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“数字丝路”国际科学计划

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Integrated Research on Disaster Risk (IRDR)
灾害风险综合研究计划
Welcome Message

It is my pleasure to announce the 4th Digital Belt and Road Conference (DBAR 2019) to be held from 17-19 December, in Shenzhen, China. DBAR is a pioneering international venture to share expertise, knowledge, technologies and data to demonstrate the significance of Earth observation and Big Earth Data applications for large-scale sustainable development.

The conference will host several specialized sessions examining the applications of Big Earth Data for sustainable development in different fields, such as environmental change, disasters, water resources, agriculture, natural and cultural heritage, coast and marine, urban and infrastructure, High Mountain and Arctic, and the need for Big Earth Data in solving large-scale regional and global problems.

Conference will host experts and participants from wide variety of public and private entities for improved partnerships and networking towards collaborative and collective efforts for regional sustainable development, through cooperation, sharing and integration of methodologies and data, and pooling of human and technological resources, as an example towards global sustainability.

You are all cordially invited to attend the DBAR 2019, your participation will be a valuable addition to the scientific diversity of our event, necessary for the multi-faceted issue of sustainable development, and use of Big Earth Data for sustainable development goals.

GUO Huadong
Chair of DBAR Program

Scientific Committee

Conference and Scientific Committee Chair

GUO Huadong
Aerospace Information Research Institute (AIR),
Chinese Academy of Sciences

Scientific Committee (in alphabetical order by last name)

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Institute for Scientific Research of Aerospace Monitoring “AEROCOSMOS” (ISR “AEROCOSMOS”), Moscow, Russia

John GENDEREN
University of Twente, Netherlands

HAN Qunli
Integrated Research on Disaster Risk (IRDR)

JIA Gensuo
Institute of Atmospheric Physics, CAS

Markku KULMALA
University of Helsinki, Finland

LIN Hui
Chinese University of Hong Kong, China

LI Yin
Bureau of International Cooperation, CAS

Massimo MENENTI
Delft University of Technology, Netherlands

Graciela METTERNICHT
University of New South Wales (UNSW), Australia

Luke MUMBA
University of Zambia, Zambia

Natarajan ISHWARAN
International Centre on Space Technologies for Natural and Cultural Heritage (HIST) under the Auspices of UNESCO

Paul UHLIR
Committee on Data of the International Council for Science

WANG Cuizhen
University of South Carolina, USA

WU Bingfang
Aerospace Information Research Institute (AIR),
Chinese Academy of Sciences

ZHAO QianJun
Bureau of Science & Technology for Development, CAS
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Silap BOUPHA  ASIA and PACIFIC Affairs of the Ministry of Science and Technology of Lao P.D.R.
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Mazlan HASHIM  Universiti Teknologi Malaysia, Malaysia
JIA Li  Aerospace Information Research Institute (AIR), Chinese Academy of Sciences
Hocine KHATTELI  Institut des Régions Arides, Tunisia
Kamal LABBASSI  Chouaib Doukkali University, Morocco
Rosa LASAPONARA  Institute of Methodologies for Environmental Analysis, National Research Council, Italy
Juha LEMMETYINEN  Finnish Meteorological Institute, Finland
Li Guoqing  Aerospace Information Research Institute (AIR), Chinese Academy of Sciences
Li Xin  Institute of Tibetan Plateau, Chinese Academy of Sciences
Li Xinwu  Aerospace Information Research Institute (AIR), Chinese Academy of Sciences
LU Linlin  Aerospace Information Research Institute (AIR), Chinese Academy of Sciences
Marco MANCINI  Politecnico di Milano, Italy
Martino PESARESI  Joint Research Centre, European Commission
QIU Yubao  Aerospace Information Research Institute (AIR), Chinese Academy of Sciences
Rajib SHAW  Keio University, Japan
Monthip SRIRATANA  Climate Change Research Strategy Center, National Research Council of Thailand, Thailand
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WANG Xinyuan  Aerospace Information Research Institute (AIR), Chinese Academy of Sciences
YAN Dongmei  Big Earth Data Science Engineering Project (CASEarth)

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The 4th Digital Belt and Road Conference (DBAR 2019)
第四届“数字丝路”国际会议
17-19, December, 2019 Shenzhen, China
2019年12月17-19日 中国 深圳
**Keynote Speakers**

**GUO Huadong**
Chair of DBAR Program  
Aerospace Information Research Institute (AIR), Chinese Academy of Sciences

Huadong Guo is a professor at the Aerospace Information Research Institute (AIR), Chinese Academy of Sciences, an Academician of 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 the World Academy of Sciences (TWAS). He presently serves as Honorary President of the International Society for Digital Earth (ISDE), Chairman of the International Committee on Remote Sensing of Environment (ICORSE), Member of UN 10-Member Group to support the Technology Facilitation Mechanism, Director of the International Centre on Space Technologies for Natural and Cultural Heritage (HIST) under the Auspices of UNESCO, Editor-in-Chief of the *International Journal of Digital Earth* and *Big Earth Data* published by Taylor & Francis. He served as President of ICSU Committee on Data for Science and Technology (2010-2014) and President of ISDE (2015-2019). He specializes in remote sensing science and its applications, and has a series of achievements in remote sensing information mechanisms, radar for Earth observation, and Digital Earth science. He has published more than 600 papers and seventeen books, and is the principal awardee of sixteen domestic and international prizes.

**Title:** DBAR: Big Earth Data for SDGs in the Belt and Road Region

**Markku KULMALA**
Director, Atmospheric Sciences Division, University of Helsinki

Academician, prof. Markku Kulmala leads The Centre of Excellence in Atmospheric Science – From Molecular and Biological processes to the Global Climate (ATM). He is active in international initiatives to improve comprehensive continuous measurement networks all around the world, and to solve air quality – climate change interactions. This activity includes Pan Eurasian Experiment (PEEX) and air quality projects in megacities, such as “HAZE Beijing”. Kulmala’s research consists of SMEAR (Stations for Measuring the Earth surface – Atmosphere Relationships) field stations. SMEAR investigate aerosol and trace gas concentrations, fluxes, biosphere-atmosphere interactions, aerosol formation and growth, dynamics of atmospheric clusters and ions, and the biogenic background for processes leading to aerosol formation. There are SMEAR-type stations in China, Sweden, Cyprus, South Africa and Estonia. The newest initiative is to establish a GlobalSMEAR network. Kulmala has published over 1000 original research papers; 17 of which are in Nature, 16 in Science and 7 in Physical Review Letters. According to the ISI Web of Knowledge, Kulmala has been 1st in the Citation Rankings in Geosciences (1.5.2011 – 30.4.2018). The total number of citations is over 50500 (from over 15500 different papers). H-factor is 111. Prof. Kulmala is the Foreign Member of Chinese Academy of Sciences, and Russian Academy of Sciences. He is member of 5 other Academies. He acts as a president of European Center of International Eurasian Academy of Sciences. He chairs national committee of Future Earth. He has won many international awards (>10) and has also been awarded honored doctoral degrees /professorships. He has supervised 17 professors, 10 (ISI) highly cited scientist and over 70 doctors.

