United Nations / Germany High Level Forum:

The way forward after UNISPACE+50 and on Space2030

Bonn, Germany

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UNOOSA and the Sustainable Development Goals

Hui Du

United Nations Office for Outer Space Affairs

UNITED NATIONS
Office for Outer Space Affairs

A challenging 2030 Agenda

- Transforming our world: the 2030 Agenda for Sustainable Development:
  - Adopted by Heads of State and Government and High Representatives at the United Nations Sustainable Development Summit on 25 September 2015 (A/RES/70/1).
  - 17 goals, 169 targets, 232 indicators.
  - **UN Secretary General António Guterres**: the boldest agenda for humanity and the most ambitious anti-poverty, pro-planet agenda ever adopted by UN.

Space and socio-economic development

- Satellite Earth observation: disaster management, climate change monitoring, urban planning, food security, environment protection,…
- Global navigation satellite systems (GNSS): global location service fundamental to our modern life…
- Satellite communication: Direct-to-Home (DTH) TV services, satellite phone, broadband internet service…
- And more…

Source: ITU

Huge potential of Space4SDGs

- The implementation of the 2030 Agenda is a whole-society effort that needs contribution from each sector, including the space sector.
- Joint study by UNOOSA and the European GNSS Agency:
  - All 17 SDGs are positively impacted by the benefits of space.
  - 65 out of 169 targets (almost 40%) benefit from EGNSS and Copernicus alone.
- SDG indicator metadata repository: space data is only integrated into the measurement of about 10 indicators out of 232.

Legislative mandate for SDGs

- Recommendation by the Committee for Programme and Coordination (A/71/16), the report of which was adopted by the General Assembly (A/RES/71/6) on 27 October 2016:
  - Add “70/1Transforming our world: the 2030 Agenda for Sustainable Development” as one of UNOOSA’s legislative mandates.
- The 60th session of COPUOS in June 2017 (A/72/20):
  - Acknowledged the significant role of space science and technology applications in the implementation of the three global development frameworks adopted in 2015: the 2030 Agenda for Sustainable Development, in particular the Sustainable Development Goals; the Sendai Framework for Disaster Risk Reduction 2015-2030; and the Paris Agreement on climate change.
  - Noted that the space community should gain a visible presence in the governmental processes pertaining to the development of implementation and monitoring methods relating to the attainment of the Sustainable Development Goals, and agreed that the Office for Outer Space Affairs should explore various means to raise awareness of the benefits of space-based solutions within those processes.

UNOOSA contributing to the SDGs

SDG	Type of activity	Targets/indicators	Extent of focus
■ SDG 1 – No poverty	☐ Normative ■ Technical assistance ☐ Operational	1.4, 1.5/1.5.1 and 1.5.2.	☐ High focus ☐ Medium focus ■ Tangential focus
■ SDG 2 – Zero hunger	☐ Normative ■ Technical assistance ☐ Operational	2.3, 2.4/2.4.1, 2.c.	☐ High focus ■ Medium focus ☐ Tangential focus
■ SDG 3 – Good health and well-being	☐ Normative ■ Technical assistance ■ Operational	3.3, 3.4, 3.6, 3.7, 3.8, 3.9/3.9.1, 3.a.	■ High focus ☐ Medium focus ☐ Tangential focus
■ SDG 4 – Quality education	☐ Normative ■ Technical assistance ■ Operational	4.3, 4.a/4.a.1, 4.b/4.b.1.	■ High focus ☐ Medium focus ☐ Tangential focus
■ SDG 5 – Gender equality	☐ Normative ■ Technical assistance ■ Operational	5.a/5.a.1, 5.b.	■ High focus ☐ Medium focus ☐ Tangential focus
■ SDG 6 – Clean water and sanitation	☐ Normative ■ Technical assistance ■ Operational	6.1, 6.3/6.3.1 and 6.3.2, 6.4/6.4.2, 6.5/6.5.1, 6.6/6.6.1, 6.a, 6.b.	■ High focus ☐ Medium focus ☐ Tangential focus
■ SDG 7 – Affordable and clean energy	☐ Normative ■ Technical assistance ☐ Operational	7.1/7.1.1, 7.a.	☐ High focus ☐ Medium focus ■ Tangential focus
■ SDG 8 – Decent work and economic growth	☐ Normative ■ Technical assistance ☐ Operational	8.2, 8.6.	☐ High focus ■ Medium focus ☐ Tangential focus
■ SDG 9 – Industry, innovation and infrastructure	☐ Normative ■ Technical assistance ■ Operational	9.1/9.1.1, 9.4/9.4.1, 9.c.	■ High focus ☐ Medium focus ☐ Tangential focus

