Institute of Tibetan Plateau Research, CAS)	
	PAN Xiaoduo (Institute of Tibetan Plateau Research, CAS)	
Event 1: Presentations		
Linking Envrionment to Human Health Using AI for Atmospheric Science		
CHEN Yang (Chongqing Institute of Green and Intelligent Technology, CAS, China)		
Governing the commons during uncertainties: The role of Big Data Analytics to overcome Climate Change Anxiety and Achieve Sustainability		
KHOLAIF, Moustafa (Institute of Tibetan Plateau Research, CAS, China)		
A comparison approach in assessment of groundwater zones Using deep learning model of geospatial Artificial Intelligence (Geo-AI), and a conventional AHP model in Nagqu Northern Tibet Plateau China		
JOSHUA, Godwin Inieke (Institute of Tibetan Plateau Research, CAS, China)		
Event 2: Round Table Discussion		
Topics: Big Data and AI for Driving Sustainable Development: Methods and Pathways		
Panel Speakers:		
NIE Xiaowei (Institute of Tibetan Plateau Research, CAS, China)		
PAN Xiaoduo (Institute of Tibetan Plateau Research, CAS, China)		
CHEN Yang (Chongqing Institute of Green and Intelligent Technology, CAS, China)		
KHOLAIF, Moustafa (Institute of Tibetan Plateau Research, CAS, China)		
JOSHUA, Godwin Inieke (Institute of Tibetan Plateau Research, CAS, China)		

Session A5	New Earth Data Intelligence Technologies and Applications for SDGs	
Time	10:30-12:00, 8th September	Room: 305C
	WANG Jie (Pengcheng Laboratory)	
Co-Chairs	HUANG Huabing (Sun Yat-Sen University)	
	WANG Xiaoyi (Institute of Tibetan Plateau Research, CAS)	
	Event 1: Presentations	
	A Novel Multimodal AI Framework for Early Wheat Yellow Rust Detection Using Multi-Sensor and Multi-Temporal Earth Observation Data SABA Zahid	
	A Global Monthly 500 m VIIRS-like NTL Dataset Reconstructed from DMSP Observations Using Deep Super Resolution CHENG Hongquan (PENGCHENG LABORATORY, China)	
	High resolution (2m) mapping of forestation across Tibetan Plateau DING Xiaoyu (Institute of Tibetan Plateau Research, CAS, China)	
	AI-Powered Open Data Ecosystems for Smart and Sustainable Urban Governance Obwaya Mogire (South Eastern Kenya University)	
	Multisensory Perspective and Landsenses Ecology for SDGs DONG Rencai (State Key Laboratory of Regional and Urban Ecology, Research Center for Eco-Environmental Sciences, CAS, China)	
	Development and Technical Applications of a Data Intelligence Platform for the Sustainable Development Goals TIAN Geng (PENGCHENG LABORATORY, China)	

Session A7 **AI and Big Data for Greening Global Shipping Routes**

Time **10:30-12:00, 8th September** **Room: 305A**

Co-Chairs

ZHAO Pengjun (College of Urban and Environmental Science, Peking University)

KANG Tingting (College of Urban and Environmental Science, Peking University)

ZHANG Caixia (College of Urban and Environmental Science, Peking University)

MA Tianyu (College of Urban and Environmental Science, Peking University)

Event 1: Presentations

Research on Forecasting Pollution Emissions from Shipping along Arctic Routes

ZHAO Pengjun (College of Urban and Environmental Science, Peking University, China)

Green Shipping Pathways: Vision, Challenges, and Operational Realities

YANG Dong (Business school, The Hong Kong Polytechnic University, China)

Coordinated Control of Greenhouse Gas and Air Pollutant Emissions from Vessels at Global Container Ports

CHEN Jihong (College of Management, Shenzhen University, China)

The Impact of Market-Based Measures on Carbon Emission Reduction in International Shipping

Adolf K.Y. Ng (Faculty of Business and Management, Beijing Normal-Hong Kong Baptist University, China)

Drivers and impacts of Arctic shipping

LIU Huan (School of Environment, Tsinghua University, China)

Transformation and Upgrading of Smart Ports and the Shipping Industry in the Age of Artificial Intelligence

LU Bo (School of Economics and Management, Dalian University of Technology, China)

A Data-Driven Study on the Electrification of Vessels on the Yangtze River

TAN Zhijia (School of Management, Huazhong University of Science and Technology, China)

Development of New-Energy Vessels in China and Key Technologies for Intelligent Operations and Maintenance

FAN Ailong (School of Transportation and Logistics Engineering, Wuhan University of technology)

Session A8	Computability of SDGs and Digital Indicator Framework	
Time	13:30-15:00, 7th September	Room: 305D
Co-Chairs	HAN Qunli (CBAS)	
	LIU Jie (CBAS)	
	Event 1: Presentations	
	Introduction to Big Data-Supported SDG Pathway Computability and the SDG Digital Indicator Framework	
	CHEN Yu (CBAS, China)	
	Beyond 2030: Digital SDGs: A Critical Evaluation of Computability, Indicators and Policy Relevance	
	Ranjula Bali Swain (Stockholm School of Economics, Sweden. Online)	
	A Threefold Approach for Sustainability Nexus Modelling	
	Prajal Pradhan (Professor assistant, University of Groningen. Online)	
	Event 2: Round Table Discussion	
	Topics:	
	Digital Indicators as the Foundation for Computable SDGs: Science, Standards and Cooperation	
	Panel Speakers:	
	CHEN Deliang (Tsinghua University, China)	
	Johannes Cullmann (Scientific Advisor to the President of the 77th session of the UN General Assembly, Germany)	
	PETER Smmond (UCL Department of Risk and Disaster Reduction, UK)	
	Kamal LABBASSI (Chouaib Doukkali University, Morocco. online)	
	Ranjula Bali Swain (Professor of Economics, Södertörn University. Online)	
	Prajal Pradhan (Professor assistant, University of Groningen. Online)	
	HUANG Lei (CBAS, China)	

Session A9	Digital Infrastructure for DSP: Satellites, Platforms, and Foundation Models	
Time	10: 50-12:20, 7th September	Room: 305D
Co-Chairs	LI Jianhui (International Research Center of Big Data for Sustainable Development Goals / Nanjing University)	
	DOU Changyong (International Research Center of Big Data for Sustainable Development Goals / Aerospace Information Research Institute, Chinese Academy of Sciences)	
	DU Xiaoping (International Research Center of Big Data for Sustainable Development Goals / Aerospace Information Research Institute, Chinese Academy of Sciences)	
	Concept, Scope, and Key Components of DSP Digital Infrastructure	
	DU Xiaoping (International Research Center of Big Data for Sustainable Development Goals/ Aerospace Information Research Institute, Chinese Academy of Sciences) (15 minutes)	
	Satellite Earth Observation for the Sustainable Development Goals (SDGs)	
	DOU Changyong (International Research Center of Big Data for Sustainable Development Goals / Aerospace Information Research Institute, Chinese Academy of Sciences) (15 minutes)	
	Data Lifecycle-Driven Trustworthy Foundation Models	
	LIU Shenghua (Institute of Computing Technology, Chinese Academy of Sciences) (15 minutes)	
	National Computing Power Network Supporting the Development of Data Infrastructure for Digital Sustainable Development	
	Geng Tian (Peng Cheng Laboratory) (15 minutes)	
	Open Geospatial Engine (OGE): Research, Architecture, and Technical Standards	
	YUE Peng (Wuhan University) (15 minutes)	
	Current Status and Applications of Scientific Data Agents	
	ZHANG Chi (Shanghai Artificial Intelligence Laboratory) (15 minutes)	

Session B1	Agricultural monitoring by multi-source remote sensing techniques	
Time	15:30-17:00, 6th September	Room: 302
Co-Chairs	SU Wei (China Agricultural University, China)	
	YANG Guijun (Chang' an University, China)	
	Event 1: Presentations	
	AI-Based Remote Sensing Retrieval of Hourly Evapotranspiration CUI Yaokui (Peking University, China)	
	China' s urbanization has driven cropland expansion onto steeper terrains LI Xuecao (Sun Yat-sen Unversity, China)	
	A radiative transfer model for agricultural strip intercropping canopies by decoupling vegetation–soil multiple scattering effects ZENG Yelu (China Agricultural University, China)	
	Remote Sensing of Soil Moisture for Large-Scale Drought Monitoring ZHAO Tianjie (Aerospace Information Research Institute, CAS, China)	
	Retrieving crop structural and radiative parameters through three-dimensional radiative transfer modeling QI Jianbo (Beijing Normal University, China)	
	Remote Sensing Monitoring and Prediction Technology and Application for Agricultural Disasters Sheng Chang (Aerospace Information Research Institute, CAS, China)	
	A transpiration-driven root-zone soil moisture retrieval framework using remotely sensed vegetation signals Pei Leng (Institute of Agricultural Resources and Regional Planning, CAAS, China)	

Session B2 **Advances in soil mapping and monitoring for sustainable fertility management**

Time **13:30-17:00, 6th September**

Room: 305B

Co-Chairs

ZUO Lijun (International Research Center of Big Data for Sustainable Development Goals (CBAS))

CHIOZZA Federica (Land and Water Division, FAO)

LUOTTO Isabel (Land and Water Division, FAO)

Openings

LI Lifeng (Land and Water Division, FAO (online))

Event 1: Presentations

Soil mapping for resilient agrifood system in Africa and Central America (SoilFER) - Programme overview

Isabel Luotto (Land and Water Division, FAO)

From soil information to smarter crop decisions: the SoilFER CropSuit App

Federica Chiozza (Land and Water Division, FAO)

Integrate Legacy Data to Better Predict Soil Behavior and Soil Resource Management

ZHANG Ganlin (Institute of Soil Science, Chinese Academy of Sciences)

Perspectives on Spectroscopy and Digital Mapping (online)

Leonardo Ramireze Lopez (BUCHI)

Advances in Remote Sensing and Digital Soil Mapping for Sustainable Soil Fertility Management (in person/online)

SHI Haijing (Northwest AF University)

Bridging sustainable fertilizer management with Soil Health in Zambia through soil maps

Vernon Kamboyi (Zambian Agricultural Research Institution)

Building Africa's AI-Enabled Digital Soil Intelligence Infrastructure through the African Union Soil Observatory

Wole Fatunbi (FARA)

Effects of Soil salinization on Crop Planting Structure: Evidence from the Yellow River Delta, China

LU Miao (CAAS, China)

Mapping Soil Organic Matter in a Typical Black Soil Region Using Multi-Temporal Synthetic Images and Radar Indices

KONG Xiangbin (SCAU)

Event 2: Q&A Session (15 min.)

