

Engaging with stakeholders in preparation for UNISPACE+50

**ESPI 10th Autumn Conference
Space for Sustainable Development**

**United Nation COPUOS STSC
Working Group
2 Feb 2017**

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Outline

- **Pathways to Sustainable Development**
- **Space community - supply**
- **Development actors - demand**
- **Dialogue, Stakeholders**
- **ESPI 10th Autumn Conference “Space for Sustainable Development”**
- **Other relevant fora, conferences, seminars**

Global community & SDGs

- 4 dimensions of sustainable development
 - Economic development
 - Social inclusion
 - Environmental sustainability
 - Good governance



Space & Sustainable Development




SUSTAINABLE DEVELOPMENT GOALS



Building blocks - Key questions

1. Where has space already proven useful and which programs currently exist ?
2. Where does it appear that space has been underused ?
3. What is the current dynamic and who are the relevant actors ?
4. What are the current dialogue fora and tools ?
5. Which actors are overlooked ?
6. How to create a sustainable dialogue and which new fora and tools are advisable ?
7. Are new programmatic tools possible ?

ESPI S4SD project activities

- **European Union consultations, Brussels (Sept 2015)**
 - ESA Jam Session on Migration, Paris
- **EU DG-ECHO Partners conference 2015, Brussels**
 - United Nations High Level Forum, Vienna - Dubai
 - ESPI Advisory Group on Sust Development
 - GEO Roundtable, Geneva
 - FSD consultation on drones, Geneva
- **ESPI dialogue platform with NGOs**
 - United Nations COPUOS, Vienna
- **ESPI 10th Autumn Conference, Vienna**
- **International Conference on Sustainable Development New York (Sept 2016)**

ESPI S4SD project highlights



European Space Policy Institute

Space for Sustainable Development

Report 59
June 2016

Stefano Ferretti
Jörg Feustel-Büechl
Roy Gibson
Peter Hulsroj
Andreas Papp
Elisabeth Veit



Space community – supply

- Multitude of sectors and actors with very different interests, specializations, backgrounds, and institutional character
 - Space Agencies, Industry, Academia
- Space technology & economic development:
 - Private actors - **Connectivity**
 - European Union - Copernicus Programme
 - Tiger - **Earth Observation**
 - United Nations OOSA
 - ICG (GNSS) **Navigation**

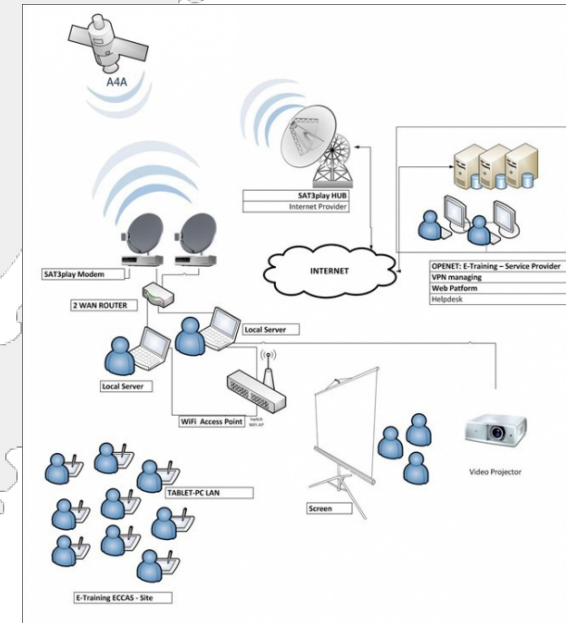


Space as an enabler

- Space services vs terrestrial infrastructures
 - Leapfrog based development
- Integrated innovative services
 - e-health
 - tele-education



*Sway4*edu ²
Satellite way for education



Space in the future

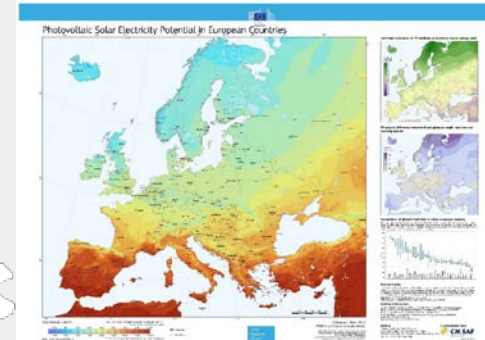


A new role for Space ?

