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SPACE FOR CLIMATE ACTION

space applications and technologies for sustainability on Earth

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SPEAKERS' BIOGRAPHIES

as of 6 September 2023

SESSION 1

USING SPACE APPLICATIONS TO ADDRESS WATER-RELATED CHALLENGES

FRÉDÉRIC BRETAR
Space Climate Observatory
Frédéric Bretar is a French Engineer and a scientist. He was a researcher in computer vision and applied mathematics at the French National Survey (IGN) before heading a laboratory in Earth Sciences. He then served as a diplomat for some years in China (Shanghai and Hong Kong). He joined the Centre National d'Etudes Spatiales (CNES) in 2019 to develop and manage the Space for Climate Observatory (SCO).

MAYAR WAEL MAHER FAHIM
Egyptian Space Agency
Mayar Wael Maher Fahim is an Attitude Determination and Control System (ADCS) Design Engineer at the Egyptian Space Agency. Mayar graduated from the National Aerospace University (KhAI), Ukraine, with a Bachelor's degree in Aerospace Engineering, specializing in Aircraft and Rocket Construction and Design. Mayar has contributed to the success of numerous space missions and actively supports the Egypt's space exploration initiatives.

ESTHER WANJIKU MAINA
Kenya Space Agency
Esther Wanjiku Maina is a Remote Sensing Officer leading projects on natural resources management. Her work involves developing innovative solutions for geospatial data analysis and visualization, including flood mapping, sugarcane mapping, and Ngong River watershed restoration. She holds a Bachelor of Science degree from Dedan Kimathi University of Technology, specializing in Geospatial Information Science. She is a member of International Society for Photogrammetry and Remote Sensing and African Women in GIS.

WAHID MOHAMED MOUFADDAL HUSSEIN KHALAF
Regional Organization for the Protection of the Marine Environment, Kuwait
Wahid Moufaddal is a remote sensing expert. He holds a Ph.D in coastal environmental remote sensing and has more than 25 years of experience in marine research linked to sedimentology of coastal environments and coastal and marine applications of remote sensing. His current research areas include utilization of remote sensing for real-time monitoring of harmful algal blooms, oil spills and other coastal and marine hazards.

MARIETTE VREUGDENHIL
Vienna University of Technology, Austria
Mariette Vreugdenhil is a senior scientist at the Department of Geodesy and Geoinformation at TU Wien. She holds a M.Sc. degree in Earth Sciences from the VU University Amsterdam and a PhD in Remote Sensing from TU Wien. She was awarded the European Space Agency Fellowship to research vegetation and drought interactions with Sentinel-1 Synthetic Aperture Radar data. Her main interest is in the research of land surface processes in a changing climate and mitigations related to natural disasters such as droughts.

SESSION 2

USING SPACE APPLICATIONS TO ADDRESS FORESTRY AND AGRICULTURE-RELATED CHALLENGES

AIDA LUZ AQUINO
World Wildlife Fund, Paraguay

Lucy Aquino holds a Master of Science majoring in Ecology and Evolutionary Biology from the University of New Mexico, USA and Bachelor of Science in Biology from the National University of Asuncion. For 18 years, she worked on the biodiversity of Paraguay and conducted numerous studies on reptile populations subjected to commercialization. In 2000, she established WWF in Paraguay and convened a multidisciplinary team to fight against the deforestation of the Atlantic Forest. She is currently promoting the implementation of a Sustainable Use Programme in the Chaco-Pantanal.

ROAYA RASHED HAMAD BUBSHAIT
National Space Science Agency of Bahrain

Roaya Bubshait is a Senior Geospatial Analyst at the National Space Science Agency of Bahrain and has 4 years of GIS experience. She holds a Master's degree majoring in Space Engineering. Roaya developed a cutting-edge application that simulates natural disasters utilizing real-world data from satellites, along with various algorithms and techniques of object detection and enhancing the spatial resolution of satellite images. She relies on innovation, automation, and emerging technologies to establish effective action plans for emergency responses and sustainable development.

MANINI SYALI
Vivekananda Institute of Professional Studies, India

Manini Syali is an Assistant Professor of Law at Vivekananda Institute of Professional Studies, Delhi, India. She holds a PhD in Law from the Guru Gobind Singh Indraprastha University, Delhi and LLM in International Law from the South Asian (SAARC) University. Her area of specialization is international environmental law.

