



United Nations/Austria Symposium

**“Space for the Sustainable Development Goals:
Stronger partnerships and strengthened cooperation for
2030 and beyond”**

Programme

Graz, Austria, 17 – 19 September 2018

Organized by

The United Nations Office for Outer Space Affairs

Co-organized by

The Government of Austria

With the support of

**JOANNEUM RESEARCH Forschungsgesellschaft mbH, Graz University of Technology,
City of Graz, State of Styria, Austrian Ministry for Transport, Innovation and Technology
NPOC Space Law Austria, European Space Agency (ESA) and German Aerospace Center (DLR)**

Honorary Committee (in alphabetical order):

| | |
|------------------|---------------------------------------------------------------------------|
| S. Di Pippo | Director, Office for Outer Space Affairs, United Nations |
| P. Ehrenfreund | Chair of the Executive Board, DLR |
| H. Kainz | Rector of Graz University of Technology |
| M. Kowatsch | President, AUSTROSPACE, Austria |
| J.-Y. Le Gall | Director, CNES |
| S. Nagl | Mayor, City of Graz, Austria |
| W. Pribyl | CEO, JOANNEUM RESEARCH, Austria |
| I. Schädler | Director, Ministry of Transport, Innovation and Technology, Austria |
| H. Schützenhöfer | Governor, Federal State of Styria, Austria |
| C. Stix-Hackl | Ambassador, Ministry for Europe, Integration and Foreign Affairs, Austria |
| J.-J. Tortora | Director European Space Policy Institute |
| J. Wörner | Director General, ESA |

Programme Committee (in alphabetical order):

| | |
|------------------|------------------------------------------------------|
| J. Del Rio Vera | UNOOSA |
| I. Duvaux-Béchon | ESA |
| M.H. Fuchs | Ministry for Europe, Integration and Foreign Affairs |
| A. Kleinsasser | Ministry for Transport, Innovation and Technology |
| O. Koudelka | JOANNEUM RESEARCH and Graz University of Technology |
| I. Marboe | University of Vienna |
| M. Mischkulnig | Ministry for Transport, Innovation and Technology |
| Y. Okumura | UNOOSA |
| J. Ortner | EURISY |
| K.-U. Schrogl | ESA |
| L. St-Pierre | UNOOSA |
| C. Steinkogler | University of Vienna |
| P. Stubbe | DLR |
| I. Vlachopoulou | UNOOSA |

Local Organizing Committee (in alphabetical order):

| | |
|--------------------|-----------------------------------------------------|
| A. Fuchs-Fehringer | Graz Tourism |
| N. Hofer | City of Graz |
| O. Koudelka | JOANNEUM RESEARCH and Graz University of Technology |
| D. Müller | JOANNEUM RESEARCH |
| M. Schaffer | JOANNEUM RESEARCH |

General Information

The United Nations/Austria Symposium has been held in Graz as a scientific conference of international significance since 1994. This year's Symposium will take place shortly after UNISPACE+50, where the international community considered the future course of global space cooperation for the benefit of humankind, in particular the contribution of space to sustainable development and to the Sustainable Development Goals (SDGs). The SDGs are a set of goals to end poverty, protect the planet and ensure prosperity for all, which is at the core of the work of the United Nations. The 2030 Agenda for Sustainable Development sets forth 17 SDGs, and each goal with specific targets to be achieved until 2030.

Space has been used as a tool for humankind for over 50 years already; it is not new to the area of development and is a critical resource for developed nations. This year, the Symposium will build around the possible contributions stemming from space-related activities to sustainable development and the contribution of the space community towards the achievement and monitoring of the SDGs (see recent study with the European GNSS Agency on [GNSS and Copernicus supporting the SDGs](#)). Today, space-related activities have a significant contribution from private entities, therefore the discussion shall include public and private partners and has as its ultimate objective to close existing gaps that prevent countries from making full use of space assets.

For countries to make full use of the available space capabilities, there is the need of understanding what space can offer, and what it takes to make it accessible considering the applicable policy regimes. On the other hand, service providers will better be able to fit to what is requested by users if their needs are known. Therefore, it is a bidirectional process.

Based on the success of last year and following the same approach, the UN/Austria Symposium will encompass the legal and policy aspects together with the technical views, providing the attendees with a holistic view on how space contributes to sustainable development.