Event 3: Round Table Discussion (30 min.)

Topics:

1) Digital soil mapping for decision support and geospatial analysis on fertilizer and sustainable land management

Soil health monitoring through remote sensing and data integration

Panel Speakers:

- Isabel Luotto, FAO, Land and Water Division
 - Patricio Grassini, University of Nebraska-Lincoln (online)
 - Wole Fatunbi, FARA
 - Nuru Seid Tehulie, CAAS
-

Session B3

Population and Big Data at the Science–Policy Interface of Sustainable Development

Time

13:30-15:00, 6th September

Room: 305A

Co-Chairs

HE Dan (China Population and Development Research Center)

JIANG Leiwen (Shanghai University)

Event 1: Presentations

Exploring Social Interaction and Value Governance in the Era of Human–AI Symbiosis

KANG Yipeng (Beijing Institute for General Artificial Intelligence)

Towards a General Framework for Social Simulation with Generative Agents

WEI Zhongyu (Fudan University, Shanghai Innovation Institute)

Human–Grain Relationship on Both Sides of the Hu Line under Climate Change

XIA Haibin (East China Normal University)

From Land to People: Empowering Urban Governance with Big Data

LIU Zhuming (Senior Data Analyst, China Unicom Smart Steps Co., Ltd.)

Population Transition and Data-Driven Governance in a Low-Fertility, Highly Mobile City: Multi-Source Evidence from Shenzhen, China

LU Cao, WU Xusheng, WU Liqun, SHANG Li, HE Xiaofeng* (Shenzhen Health Development Research and Data Management Center, Shenzhen)

Social Simulator: Coupling Population Big Data with Generative Agent-Based Modeling for Ex-Ante Policy Evaluation at the Science–Policy Interface

MI Baotong, CHAI Yunpeng (Renmin University of China, Beijing, China)

Population Monitoring Using Multi-Source Big Data: Theory, Methods, and Practice

WANG Ying ‘an (China Population and Development Research Center, China)

Session B5

Energy Infrastructure Survey Based on Remote Sensing Big Data

Time

15:30-17:00, 7th September

Room: 305A

Co-Chairs

SUN Liquan (Shenzhen Institutes of Advanced Technology, CAS, China)

WU Mingquan (Aerospace Information Research Institute, CAS, China)

CHEN Yuehong (Hohai University, China)

ZHANG Jianpeng (Peking University, China)

Event 1: Presentations

Urban Façade Photovoltaic Potential Survey: Integrating 2.5D Remote Sensing Building Detection and Geometric Shadow Simulation

JIANG Hou (Institute of Geographic Sciences and Natural Resources Research, CAS)

Photovoltaic Data Modeling Based on Remote Sensing Big Data

ZHU Rui (Nanjing Normal University, China)

Energy Transition and Global Sustainable Development

WU Mingquan (Aerospace Information Research Institute, CAS, China)

Remote Sensing Dataset of Photovoltaic Power Plants in China

CHEN Yuehong (Hohai University, China)

Progress Toward Carbon Neutrality Amidst Changes in Global Urban Infrastructure

QIU Linghua (Beijing Normal University, China)

Research on Intelligent Extraction Methods for Large-Scale, Ultra-High Resolution Photovoltaic Remote Sensing Information

YANG Ruiqing (Hunan Normal University, China)

Progress in Remote Sensing of Floating Photovoltaics

YAN Yue (Southern University of Science and Technology, China)

Optimal Feature Selection for Utility-Scale Photovoltaic Power Plants from Sentinel-2 MSI Imagery

CHEN Feng (Institute of Spatiotemporal Intelligence Application and Innovation, Xiamen University of Technology, China)

Mapping global onshore wind turbines using multi-source remote sensing images and hybrid learning approaches

LI Shujun (Institute of Urban Environment, CAS, China)

Progress in Global Photovoltaic Remote Sensing

SUN Liqun (Shenzhen Institutes of advanced technology, CAS, China)

Session B7

**Advancing SDG 11 Monitoring through Geospatial Data:
Insights for Housing Measurement and Policy**

Time

13:30-15:00, 7th September

Room: 305A

Co-Chairs

Robert Ndugwa (UNHabitat, Kenya)

SUN Zhongchang (CBAS)

Presentations

Advancing SDG 11 Monitoring through Geospatial Data and AI: early insights for Housing Measurement and Policy

Robert Ndugwa (UNHabitat, Kenya)

From Observation to Policy: Leveraging GHSL, GEO Human Planet, and Open Data Partnerships for SDG 11 Monitoring

Michele Melchiorri (European Commission Joint Research Centre, Ispra, Italy)

Strengthening National SDG 11 Monitoring through Geospatial Data: The South African Experience (online)

Naledzani Mudau (South African National Space Agency, South Africa)

The Application and Practice of Urban data platform Supporting High-Quality Housing Development in Wuhan

HE Bo (Wuhan Natural Resources Conservation and Utilization Center)

Tracking Informal Settlements from Space: Spatial Dynamics and Population Densification across the Global South

LI Xi (Wuhan University, China)

Overall Architecture of the SDG 11 Urban Intelligent Domain and Prototype Development

LI Jing (CBAS)

Assessing Compound Climate Risks and Strengthening Urban Resilience: Insights from the Yangtze River Delta for SDG 11

LI Chunlan (School of Geographical Sciences, East China Normal University, China)

Session B8 **Big Earth Data for SDG 13 Climate Action Monitoring and Forecasting**

Time **15:30-17:00, 6th September** **Room: 305C**

Co-Chairs **HUANG Lei** (CBAS)

PETER Smmond (UCL Department of Risk and Disaster Reduction, UK)

Event 1: Presentations

Multi-Source Big Data for Sustainable Groundwater Recharge in Pakistan

Sehrish Quddoos (Land Information and Management System (LIMS), Pakistan)

Hazard and EWS in humanitarian response

PETER Smmond (UCL Department of Risk and Disaster Reduction, UK)

Multi-hazard Monitoring and Early Warning from Multi-source Data with Fengyun Satellite Observations: A Case Study of Saudi Arabia

ZHANG Yan (National Satellite Meteorological Center)

Global Flood Mapping, Risk Assessment, and Future Projections under Climate Change

HE Qisheng (Hohai University)

New indicator framework for SDG 13 Climate Action

HUANG Lei (CBAS)

Session B9 Digital Technology for Disaster Risk Reduction and SDGs

Time 13:30-15:00, 8th September **Room: 305D**

WANG Lizhe (Tsinghua University, China)

XU Chong (National Institute of Natural Hazards, Ministry of Emergency Management of China, China)

Co-Chairs **XUE Yong** (China University of Mining and Technology, China)

YAN Jining (China University of Geosciences, China)

FENG Ruyi (Tsinghua Shenzhen International Graduate School, Tsinghua University, China)

Event 1: Presentations

SAGINGeo: A Space-Aerial-Ground Integrated Framework for VGI Geolocalization in Multi-Disaster Scenarios

XUE Yong (School of Environment and Spatial Informatics, China University of Mining and Technology, China)

Application of Geospatial Approaches in Urban Flood Hazard Assessment, Coping Capacity and Extent of Urban Flood Resilience of Rapidly Growing Abbottabad City, Pakistan

Atta-Ur Rahman (Department of Geography and Geomatics, University of Peshawar, Pakistan)

Big data driven disaster risk reduction knowledge service

WANG Juanle (Institute of Geographic Sciences and Natural Resources Research, CAS, China)

Quantitative evacuation thresholds and decision support for mountain flood and geological hazards in the Yanshan-Taihang mountain region, China

XU Chong (National Institute of Natural Hazards, Ministry of Emergency Management of China, China)

PALSAR-3-Based InSAR Monitoring of Landslide Deformation in Complex Alpine Canyon Areas

WANG Shenghan (Aerospace Information Research Institute, CAS, China)

Multi-Source Geospatial Data for Extreme-Rainfall Risk Assessment of Elderly Care Institutions in Beijing

WU Saier (National Institute of Natural Hazards, Ministry of Emergency Management of China, China)

Session B10	Improving monitoring for better integrated climate and biodiversity approaches, using environmental and Earth observation	
Time	13:30-17:00, 6th September	Room: 305E
Co-Chairs	MEI Linlu (International Research Center of Big Data for Sustainable Development Goals (CBAS))	
	Robert Brian O'Hara (Department of Mathematical Sciences, NTNU)	
	YAO Xiaojing (Aerospace Information Research Institute, CAS)	
	LIU Yalan (Aerospace Information Research Institute, CAS)	
	Improving monitoring for better integrated climate and biodiversity by environmental and Earth observations LIU Yalan (Aerospace Information Research Institute, CAS, China)	
	Addressing Data Fragmentation in Biodiversity: a Workflow for Integrated Species Distribution Models Philip Stanley Mostert (Norwegian University of Science and Technology, Norway)	
	Applications of Intelligent Sensing Devices Based on Integrated AI Hardware and Software Technology in Wildlife Conservation JIAN Haifang (Institute of Semiconductors, CAS, China)	
	Dominant Modes of Interannual Variability in Spring Eurasian Vegetation and Associated Climatic Forcing Mechanisms JI Kai (International Research Center of Big Data for Sustainable Development Goals, China)	
	Multi-angle, cross-domain fusion strategy enhances automated insect identification and hierarchical categorization: a case study on assassin bugs (Hemiptera: Reduviidae) WANG Xinkai (Nanjing Institute of Environmental Sciences, China)	
	Emissivity Priors in 10 m Land Surface Temperature Retrieval: A Physically Constrained Algorithm for SDGSAT-1 Satellite XU Rui (Aerospace Information Research Institute, CAS)	

Biodiversity Credit Accounting Using Authenticity, Integrity, and Connectivity: A Social Equity Lens

ZHANG Hailin (Beijing Normal University)

Essential Biodiversity Variables (EBVs) as an Optimal Format for Habitat Suitability Index of the Black-Necked Crane Across Life Stages

ZHONG Yu (Institute of Zoology, CAS, China)

Break

Standardizing UAV Data Collection for Multi-Temporal Biodiversity Analysis

Ionut Sandric (Faculty of Geography, University of Bucharest, Romania)