**Title:** Contributions to Global Grand Challenges: from Atmospheric Clustering to Migacities
Shukri AHMED

Senior Economist

Food and Agriculture Organization (FAO) of the United Nations

Shukri Ahmed is currently the Deputy Strategic Programme Leader for one of FAO’s five Strategic Programmes “Increase the Resilience of Agricultural Livelihoods (Crop, Livestock, Fisheries-aquaculture, and forest dependent) to Threats and Crisis”. For more than fifteen years, Mr. Ahmed has served as an expert and subsequently as team leader of FAO’s Global Information and Early Warning System (FAO/GIEWS). His previous work experiences include research assistant at the Centre for the Study of African Economies (CSAE) in the University of Oxford; Economic and Agriculture Statistician at the Central Statistical Authority in Addis Ababa, Ethiopia. His main areas of work and interest include the economics of agriculture and household decisions in resource allocation; risk management and reduction in agriculture; food security information, monitoring and analysis together with related institutional issues in developing countries; early warning and response, including in natural hazards, food chain and protracted crisis. He has a D. Phil. and a M.Sc. in Agricultural Economics from the University of Oxford and a BA in Economics from the University of Addis Ababa, Ethiopia.

Title: SDG2 and FAO: Emphasis on Africa

Sirirurg SONGSIVILAI

Secretary-General

National Research Council of Thailand (NRCT)

Professor Sirirurg Songsivilai, M.D., Ph.D. is Secretary-General of the National Research Council of Thailand (NRCT), the main national funding agency for research and innovation on natural sciences, technology, social sciences, arts and humanities.

Prof. Songsivilai was trained in clinical medicine with M.D. degree (First Class Honours with Gold Medal) from Mahidol University, and in molecular biology with Ph.D. degree from University of Cambridge, U.K. He was postdoctoral fellow at University of Colorado Health Science Center, U.S.A. In management, he received postgraduate certificates in law and public administration from National Defence College King Prajadhipok Institute, and in science, technology and innovation policy from Harvard University.

Prof. Songsivilai is an Anandhamahidol Foundation Scholar awarded by H.M. the King of Thailand. After training and working in Europe and U.S.A., he returned to Mahidol University and became full Professor at Faculty of Medicine Siriraj Hospital, Mahidol University in 2000. His main research interests are molecular biology and genomics of infectious diseases, especially viral hepatitis and melioidosis; focusing on understanding clinical characteristics from the genomics variations. His laboratory works on cutting-edge technologies including manipulation of structure of antibody molecules, discovery of new biomolecular targets, and on nanobiosensor technology. He received several major international awards and honours, including Rockefeller Biotechnology Career Fellowship, Thailand Young Scientist Award, ASEAN Young Scientist and Technologist Award, and the National Outstanding Technologist Award.

Prior to becoming Secretary-General of the NRCT, Ministry of Higher Education, Science, Research and Innovation, Prof. Songsivilai served as Executive Director of National Nanotechnology Center (NANOTEC). He is also the Founding President of Thailand Nanotechnology Association, and President of Asia Nano Forum (ANF) in 2015-2016. Prof. Songsivilai plays active roles and represents Thailand in various international networks, such as ASEAN S&T communities and interactions with the United Nations bodies, OECD and the European Union. He also serves as international advisor in several international programs and institutes.

Title: Digital Belt and Road: A View from Thailand and Southeast Asia
Keynote Speakers

Jon PADGHAM
Director of Partnerships
START International

Over the past 11 years at START, Dr. Padgham has led or co-led several science capacity development projects in Africa and Asia that engaged early career researchers. His work helped strengthen analytical skills for applying climate model projections to adaptation decision making and helped advance understanding of climate change adaptation in drylands and of urban food systems. His capacity building skills include scientific writing, science communication across disciplines, persuasive communications of science to policy and other stakeholder communities, research and assessment methods, building links to global science assessments, and building mentorship bridges between junior and senior academics. Dr. Padgham has developed and facilitated over 20 training workshops and courses and science-policy dialogues. He is skilled at group facilitation, critical listening and mentoring, and working with mixed teams of researchers and users of research. Dr. Padgham was a lead author on the Africa regional chapter of the IPCC 5th Assessment Report and on the International Assessment of Agricultural Knowledge, Science and Technology for Development. He holds a PhD in Soil Science from Cornell University.

Title: Strengthening Scientific Capacity to Address 21st Century Challenges Across Belt and Road Region-Perspective from START

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JIAO Nianzhi
Professor
College of Ocean and Earth Sciences, Xiamen University

JIAO Nianzhi is a Cheung Kong Chair Professor and Director of Institute of Marine Ecosystems, Xiamen University; He is also Fellow of Chinese Academy of Sciences (CAS), Associate Director of the Division of Earth Sciences at CAS, Fellow of the World Academy of Sciences for developing countries (TWAS), and Fellow of the American Academy of Microbiology (AAM) USA. He presently serves as adjunct professors of the University of Maryland, USA, and Dalhousie University, Canada. He is the chair of the joint North Pacific Marine Science Organization (PICES) / International Council for the Exploration of the Sea (ICES) working group on Climate Change and Biologically-driven ocean carbon sequestration. He is major in Aquatic Ecology and Marine Environmental Sciences and has published more than 300 research papers in professional journals. He proposed the concept of Microbial Carbon Pump (MCP, published in Nature Reviews Microbiology), the MCP was commented by Science as “the invisible hand behind a vast carbon reservoir”, and recognized as “research hot spot” by peers in the literature. The Scientific Committee for Oceanic Research (SCOR) set a working group on the MCP (SCOR-WG134), and Science published a special booklet on the MCP. The MCP has extended the concept of blue carbon from visible plants to the invisible dissolved organic carbon, which actually accounts for > 90% of the marine organic carbon, and is of crucial importance for climate change and the determination of a coastal water to be a “sink” or “source” of atmospheric CO₂.