Objectives

The main objective of the Symposium is to present different initiatives and to elaborate roadmaps and concrete deliverables that could serve as guidance to stress the role of space in the 2030 Agenda for Sustainable Development. The particular objectives are:

1. Elaborate on streamlining the user needs and their link to global agendas, such as the 2030 Agenda for Sustainable Development, the Sendai Framework for Disaster Risk Reduction and the Paris Agreement.
2. Prepare a Space systems roadmap with a view on how they can contribute to the global agendas
3. Discuss the following portfolios that can be used by users to understand what is available:
 1. Data and Services Access Portfolio
 2. Asset Access Portfolio
 3. Technology Access Portfolio
 4. Capacity-Building Portfolio
4. Enhance existing partnerships and forge new ones for capacity building and institutional support;
5. Promote the participation of women and youth in space science;
6. Provide recommendations and elaborate on a roadmap on how space can contribute to sustainable development

Programme of the Symposium

The program is designed to cover the aforementioned objectives and deliver the expected outputs. Sessions might be added or modified depending on the availability of speakers.

The programme includes plenary sessions and sufficient time for discussions among participants to identify the priority areas where pilot projects should be launched and examine possible partnerships that could be established. The programme is as follows. **Please note that is a draft version and the order of speakers and split in sessions may be subject to some changes:**

Monday, 17 September 2018 Morning

| | |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| 08:30 – 09:00 | Registration of Participants |
| Morning Session | Moderators: Otto Koudelka / Irmgard Marboe |
| 09:00 | Welcome Addresses & Welcome Ceremony |
| 10:00 | Space Capacity Building in Austria in Support of the Sustainable Development Goals Stephan Mayer Austrian Research Promotion Agency |

| | |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 10:15 | Setting the Scene Luc St-Pierre United Nations Office for Outer Space Affairs |
| 10:30 – 10:50 | Coffee Break |
| 10:50 | High Level Discussion Panel: Space Contributing to the 2030 Agenda for Sustainable Development Moderator: Luc St-Pierre Jean-Pascal Le Franc – Centre National de Études Spatiales Toby Clark – Eurisy Modou Sanda – Cameroon National Statistics Institute Isabelle Duvaux-Béchon – European Space Agency Christian Briebe – Earth Observation Data Centre for Water Resources Monitoring Karina von Schuckmann – Copernicus Marine Service |
| 12:20 | Preparatory Session for the Working Groups |
| 13:00 – 14:00 | Lunch Break |

Monday, 17 September 2018
Afternoon

| | |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Afternoon Session | Working Groups – Breakout Sessions |
| 14:00 | Working Group 1: User Need Process <i>Moderator: Luc St-Pierre / Rapporteur: Hui Du</i> Working Group 2: Space Systems Capacity supporting the Global Agendas <i>Moderator: Jean-Pascal Le Franc / Rapporteur: Upasana Dasgupta</i> Working Group 3: Space-derived products and services for the Global Agendas <i>Moderator: Markus Woltran / Rapporteur: Benjamin Bonsu</i> Working Group 4: Contribution to Policy Definition Processes: Environmental protection and the principles relating to remote sensing of the Earth from outer space <i>Moderator: Irmgard Marboe / Rapporteur: Yukiko Okumura</i> |

| | |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| | Working Group 5: Capacity-Building on Space for the Global Agendas <i>Moderator: Irianna Vlachopoulou / Rapporteur: Ayami Kojima</i> |
| 16:00 – 16:30 | Coffee Break |
| 16:30 | Continuation of working groups |
| 18:10 | Closure |

| | |
|-------|--------------------------------------------------------------------------------------------------------------------------|
| 18:15 | Transfer to the City Centre |
| 18:30 | Guided Tour through the Old City of Graz |
| 20:00 | Reception hosted by the Mayor of the City of Graz, Siegfried Nagl Assembly Hall of the City Parliament of Graz |

Tuesday, 18 September 2018
Morning

| | |
|---------------|-------------------------------------|
| 08:30 – 09:00 | Registration of Participants |
|---------------|-------------------------------------|

| | |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Morning Session | User Needs Moderator: Niklas Hedman / Rapporteur: Hui Du |
| 9:00 | Summary of WG 1 |
| 9:10 | The Use of Satellite Imagery in Ghana Using Africa Regional Data Cube: Use Case in Water Detection and Urbanization Victor Owusu Ghana Statistical Service |
| 9:25 | Sharing the Experience of Cameroon in the preparation and writing of the report on the situation of the reference of SDGs. Methodology and Criteria for Selection of Indicators Modou Sanda Cameroon National Institute of Statistics |
| 9:40 | Contribution of Space Science to Natural Resource Management in Senegal: Case of Agricultural Monitoring Faye Gayane Institut des Sciences de la Terre / University Cheikh Anta DIOP of Dakar |