- Creation of Space programs addressing societal needs
- Innovative downstream services integrating Space and social data, climate change-->emissions monitoring

Space as an essential tool for life on Earth

- Sustainable development & Smart Cities
- Connectivity & Big Data
- Mobility: integrated and green transportation systems

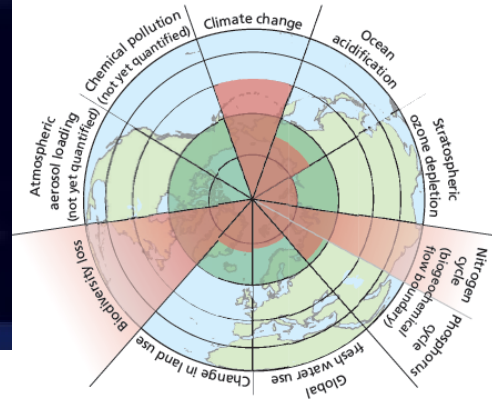


Space spin-in and Space spin-off

- e-health, Key Enabling Technologies



Development actors – demand



1.16 Planetary boundaries

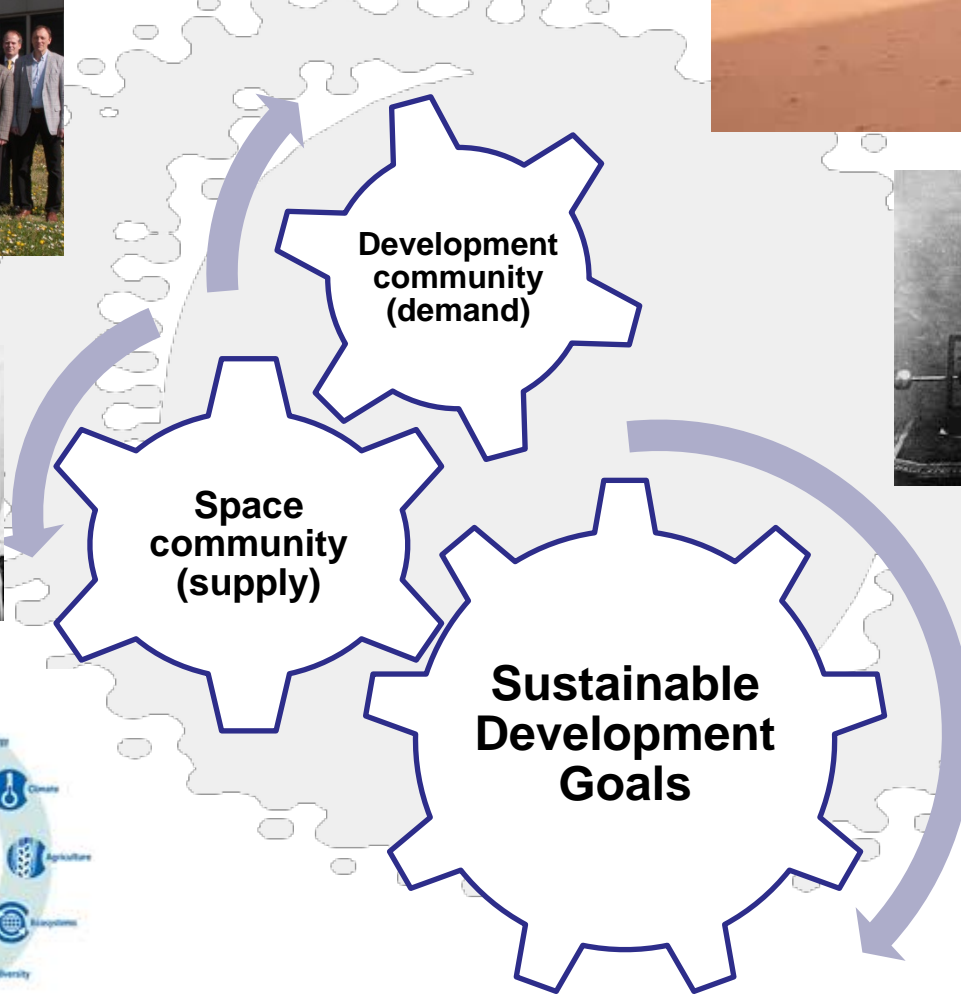
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Some of the key development actors:

- national governmental actors
- citizens
- non-governmental actors
- governmental aid organisations
- intergovernmental organisations in the field
- the Office of the UN Special Representative for the SDGs,
- development consultancy firms

Dialogue



ESPI dialogue platform with NGOs

- How important it is for the space domain to listen to the actual needs of developing countries (e.g. new service design)
- Seriously consider when space-based solutions are indeed the best and most cost effective (e.g. creation of helpdesk)
- The potential of space for managing the environment and the local effects of climate change, for telemedicine and epidemiology, for facilitation of telecommunication, education and logistics management (e.g. local actors involvement)
- The challenge is not so much to create new space infrastructure, as it is to use the existing infrastructure and its functionalities and data in an even better way and, through this, contribute to the achievement of the SDGs across a broad spectrum of individual goals (e.g. new holistic programs)



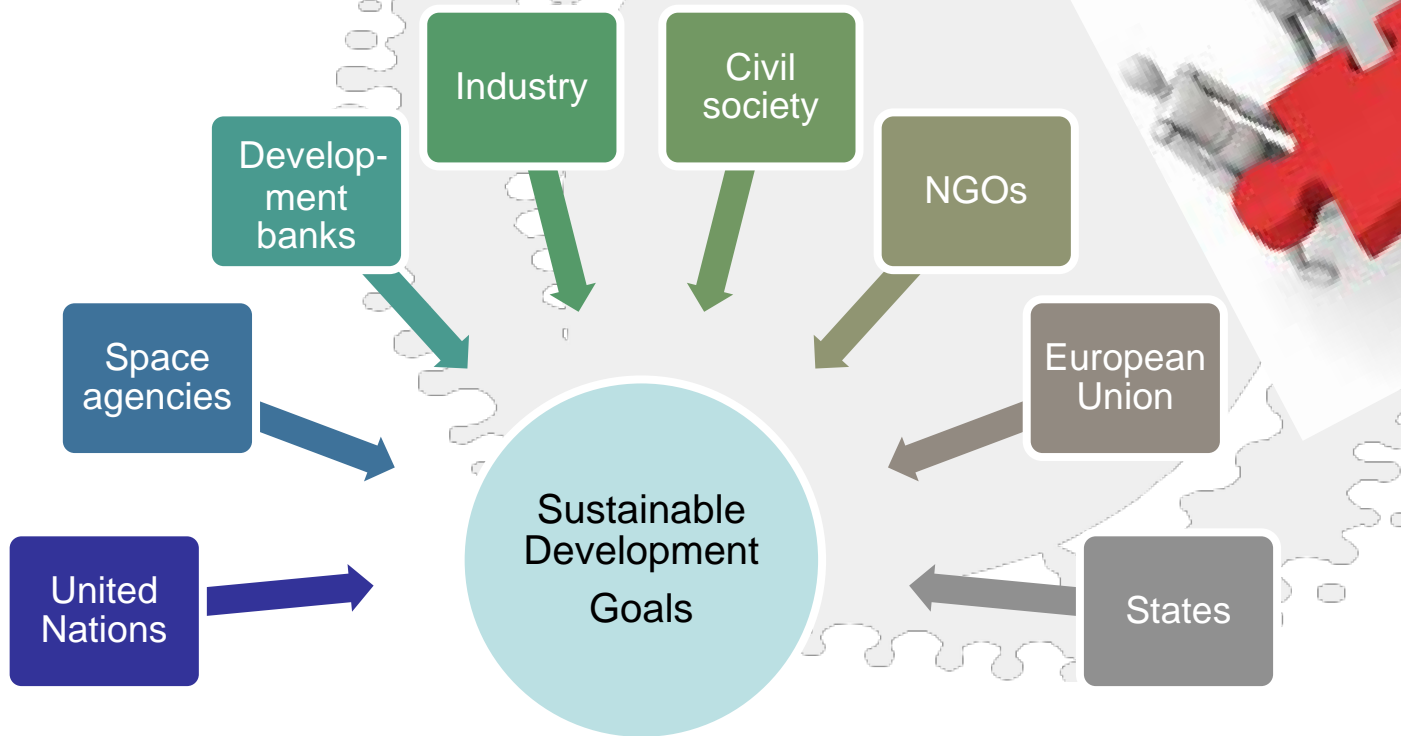
New Programs

- Space Agencies & third parties
- Optional Programs structure
- Space incubators for development





Stakeholders



ESPI 10th Autumn Conference

Highlights

- Dialogue with the most relevant stakeholders, including both development and space actors.
- Presentation of the African Union Space Policy and Strategy released in 2016
- UN Agenda 2030: the role of UNOOSA and Space Agencies in supporting Sustainable Development
- New entrants in space and their relation to sustainable development: telecommunications, drones, Additive Layer Manufacturing, and cubesats.

ESPI 10th Autumn Conference

- *Implementing the SDGs using Space: health and education at ISRO*
- ISRO, the Indian Space Research Organization, has followed this approach in order to bring benefits to remote areas while accelerating the pace of national development.
- The main focus of these efforts has been in the fields of education and health, building upon initial experiments at the beginning of the sixties, which aimed at reaching out to the rural and remote areas of India to guarantee the transmission of school educational programmes.
- According to Professor Bhatia, a possible reason why Telemedicine has not been institutionalised could be the missed involvement of ISRO in the development of the telemedicine software. However, telemedicine continues to be used in India by private hospitals, NGOs and governmental hospitals in rural and remote areas, even without becoming part of the government health system.

Key Recommendation 1