POOJA PANDEY
Planet, USA

Pooja Pandey is a product manager currently leading customer retention in Planet, supporting companies across various sectors in their digital transformation and adoption of remote sensing technologies. She has helped Planet customers capture value from satellite imagery by advising them on architecting and developing solutions that enable them to make global change actionable. Before Planet, she was a geospatial analyst building maps for the automotive industry in Munich. She has an educational background in environmental science, business and computational sciences having studied both in London and Berlin.

PANEL 1
ENERGY AND EMISSIONS

MAHMOUD IBRAHIM MAHMOUD
National Oil Spill Detection and Response Agency, Nigeria

Mahmoud Ibrahim Mahmoud currently works as a Principal Environmental Scientist with the National Oil Spill Detection and Response Agency, Abuja, Nigeria. He is the Head of GIS Section and Climate Change Desk of the Agency and manages the Nigerian Gas Flare Tracker platform used for detecting gas flares in the Oil and Gas sector of Nigeria. He completed his first postdoctoral research fellowship as a Computer Geospatial Modeller with the Centre for Tropical Environmental and Sustainability Science, James Cook University, Australia. His interest includes spatial land-use planning, urban ecology, the conservation of natural ecosystems, oil spill management, emission detection and measurement.

DANIELA SCHMIDT
OHB SE, Germany

Daniela Schmidt is member of the board of directors of OHB SE, a space company based in Bremen, Germany and one of three large system integrators in Europe. She is responsible for sustainability and legal affairs in the OHB Group. Daniela Schmidt has been employed at OHB SE as Legal Counsel and in-house lawyer from 2014-2021. She was employed as a lawyer at the law firms Jones Day and White & Case LLP in Frankfurt from 2011-2014.

TIMOTHY-BRYN ORTH-LASHLEY
GHGSat, Canada

Bryn Orth-Lashley is the Technical Operations & Service Delivery Manager at GHGSAT. He has held positions at QinetiQ and MDA, where he was the Mission Systems Engineer and Commissioning Coordinator for the RADARSAT Constellation Mission. Bryn also brings his technical expertise to policy discussions at the World Economic Forum and the Public Policy and Advocacy Committee of Space Canada. He was Canadian National Point of Contact for the Space Generation Advisory Council. Bryn holds a BSc and MSc in Astrophysics from the University of Toronto and a MSc in Space Science & Engineering from University College London.

DORIS OBERLEITER
EnergyFamily, Austria

Doris Oberleiter is responsible for communication & marketing at the startup energyfamily.at. She has over ten years of experience in journalism, communication and international education with a keen interest in sustainability and innovation. Energyfamily offers services and a web platform to help create, manage and bill energy communities in an easy and intuitive way. The startup is also working on innovative energy management concepts that include using satellite data to increase energy efficiency.

PANEL 2

GREENING SPACE SYSTEMS ENGINEERING

MATHIEU LUINAUD
PwC Space Practice, France

Mathieu is a Manager Consultant in strategy at the PwC Space Practice. He has worked with the European Commission on the European Space Industrial landscape as well as on launcher programs Ariane 6, Vega-C and micro-launcher initiatives. He has worked with foreign space agencies on space strategy definition, space law and regulations. He has also worked on business plan assessment of a future micro-launcher program and market assessments in the satellite market. He is a member of the International Institute of Space Law and the European Center for Space Law. He also serves as Deputy-Mayor for the Paris 15th District and authored the book chapters "L'Industrie Spatiale" (2023) in the "Que Sais-Je" collection.

MARTA SALIERI LOPEZ
European Space Agency

Marta Salieri is Corporate Social Responsibility Officer in the Climate and Sustainability Office at ESA Headquarters in Paris. She is ESA Green Agenda work package leader for "Sustainability Strategy for ESA Projects". She holds a Master's degree in Industrial Engineering from the Polytechnic University of Madrid, and a specialization in Corporate Social Responsibility and Sustainability from CMI Business School and in Supply Chain Management from the Massachusetts Institute of Technology. She has previously worked for ESA at ESRIN in Italy, United Nations Office for Project Services in Denmark, Raytheon Technology and Bombardier Aerospace in Canada, and Apple in the UK.

JERRE SWEERS
Stellar Space Industries, Netherlands

Jerre Sweers is an Aerospace Entrepreneur, mechanical engineer, and Founder and CEO of Stellar Space Industries B.V. based in the Netherlands. Stellar Space Industries B.V. specializes in rapid breadboarding and high-end manufacturing, bringing complex systems, instruments and components to maturity with quick turnaround times. Jerre is an expert in rapid precision engineering of instruments, robotics and components for the Aerospace, Space and Defence.