Functional Trait Economics Spectrum Reveals Divergent Water-Carbon Strategies and Climate Adaptation in *Cunninghamia lanceolata* Provenances

XU Tingyu (Ecology and Nature Conservation Institute, Chinese Academy of Forestry)

Ultraviolet and Visible Spectral Information for Enhanced Geostationary Aerosol Type Monitoring over East Asia

WANG Feiyang (Key Laboratory of Digital Earth Science, Aerospace Information Research Institute, CAS)

Exploring UAV Multi-sensor Fusion for Understanding Vegetation Diversity

Marian Mirea (University of Bucharest, Centre for Environmental Research and Impact Studies, Romania)

High-resolution map revealed conflicts between tea production, food security and biodiversity protection

QIU Bingwen (Fuzhou University, China)

Analysis of Dynamics and Environmental Responses of the Potential Distribution Area of *Castanopsis fargesii* in China in the Context of Climate Change: Based on the Maxent Model

ZE Zihan (Ecology and Nature Conservation Institute, Chinese Academy of Forestry)

Data-Supported Pathways for Monitoring and Mainstreaming Other Effective Area-Based Conservation Measures under the Kunming-Montreal Global Biodiversity Framework

ZHAO Weiyang (Tongji University, Chinese Research Academy of Environmental Sciences)

**Monitoring Subtropical Evergreen Broad-leaved Forest Phenological
Dynamics Using Near-Surface Remote Sensing and Environmental
Data Integration**

YANG Lu(Ecology and Nature Conservation Institute, Chinese Academy of
Forestry / College of Forestry, Shenyang Agricultural University)

**High-Resolution Land Use Mapping Based on GF-1 Imagery and
Random Forest Classification**

ZHANG Xinhong (Aerospace Information Research Institute, CAS, China)

Session B11 Big Earth Data in Support of Land Degradation Neutrality

Time 15:30-17:00, 7th September Room: 305D

Co-Chairs
LI Xiaosong (CBAS)
Barron Joseph Orr (UNCCD)

Event 1: Presentations

Great Green Wall Initiative: progress and challenges

Ibrahim Thiaw (Former Executive Secretary of the UN Convention to Combat Desertification)

GEO-LDN: Capacity development and future outlook

Amos Tiereyangn Kabo-bah (University of Energy and Natural Resources)

UNCCD Regional Support Hub: Missions and Perspectives

LI Xiaosong (CBAS)

Spatio-temporal Dynamics and Drivers of Net Primary Productivity in the Niger River Basin

OGBUE Chukwuka Prince (National Engineering Technology Research Centre for Desert and Oasis Ecological Construction, Xinjiang Institute of Ecology and Geography, CAS, China)

Event 2: Panel Discussions

CAS Pan-Africa Great Green Wall Center: Missions and progresses

WANG Yongdong (Xinjiang Institute of Ecology and Geography, CAS, China)

China-Arab Desertification Control Center: Missions and progresses

ZHU Jinlei (Chinese Academy of Forestry)

China-Mongolia Desertification Control Center: Progress and Outlooks

CHENG Yiben (Beijing Forestry University)

China-Central Asia Desertification Control Center: Progress and Outlooks

Wei Huang (China-Central Asia Desertification Control Center)

Session B12 **Precision SDG Monitoring and Evaluation Using Multi-Source Big Data**

Time **13:30-15:00, 7th September** **Room: 305B**

Co-Chairs

Shahina Tariq (Land Information and Management System (LIMS), Islamabad Pakistan)

WANG Xinyuan (Aerospace Information Research Institute, Chinese Academy of Science, Beijing)

LUO Lei (Aerospace Information Research Institute, Chinese Academy of Science, Beijing)

Event 1: Presentations

Spatiotemporal Evolution and Equity of Blue Space Exposure in China during the First Two Decades of the 21st Century

SHA Te (Capital Normal University)

Harnessing Multi-Source Big Data for Precision Monitoring and Evaluation of Sustainable Development Goals: A Geospatial Intelligence Framework

ZIA Muhammad Abu Bakar (Green Pakistan Initiative)

Enhancing Global SDG Monitoring Through Multi-Source Geospatial and Statistical Data: Insights from Pakistan and International Best Practices

TARIQ Shahina (Land Information and Management System (LIMS-CoE))

Event 2:

Topics:

- From Data to Action: Strengthening SDG Monitoring
- AI & Big Data: The Future of SDG Assessment
- Official Statistics & Geospatial Data: Bridging the Data Gap

Panel Speakers:

1. Waqar Yasin (Land Information and Management System-Centre of excellence (LIMS-CoE), Rawalpindi, Pakistan)
 2. LUO Lei (Aerospace Information Research Institute, Chinese Academy of Science (AIR-CAS), Beijing)
 3. ABU BAKAR Zia (Land Information and Management System-Centre of excellence (LIMS-CoE) Pakistan)
 4. SHA Te (Capital Normal University)
 5. QIU Yubao (Aerospace Information Research Institute, Chinese Academy of Science (AIR-CAS), Beijing)
- CHEN Bowei (CBAS , Aerospace Information Research Institute, Chinese Academy of Science (AIR-CAS), Beijing)
-

Session B13 **Big Earth Data for WEEF Nexus and Ecosystem Services Modeling— Integrating Water, Energy, Food and Ecosystems for Sustainability**

Time **13:30-17:00, 6th September** **Room: 305D**

Co-Chairs **ZHANG Li** (CBAS, China)
SUTRISNO Dewayany (BRIN, Indonesia)

Event 1: Presentations (13:30-14:30)

Advancing SDG 11 Through Capacity Building and Science-Based Urban Spatial Planning (SciBUSP) in Southeast Asia: Big Earth Data Solutions for Sustainable Urban Planning

SUTRISNO Dewayany (BRIN, Indonesia)

Judul SciBUSP: A Science-Based Platform for Urban Spatial Planning
PUTRA Prabu Kresna Putra (BRIN, Indonesia)

Judul : Use of Geographic Information Systems (GIS) to Support SDG 11

PRATAMA Bobby Bagja Pratama (BRIN, Indonesia)

Sustainability Analysis is Global Coastal Urban Systems through LLM-based Water-Energy-Food Nexus Assessment and Ecosystem Services Modelling

Syed Ahmed Raza, ZHANG Li (AIRCAS, China)

A Spatio-Temporal Modeling Framework for the Land-Climate-Food Nexus in Africa: A Big Earth Data and Machine Learning Approach

Abebe Yesgat Andualem, ZHANG Li (AIRCAS, China)

Tea Break (14:30-14:40)

Event 2: Presentations (14:40-16:30)

Big Earth Data for Sustainable Development: From Science to Practice
ZHANG Li (CBAS, China)

Big Earth Data for Water Ecosystem Monitoring and Assessment in Hainan Prefecture, Qinghai Province

JING Ruofan (AIRCAS, China)

**Big Earth Data for Vegetation Ecosystem Monitoring and Analysis in
Hainan Prefecture, Qinghai Province**

Xia Junchao (AIRCAS, China)

**SpaceAirGround Monitoring and Ecological Impact Analysis of the
Photovoltaic Industry**

CHEN Bowei (CBAS, China)

**Evaluation of Urban Human Settlements towards the UN Sustainable
Development Goals**

BAI Linyan (CBAS, China)

Discussion

Session B14

Leveraging Aerial and Space-Based Data Ecosystems for Sustainable Development Goals

Time

10:50-12:20, 7th September

Room: 305B

Co-Chairs

Mohamed-Slim Alouini (King Abdullah University of Science and Technology)

Jia Ye (Chongqing University)

Event 1: Presentations

NLoS Wireless Sensing for Non-cooperative UAVs with Intelligent CKM

Yong Zeng (Southeast University)

Tapping into the Full Potential of the Stratosphere

Mohamed-Slim Alouini (KAUST)

Aerospace Data Ecosystems for Resilient Energy Services

Jia Ye (Chongqing University)

Leveraging Fengyun Satellite Data to Support Ecosystem Services and the Sustainable Development Goals

Lin Zhu (China Meteorological Administration (CMA))

SkySense++: A Semantic-Enhanced Multi-Modal Remote Sensing Foundation Model for Earth Observation.

LI Yansheng (Wuhan University)

Event 2: Round Table Discussion

Topics:

The exponential growth of data collection from aerial and space-based platforms (including drones, High-Altitude Platform Stations (HAPS), and satellites) is reshaping how humanity monitors and advances the Sustainable Development Goals. From precision agriculture and disaster response to climate monitoring and urban planning, the sky has become a critical layer of the global data infrastructure.

This panel explores three distinct but complementary tiers of aerial data collection. Each featured talk examines one platform tier (low-altitude drones and the emerging low-altitude economy, HAPS as a middle-layer bridging terrestrial and satellite systems, and satellite-based Earth observation) illuminating how each generates high-frequency, large-scale datasets relevant to SDG tracking. Crosscutting themes include remote sensing methodologies, edge computing for on-board data processing, and anomaly detection techniques that surface actionable insights from massive geospatial streams. More specifically, the panel discussion will examine interoperability and the convergence of these platforms into unified sky-to-ground data pipelines in service of sustainable development.