Title: Microbial Carbon Sequestration and Climate Change
Keynote Speakers

Daniele EHRICH
Senior Scientist
Joint Research Center (JRC)
European Commission

Daniele Ehrlich is a senior scientist with the Joint Research Centre (JRC), of the European Commission and based in Ispra, Italy. He has over 25 years of experience in Remote Sensing and Geographic Information Systems applied to global forestry analysis, and disaster risk management. His recent work addresses measuring and mapping global human settlement with focus on global built-up analysis, global population estimations, and for generating exposure data sets used in global disaster risk assessments. Daniele’s research interest focuses also on analyzing spatial urbanization patterns for use in local and global sustainability research within the Global Human Settlement Project of the JRC.

Title: Mainstreaming Big Earth Data into Decision Making: The Global Definition of Cities and Rural Areas in Support of International Frameworks

Kamal LABBASSI
Professor
Chouaib Doukkali University

Kamal Labbassi is Professor, head of the research unit "Geosciences & Remote Sensing" and a Director of the BDAR_ICoR (EO-AWARE) at the Chouaib Doukkali University (Morocco). He is the President of the African Association of Remote sensing of the Environment (continental scope), council member of the International Society for Digital Earth Digital and Ambassador in Morocco, of IEEE-GRSS for the MENA region. Doctorate Es-Sciences (1998), PhD Thesis (1991). Visiting Professor at the University of Nantes, France (2004-2005). He has served as expert / consultant in feasibility studies and technical reports for the World Bank, African Union Commission and the African Academy of Sciences. Peer Reviewer of the international programs AMESD (African Monitoring of the Environment for Sustainable Development) and GMES and Africa (Global Monitoring for Environment and Security in Africa), implemented under the coordination of the commission of the African Union with the support of the European Commission. He is also a scientific reviewer for Journals including Remote sensing, RPTS, and Revue Télédétection AUF. Initiated and directed numerous research projects that focused on remote sensing applications in geosciences and involving an extensive network of international partners. Supervised several dissertations of Engineers, Masters and PhD theses. He has supervised several memoirs of master’s and Doctoral Thesis. He has authored and co-authored numerous publications and scientific papers.

Title: Promoting Effective Utilization of Earth Observation Systems for Africa’s Development
Keynote Speakers

Joe MILLER
GBIF Executive Secretary
Director of the GBIF Secretariat
Global Biodiversity Information Facility (GBIF)

GBIF—the Global Biodiversity Information Facility—is an international network and research infrastructure funded by the world governments and aimed at providing anyone, anywhere, open access to data about all types of life on Earth. Miller started as Executive Secretary of the Secretariat this past March. The Secretariat coordinates a global network of participating countries and organizations, provides data-holding institutions around the world with common standards and open-source tools that enable them to share and use information about where and when biodiversity has been recorded. GBIF also provides tools and strategies to report on international commitments such as the SDGs. Southeast Asia, along with most tropical areas, has high levels of biodiversity but has less data available for decision making. GBIF is committed to working with partners to correct this imbalance. Before coming to GBIF, Miller was at the US National Science Foundation where he promoted international research and managed biodiversity science programs. From 2008-2013, Miller was a senior research scientist at the Australian National Herbarium in Canberra. Miller has a Ph.D. from the University of Wisconsin and continues to research and has published on topics including plant systematics, biogeography and biodiversity informatics, focusing mainly on the Australian flora.

Title: Integrated Biodiversity Data to Improve Conservation Decisions

Peter J. van OEVELEN
Director International GEWEX Project Office
The Global Energy and Water Exchanges (GEWEX) project

Peter J. van Oevelen is the director of Global Energy and Water Cycle Experiment (GEWEX), a program of the World Climate Research Program (WCRP) dedicated to understanding Earth’s water cycle and energy fluxes at and below the surface and in the atmosphere. Peter has been in this capacity since 2008 and oversees all of the day to day operations. In addition to administrative management, Peter is responsible for expanding GEWEX’s interests and worldwide network in global energy and water cycle issues. His experience in research and development within the environmental sciences and engineering industries, as well as expertise in intercultural communication and marketing, perfectly complements decades of acquired knowledge in hydrology, geo-hydrology, stochastic hydrology, soil physics, and remote sensing. Peter holds a Ph.D. in environmental engineering from the University of Wageningen and is a member of the AGU, EGU, AOGS and IEEE. In his spare time, Peter enjoys travel, paragliding, backpacking, photography, theatre and family activities.

Title: The WCRP-GEWEX Science Activities Underpinning the Sustainable Development Goals in the Belt and Road Region
Programme at a Glance

17 Dec 2019 (Tuesday)

Opening Ceremony

09:00-10:00 Opening Remarks & Events
10:00-10:30 Tea Break

Keynote Speech

Venue: Ballroom 5F

Chair: Massimo MENENTI & HE Changchui
10:30-11:00 DBAR: Big Earth Data for SDGs in the Belt and Road Region
Guo Huadong - Chair of DBAR Program
11:00-11:30 SDG2 and FAO: Emphasis on Africa
Shukri Ahmed - Food and Agriculture Organization of the United Nations
11:30-12:00 Digital Belt and Road: A View from Thailand and Southeast Asia
Sirirurg Songsivilai - National Research Council of Thailand (NRCT)
12:00-13:00 Buffet Lunch
Venue: Jinfeng Hall 2F
13:00-13:30 Lunch Break
Venue: Room 3-5 2F
13:30-15:00 Parallel Session I
15:00-15:30 Tea Break
15:30-17:00 Parallel Session II
18:30-21:00 Welcome Banquet
Venue: Ballroom 5F

Parallel Session

17 Dec 2019 (Tuesday) Parallel Session I
16 Dec (Monday) Check-in or Onsite Registration
17 Dec (Tuesday) AM Opening Ceremony Keynote Session II Keynote Session IV
PM Keynote Session I Keynote Session III Closing Ceremony or Welcome Banquet
Evening Welcome Banquet

Session: Data Sharing Advancing the Implementation of SDG 17 Session-I
Venue: Room 3 2F

Co-Chairs: Silap BOUPHA and LI Guoqing

Introduction to SDG 17 and what data sharing and regional cooperation can do for it
CHEN Zugang - Aerospace Information Research Institute, Chinese Academy of Sciences
Strategy on Vietnam national remote sensing development to 2030, vision to 2040 and the needs of remote sensing data for the implementation of SDG
Nguyen Quoc Khanh - General Director of Vietnam National Remote sensing Department, Vietnam
Virtual ground station data service technology
LIU Jianbo - Aerospace Information Research Institute, Chinese Academy of Sciences
Geospatial technologies synergy needed for supporting the specific SDGs
Silap BOUPHA - ASEAN and International Affairs, Ministry of Science and Technology, Nahaydia Street, Chanthabury District,Vientiane Capital, Lao PDR
One Belt and One Road Initiative: A story about How to get rich!
Mingquan WU - Aerospace Information Research Institute, Chinese Academy of Sciences
Meeting the challenge of warehousing and harmonizing of Earth Observation data for decision making in Pakistan
Jawed Ali Khan, Zainul Abedin, Uzma Nooreen, Yasmin Jawed - UN Habitat; Metropolitan Academy of Art and Design