| | |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9:55 | Experience of Cabo Verde with the Sustainable Development Goals and Associated Challenges Celso Herminio Soares Ribeiro Cabo Verde National Statistical Institute |
| 10:10 | UN-SPIDER: Capturing User Needs for the Disaster Management Cycle Jorge Del Rio Vera United Nations Office for Outer Space Affairs |
| 10:25 | Discussion round in the context of deliverables |
| 10:40 – 11:10 | Coffee Break / Poster Session 1 |
| Morning Session | Space Systems Capacity supporting the Global Agendas Moderator: Jorge Del Rio Vera / Rapporteur: Upasana Dasgupta |
| 11:10 | Summary of WG 2 |
| 11:25 | Earth Observation: Challenges and Opportunities for the Sustainable Development Goals Marc Paganini European Space Agency |
| 11:40 | The Regional Integral System of Satellite Information (SIRIS), an example of regional cooperation in Latin America towards the achievements of the SDGs Fabiola Lopez Mexican Space Agency |
| 11:55 | Forest Monitoring Systems from National Institute for Space Research - BRAZIL and link with Sustainable Development Goals Alessandra Gomes Instituto Nacional de Pesquisas Espaciais |
| 12:10 | ASI's Survey to contribute to the achievement of the Sustainable Development Goals Nunzia Maria Paradiso Italian Space Agency |
| 12:25 | JAXA's contribution to achieving SDGs in the field of disaster management through international cooperation Takanori Miyoshi Japan Aerospace Exploration Agency |
| 12:40 – 13:00 | Visit the test facilities where a nanosatellite for ESA is being implemented and the ground station/mission control centre for our BRITE-Austria/TUGSAT-1 satellite |
| 13:00 – 14:00 | Lunch Break |

Tuesday, 18 September 2018
Afternoon

| | |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Afternoon Session | Space Systems Capacity supporting the Global Agendas (continuation) Moderator: Jorge Del Rio Vera / Rapporteur: Upasana Dasgupta |
| 14:00 | Exomars HABIT and Sustainable Development Goal 6 Javier Martin-Torres Lulea University of Technology |
| 14:15 | Discussion round in the context of deliverables |
| Afternoon Session | Space-derived products and services for the Global Agendas Moderator: Isabelle Duvaux-Béchon / Rapporteur: Benjamin Bonsu |
| 14:30 | Summary of WG 3 |
| 14:40 | Using space data for the Planet Jillian Campbell United Nations Environment Programme |
| 14:55 | Collect Earth and Earth Map: new free geo-spatial FAO-Google tools to support developing countries efforts on land monitoring Danilo Mollicone Food and Agriculture Organization |
| 15:10 | Common Sensing Luca Dell' Oro United Nations Institute for Training and Research |
| 15:25 | European Medium-Range Weather Forecasts for the SDGs Juan Garces de Marcilla European Centre for Medium-Range Weather Forecasts |
| 15:40 | SDG 9.1 and the Rural Access Index SDG indicator Adam Diehl World Bank |
| 15:55 | EO4SDGs Argyro Kavvada National Aeronautics and Space Administration |
| 16:10 | UN-SPACE: an inter-agency mechanism on the use of space Niklas Hedman United Nations Office for Outer Space Affairs |
| 16:25 | Discussion round in the context of deliverables |

| | |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 16:25 – 17:00 | Coffee Break / Poster Session 2 |
| Afternoon Session | Capacity-Building on Space for the Global Agendas Moderator: Irianna Vlachopoulou / Rapporteur: Hui Du |
| 17:00 | Summary of WG 5 |
| 17:10 | Nanosatellites for communications and remote sensing applications Otto Koudelka Graz Technical University |
| 17:25 | ISU ‘3I’s space education supporting the UN Sustainable Development Goals Chris Welch International Space University |
| 17:40 | Opportunities to reduce the barriers that limit the use of space as a tool for sustainable development Minoo Rathnasabapathy/Danielle Wood, Massachusetts Institute of Technology |
| 17:55 | Enhancing existing capacity building partnerships at the Regional Centres and forging new ones to support Space2030 Ganiyu Agbaje African Regional Centre for Space Science and Technology Education in English, Nigeria |
| 18:10 | The necessity of combining capacity-building Efforts Clementine Decoopman Space Generation Advisory Council |
| 18:25 | Discussion round in the context of deliverables |
| 18:40 | Closure |

| | |
|-------|-------------------------------------------------------------------------------------------------------|
| 18:40 | Transfer to the Hotel |
| 19:00 | Transfer from the Hotel to the Centre of Graz - ‘Burgring’ |
| 19:30 | Reception hosted by the Governor of Styria, Hermann Schützenhöfer Staterooms of Grazer Burg |