Panel Speakers:

- 1-Mohamed-Slim Alouini (KAUST)
 - 2-Jia Ye (Chongqing University)
 - 3-Yong Zeng (Southeast University)
 - 4-Lin Zhu (China Meteorological Administration (CMA))
 - 5-ZHANG Yongjun (Wuhan University)
-

Session C1 **AI for Nature: Integrating Spatiotemporal Modeling and Multi-modal AI for Automated Auditing of Nature-based Solutions**

Time **10:30-12:00, 8th September** **Room: 302**

Amber Ren (School of environmental science in Tongji University, China)

Co-Chairs **ZHANG Hongshen** (The Department of Geography, The University of Hong Kong, Hong Kong SAR, China)

Loic Pelliser (Loic Pellisfer ETH Zurich)

Event 1: Presentations

Global Mangrove Conservation under Urbanization and Climate Change

Zhang Hongshen (The University of Hong Kong, Hong Kong SAR, China)

AI for Nature

Amber Ren (Tongji University, China)

Event 2: Round Table Discussion

Topics:

AI for Nature Conversation-Happy People, Happy Planet

Panel Speakers:

FU Bojie(CAS)

Jian Liu (CAS)

Loic Pelliser (ETH Zurich)

One UN Colleague

Session C2

Advancing FAIR Metadata Ecosystems for SDGs: AI-Driven Quality Assessment, Discovery, and Interoperable Environmental Data Systems

Time **13:30-15:00, 8th September** **Room: 305B**

Co-Chairs

Farzane Mohseni (Institute of Geodesy and Geoinformation, University of Bonn, Germany)

GUAN Linlin (Aerospace Information Research Institute, CAS, China)

Event 1: Presentations

An Automated Framework for Metadata Quality and FAIRness Assessment with Interactive Visualization: A Case Study of Global Soil Moisture Datasets

Farzane Mohseni

China Efforts on Earth Observation Data Sharing by NODA

CHEN Zugang (Aerospace Information Research Institute, CAS, China)

Toward AI-Driven Quality Assessment of FAIR Environmental Knowledge Graphs for SDG Pathway Recommendation: A Framework, Capability Boundaries, and Recommendations

WANG Shu (Institute of geographic sciences and natural resources research, CAS, China)

How Reliable Are Our Mountain Maps? Global Assessment of 10-m Land Cover Uncertainty and Impacts

Amin Naboureh (Research Center for Digital Mountain and Remote Sensing Application, Institute of Mountain Hazards and Environment, CAS, China)

Metadata Curation Practices for FAIRification in Data Repository: A Case Study of Science Data Bank

JIANG Lulu (Computer Network Information Center, CAS, China)

Developing an AlphaEarth-Assisted FAIR Annual PM_{2.5} Dataset for Intra-Urban SDG 11.6.2 Assessment: A Case Study in 49 Coastal Cities of Mainland China

JIANG Huiping (Institute of Geographic Sciences and Natural Resources Research, CAS, China)

Session C3 AI for Climate-Resilient and Sustainable Cities

Time 10:50-12:20, 7th September **Room:** 305E

Co-Chairs

ZHANG Hongsheng (The Department of Geography, The University of Hong Kong, Hong Kong SAR, China)

CHEN Bin (Division of Landscape Architecture, The University of Hong Kong, Hong Kong SAR, China)

Amber Ren (United Nations Environment Programme, Kenya)

ZHOU Yuyu (The Department of Geography, The University of Hong Kong, Hong Kong SAR, China)

Event 1: Presentations

How wetland restoration enhanced Red-crowned Crane habitat quality: evidence from time-series remote sensing and explainable machine learning (Invited)

KE Yinghai (College of Resource Environment and Tourism, Capital Normal University, Beijing 100048, China)

Advancing urban sustainability with visual intelligence (Invited)

ZHANG Fan (Peking University, China)

Leveraging geospatial big data and GeoAI for healthy cities (Invited)

SONG Yimeng (The University of Hong Kong, China)

Urban Flood Mapping from Bi-Temporal SAR under Incomplete Flood Support: Extent Detection and DEM-Constrained Depth Approximation

FAN Yukun (Key Laboratory of Digital Earth Science, Aerospace Information Research Institute, Chinese Academy of Sciences, China)

Artificial Intelligence-Driven Smart and Resilient Cities: Leveraging Open Data for Sustainable Urban Development

Obwaya Mogire (South Eastern Kenya University, Kenya)

Spatially Explainable AI for Decoding Urban Thermal Environment and Energy Consumption Patterns to Support Climate-Responsive Urban Sustainability

LI Yiyan (The University of Hong Kong, China)

Session C4 AI4Science in Marine Fishery: Evolution and Forecasting

Time 13:30-15:00, 6th September Room: 305C

Co-Chairs

CHEN Xinjun (Shanghai Ocean University, China)

LIU Bin (Shanghai Ocean University, China)

Event 1: Presentations

Global Satellite-Based Ocean Front Detection and Its Applications in Marine Fisheries Research

XING Qinwang (University of Tokyo, Japan; Shanghai Ocean University, China)

Artificial Intelligence in Marine Fisheries Forecasting: A Decadal Review

LIU Guankui (Shanghai Ocean University, China)

Revisiting Global Forage Fish Dynamics: An AI-Driven Method for Catch-Based Stock Assessment and MSY Forecasting

LIU Yue (Xiamen University, China)

Population Structure and Distribution of Gadiformes in the Subarctic Northeast Pacific

ZHANG Yidan (Shanghai Ocean University, China)

Projecting the Spatial Distribution of a Large Squid Habitat in the Humboldt Current Ecosystem

WANG Ruolu (Shanghai Ocean University, China)

Applying a Machine Learning Approach to Identify the Optimal Abundance Index for Predicting the Habitat of Auxis in the South China Sea

FANG Xingnan (South China Sea Fisheries Research Institute, Chinese Academy of Fishery Sciences, China)

Research on the Short- and Medium-Term Spatiotemporal Distribution Prediction of Marine Fishing Effort Based on Deep Learning

YANG Shenglong (East China Sea Fisheries Research Institute, Chinese Academy of Fishery Sciences, China)

**Interpretable AI for Size-Structured Tuna Habitat Dynamics and Fishery
Forecasting in the Tropical Atlantic**

LIAN Peng (Chinese Academy of Fishery Sciences, China)

**AI-Empowered Fishing Ground Forecasting Using Distant-Water
Fisheries Big Data: A Case Study of Neon Flying Squid in the Northwest
Pacific Ocean**

XIE Mingyang (Zhejiang Ocean University, China)

Session D1	Developing Indicators and Baseline Assessment for Sustainable Development of Urban Regions: Lessons from Bangkok Metropolitan Region and Eastern	
Time	15:30-17:00, 7th September	Room: 305B
Co-Chairs	Vilas Nitivattananon (Asian Institute of Technology, Thailand)	
	Michele Melchiorri (European Commission Joint Research Centre, Ispra, Italy)	
	LU Linlin (International Research Center of Big Data for Sustainable Development Goals (CBAS), China)	
Event 1: Presentations		
A Global, Harmonized View of Urban Regions: Leveraging GHSL Urban Centre Database for Multi-Thematic Analysis and Corridor Development		
Michele Melchiorri (European Commission Joint Research Centre, Ispra, Italy)		
Developing Indicators for Sustainable Development of Urban Regions within Belt and Road Initiative: Case of Thailand's Bangkok Metropolitan Region and Eastern Economic Corridor		
Vilas Nitivattananon (Asian Institute of Technology, Thailand)		
Building trust in global open high-resolution geospatial data for SDG monitoring: From reference data harmonisation to production diagnostics		
Panagiotis Politis (European Commission Joint Research Centre, Ispra, Italy)		
Leveraging Earth Observation Data Layers for Integrated SDG Assessment in Thailand		
Chakris Pitakrattanasakun (Capacity Building Office, Geo-Informatics and Space Technology Development Agency, Thailand)		
High-Resolution Building Height Estimation by Fusing SDGSAT-1 and Multi-Source Remote Sensing Data		
YIN Shusheng (International Research Center of Big Data for Sustainable Development Goals (CBAS), China)		

Climate-driven Risk Assessment in Coastal Urban Regions of the Upper Gulf of Thailand

Laiba Mehboob (Faculty of Climate Change and Sustainability, Asian Institute of Technology, Thailand)

Enhancing urban resilience through urban fire risk reduction actions in Mandalay city, Myanmar

Aye Thandar Phyo Wai (Faculty of Architecture, Building and Planning, University of Melbourne, Australia)

A Decade of DBAR URBAN: Scientific Legacy and the Next-Generation EO Pathways to Urban Sustainability

LU Linlin (International Research Center of Big Data for Sustainable Development Goals (CBAS), China)

Session D2	Enhancing SDG 6 Implementation through Digital Indicator Systems: Science, Data and Country Practices	
Time	10:50-12:20, 7th September	Room: 307
Co-Chairs	ZHANG Weidong (United Nations Development Programme (UNDP), China)	
	LU Shanlong (International Research Center of Big Data for Sustainable Development Goals (CBAS), China)	
	Zhumaliev, K.M. (Institute of Seismology of the National Academy of the Sciences Kyrgyz Republic, Kyrgyzstan)	
	Opening Remarks (10 min)	
	• Mr. Stefen Liller, Representative of UNDP China • Ms. LIU Jie, International Research Center of Big Data for Sustainable Development Goals (CBAS), China • Ms. AI Yinfang, Representative of China International Center for Economic and Technical Exchanges (CICETE), Ministry of Commerce	
	Part I. Framework Presentation (10 min)	
	• A Localized Digital Indicator System for SDG 6: From Global Targets to Local Actions. (LU Shanlong, CBAS, China)	
	Part II. Country and Regional Practices (25 min)	
	• Digital Transformation for Water Resources Management and SDG 6 Implementation in Lao PDR: Current Progress, Challenges and Future Directions. (Sengphasouk Xayavong, Ministry of Natural Resources and Environment, Lao PDR) • Water Data Sharing in the Lower Mekong Basin: The Case of the Mekong River Commission. (Sopheak Meas, Cambodian National Mekong Committee, Cambodia) • Agricultural Water Sustainability under Threat from the Paradox of Irrigation Efficiency. (SHI Wenjiao, Institute of Geographic Sciences and Natural Resources Research, CAS, China)	

Part III. Local Demonstration and Roundtable Discussion (40 min)

Panel Theme: From Indicators to Governance: Translating Digital Metrics into Local Actions

1. Local Demonstration Cases (15 min)

- Chenzhou, China — Local SDG 6 Demonstration
- Hainan Tibetan Autonomous Prefecture, China — Local SDG 6 Demonstration
- Ordos, China — Local SDG 6 Demonstration

2. International Reflections (10 min)

- Ludovika University of Public Service (LUPS), Hungary
- The International Centre for Integrated Mountain Development (ICIMOD), Nepal
- National Academy of Sciences of the Kyrgyz Republic, Kyrgyzstan

3. Moderated Roundtable Dialogue (15 min)

Moderator: LU Shanlong, CBAS, China

Roundtable Participants: Speakers, local demonstration representatives, international partners

Session Wrap-up and Closing (5 min)

Key Takeaways and Closing Remarks

Session D3 Research Frontiers and Open Issues in Aerospace Information

Time 13:30-17:00, 7th September **Room: 307**

Co-Chairs

ZOU Xudong (Aerospace Information Research Institute, CAS, China)

ZHENG Fu (Beihang University, China)

FENG Jing (Aerospace Information Research Institute, CAS, China)

Event 1: Presentations

Top 10 Ground Challenges in Microsystems and Nanoengineering

ZOU Xudong (Aerospace Information Research Institute, CAS, China)