Programme at a Glance

The 4th Digital Belt and Road Conference (DBAR 2019)
第四届“数字丝路”国际会议
17-19, December, 2019 Shenzhen, China
2019年12月17-19日 中国 深圳
The 4th Digital Belt and Road Conference (DBAR 2019)

Session: DBAR/JRC/KTH/AIT Session-I: Big Earth Data for Sustainable Urban Development

Co-Chairs: Daniele EHR LICH and Vilas NITIVATTANANON

Indicators of sustainable urbanization in Digital Belt and Road cities
Daniele EHR LICH - Joint Research Centre, European Commission, Italy

Geo-demographic environment and crimes Nexus in Karachi
Salima HAMZDA-Bahria University, Pakistan

Spatiotemporal dynamics of urban expansion in the Bangkok Metropolitan Region, Thailand
XIAO Da - Aerospace Information Research Institute, Chinese Academy of Sciences

Land use detection by local climate zone and its application for urban sustainable development
CAI Meng - The Chinese University of Hong Kong

Integrated assessment of SDGs for Bangkok metropolitan regional: scoping study
Vilas NITIVATTANANON - Asian Institute of Technology, Thailand

Description: The use of Big Earth data to advance the UN Sustainable Development Goals requires greater attention to science capacity development. In parts of Asia and Africa there is a pressing need to strengthen capacities for accessing and utilizing Big Earth data to inform decision making on a range of SDG-related issues that connect with DBAR themes of agriculture, environment, coastal zones, natural and cultural heritage, urban, and disasters. The global change SysTem for coastal zones, natural and cultural heritage, urban, and disasters. The global change SysTem for

Venue: Room 4 2F

Session: DBAR/IMAA/ACCIMT/HIST Session-I: Big Earth Data Contribution to UN's SDGs for Monitoring, Conservation and Promotion of Natural and Cultural Heritage

Co-Chairs: SHI Pilong, Nabil BACHAGHA, WANG Xinyuan - Institute of Arid Regions, Medenine, Tunisia; Aerospace Information Research Institute, Chinese Academy of Sciences.

Description: The use of Big Earth data to advance the SDGs in Asia and Africa.

Venue: Room 5 2F

Session: DBAR/JRC/KTH/AIT Session-II: Big Earth Data for Sustainable Urban Development

Co-Chairs: Daniele EHR LICH and Vilas NITIVATTANANON

Indicators of sustainable urbanization in Digital Belt and Road cities
Daniele EHR LICH - Joint Research Centre, European Commission, Italy

Geo-demographic environment and crimes Nexus in Karachi
Salima HAMZDA-Bahria University, Pakistan

Spatiotemporal dynamics of urban expansion in the Bangkok Metropolitan Region, Thailand
XIAO Da - Aerospace Information Research Institute, Chinese Academy of Sciences

Land use detection by local climate zone and its application for urban sustainable development
CAI Meng - The Chinese University of Hong Kong

Integrated assessment of SDGs for Bangkok metropolitan regional: scoping study
Vilas NITIVATTANANON - Asian Institute of Technology, Thailand

Description: The use of Big Earth data to advance the SDGs in Asia and Africa.

Venue: Room 4 2F

Panel Discussion—How to evaluate the contribution of data sharing to SDG 17

Co-Chairs: Silap BOUPHA and LI Guoqing

Disaster risk reduction knowledge service: a paradigm shift from disaster data towards knowledge services
WANG Juanie - Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences, China

Panel Discussion—How to evaluate the contribution of data sharing to SDG 17

Panelist as above speakers

Venue: Room 3 2F

Session: Data Sharing Advancing the Implementation of SDG 17 Session-II

Co-Chairs: Andrea NASCETTI and LI Linlin

EO Big Data for monitoring urban SDG indicators
Andrea NASCETTI - KTH Royal Institute of Technology, Sweden

Analyzing characteristics of public transport users' travel behavior and their travel demand based on time-series smart-card big data of Shenzhen
LIU Qian - Shenzhen University, China

Land use and shoreline changes in Karachi, Pakistan from 1990 to 2019
Muhammad Fahad BAQA - Aerospace Information Research Institute, Chinese Academy of Sciences

An assessment of global electric power consumption using the Defense Meteorological Satellite Program-Operational Linescan System nighttime light imagery
LU Linlin - Aerospace Information Research Institute, Chinese Academy of Sciences

Venue: Room 4 2F

Programme

15:30-17:00 17 Dec 2019 (Tuesday) Parallel Session II

Session: Data Sharing Advancing the Implementation of SDG 17 Session-II

Co-Chairs: Silap BOUPHA and LI Guoqing

Disaster risk reduction knowledge service: a paradigm shift from disaster data towards knowledge services
WANG Juanie - Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences, China

Panel Discussion—How to evaluate the contribution of data sharing to SDG 17

Panelist as above speakers

Venue: Room 3 2F

Session: Data Sharing Advancing the Implementation of SDG 17 Session-II

Co-Chairs: Andrea NASCETTI and LI Linlin

EO Big Data for monitoring urban SDG indicators
Andrea NASCETTI - KTH Royal Institute of Technology, Sweden

Analyzing characteristics of public transport users' travel behavior and their travel demand based on time-series smart-card big data of Shenzhen
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Land use and shoreline changes in Karachi, Pakistan from 1990 to 2019
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An assessment of global electric power consumption using the Defense Meteorological Satellite Program-Operational Linescan System nighttime light imagery
LU Linlin - Aerospace Information Research Institute, Chinese Academy of Sciences

Venue: Room 4 2F
Programme

18 Dec 2019 (Wednesday)

Keynote Speech
Venue: Room 1&2 2F

Chair: LIN Hui & Monthip SRIRATANA

09:00-09:30  Marine carbon sink and sustainable development
JIANG Nianzhi - Xiamen University

09:30-10:00  Contributions to Global Grand Challenges: from Atmospheric Clustering to Gigacities
Markku Kulmala - The Centre of Excellence in Atmospheric Science, University of Helsinki

10:00-10:30  Strengthening Scientific Capacity to Address 21st Century Challenges Across Belt and Road
Region-Perspective from START
Jon Padgham - START International

10:30-11:00  Tea Break

Chair: WU Bingfang & Juha LEMMETYINEN

Mainstreaming Big Earth Data into Decision Making: The Global Definition of Cities and Rural areas in support of international frameworks
Daniele Ehrlich – Joint Research Center (JRC) European Commission