UNOOSA contributing to the SDGs (continued)

SDG	Type of activity	Targets/indicators	Extent of focus
■ SDG 10 – Reduced inequalities	☐ Normative ■ Technical assistance ☐ Operational	10.3, 10.6, 10.b.	■ High focus ☐ Medium focus ☐ Tangential focus
■ SDG 11 – Sustainable cities and communities	☐ Normative ■ Technical assistance ■ Operational	11.1/11.1.1, 11.2/11.2.1, 11.3/11.3.1, 11.4, 11.5/11.5.2, 11.6/11.6.2, 11.7/11.7.1, 11.b.	■ High focus ☐ Medium focus ☐ Tangential focus
■ SDG 12 – Responsible consumption and production	☐ Normative ■ Technical assistance ☐ Operational	12.2, 12.4, 12.b.	☐ High focus ☐ Medium focus ■ Tangential focus
■ SDG 13 – Climate action	☐ Normative ■ Technical assistance ■ Operational	13.1/13.1.1, 13.2, 13.3, 13.4.	■ High focus ☐ Medium focus ☐ Tangential focus
■ SDG 14 – Life below water	☐ Normative ■ Technical assistance ☐ Operational	14.1/14.1.1, 14.2, 14.3/14.3.1, 14.4/14.4.1, 14.7, 14.a.	☐ High focus ☐ Medium focus ■ Tangential focus
■ SDG 15 – Life on land	☐ Normative ■ Technical assistance ☐ Operational	15.1/15.1.1 and 15.1.2, 15.2/15.2.1, 15.3/15.3.1, 15.4/15.4.1 and 15.4.2, 15.5, 15.7, 15.8, 15.9.	☐ High focus ■ Medium focus ☐ Tangential focus
■ SDG 16 – Peace, justice and strong institutions	■ Normative ■ Technical assistance ■ Operational	16.8/16.8.1, 16.b.	■ High focus ☐ Medium focus ☐ Tangential focus
■ SDG 17 – Partnership for the goals	☐ Normative ☐ Technical assistance ■ Operational	17.3, 17.6/17.6.1, 17.7, 17.8, 17.9, 17.14, 17.16, 17.17, 17.18/17.18.1.	■ High focus ☐ Medium focus ☐ Tangential focus

Contribution to policy definition processes

78. Access to and equal benefits from new technologies are important. It was noted, for example, that reporting against 40 per cent of the Sustainable Development Goal indicators could be dramatically improved through access to space technology. Space technology can be used for improving urban transport flows, tackling deforestation, measuring and mitigating climate change, inter alia, but many countries are still not

benefiting from these technologies and data. The issue of the social acceptability of technologies also needs to be addressed.

Round table of science, technology and innovation innovators, funders and other supporters

79. The round table examined how to leverage frontier technologies, including by

- UNOOSA continues to be active in important processes involving policy definition relevant to space.
- UNOOSA will continue to provide advice on national space policy/law definition upon request.
- To have space activities included, through UNOOSA, as the UN gateway to space, in global processes/agendas.
- Recent attendance in HLPF, STI Forum, IAEG-SDGs…*The importance of space was highlighted in the report of STI Forum 2018*.

Awareness raising

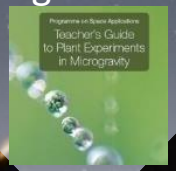
- Raise awareness of the benefits of space:
  - Side events/exhibitions at important occasions, such as HLPF;
  - Publications;
  - Workshops;
  - …