Flexible Sensors and Integrated Systems Towards Extreme Temperature Environment

LI Weiwei (Northwestern Polytechnical University, China)

Implantable Wireless Passive Miniaturized Brain-computer Interface Based on Magneto-electric Materials

HU Liang (Beihang University, China)

Redefining Anomaly Detection in Earth Observation Through Surface Process Modeling

YAN Kai (Beijing Normal University, China)

Credible Positioning Method Based on Multi-sensor Tight Integration

YANG Cheng (China University of Geosciences Beijing, China)

AI-Enhanced Trustworthy Navigation for Embodied Intelligence

WANG Ningbo (Aerospace Information Research Institute, CAS, China)

Machine Learning for GNSS Positioning in Autonomous Vehicles: Performance, Safety Certification, and Future Prospects

Ahmed Wasiu Akande (Hangzhou International Innovation Institute of Beihang University, Nigeria)

China-Africa Technology Transfer: Deploying Chinese GNSS-R Expertise for Precision Agriculture in South African Smallholder Farms

Ratshilingana Mudanalo Maryline (World Geospatial Information Home(WGHI), South Africa)

Truly Complex Micro- and Nano Systems

WANG Chen (KU Leuven, Belgium)

Session D4	The High-level Experts and Leaders Panel on Water and Disasters (HELP)	
Time	10:50-17:00, 7th September	Room: 305C
Co-Chairs	Kenzo Hiroki (The National Graduate Institute for Policy Studies)	
	Gretchen Kalonji (CBAS)	
	Event 1: Opening Session	
	1.Opening remarks by the Chair/Vice Chairs 2.Welcome remarks by Prof. Guo Huadong, Director General of the International Research Center of Big Data for Sustainable Development Goals (CBAS) 3.Approval of Agenda 4.HELP Matters	
	Event 2: Keynote speeches by high-level guest speakers	
	• H.E. Mr. Csaba Kőrösi, President of the 77th Session of the United Nations General Assembly • Dr. Moctar Touré, President of the Academy of Science and Technology of Senegal • Dr. Tan Seng Chuan, President, World Federation of Engineering Organizations (WFEO)	
	Event 3: Special Session on the 2026 UN Water Conference	
	1.Reflection of HELP actions and future plan • Prof. Kenzo Hiroki, HELP Coordinator/Professor Emeritus of the National Graduate Institute for Policy Studies (GRIPS) 2.Preparatory status and process toward the Conference • Preparatory process by Mr. Yosuke Tomizawa, Senior Programme Management Officer, Division for Sustainable Development Goals (DSDG), Department of Economic and Social Affairs (DESA) of the United Nations • Work Plan of the ID-C “Water for Planet” of the 2026 Water Conference by Mr. Toshikazu Tokioka, Director, International Affairs Office, Water and Disaster Management Bureau, MLIT, Japan • Representative of the Ministry of Water Resources, China • Discussions	

LUNCH BREAK

1.Focused discussion on the envisioned HELP' s inputs to the Interactive Dialogue C “Water for Planet” (IDC) and other interactive dialogues as well as Flagship Initiatives of the 2026 UN Water Conference and linkage between 2026 and 2028 UN Water Conference

1)Keynote speech by HELP members

- Ms. Armida Salsiah Alisjahbana, Executive Secretary of the Economic and Social Commission for Asia and the Pacific (ESCAP) (video)
- Mr. Masayoshi Hirose, Vice-Minister for Engineering Affairs, Ministry of Land, Infrastructure, Transport and Tourism of Japan
- Mr. Yoshifumi Yoshikawa, Senior Vice President, Japan International Cooperation Agency (JICA) (online)

2)Presentations by HELP advisors and other partner organizations

- Prof. Toshio Koike, Executive Director of the International Centre for Water Hazard and Risk Management (ICHARM)
- Dr. Jerome Delli Priscoli, Editor in Chief, Water Policy (online)
- Mr. Shinji Tomita, Vice President of the Japan Water Agency
- Prof. Shahbaz Khan, Director of the UNESCO Regional Office for East Asia / UNESCO Representative to China, North Korea, Japan, Mongolia, and South Korea
- Dr. Johannes Cullmann

3)Presentations on the IDC Flagship Initiatives

- Mr. Stefan Rau, Principal Urban Development Specialist, Sectors Department 2, Asian Development Bank (ADB)
- Dr. Faisal Mueen Qamer, Senior Intervention Manager - River Basins, ICIMOD
- Ms. Tomomi Nio, Senior Chief Officer of Earth Observation Missions, Space Technology Directorate I, JAXA (online)
- WMO representative

4)Discussions

COFFEE BREAK

2. Advancing HELP Flagship Initiatives

- ISO Community on Hydrological Risks by Mr. Toshikazu Tokioka, Director, International Affairs Office, Water and Disaster Management Bureau, MLIT, Japan
 - Reducing poverty and inequality through climate adaptation by the University of Tokyo and Geneva Water Hub by Prof. Akiyuki Kawasaki, Professor of the University of Tokyo
 - The role of Groundwater against the background of current developments by Ms. Elisabeth Lictevout, Director of the International Groundwater Resources Assessment Centre (IGRAC) and Mr. Koos Wieriks, Chairman of IGRAC (online)
 - Discussion
-

3. Exploring Opportunities for Future Collaboration

1) Setting the Scene: Introductory Presentation

- Goals for the HELP28: Strengthening our collaborations in preparations for the 2026 and 2028 UN Water Conferences by Prof. Gretchen Kalonji, Special Advisor and Professor, CBAS

2) Technical presentations

- Mr. Han Jae Jin, General Director, K-water / Executive Director, Asia Water Council
 - Prof. Xiaosong Li, Global Liaison for SDG15, CBAS Co-Lead, GEO-LDN Flagship Program / Director, UNCCD Support Hub for East, South and Southeast Asia
 - Prof. Yang Min, Research Center of Eco and Env Sciences (RCEES), CAS
 - Dr. Teodora Szocs, President, International Association of Hydrogeologists (IAH), Professor, Ludovica University of Public Service
 - Prof. Tibor Biro, Professor, Ludovica University of Public Service, Hungarian Water Partnership
-

4. Closing Session

1) The 29th HELP Meeting

Wrap up by Chair

Session E1	The CODATA IDPC 2030 Vision—Promoting Open Data in Crisis and beyond
Time	13:30-15:00, 8th September (CST) /7:30-9:00(CET) Room: 305C
Zoom link	Meeting ID: 964 2786 5426 Passcode: 199608
Co-Chairs	ZHANG Lili (Computer Network Information Center, CAS & Co-chair of CODATA IDPC SDGs beyond 2030 subgroup, China) Virginia Murray (Chair of UNDRR-ISC Hazard Information Profiles 2025 Update & Co-chair of CODATA IDPC, UK) Burcak Basbug Erkan (Middle East Technical University & Co-chair of CODATA IDPC, Türkiye)
	Event 1: Presentations
	Reshaping data in crisis governance: An UN perspective(online) Virginia Murray (UNDRR-ISC Hazard Information Profiles 2025 Update & Co-chair of CODATA IDPC, UK) Threefold approach of sustainable transformation by 2030 and beyond(online) Prajal Pradhan (University of Groningen) Protect Essentials in managing crisis data ZHANG Lili (Computer Network Information Center, CAS, China) When Digitalization Meets Green Innovation: Complementarity, Not Expansion, Drives Urban Pollution and Carbon Reduction(online) HE Shucheng (Huazhong University of Science and Technology, China) UNESCO CODATA global DPTC survey(online) Burcak Basbug Erkan (Middle East Technical University & Co-chair of CODATA IDPC, Türkiye)
	Event 2: Panel discussion
	Topics: Open data for crisis management towards SDGs 2030 agenda and beyond. • What are the most critical gaps between existing national data policies and the requirements in compound crisis scenarios?

- How can the CODATA IDPC 2030 Agenda move from a high-level vision to actionable milestones that different countries, regardless of their data maturity level, can realistically adopt?
- What institutional or political barriers have prevented the widespread adoption of anticipatory data governance frameworks despite clear lessons learned from recent global crises?

Feedback to the UNESCO CODATA global DPTC survey.

Panel Speakers:

SDGs science representatives\SDGs data representatives\SDGs policy representatives\SDGs user community\Other SDGs stakeholders

Session F1 Youth Session

Time 13:30-15:00, 6th September

Room: 302

Co-Chairs

ZHANG Tingting (CBAS)

TIAN Chao (Institute of Geographic Sciences and Natural Resources Research, CAS, China)

Event 1: Presentations

Recovering Latent ESG: Rating Disagreement, Multi-Source Measurement, and Capital Market Efficiency

GUO Yang (Harbin Engineering University, China)

Predicting Seasonal River Water Quality Using Explainable and Physics-Informed Machine Learning

Tasrina Rabia Choudhury (Atomic Energy Centre Dhaka, Bangladesh Atomic Energy Commission, Bangladesh)

Tracking the spatio-temporal patterns and environmental drivers of global tidal wetland soil organic carbon stocks since 2009

YANG Chenconghai (Nanjing University, China)

Decoding public sentiment topics in google map reviews on urban infrastructure development of belt and road initiative

Xiong Yue (East China Normal University, Shanghai, China)

AI-Driven Earth Observation for Climate Action: From Satellite Calibration to Precipitation Nowcasting

WANG Fu (China Meteorological Administration, China)

Climate Change-Driven “Fragile Prosperity” in Sustainable Development Progress

WANG Xinran (Xi'an Jiaotong University, China)

Global saline-alkali soils as a strategic reserve for food production under water scarcity

MA Rongfei (Institute of Geographic Sciences and Natural Resources Research, CAS, China)

Inventory, Spatial Variability and Multi-Factor Mechanism of Landslides Triggered by the “23.7” Extreme Rainstorm in North China

XIE Chenchen (China University of Geosciences (Beijing), China)

Quantifying the contribution of well-facilitated farmland construction to crop productivity and its driving factors using remote sensing and machine learning models

GUO Jinghan (Institute of Geographic Sciences and Natural Resources Research, China)