11:00-11:30  Promoting Effective Utilization of Earth Observation Systems for Africa's Development
Kamal Labbassi – Chouaib Doukkali University

11:30-12:00  Lunch
Venue: Ballroom 5F

12:00-13:00  Lunch Break
Venue: Room 3-5 2F

13:00-13:30  Parallel Session III
Venue: Tongle Hall 2F

13:30-15:00  Parallel Session III

15:00-15:30  Tea Break

15:30-17:00  Parallel Session IV

18:00-21:00  Dinner
Venue: Ballroom 5F

Parallel Session

13:30-15:00  18 Dec 2019 (Wednesday) Parallel Session III

Session: START-DBAR Science Capacity Development
Venue: Tongle Hall 2F

Session: Big Earth Data for Disaster Risk Reduction and Climate Change Session-II
Venue: Room 2 2F

Co-Chairs: Rajib SHAW and CHEN Fang

Society 5.0 and inclusive disaster risk reduction in Japan
Rajib SHAW - Keio University, Japan

Making cities disaster resilient: climate action as a point of departure
Joy Jacqueline PEREIRA, Nurfashareena MUHAMAD, Julian HUNT - IRDR ICoE SEADPRI-UKM; Universiti Kebangsaan Malaysia; University of Cambridge and University College London

Development of Big Earth Data platform for DBAR: progress and lessons
QIN Yuchu - Aerospace Information Research Institute, Chinese Academy of Sciences

Spatial appraisal of flood risk assessment and evaluation using integrated hydro-probabilistic approach in Panjkor River Basin, Pakistan
Atta Ur RAHMAN - University of Peshawar, Pakistan

Forest fire mitigation based on land cover type and its occurrence case study in Riau Province, Indonesia
Nahib IRMADI - Geospatial Information Agency, Indonesia

Programme
Session: DBAR For SDG 14 Session-I: Big Earth Data Applications in Sustainable Development and Management of Coast and Sea
Venue: Room 3 2F
Co-Chairs: Myriam De Las Nieves Fernandez HERRERO and ZHANG Li
Environment and sustainable development in Spain
Myriam De Las Nieves Fernandez HERRERO - Valencian International University, Spain
Remote sensing of mangrove forests using field survey, drones and satellites
ZHANG Hongsheng, WANG Luoma, LIN Yini, LIU Mingfeng - Department of Geography, The University of Hong Kong; Institute of Space and Earth Information Science, The Chinese University of Hong Kong; Institute of Environment, Energy and Sustainability, The Chinese University of Hong Kong
Employability issues for the climate migrants in Bangladesh: a study of Khulna city
Tanjil SOWGAT - Khulna University, Bangladesh
Night-time light and its relationship with urban development: a study of rapidly urbanising regions in Bangladesh
CHEN Bowei - Aerospace Information Research Institute, Chinese Academy of Sciences
Spatial monitoring and assessment of port cities expansion along the Maritime Silk Road
YAN Min, ZHANG Li, GU Yu - Aerospace Information Research Institute, Chinese Academy of Sciences
Assessment of water productivity changes over Iran using remote sensing data
Saeid HAMZEI, Falahati EHSAN, Sedighi AMIR - University of Tehran, Iran
Assessment of crop water use efficiency based on remote sensing and ground observations: Case study of the Doukkala Irrigation District in Morocco
CHEN Qiting, Adnane HABIB, JIA Li, HOU Guangcheng, Kamal LABBASSI, Massimo MENENTI - Aerospace Information Research Institute, Chinese Academy of Sciences; Chouaib Doukkali University, Morocco
Validating remote sensing based evapotranspiration based on basin scale water balance method
ZHENG Chaolei, JIA Li - Aerospace Information Research Institute, Chinese Academy of Sciences
Estimation of farmland evapotranspiration based on SEBAL model in Kai-Kong River Basin, Xinjiang
CHEN Qiting, Adnane HABIB, JIA Li, HU Guangcheng, Kamal LABBASSI, Massimo MENENTI - Aerospace Information Research Institute, Chinese Academy of Sciences; Chouaib Doukkali University, Morocco

Session: Big Earth Data Applications in Sustainable Water Resource Management Session-I
Venue: Room 4 2F
Co-Chairs: Kamal LABBASSI and LIU Yuanbo
Response of the irrigation water management to climate variability by remote sensing: monitoring of evapotranspiration in the irrigated area of Doukkala
Kamal LABBASSI - Chouaib Doukkali University, Morocco
Sentinel-2 time series imagery in support to groundwater abstraction monitoring
Mustapha MIMOUI, Faiz SAMI, Mourad BRIKI, Nobil BENKHATRA - Observatoire du Sahara et du Sahel, Tunisia; University of La Manouba, Tunisia
Assessment of water productivity changes over Iran using remote sensing data
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Session: DBAR Agriculture Session-I
Venue: Room 5 2F
Co-Chairs: Dr. Shukri Ahmed and Dr. Hongwei Zeng
Enhancing food security through the use of biophysical, climate modelling and sensing technologies
Dr. Andrés Potgieter, University of Queensland
Vegetable mapping in Indonesia from time series of Sentinel-1A SAR data
Li Mengmeng, Academy of Digital China (Fujian), Fuzhou University
Crop identification with Senz Agri in Mexico: lessons learned using a large in-situ data set
Dr. Urs Schultithess, CYMMIT
FY satellite data and product development for the global agricultural monitoring
Dr. Fan Jinglong, National Satellite Meteorological Center China; Meteorological Administration, China
National crop type maps in Argentina based on high resolution remote sensing
Dr. Diego de Abelleuya, Instituto Nacional de Agropecuaria (INTA) Argentina
National crop type maps in Argentina based on high resolution remote sensing
Dr. Diego de Abelleuya, Instituto Nacional de Agropecuaria (INTA) Argentina

The 4th Digital Belt and Road Conference (DBAR 2019)
第四届"数字丝路"国际会议
17-19, December, 2019 Shenzhen, China
2019年12月17-19日 中国 深圳
Automatic learning of sea ice properties by remote sensing data analysis: challenges and opportunities
Andrea MARINONI - the Arctic University of Norway

Snow and ice thickness derived from the thermistor string based ice mass balance buoys
CHENG Bin - Finnish Meteorological Institute, Finland

Exploring methods for snow parameter retrieval in the Arctic and high mountain areas
Juha LEMMETYinen - Finnish Meteorological Institute, Finland

Glacier mass balance variations on the Nyingiritangba mountain of Tibetan plateau from 2000 to 2013
Drolma LHAMPA - Tibet Institute of Plateau Atmospheric and Environmental Sciences, Tibet Meteorological Bureau