Wednesday, 19 September 2017
Morning

| | |
|---------------|-------------------------------------|
| 08:30 – 09:00 | Registration of Participants |
|---------------|-------------------------------------|

| | |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Morning Session | Contribution to Policy Definition Processes Moderator: Irmgard Marboe / Rapporteur: Yukiko Okumura |
| 09:00 | Summary of WG 4 |
| 09:25 | European Space Policy and Sustainable Development Goals Servatius Van Thiel European Union Delegation in Vienna |
| 09:40 | The ISU-SSP study on capacity building in space policy – a case study Victoria Schebek Alumna SSP 2017, Austria |
| 09:55 | How to design a space agency with the Sustainable Development Goals in mind Joseph Abakunda Graz University of Technology |
| 10:10 | Role of Space Technology in Achieving Sustainable Development Goals in Pakistan: An Analysis of the National Data Policies Supporting the Use of Space in Sustainable Manner Aisha Jagirani Pakistan Space and Upper Atmosphere Research Commission |
| 10:25 | Discussion round in the context of the deliverables |
| 10:50-11:20 | Coffee Break / Poster Session 3 |
| | Keynote Speech Moderator: Johannes Ortner / Rapporteur: Jorge Del Rio Vera |
| 11:20 | Key Note Speech “Space technologies and applications to contribute to achieving and monitoring the Sustainable Development Goals” Pascale Ehrenfreund German Aerospace Center |
| 11:40 | Closing Ceremony |
| 14:00 | Transfer to the Hotel |

| |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Poster Session 1 [18.09.2018, 10:40-11:10] |
| Role of Space Technology in Promoting the Sustainable Development Goals – Case of Agenda 2030 Babatunde Akinola Ministry of Environment Ado Ekiti – Nigeria |
| IceKing: A Platform Combining Sustainable Tourism and Citizen Science on Glaciers Paola Belingheri IceKing - Austria |
| Report on Ghana Space Activities Benjamin Bonsu All Nations University - Japan |
| The Importance/Role of Geospatial Data in Achieving the Sustainable Development Goals Carlene Boodoo Surveys and Mapping Division – Trinidad and Tobago |
| Addressing United Nations Global Goals with Space Innovation & STEM Skill Proficiency among Disadvantaged Youth, Worldwide Jayfus Doswell Juxtopia - USA |
| KiboCUBE: The United Nations/Japan Cooperation Programme on CubeSat Deployment from the International Space Station (ISS) – Japanese Experiment Module (Kibo) “KiboCUBE” Ayami Kojima United Nations Office for Outer Space Affairs - Austria |
| Poster Session 2 [18.09.2018, 16:25-17:00] |
| Cartography 2030- In contribution to Sustainable Development Sindulfo Colman Direction of the Military Geographical Service – Paraguay |
| Co-operation Between States in Outer Space: To Make the Earth a Better Place Upasana Dasgupta Institute of Air and Space Law and Faculty of Law, McGill University - Canada |
| Development of programs and projects for the use of space for monitoring the sustainable development goals in the Atlantic Ocean and coastal areas. Jose Luiz de Araujo Moutinho Neto AIR Centre – Portugal |
| Space2030 and Space4.0: synergies for capacity building in the XXI century Stefano Ferretti European Space Policy Institute – France |

| |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Integrated Human Factors, Resilience, and Cooperation for Long Term Space Exploration: Designing Space Technology, Laws, Policies, and Physiological Training for Deep Space Longevity & Cooperation Yvette Gonzalez Gonzalez Global Solutions LLC – United States |
| Satellite Communication Development in LAO PDR Singthong Khamone Ministry of Post and Telecommunication - LAO PDR |
| Space Global Data and Technology Access, Partnership and Cooperation: For Industry, Innovation and Infrastructure Funmilola Oluwafemi National Space Research and Development Agency – Nigeria |
| Poster Session 3 [19.09.2018, 10:50-11:20] |
| Rural women and Space technology in Migori, County, Western Kenya Ambrose Otachi Macalder Mines – Kenya |
| Democratizing Access to Space for Everyone: Co-creating sustainable space ecosystems for developing and emerging nations Emeline Paat-Dahlstrom, Eric Dahlstrom SpaceBase – New Zealand |
| The role of satellite telecommunications in the Universal Service provision for rural areas in the developing countries Hisham Tahat Telecommunications Regulatory Authority – Jordan |
| Drought Assessment and Prediction for the Indian Subcontinent using Geospatial Intelligence Tarun Singh Symbiosis International University - India |
| Earth observation-based environmental indicators in support of SDG monitoring and fragility assessment in arid zones Tatjana Veljanovski, Lisa Stančič, U. Kanjir, Ž. Kokalj Research Center of the Slovenian Academy of Sciences and Arts - Slovenia |