Session F2	Youth Session	
Time	10:30-12:00, 8th September	Room: 305B
Co-Chairs	LU Linlin (CBAS)	
	SUI Yue (China University of Mining and Technology, China)	
Co-Chairs	Aqil Tariq (Regional Centre for Space Science and Technology Education in Asia and the Pacific (China) (Affiliated to the United Nations), Beihang University, China)	
	Event 1: Presentations	
	Open geospatial data and deep learning model for road surface mapping: supporting sustainable road infrastructure in Africa	
	ZHOU Qi (China University of Geosciences, China)	
	AI-ready Databases for Disaster Risk Reduction: From Data Archives to Agent-Usable Knowledge Infrastructure	
	LI Congrong (Institute of Geographic Sciences and Natural Resources Research, CAS, China)	
	From Earth Observations to Digital Intelligence: Fengyun Satellites Synergized All-Weather Land Surface Hydrothermal Parameters for Heatwave and Drought Monitoring	
	XU Ronghan (National Satellite Meteorological Center (National Center for Space Weather), China)	
	Resilience mechanisms of human-environment systems in border towns under disaster risk: A case study of Gyirong Town, southeastern Tibet	
	HE Min (Chengdu University of Technology, China)	
	From network connectivity to service access: Differentiated responses to critical road node failures in mountain villages	
	JIA Xugong (Chengdu University of Technology, China)	
	Transformation of Media Content Production Mechanisms and Dissemination Effectiveness Driven by Generative Artificial Intelligence	
	ZONG Shuang (Universiti Malaya)	

Harnessing nature: Evaluating cost-effective and globally sustainable solutions for Africa's environmental resilience

Michael Asiedu Kumi

Rainfall-Scenario-Driven Landslide Exposure Assessment and Response Analysis for UHV Transmission Towers along the Qinghai-Henan DC Project

FENG Weixiang (National Institute of Natural Hazards, Ministry of Emergency Management of China)

Climate Policy Uncertainty, ESG, and Energy Consumption: A Quantum-Inspired Approach

GUO Yang (Harbin Engineering University, China)

Session F3	Youth Session	
Time	10:30-12:00, 8th September	Room: 305D
Co-Chairs	LIU Jian (CBAS)	
	HE Haixia (National Disaster Reduction Center of China (Satellite Application Center for Disaster Reduction), China)	
	Event 1: Presentations	
	Spectral Prior-Driven Hyperspectral Image Classification for Sustainable Earth Observation	
	CAO Weijia (Aerospace Information Research Institute, CAS, China)	
	Potential regional distribution and dynamics of wheat under multiple climate change scenarios: evidence from multi-Data and ensembled algorithms	
	Gebremedhin Berhe Zenebe (Institute of Environment and Sustainable Development in Agriculture, CAS, China)	
	AI-Driven Earth Observation for Climate Action: From Satellite Calibration to Precipitation Nowcasting	
	WANG Fu (China Meteorological Administration, China)	
	Do ESG Indicators Track Environmental SDG Performance? A Global Diagnostic Framework for Alignment and Misalignment	
ZHANG Yiwen (Nanyang Technological University Singapore)		
Multi-Source Big Data for Sustainable Groundwater Recharge in Pakistan		
Sehrish Quddoos		
Estimating the Net Effect of Rice Cultivation on Soil Organic Carbon Using Planting Trajectories and Causal Forests		
FENG Xiangyang		
Simulating ecological security patterns and ecological network resilience using machine learning under multi-scenarios: Evidence from the Chengdu-Chongqing Economic Circle (CCEC)		
LI Keshuo (China university of mining and technology, China)		
Promoting Land Degradation Neutrality via Anaerobic Digestion for Resilient Agriculture		
Sylvia Adipah (University of Energy and Natural Resources)		

**Integrating landslide susceptibility and connectivity to identify
areas most vulnerable to landslide impacts along the Sichuan–Tibet
transportation corridor**

LEI Xiangqi (Peking University, Beijing, China)

**Harnessing nature: Evaluating cost-effective and globally sustainable
solutions for Africa's environmental resilience**

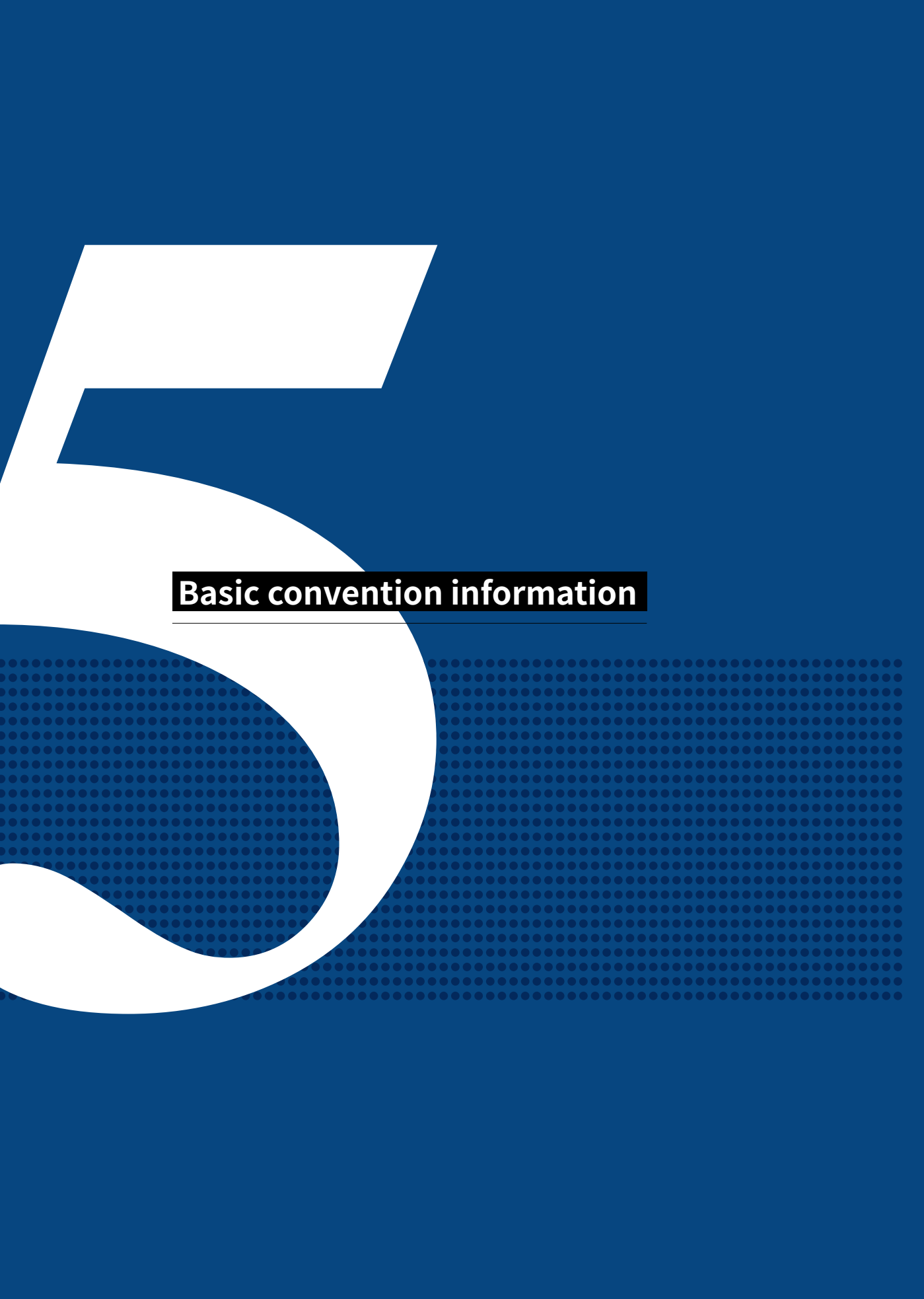
Michael Asiedu Kumi

Poster Session

PostID	Title	Author	Session
P1	Environmental Impacts and Recycling Potential of Renewable Energy Technologies in Large-Scale Clean Energy Bases: A Life Cycle Assessment Perspective	LI Yongxing	F1
P2	How does ethnic culture influence rural household clean energy transition? Evidence from an ethnic minority region in China	YANG Jie	F1
P3	SNSTFM: A novel data fusion approach based on spatial non-stationarity to generate fine-resolution land surface temperature	ZHANG Laifu	F1
P4	Detecting Diurnal Dynamics of Cotton Leaf Inclination Angle and Light Interception under Water-Salt Stress	LI Qing	F1
P5	Urbanization is projected to increase local surface temperature by 2100	LIU Shirao	F1
P6	Under multi-method coupling, this study investigates the weight of contributing factors for landslides in the completely weathered granite area of Xiangxiang City	ZHANG Lianzhi	F1
P7	GIS-based geohazards susceptibility assessment in Xiangxiang city	ZHANG Lianzhi	F1
P8	Assessing the impacts of cascade reservoirs on Pearl River environmental status using machine learning and satellite-derived chlorophyll-a concentrations	LI Zikang	F1
P9	A flexible framework for identifying urban villages using Sentinel-2 observations and deep learning	WU Yizhen	F1
P10	Spatio-temporal variations and driving forces of wind erosion and sand stabilization in the middle Heihe River Basin	SHI Peidong	F1
P11	Non-Stationary Channel Estimation for Extremely Large-Scale MIMO	LI Zijian	F1
P12	Maize Yield Estimation by Integrating Phenology Based Remote Sensing Features and Dynamic Meteorological Features	WEI Peng	F1
P13	Identification of suitable habitats for the six-spotted mite on rubber trees using multi-source data and MaxEnt modeling	YOU Yanan	F1
P14	Integrating landslide susceptibility and connectivity to identify areas most vulnerable to landslide impacts along the Sichuan-Tibet transportation corridor	LEI Xiangqi	F1
P15	Combining RUSLE, Satellite Imagery, and Machine Learning to Monitor Soil Degradation and Livestock Impacts for SDG-Aligned Land Management in Burundi	Nijimbere Gilbert	A1