Climate change and human activities exacerbate water stress in the Aral Sea Basin, Central Asia
DUAN Weili--Xinjiang Institute of Ecology and Geography, Chinese Academy of Sciences

15:30-17:00 18 Dec 2019 (Wednesday)  Parallel Session IV

Session: Big Earth Data for Disaster Risk Reduction and Climate Change Session-II  Venue: Room 2 2F

Co-Chairs: CHEN Fang and Rajib SHAW

Use of remote sensing for disaster risk reduction in Nepal – efforts of NSET
Amad Mani DIXIT - National Society For Earthquake Technology, Nepal

Monitoring tropical forest fragments
WANG Lei, Matthew HANSEN - Aerospace Information Research Institute, Chinese Academy of Sciences; University of Maryland, College Park

Climate change and salinity induced nutritional imbalance of rice and its risk to coastal community of Bangladesh
Md Anwarul ABEDIN - Bangladesh Agricultural University, Bangladesh

Literature-based analysis on Earth observations for flood research
ZHANG Hongyue - Minjiang University, China

Investigation of the Effect of Class Imbalance on Land Cover Classification in Different Landscapes of China–Central Asia–West Asia Economic Corridor
Naboureh Amin, Ainong Li, Jinhu Bian, Guangbin Lei - Institute of Mountain Hazards and Environment, Chinese Academy of Sciences, Chengdu, China

DBAR For SDG 14 Session-II: Big Earth Data Applications in Sustainable Development and Management of Coast and Sea  Venue: Room 3 2F

Session: Sustainable coastal environment planning: from concept to implementation
Sutrina DEWAYANY and WANG Cuizhen

Sustainable coastal environment planning: from concept to implementation
Sutrina DEWAYANY - Badan Informasi Geospasial

sUAS-based 3D tree surveying on earth dams to assess dam safety and flood preparedness
WANG Cuizhen (Susan) - University of South Carolina

Parallel optimization of the tropical-cyclone coupled numerical model in the NMEFC
WANG Yanping, YIN Zhachui, HAO Sai, WANG Chenqi, ZHANG Tianyu - National Marine Environmental Forecasting Center; Key Laboratory of Research on Marine Hazards Forecasting

Dynamics of coastal aquaculture ponds in DBAR from 1990 to 2015 and the influence on offshore Chla
LUO Jiahua, SUN Zhe; YANG Jinghicheng, ZHANG Li - Nanjing Institute of Geography and Limnology, Chinese Academy of Sciences; University of Chinese Academy of Sciences; Aerospace Information Research Institute, Chinese Academy of Sciences

Application of remote sensing and Earth Data to monitor and assess nature based solutions
Mohammad Emran HASAN - Aerospace Information Research Institute, Chinese Academy of Sciences

Delineating the spatio-temporal feature of urban dynamics along the Land Silk Road Belt being associated with land consumption rate from 2000 to 2015
BAI Linyan, FENG Jianzhong, GAO Wangwang - Aerospace Information Research Institute, Chinese Academy of Sciences; Agricultural Information Institute, Chinese Academy of Agricultural Sciences

CO-EVENTS

17-19, December, 2019 Shenzhen, China

The 4th Digital Belt and Road Conference (DBAR 2019)
Programme

Monthly statistical downscaling approach on TRMM 3B43 precipitation product using machine learning and Google Earth Engine in The Mekong Region
Abdelrazek F. ELNASR, ZENG Hangwei, WU Bingfang - Aerospace Information Research Institute, Chinese Academy of Sciences, China; University of Chinese Academy of Sciences, China; Cairo University, Egypt

Session: DBAR High Mountain and Cold Regions Session-II
Venue: Jindian Hall 2F
Co-Chairs: Massimo MENENTI and Andrea MARINONI

High quality, environmental information and analysis relevant to the new silk road economic belt regions and for the arctic sea route
Hanna LAPPALAINEN - University of Helsinki, Finland

Seasonal evolution of supraglacial lakes and rivers on the southwest Greenland Ice Sheet
YANG Kang - Nanjing University, China

Development and application of NMEFC Arctic Ice-Ocean Prediction System (ArcIOPS)
LIANG Xi - National Marine Environmental Forecasting Center, China

Spatial-temporal dynamics of supraglacial debris cover on glaciers in Hunza Valley based on GEE platform and machine learning algorithms
XIE Fuming - Yunnan University, China

Session: DBAR Agriculture Session-II
Venue: Room 5 2F
Co-Chairs: Dr. Changchui He and Dr. Miao Zhang

Overview Introduction of Crop Productivity Gap Analysis in DBAR-AGRI
Dr. Bingfang Wu, Institute of Remote Sensing and Digital Earth

The role and use of Geospatial Information for Crop monitoring: an opportunity for interagency collaboration
Dr. Shukri Ahmed, FAO

Earth data application in agriculture and food security
Pedro Daniel Ozcuna, Ministry of Agriculture and Rural Development, Mozambique

Crop productivity gap analysis in Russia
Dr. Igor Savin, V.V. Dokuchaev Soil Science Institute, ATI RUDN University, Russia

Challenges and opportunities of food security in Ethiopia
Tesfay Gebretsadkan, Tigray Agricultural research institute, Ethiopia

Estimation of potential wheat yield gap in Ethiopia
Avetayehn Niguse Beyene, Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences

Crop Yield Gap Analysis for Zambia, Summary: Initiative of Productivity gap analysis of DBAR-AGRI
Dr. Elijah Phiri, University of Zambia

Session: DBAR/ENVI Session-II: Big Earth Data for Environmental Change Monitoring – Focus on SDGs 15
Venue: Tongle Hall 2F
Co-Chairs: Monthip SRIRATANA and JIA Gensuo

GOFC-GOLD Regional Networks: The role of SAFNet in Africa
Navashni Govender - South African National Parks

Decadal changes of wetlands in response to climate variability and land use along the Belt & Road region
Sana ILYAS - Institute of Atmospheric Physics of CAS, China

FY meteorological satellite series serve Belt & Road communities
XU Ronghan - National Satellite Meteorological Center, China Meteorological Administration, China

Crevasse Detection Using Sentinel-1 EW SAR Data
DUAN Yiru- Institute of Remote Sensing and Digital Earth of CAS, China

Analysis of Temporal and Spatial Changes and Driving Forces of Vegetation in the Loess Plateau
DONG Yi - China Agricultural University, China

Monitoring and assessing urbanization progress in the Belt and Road region
JIANG Huiping - Aerospace Information Research Institute, Chinese Academy of Sciences
Programme
19 Dec 2019 (Thursday)