Access to Space: Human Space Technology

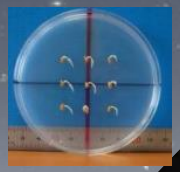
Micro/hypergravity Simulation

Access 2 Space

Teacher's guides



ZGI



2013-
2016

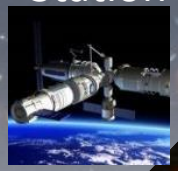
DropTES

2013-
2016
-… 2019

KiboCUBE

2016-
2021

China Space Station

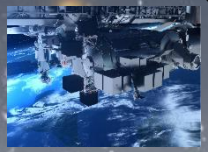


2016-

SNC Dreamchas

2016-

Airbus



2018-
2023

ESA Centrifuge

Expected
2018-

High Schools

Universities and Academics

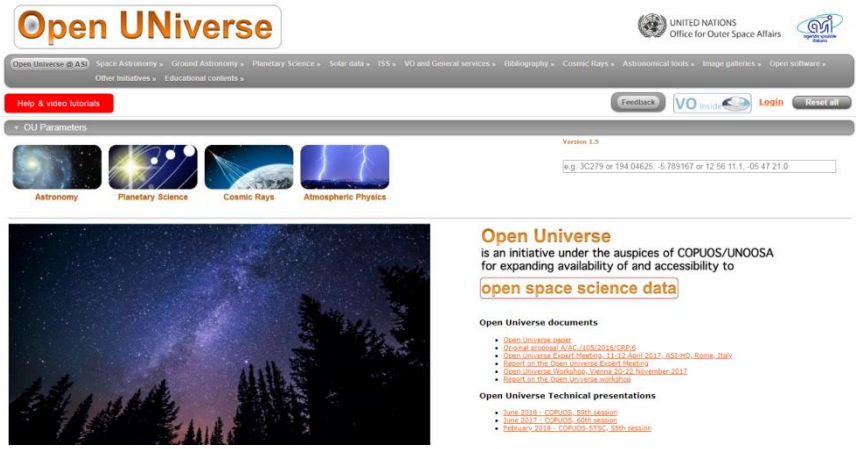
Research Centres / Institutions

Space Agencies

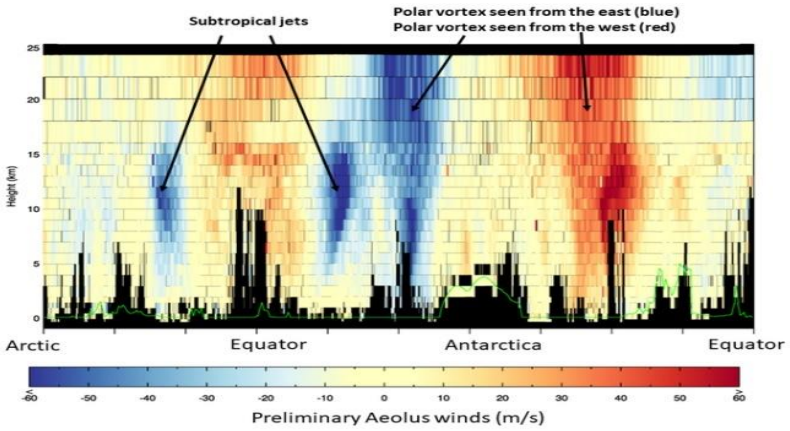
Governments and IGOs

Access to Space: EO and science data

- Free high quality EO data for countries by cooperation with multi-stakeholders:
  - DigitalGlobe;
  - Airbus Defense and Space;
  - China High Resolution EO Data Archive;
  - Copernicus and others.
- Open universe initiative:
  - Access to space science data



Open access to space solutions



- To show what solutions are already available and what benefits space can bring for the SDGs. When combined with user needs study, gaps can be identified.
- Long-term accumulating and updating process, open to all solution providers.
- Deliverable: Space Solutions Compendium.
- Recent Development:
  - A dedicated webpage/database is under construction;
  - Working together with ESA for a MoU on incorporating the ESA Catalogue of Space Solutions into the Compendium.

Space user needs study

- Expand upon the existing links between space and the SDGs, and further
  - Facilitate communication among space users and providers;
  - Raise awareness of the needs of developing countries;
  - Contribute to the planning of future global space development programmes and processes, such as the “Space2030” agenda.
- A rolling process with transparency and inclusiveness.
- Deliverable: a publicly accessible space user needs report/repository.
- Recent development:
  - Jointly organize an informal meeting with Austria on efficient ways to conduct the study in January 2019;
  - Already incorporate space user need study into the new UNOOSA project “Space solutions for the Pacific”;
  - A potential Belt and Road space user need study project, in collaboration with CNSA, is under discussion.

UNOOSA capacity building

- To fill in the gaps identified, in particular gaps found by space user need study and space solutions compendium.
- UNOOSA, as the UN's home for space affairs, will strengthen its actions as a broker to match users with solution providers.
- Recent development:
  - Space for women project and a portal;
  - The new project "Space solutions for the Pacific".