PostID	Title	Author	Session
P16	A Two-Stage Neural Network Method Bridging Radiative Transfer Physics and Deep Learning for Sea Ice Backscatter Forward Modeling	WANG Zhe	A2
P17	A Time-Aware Feature Modulation Network for Seasonal Sea Ice Prediction	HUANG Haitao	A2
P18	Separating Balanced and Unbalanced Motions from Sea Surface Height via Temporal Knowledge Distillation	YANG Tao	A2
P19	Interferometric Altimeter Error Calibration Method Based on Nadir Altimeter Constellation Observed SSH	JIAO Shiyao	A2
P20	Urban corporate ESG in China: Spatial heterogeneity, congestion effects, and the causal identification of governance efficiency	GAO Yuhang	A3
P21	Digital Intelligence-Driven Crowdsourced Updating of High-Definition Maps for Sustainable Urban Infrastructure Management	HU Haopeng	A3
P22	AI-enabled Evaluation of Drone Light Shows for Sustainable Urban Air Quality Management	YAO Tianen	A3
P23	Sentinel Time-Series Feature Enhancement for Accurate Rice Mapping in Persistently Cloud-Contaminated Areas	SHAO Minghui	B1
P24	Bridging SAR Scattering Mechanisms and Deep Learning: Phenology-Guided Early-Season Rice Mapping under Limited Observations	XIE Yazhe	B1
P25	A Robust Method for High-Resolution Multi-source SAR Image Matching via Pseudo-Modality Generation and Coupled Spectrum-Spatial Learning	Song Mingyang	B1
P26	Satellite Data and Explainable Machine Learning Reveal Rice Dynamics and Drivers in Southeast Asia from 2015 to 2024	DING Yinhaibin	B1
P27	A Unified XBAER Framework for Global Daily AVHRR True-Color Reconstruction and Cloud Detection Since 1981	LAI Zhibin	B10
P28	Satellite-Based Estimation of Facility-Scale CO ₂ Emissions from Large Coal-Fired Power Plants Worldwide Over the Past Decade	YANG Yongliang	B10
P29	Applying Space-Air-Ground Integrated Approach to Unravel Fine-Scale Hierarchical Nest Site Selection of Alpine Wetland Flagship Crane Species	WANG Yifei	B10
P30	Mapping Soil Organic Matter in a Typical Black Soil Region Using Multi-Temporal Synthetic Images and Radar Indices	KONG Xiangbin	B2
P31	Digital Health Data-Driven SDG 3 Monitoring and Assessment at the County Level —A Case Study of Gaoyi County's Tele-ECG and 5G Emergency Systems	WANG Zihan	B3

PostID	Title	Author	Session
P32	A Semi-Supervised Method for Flood-Damaged Farmland Extraction under Limited Samples with Physical Prior and Multi-Source Remote Sensing	ZHAO Haoxu	B9
P33	PALSAR-3-Based InSAR Monitoring of Landslide Deformation in Complex Alpine Canyon Areas	WANG Shenghan	B9
P34	Urban Flood Mapping from Bi-Temporal SAR under Incomplete Flood Support: Extent Detection and DEM-Constrained Depth Approximation	FAN Yukun	C3
P35	Environmental impacts mitigation for Hong Kong's urban mobility through plastic waste to hydrogen technology	CHEN Peixiu	E1
P36	Spatiotemporal variations and associated factors of PM2.5 in violence-exposed African regions: Insights from the Environmental Kuznets Curve	YANG Xinyu	S2

A large, stylized white number '5' is positioned on the left side of the page. The background is a solid blue color. A horizontal band of small, dark blue dots runs across the middle of the page, partially overlapping the number '5'.

Basic convention information

Convention Venue: Beijing International Convention Center

Address: No. 8 Beichen East Road, Chaoyang District, Beijing

Beijing International Convention Center opened in 1990. Since its establishment, it has provided services for nearly 1,000 different international and domestic conventions and exhibitions every year.

In 2002, the Convention Center was merged into Beijing North Star Industrial Group Co., Ltd., creating a stronger reputation with more effective management. The center is located in the bustling Asian Games Village in Beijing, combining a convention center, a commercial and shopping center and an entertainment venue. Located on the Fourth Ring Road in Beijing, it is only 20 kilometers away from the Beijing Capital International Airport and 9 kilometers away from the city center. The center is also very close to the central area of the Olympic Games, including the Bird's Nest (officially known as the National Stadium).

Beijing International Convention Center provides five-star service and has 48 different convention rooms. The exhibition hall of the center covers an area of 5,000 square meters. Beijing Continental Grand Hotel is a four-star hotel with 538 rooms and 5 restaurants serving different types of food, which is an ideal place to hold international and domestic conferences, display cultural events and hold business meetings.



BICC 一层平面图

PLAN OF BICC LEVEL 1

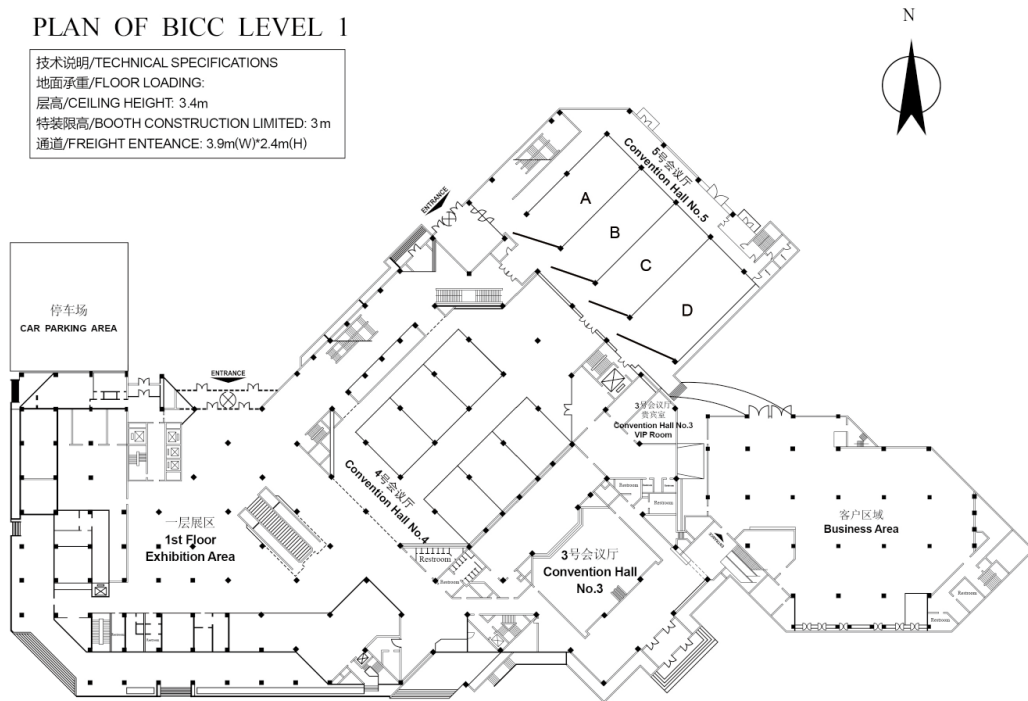
技术说明/TECHNICAL SPECIFICATIONS

地面承重/FLOOR LOADING:

层高/CEILING HEIGHT: 3.4m

特装限高/BOOTH CONSTRUCTION LIMITED: 3m

通道/FREIGHT ENTRANCE: 3.9m(W)*2.4m(H)



BICC 二层平面图

PLAN OF BICC LEVEL 2

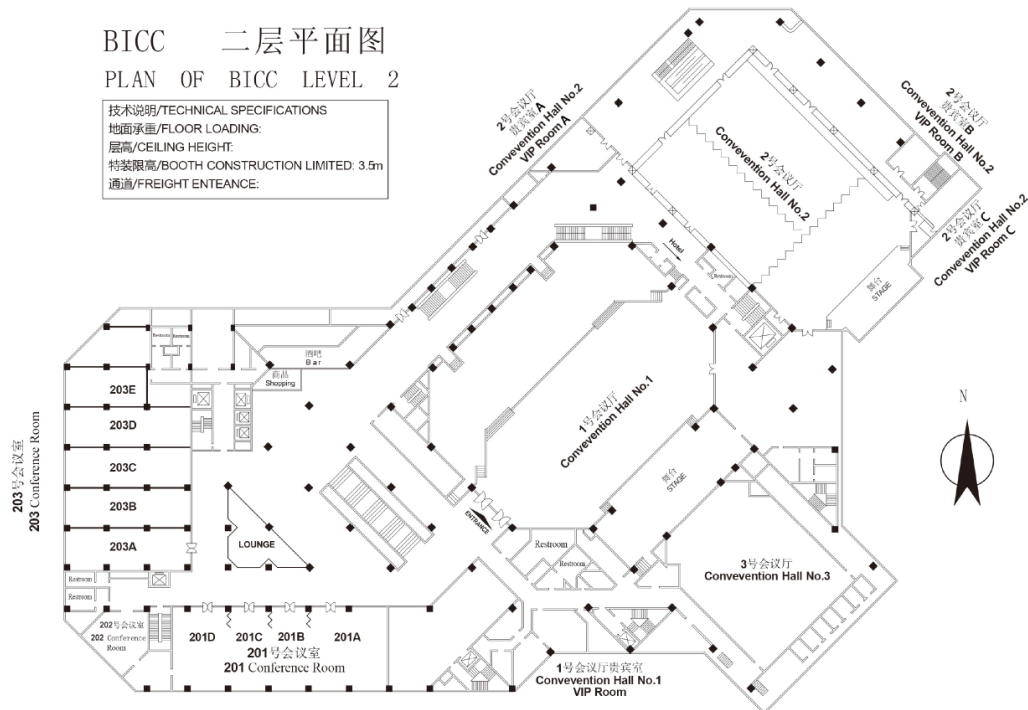
技术说明/TECHNICAL SPECIFICATIONS

地面承重/FLOOR LOADING:

层高/CEILING HEIGHT: 3.5m

特装限高/BOOTH CONSTRUCTION LIMITED: 3.5m

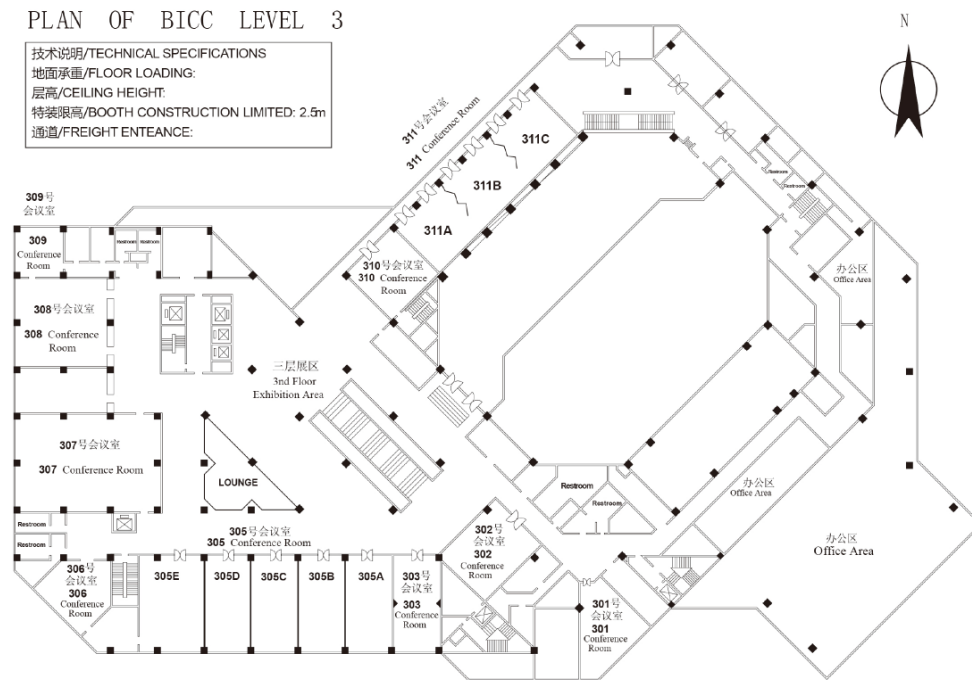
通道/FREIGHT ENTRANCE:



BICC 三层平面图

PLAN OF BICC LEVEL 3

技术说明/TECHNICAL SPECIFICATIONS
地面承重/FLOOR LOADING:
层高/CEILING HEIGHT:
特装限高/BOOTH CONSTRUCTION LIMITED: 2.5m
通道/FREIGHT ENTRANCE:



Convention Secretariat

On September 6th, the Convention Secretariat was located in the VIP room of the first conference hall on the second floor of Beijing International Convention Center.

On September 7th-8th, the Convention Secretariat was located in Conference Room 303 on the third floor of Beijing International Convention Center.

Conference Sign-in

The on-site sign-in is located in the lobby on the first floor of Beijing International Convention Center. The opening hours are as follows:

Date of On-site Sign-in	Time for On-site Sign-in
September 6	08:00-17:00
September 7	08:30-17:00
September 8	08:30-17:00

Conference Pass

Registered representatives before September 6:

For the representative who has registered, please sign in through the registered channel at the sign-in to get the representative card and conference materials.

Please be sure to wear the representative card when entering the conference room.

Registered representatives on September 6 and the meeting site:

If you register on the day of the event, please register through the unregistered channel at the sign-in and show the registration completion page.

After the on-site staffs check that the information is correct, please sign in the sign-in form and get the representative card and conference materials.

Please be sure to wear the representative card when entering the conference room.

Conference Language

Opening Ceremony: Bilingual (Chinese and English)

Offline Branch: English

WiFi Network

The name of Beijing International Convention Center (BICC) free WiFi is “BICC WLAN”. And you can log in with your mobile phone number to get free WiFi.

Transportation and Accommodation

Hotel Reservation

The following hotels are located near the conference venue. During the conference, due to the limited number of hotel rooms, please reserve in advance.

1. Beijing Continental Grand Hotel
2. VIP Building of Huiyuan Apartment Hotel
3. Asian Games Village Hotel
4. National Convention Center Grand Hotel

Transportation and Surroundings

(1) From the Beijing Capital International Airport to Beijing International Convention Center.

a) Taxi. There is a taxi service at Beijing Capital International Airport and you can take a taxi to the conference venue. Taxi boarding location: outside Gate 1 on the first floor of Terminal 1.

Outside Gates 5-9 on the first floor of Terminal 2.

Terminal 3: Please follow the guiding signs inside the building.

The fare is about RMB120 (equal to USD20, including the highway toll fees), which varies with the traffic conditions.

b) Airport Shuttle

Take the Airport Shuttle Line 5 (terminus: Zhongguancun Station) and get off at Anhui Bridge Station of the Asian Games Village, then walk about 400 meters west to Beijing International Convention Center.

The fare is RMB24 (equal to USD4)

c) Airport Express

Take the airport express and get off at Dongzhimen Station, and then take Bus No. 2 and get off at Anhui Bridge North Station.

Take the airport express and get off at Sanyuan Bridge Station, then transfer to Metro Line 10 to Beitucheng Station, and then transfer to Metro Line 8 and get off at the Olympic Sports Center Station.

(2) From the railway station to Beijing International Convention Center

A) From Beijing Railway Station to Beijing International Convention Center

Take Metro Line 2 and get off at Gulou Street Station, and then transfer to Line 8 and get off at the Olympic Sports Center Station.

Take Metro Line 2 and get off at Yonghegong Station, and then transfer to Line 5 and get off at the Huixin West Street North Exit Station.

Take bus No. 2 and get off at Anhui Bridge North Station.

b) Departing from Beijing West Railway Station

Take Metro Line 9 and get off at Baishi Bridge South Station, then transfer to Line 6 and get off at Nanluogu Alley, Subway Station, and then transfer to Line 8 and get off at Olympic Sports Center Station.

Take bus No.387 and get off at Anhui Bridge North Station.

c) Departing from Beijing South Railway Station

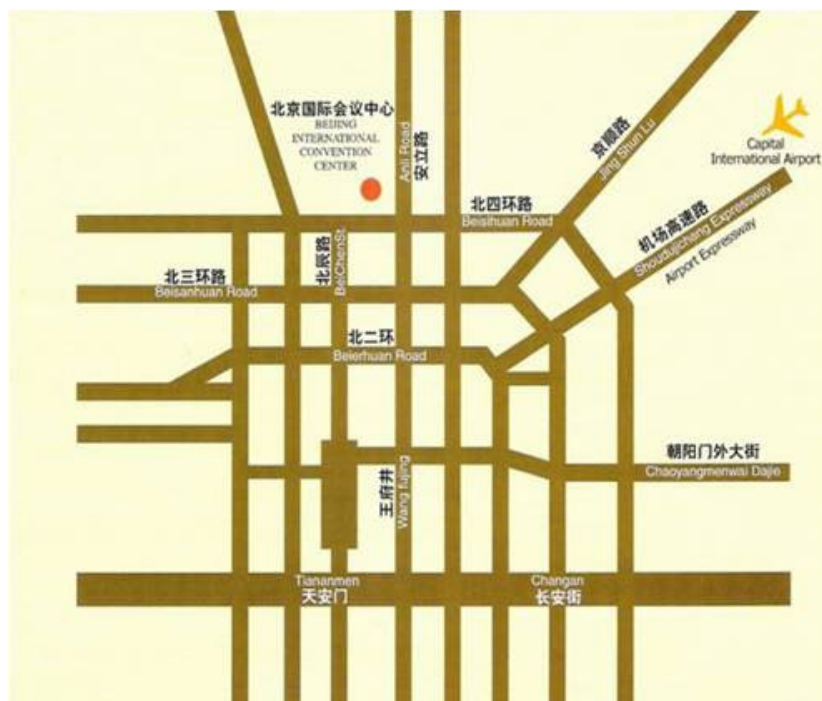
Take Metro Line 14 and get off at Puhuangyu Station, then transfer to Line 5 and get off at the Huixin West Street North Exit Station, and then transfer to Bus No.983/658/386/490 and get off at the Asian Games Village Station.

Take Metro Line 4 Daxing Line and get off at Xuanwumen Station, then transfer to Line 2 and get off at Gulou Street Station, and then transfer to Line 8 and get off at Olympic Sports Center Station.

Take Metro Line 4 Daxing Line and get off at Ping'anli Station, then transfer to Line 6 and get off at Nanluogu Alley Station, and then transfer to Line 8 and get off at Olympic Sports Center Station.

Remarks:

1. Due to the need for taking public transportation in RMB, you can exchange the money at the bank or foreign currency exchange counter at the airport in advance.
2. If you take the airport shuttle, airport express or subway to Beijing International Convention Center, there will be many uphill and downhill slopes or stairs on the way. We have received comments on the inconvenience of taking the airport express and subway in previous events, therefore, we suggest that you take a taxi to Beijing International Convention Center.



Conference Meals

Buffet will be provided on September 6th at noon. Please follow the conference guidance to Beijing Continental Grand Hotel and enjoy the buffet with the meal vouchers.

Safety of Goods in the Venue

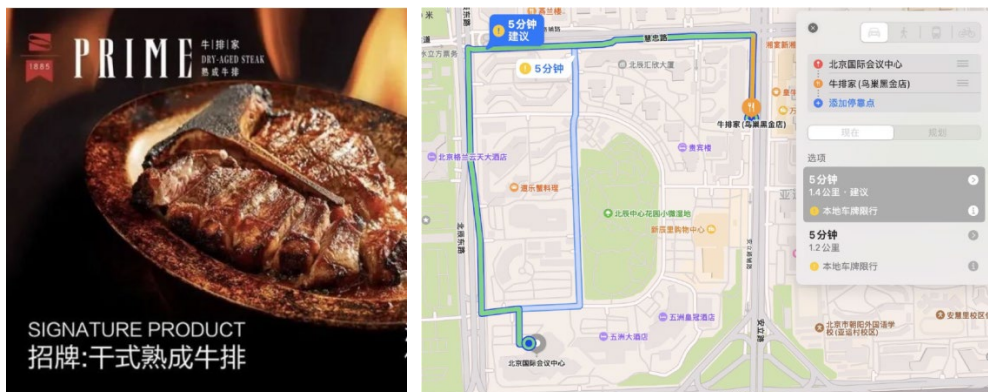
The Forum Secretariat will not be responsible for the damage or loss of your personal safety and personal belongings. Please take your personal valuables with you at any time during the conference.

Information on nearby dining

1.PRIME Dry-aged Steak

Address: Room M101-1, 1st Floor, Tower A, Beichen New Space, Anli Road, Beijing

Distance to the venue: about 5 minutes by car; about 11 minutes on foot



2.CHENG LONG YUE YAN

Address: 1st Floor, Beijing International Convention Center, No. 8 Beichen East Road

Distance to the venue: about 3-4 minutes on foot



3.QING HUAI YAN

Address: 1st Floor, No. 203 Huizhongli, Datun Road, Beijing

Distance to the venue: about 6 minutes by car





**The 6th International Forum on Big Data
for Sustainable Development Goals
(FBAS 2026)**



**Secretariat of the 5th International Forum on
Big Data for Sustainable Development Goals (FBAS 2026)**

Website: <https://www.fbas.org.cn/fbas2026/web/index/index.html>

Email: fbas@cbas.ac.cn

Tel.: +86 10 82178356