Keynote Speech  Venue: Room 1&2 2F
Chair: JIA Gensuo & HAN Qunli

09:00-09:30 Integrated Biodiversity Data to Improve Conservation Decisions
Joe Miller - Global Biodiversity Information Facility (GBIF)
The WCRP-GEWEX Science Activities underpinning the Sustainable Development Goals in the
Belt and Road Region
Peter J. Van Oevelen - The Global Energy and Water Exchanges (GEWEX) Project

09:30-10:00 Tea Break

10:00-11:30 Closing Ceremony

Poster Session
Date: 17 – 18 Dec
Time: 13:30 – 17:30
Location: Passageway of conference area, Floor 2

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The 4th Digital Belt and Road Conference (DBAR 2019)
第四届“数字丝路”国际会议
2019年12月17-19日 中国 深圳
Information for speakers

Speakers are requested to arrive at their session room to upload their presentation at least 20 minutes before the respective session begins, or at an earlier break. Speakers are asked to bring their presentation on USB stick and contact the technician in the session room as soon as possible to perform the upload of the presentation file.

Presentations should be in MS PowerPoint format. The dimension of PPT is 16:9 for keynote report and 4:3 for parallel session report. Each session room is equipped with a computer/video projector, a microphone, a lectern and a laser pointer device. The software installed on the computer includes: Windows 7 MS Office 2013 Professional (PowerPoint, Word), Internet Explorer, Windows Media Player. The media player is only available with standard codecs. Use of standard True Type fonts is suggested for PowerPoint presentations. If your presentation contains a video or animation, please ensure that both files (ppt and video) are in the same folder.

As a baseline, presentations from personal laptops are not allowed to ensure a smooth session and to minimize the transition between presentations. Speakers are also asked to identify themselves as speakers to the session co-chairs, who should already be in the session room during the break before the respective session. The session chairs will introduce the speakers only with the title of the presentation, name and affiliation. Please check with the session chairs to make sure they have the correct information.

Speakers are asked to stay within the time given to your presentation. The session chairs are instructed to remind speakers on this timing and aim to finish the oral presentation part about 3 minutes earlier, in order to allow few questions. If speakers run over time, the session chairs may stop the presentation immediately and not allow further questions.
Information for Poster Presentations

Each poster should be printed in portrait orientation at 90 x 120 cm (W x H)

Materials necessary for pinning the poster to the board is available on the poster boards or at the registration desk.

Posters will be displayed in the poster area, Passageway of conference area, Floor 2.

Authors are requested to mount their posters on the day of their poster session at the following times:
Mount: 12:00 – 13:30

Authors are invited to stand by close to their poster during all breaks.

General Information

Conference Venue
St.Helen Hotels Shenzhen (http://en.shengfeitehotel.cn) is the venue of the 4th Digital Belt and Road Conference. It is one of the newest hotels in Shenzhen, which was renovated in 2016. Boasting a convenient location, the St.Helen Hotels Shenzhen is just 11km from Shenzhen North Railway Station and 25km from Bao’an International Airport. In addition, Qiaocheng East Metro Station is just a short walk away. Famous attractions such as Happy Valley and Window of the World are just a short taxi ride away.

INTRODUCTION
This St.Helen Hotels Shenzhen is a popular accommodation for guests traveling for business. St.Helen Hotels Shenzhen is located in OCT tourist areas, near to hi-tech areas and Chegongmiao industrial areas, about 40-min-drive to Bao’an international airport, 15-min-drive to Shenzhen North railway station. It is facilitated with 12 meeting rooms between 20 – 248 m², 8 – 200 people capability.

MAP
● By Train: Luohu Railway Station 15.6km
● By Airplane: Bao’an Airport 29.7km
● By high-speed-train: Futian Station 6km
● By Metro: Shenzhen Qiaocheng East Station (@Line#1) 430m
● Port: Futian Port and Huanggang Port 8km
If you don’t have the Chinese mobile number, please ask the hotel reception for help.

### Step 4: Complete the connection

**Step 3: Fill out Chinese mobile phone number.**

**Step 2: Choose the authentication method with “SMS”**

**Step 1: Choose the WIFI named ST.HELEN.**

By Chinese mobile phone number

- NO Password
- Verify Chinese mobile phone number
- Click the button “obtain the verification code”
- Input the verification code to complete the connection

**By WeChat**

- Step 1: Choose the WiFi named ST.HELEN.
- Step 2: Choose the authentication method with “Wechat”
- Step 3: Follow the WeChat Subscription of the hotel
- Step 4: Complete the connection

If you don’t have the Chinese mobile phone number, please ask the hotel reception for help.

### Official Language

The official language of DBAR 2019 is English.

**Name Badge**

Conference registrants must wear name badges to gain access to all conference activities. Should you misplace your name badge, please get a replacement at the registration Desk.

### Meals

<table>
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<th>Date</th>
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<tr>
<td><strong>17 December 2019</strong></td>
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<tr>
<td>Buffet Lunch</td>
<td>12:00-13:00</td>
<td>Jinfeng Hall</td>
<td>2F</td>
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<tr>
<td>Welcome Dinner</td>
<td>18:30-21:00</td>
<td>Ballroom</td>
<td>5F</td>
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<tr>
<td><strong>18 December 2019</strong></td>
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<td>18:00-21:00</td>
<td>Ballroom</td>
<td>5F</td>
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Conference Venue
St. Hellen Shenzhen Bauhinia Hotel (深圳博林圣海伦酒店)
http://en.shengfeitehotel.cn
Qiaocheng East Road 2002, Futian District, Shenzhen, Guangdong, China

From Shenzhen Bao'an International Airport
Approximately 35 minutes by taxi, cost approx. 90CNY
Approximately 50 minutes by metro cost approx. 7CNY

From Shenzhen North Station
Approximately 23 minutes by taxi, cost approx. 40CNY
Approximately 43 minutes by metro cost approx. 5CNY

From Shenzhen East Station
Approximately 45 minutes by taxi, cost approx. 60CNY
Approximately 72 minutes by metro cost approx. 6CNY

General Information

Public Transport
Participants who need to take public transportation in Shenzhen can pay the tickets by WeChat QR code “Shenzhen Tong+” and “Shenzhen Metro e Travel”

Bus (Shenzhen Tong+)

Metro Map of Shenzhen

http://www.szmc.net/page/eng/index.html
Accommodation

Huali Hotel- Oct store（华里酒店-华侨城店）
Huali Hotel-Creative Park Store is a 3-star hotel, located at No.2 Jinxiu North Road of Nanshan District. Available room types ranges from economic to business suite. The hotel is only 400 meters away from the conference venue, about 5 minutes walking. Participants need to mention the conference (The 4th Digital Belt and Road Conference) and organizer (Shenzhen Institutes of Advanced Technology, CAS) when booking this hotel.