- **Space actors were urged to adopt an end-to-end approach with comprehensive exploratory work on identifying user needs to avoid an inadvertent perpetuation of inequality and prevent ‘technology push’ scenarios. To this end, greater inter-sectorial, inter-institutional (e.g. state and NGOs), and international cooperation and information sharing shall be sought.**

Key Recommendation 2

- **The space sector should play a proactive role in increasing the availability of space resources, while IGOs, NGOs, and states should improve their technology awareness to strengthen capacity building, improve infrastructures as well as reduce environmental impacts. To this end, speakers expressed a desire for a formalized cross-sectoral dialogue platform, as well as for an up-to-date archive on earth observation images incorporating the capacity for near-real time map building.**

Key Recommendation 3

- **Best practices in the field should also be compiled so that basic common requirements serving the SDGs for the next generation of space infrastructure might be devised. In this context the African Union presented its Space Policy and Strategy which aims to create a well-coordinated and integrated African programme, while addressing user needs and improving access to space services, also by enhancing international cooperation.**

Other fora & conferences

ESPI participation to relevant fora, conferences and debates, where the role of space as an enabler of sustainable development was discussed as part of the preparatory activities leading up to UNISPACE+50:

- 10th ESPI Autumn Conference “Space for Sustainable Development”, Vienna
- International Conference on Sustainable Development, Columbia University, New York
- United Nations / International Astronautical Federation Workshop on Space Technology for Socio-Economic Benefits: "Integrated Space Technologies and Applications for a Better Society", Mexico
- International Astronautical Congress 2016, Mexico
- 1st International Space Forum at Ministerial level – ISF 2016, Trento, Italy
- United Nations/United Arab Emirates High Level Forum on Space as a Driver for Socio-Economic Sustainable Development, Dubai

Conclusions

- Achieving the sustainable development goals is mainly a question collective will!..... including also the space community
- Space services, as enablers, have a very substantial role to play in implementing the SDGs
- Proactive measures to ensure optimum contribution
 - facilitate information exchange and dialogue
 - expand the tool box for practical cooperation
- Much remains to be done and it is in the interest of everybody that implementation of the SDGs occur as quickly as possible.
- Space assets have an important role to play as part of an integrated whole!

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