Space for Women Project

Dedicated Symposium/ Forum on Space4SDGs

- September 2018, Graz, UN/Austria Symposium on Space for the Sustainable Development Goals: stronger partnerships and strengthened cooperation for 2030 and beyond.
- 24-27 April 2019, Changsha, UN/China Forum on Space Solutions: Realizing the Sustainable Development Goals**.** Bring together space solution providers and users to forge new partnerships.

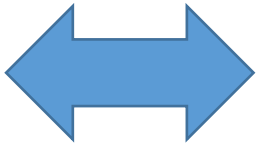
Apply via http://www.unoosa.org/oosa/en/ourwork/psa/schedule/2019/2019-un-china-forum-on-spacesolutions.html

Towards a global space partnership

- UNISPACE+50 resolution endorsed by the High-level Segment and adopted by the General Assembly on 26 Oct. 2018 (A/RES/73/6):
  - Emphasized the need to build stronger partnerships at all levels in order to enhance the contribution of space activities for the realization of the 2030 Agenda;
  - Invited COPUOS to develop a “Space2030” agenda and implementation plan;
  - Acknowledged the importance of a global partnership and strengthened cooperation among Member States, intergovernmental and non-governmental organizations, industry and private sector entities in fulfilling the “Space2030” agenda and its implementation plan.

UNOOSA and global space partnership

- Within its current mandates, UNOOSA is already building the components to lead a global space partnership for the SDGs.
- A multi-stakeholder partnership, complementary to the Global Partnership for Sustainable Development.
- Expand upon the existing links between space and the SDGs, and streamline the efforts of the space community in helping countries achieve the SDGs.



Solution and knowledge portals

- UN-SPIDER Knowledge Portal: Space4DisasterManagement

http://www.un-spider.org/

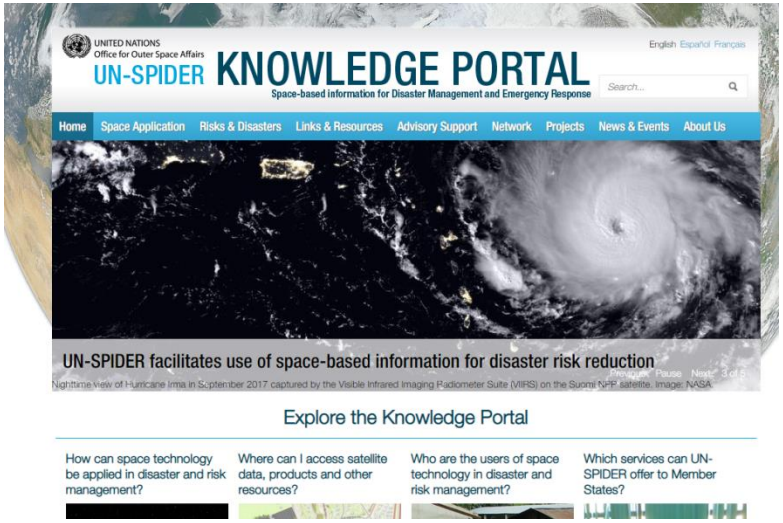
- Space4Water Portal in collaboration with Prince Sultan Bin Abdulaziz International Prize for Water. *Launched in October 2018*

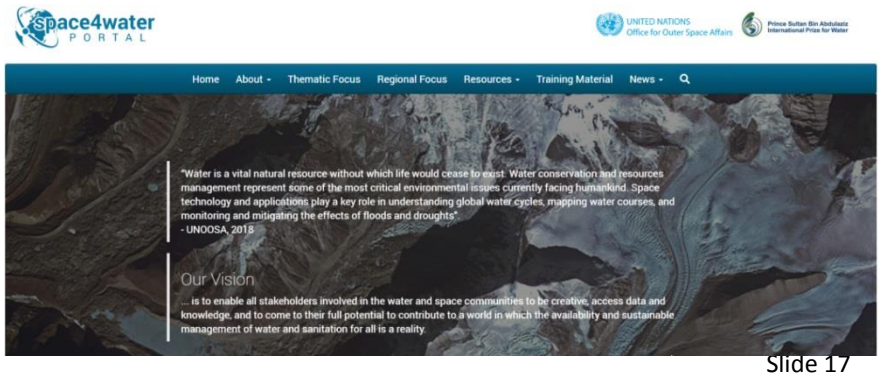
http://www.space4water.org/

- Space4SDGs Portal – Under Construction

http://www.space4sdgs.org/

- Space Solutions Compendium (Open Database) – under construction in collaboration with ESA
- Global space user need repository – Under Planning





THANK YOU

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