For room reservations, please call 86(0) 755-86668999
Hotel Reservation Box 347465209@qq.com

Huali Hotel-Creative Park Store（华里酒店-创意园店）
Huali Hotel-Creative Park Store is a 4-star hotel, located at No.99 Qiaocheng East Road of Nanshan District. Available room types ranges from economic to business suite. The hotel is only 650 meters away from the conference venue, about 10 minutes walking. Participants need to mention the conference (The 4th Digital Belt and Road Conference) and organizer (Shenzhen Institutes of Advanced Technology, CAS) when booking this hotel.

For room reservations, please call 86 13640934638
Hotel Reservation Box 284073839@qq.com

City Inn OCT Loft Hotel（城市客栈创意园店）
City Inn OCT Loft Hotel is a 3-star hotel, located at Building E-2, East Shantou street, Nanshan Science Park. The hotel is only 1100 meters away from the conference venue, about 17 minutes walking. Participants need to mention the conference (The 4th Digital Belt and Road Conference) and organizer (Shenzhen Institutes of Advanced Technology, CAS) when booking this hotel.

For room reservations, please call 86 13640934638
Hotel Reservation Box 284073839@qq.com

Yafeng Hotel
Ya Feng Hotel - Shenzhen is a 3-star venue in a Chinese style. The accommodation is 1350 meters away from Happy Valley of Shenzhen. The hotel is within 8 km from the city center of Shenzhen. A large variety of dishes is served in Four Seasons Coconut Chicken Run Park and Inter-Continental Hotel B1 Buffet, which are 5 minutes walk away. Ya Feng Hotel- Shenzhen can be reached in a 30-minute drive from Shenzhen airport.

Hotel Reservation for Foreigners please click here
Hotel Reservation for Chinese please click here
https://yafeng-hotel.hotel-shenzhen.com/zh/
About Shenzhen

Shenzhen is the first special economic zone established after China’s reform and opening up and is the window for China’s reform and opening up.

Geographic Location

Shenzhen is located on the southern coast of China, adjacent to Hong Kong. It is located in the southern part of Guangdong Province, with 6 administrative districts, 4 new districts, 57 sub-district offices and 790 residents committees. Shenzhen covers an area of 1996.85 square kilometers. The main administrative areas include Futian, Luohu, Nanshan, Yantian, Bao'an and Longgang.

Climate and Temperature

Shenzhen has a subtropical maritime climate with an altitude of 70 to 120 meters and an annual average temperature of 22.4 °C. Winter is the coldest season in Shenzhen, with temperatures reaching the lowest in the year and rare precipitation. The average maximum and minimum temperatures in Shenzhen are 38.7 °C and 4 °C, respectively, with an average rainfall of 1900 cm / year and PM$_{2.5}$ continually being recorded to be less than 10 μg / m$^3$.

Tourism

China folk Culture Villages
Reference fare: 180 CNY per adult
Duration: 10:00am-9:00pm
Location: No.9003, Shennan Road, Nanshan District, Shenzhen

A theme park including two areas (Splendid China Miniature Park & China Folk Culture Village). The park’s theme reflects the history, culture, art, ancient architecture, customs and habits of various various Chinese ethnicities in the country. It is one of the world’s largest scenery parks in the amount of scenarios reproduced.

Window of the World
Reference fare: 220 CNY per adult
Duration: 9:00am-10:30pm
Location: No. 9037 Shennan Road, Nanshan District, Shenzhen

It has about 130 reproductions of some of the most famous tourist attractions in the world squeezed into 48 hectares (118 acres). The 108 meter (354 ft) tall Eiffel Tower dominates the skyline and the sight of the Pyramids and the Taj Mahal, all in proximity to each other are part of the appeal of this theme park.
Shenzhen Overseas Chinese Town East (OCT East)
Reference fare: 220 CNY per adult
Duration: 9:30am-5:30pm
Location: OCT East, Dameisha, Yantian District, Shenzhen

It is the first domestic large comprehensive national ecological tourism demonstration district integrating various themes, such as relaxation, vacation, sightseeing tour, outdoor sports and science popularization education. It mainly includes six parts, i.e. Knight Valley Eco Park, Tea Stream Valley Holiday Park, Wind Valley Sports Park, Theme Hotel Cluster and Tianlu Mansion, embodying the harmonious coexistence between human beings and the nature.

Lianhua Hill Park
Reference fare: free
Duration: Whole day
Location: No. 6030, Honglu Road, Futian District, Shenzhen

It mainly includes three parts, i.e. Kite Squar, Peach Flower Grove, Rainforest rivulet Valley. The natural and beautiful environment provides a good place for people to relax and enjoy art. Besides, you can get a glimpse of China’s Great Man, Comrade DENG Xiaoping.

About DBAR

Digital Belt and Road Program (DBAR) is an international science program for the sustainable development of the Belt and Road Region (B&R) using Big Earth Data. DBAR pursue outstanding research and development questions relevant to attaining Sustainable Development Goals (SDGs) in B&R countries through a system of Foci that are categorized into two parts, one centralized on Big Earth Data, while other eight Foci encompass the social, environmental and technological aspects of different SDGs and are relevant to and addresses the sustainable development in B&R region. DBAR calls for international Science Technology and Innovation (STI) cooperation in support of SDGs at local, regional and national levels. Sustainable Development has been prioritized globally by worldwide adoption of the Sustainable Development Goals agenda during the 2015 UN session. By
adopting SDGs, all countries committed to work, to the best of their ability, towards achieving 17 goals identified to ensure collective sustainable development across the globe. For each individual goal there are a set of targets that have to be achieved for a goal to be fully realized. These targets provide guidelines for policy making and streamline the process towards achieving SDGs. The extensive geographical scope of the B&R region requires smart uses and applications of “Big Earth Data” for environmental protection, disaster risk reduction, water resource management, urban planning, food security, coastal zone management, and conservation and sustainable use of natural and cultural heritage sites over the next few decades. The SDGs agenda also developed a framework to measure compliance of each individual target through a set of indicators identified in 2017 that can be used to measure the progress towards achieving each individual target. The DBAR Science Program will serve as a platform for the Belt and Road countries to develop projects and activities in various focus areas, identified in, and important for progress toward achieving the UN SDGs.
The 4th Digital Belt and Road Conference (DBAR 2019)
第四届“数字丝路”国际会议

DBAR Secretariat
E-mail: dbar@radi.ac.cn
Tel: +86 10 82178980
DBAR Website: www.dbeltroad.org