TARAS WEINL
GATE Space, Austria

Taras Weinl is Chief Operating Officer and Co-Founder at GATE Space. Drawing on years of experience developing chemical propulsion systems, the team behind GATE Space is now addressing the industrialization of Space by providing universally compatible plug-and-play mobility solutions for small satellites, using a green propellant combination. At GATE, Taras is working at the interface between engineering and business- chasing the dream of a flourishing in-space economy.

PANEL 3

RECOMMENDATIONS FOR FUTURE ACTIVITIES

ANDREA KLEINSASSER
Federal Ministry for Climate Action, Enviroment, Energy, Mobility, Innovation and Technology, Austria

Andrea Kleinsasser is Deputy Head of the Department Space Affairs and Aviation Technologies in the Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology. She contributes as a member of the Austrian Delegation to the work of the United Nations Committee for the Peaceful Uses of Outer Space and the International Relations Committee of the European Space Agency. For several years, she has been instrumental in setting up national and international space activities and space programmes in Austria. Recently, she has been working on activities to raise international awareness and apply the potential of space solutions to policy areas such as Space for Climate Action.

ADRIANA CURSINO THOMÉ
Ministry of Science, Technology and Innovation, Brazil

Adriana Cursino Thome works at the International Affairs Office at the Ministry of Science, Technology, and Innovation in Brazil. Prior to this, she served as the Head of the International Relations Office at the National Institute for Space Research (INPE). She holds a Bachelor's degree in Computer Science from the Federal University of Sao Carlos, and a Master's and Doctoral degrees in Applied Computing to Space Technologies and Applications from INPE, and a specialization in Science & Technology Strategic Management from the Getulio Vargas Foundation. She also holds a Bachelor's degree in International Relations from the London School of Economics and Political Science and is currently pursuing a Master´s in Diplomatic Studies at the University of Oxford. She is also a UNOOSA Space4Women mentor.

MAXIMILIAN BAUERNFEIND
European Union Agency for the Space Programme

Maximilian Bauernfeind is an Austrian lawyer with more than 20 years of experience in transport, innovation and space policy, currently working as a seconded national expert at the EU Agency for the Space Programme in Prague, Czech Republic. His responsibilities include EU space policy, including environmental and climate change aspects. Previously, he has worked in the Austrian Ministry for Transport, as a seconded national expert for environmental affairs in inland and maritime shipping at the European Commission's Directorate General for Transport and Mobility in Belgium and the European Maritime Safety Agency in Portugal, as well as the position of a legal assistant at the Supreme Court of Administration of Austria in Vienna.

COUNTRY CASE 1
SOUTH AFRICA

BRILLIANT PETJA
Water Research Commission, South Africa

Brilliant Petja currently works as Research Manager for Climate Change at the Water Research Commission. He has previously worked at the Agricultural Research Council, the Limpopo Department of Agriculture, and the Risk and Vulnerability Science Centre of the University of Limpopo. He holds a Master of Science in Geosciences from University of the Witwatersrand and a PhD in GIS and Remote Sensing from University of Limpopo. His area of expertise includes applications of GIS and Remote Sensing in global change, natural resource management, agriculture, public health, amongst others.

RENEILWE MAAKE
Agricultural Research Centre, South Africa

Reneilwe Maake is a Research Technician at the Agricultural Research Council – Natural Resource and Engineering, working on the dissemination of indices for drought monitoring through the Umlindi newsletter. She holds a Master's degree in Environmental Sciences from the University of KwaZulu-Natal and is currently pursuing a PhD focusing on remote sensing-based algorithms for estimating carbon stocks in Savannah ecosystems at the University of KwaZulu-Natal. Her research interest is in integrating remote sensing data and GIS tools for predicting and monitoring natural disasters, climate change, crop yields and biophysical attributes of natural vegetation.

NOSISEKO MASHIYI
South African National Space Agency

Nosiseko Mashiyi is a Remote Sensing Scientist in the Research and Applications Development unit within the Earth Observation Programme in the South Africa National Space Agency. Her expertise lies in integrating remote sensing and GIS for modelling agro-ecological systems for biodiversity, agriculture and food security applications. She led the European Commission funded H2020 AfriCultuRes project. She is also a Co-Chair of the African Group on Earth Observation Land Degradation Neutrality initiative. She holds a Master of Science in Ore Deposit Geology from the University of Western Australia and a MBA from the University of South Wales.

TLOU RAMARU
National Department of Forestry, Fisheries and the Environment, South Africa

Tlou Ramaru is the Chief Director: Climate Change Adaptation in the Ministry Forestry, Fisheries and the Environment, South Africa. He serves as Board Member of the South African National Space Agency since 2022. Prior to this, he was the co-chairperson of the Green Climate Fund Board in 2022, Chief Director Sustainable Development for the National Green Fund, and was involved in negotiations of the Sustainable development Goals, development of South Africa environmental outlook and implementation of Green Economy Programmes.

COUNTRY CASE 2
BRAZIL

ADRIANA CURSINO THOMÉ
Ministry of Science, Technology and Innovation, Brazil
Please refer to biography in Panel 3.

LINCOLN MUNIZ ALVES
National Institute for Space Research, Brazil
Lincoln Muniz Alves is a climate researcher at the National Institute for Space Research, Brazil. He is the lead author of Atlas of the IPCC Sixth Assessment Report, contributing author of Amazon Assessment Report 2021 of the Science Panel for the Amazon (SPA), member of the Brazilian Panel on Climate Change, and a member of the WMO Regional Association III Working Group on Science and Research and the Coupled Model Intercomparison Project (CMIP7) Data Access Task Team led by the World Climate Research Programme. He is responsible for providing technical and scientific information quality to guide public policies for adaptation to regional environmental changes. His areas of expertise include Earth System Science and Environmental Sciences.

ALESSANDRA RODRIGUES GOMES
National Institute for Space Research, Brazil
Alessandra Rodrigues Gomes is responsible for Amazon spatial coordination at the National Institute for Space Research. She has more than 30 years of experience in geotechnologies. She holds a Master degree in Remote Sensing and a PhD in Geosciences and Environment. Since 2009, Alessandra has been working as a federal government employee with projects related to environmental monitoring and capacity building in Amazon Region and with different countries.

HUMBERTO BARBOSA
Federal University of Alagoas, Brazil
Humberto Barbosa is coordinator of the Satellite Image Analysis and Processing Laboratory (LAPIS) in Brazil. He is a researcher in the area of climate and ecosystem services. He is a report author for the Intergovernmental Panel on Climate Change. Humberto holds a Master degree in Remote Sensing from the National Institute for Space Research and a PhD in Soil, Water and Environmental Sciences from the University of Arizona.

COUNTRY CASE 3

SLOVENIA

TANJA PERMOZER
Ministry of the Economy, Tourism and Sport, Slovenia
Tanja Permozer is the Head of Slovenian Space Office and Head of Slovenian Delegation to the European Space Agency. She joined the Ministry of the Economy and is responsible for policy making in the area of internationalisation, foreign direct investments and co-shaping of trade policy within the European Union. She served as Chair of the EU Services Committee and deputy of Full Members Trade Committee, Head of Sector for Multilateral Relations in the Directorate for Foreign Trade, deputy chair of the European Space Agency PECS Committee, amongst others. She graduated from the University of Ljubljana in international economic relations and marketing.

TOMAŽ RODIČ
Slovenian Centre of Excellence for Space Sciences and Technologies (Space-SI)
Tomaž Rodič is the director of Space-SI and full professor for Engineering Materials at the University of Ljubljana. His research interests are in the areas of small satellite technologies and numerical modelling in continuum physics. His projects include the Slovenian microsatellite mission Nemo-HD, transportable ground station system STREAM and integration of advanced data processing chain into SPACE-SI remote sensing system. He established the Centre for Computational Continuum Mechanics.

ANA URBAS
Slovenian Centre of Excellence for Space Sciences and Technologies
Ana Urbas is a researcher at SPACE-SI since 2012. She is the main operator of the Nemo-HD microsatellite. Her research area includes micro and small satellite missions, simulations, analyses, and testing. She holds a degree in Geodesy from the University of Ljubljana and is currently pursuing a PhD in Material Science and Engineering.

MATEJA JEMEC-AUFLIČ
Geological Survey of Slovenia
Mateja Jemec-Auflič is a researcher at Geological survey of Slovenia. She has experience in landslide hazard tasks related to warning, prediction, remote sensing and disaster management. She has led 2 national research projects and 8 EU projects. Currently she leads ESA project and Dynamic Earth research group. She is a board member in the International Consortium of Landslides, Earth Observation expert group and Geological Survey of Slovenia (GeoZS). In 2022, she received the Lipold Award for outstanding scientific research achievements in geology.

GREGA MILCINSKI
Sinergise d.o.o., Slovenia
Grega Milcinski is the CEO and co-founder of Sinergise, specialising in software for advanced geospatial applications, helping Europe to efficiently manage and control agriculture policy and introducing land administration systems to developing countries in Africa. Sinergise is best known for Sentinel Hub, Area Monitoring Services and EO Browser.

PROJECT PITCH

ERIN MARTIN
Earth Observation Training, Education, and Capacity Development Network, USA
Erin Martin helps lead the Secretariat of Earth Observation Training, Education, and Capacity Development Network (EOTEC DevNet), a network of global space and meteorological agencies dedicated to improving access to capacity building on the use of Earth observations. An expert in strategic communications and programme management, Erin supports international agencies, NGOs, and private sector partners in responding to science and development challenges. She holds Master's and Bachelor's degrees from Stanford University.

LUCA MARINI
KTH Royal Institute of Technology, Sweden
Luca Marini is a Master's student in the Machine Learning programme at KTH Royal Institute of Technology. He holds a BSc degree in Computer Science from the University of Bologna. Currently, he performs research for his thesis in collaboration with ESA to detect marine anomalies using AI methods on Sentinel-2 images and works as a research engineer on wildfire detection at KTH. His research interests focus on space-based climate action, such as tackling climate change through computer vision and deep learning techniques using satellite imagery.

LEON OROTTA
BR Real Estate Developers Limited, Tanzania
Leon Orotta is a Geospatial Specialist. He is a member of the International Society of Remote Sensing and Photogrammetry. His research area is on forest disturbance mapping, crop mapping and land/sea surface temperature. He is passionate to learn more about active microwave remote sensing, especially InSAR, DInSAR. Leon's academic achievements includes studies at the African Regional Centre for Space Science and Technology Education - in English Language (ARCSTE-E) affiliated to the United Nations.

THOMAS BLASCHKE
University of Salzburg, Austria
Thomas Blaschke is a Professor and Director of the Department of Geoinformatics – Z_GIS, University of Salzburg, and vice-president of the Society for Geoinformatics, GeoIT & Navigation. His research interests include methodological issues of the integration of GIS, remote sensing and image processing also with aspects of participation and human-environment interaction. He is active in spin-off activities and has been serving on various boards including ESA, the European Copernicus programme or ISPRS IPAC.

YANG LU
York St John University, UK
Yang Lu is a Senior Lecturer in Computer Science at York St John University, UK, with expertise in cyber security, machine learning, human-computer interaction, and autonomous systems. Her work covers sectors such as sustainability and robotics. Her interest in data protection laws is pivotal to her ongoing work in developing privacy-enhanced technologies. Leveraging her understanding of user experience and behavioural science, she is dedicated to making contributions to the digital transformation of the space sector.

RACHITA AGRAWAL
University School of Law & Legal Studies, GGS Indraprastha University, India

Rachita Agrawal is currently pursuing a Doctorate in Law from GGS Indraprastha University, Delhi, India. She completed her LL.M. from National Law University, Delhi and received the Indraprastha Research Fellowship. Her research area of interest is in legal and policy issues in outer space. She has contributed to the legal community through teaching and mentoring roles, and works with NGOs to make a positive impact on society.

JOSÉ PEDRO FERREIRA
University of Southern California, USA

José Pedro Ferreira is a Fulbright and NASA FINESST fellow pursuing a doctoral degree in Astronautical Engineering at University of Southern California focusing on space sustainability and environmental impact of spacecraft demise in the atmosphere. José holds a Master's degree in Aerospace Engineering from Instituto Superior Técnico – University of Lisbon, and has conducted research at Delft University of Technology and at NASA Ames Research Center. He served as the lead systems engineer for the INFANTE project that developed a SAR microsatellite.

BOITUMELO MMAPULA P MOKOKA
Waseda University, Japan

Boitumelo Mokoka is a PhD student in International Finance at Waseda University, Japan. One of the goals of her research is how space applications and technologies can be commercialized to address climate change challenges faced by young farmers in developing countries such as Botswana. She holds a BBA in International Business from the University of Botswana and an MSc in International Finance from Waseda University. She has participated in the Seventh Tokyo International Conference on African Development and the Japan-Africa Space Summit.

RUVIMBO DOREEN SUPIYA
Midlands State University, Zimbabwe

Ruvimbo is a final year student at Midlands State University, Zimbabwe, studying towards a BSc Honors Degree in Surveying and Geomatics. She is the country lead for the African STEM Satellite project. She is an OpenStreetMap contributor, a YouthMappers Chapter Lead, and a member of the Students for the Exploration and Development of Space (SEDS Zimbabwe) Women and Girls Committee.