



UNITED NATIONS
Office for Outer Space Affairs

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Thematic Priority 6: International cooperation towards low-emission and resilient societies

United Nations Office for Outer Space Affairs
United Nations Office at Vienna
www.unoosa.org



- **Objectives**
- Background and context of TP6
- The components
- Cross cutting elements
- One road map
- Specific recommendations

Objectives of thematic priority 6: International cooperation towards low-emission and resilient societies

- a) Define **synergies** between climate change mitigation efforts, disaster risk reduction and global development;
- b) Improve **integrated space applications** approaches and the interoperability of space-based systems and ground/in situ systems;
- c) Provide requirements to new developers for **coverage in geographical areas not sufficiently monitored** or applications that need further development;
- d) **Identify governance and cooperation mechanisms** to support this objective; and
- e) **Develop a roadmap** for enhanced resiliency of space-based systems and the affiliation of existing and future Earth observation, global navigation satellite system and telecommunication constellations for disaster risk reduction and climate change monitoring and mitigation



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Background and context of TP6

- **10 years** of work by the United Nations Platform on Space-based Information for Disaster Management and Emergency Response (**UN-SPIDER**)
- UNOOSA activities on climate change
- **DRR and Climate change synergy** as discussed in Sendai Framework
- Synergies with **Sendai Framework, SDGs, Paris Agreement**
- **Resiliency of space based systems**
- **Global partnership**



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A. Disaster Risk Reduction

B. Mitigation and adaptation to climate change

C. 2030 Agenda for Sustainable Development

D. Space Infrastructure Resiliency



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A. Disaster Risk Reduction

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- Relevance to **1st and 4th priorities** of Sendai Framework
 - Understanding disaster risk; and
 - Enhancing disaster preparedness for effective response and to “Build Back Better” in recovery, rehabilitation and reconstruction
 - Disaster risk reduction requires a **multi-hazard approach and inclusive risk-informed decision-making** based on the open exchange and dissemination of disaggregated data
 - **Disaster risk reduction is essential to achieve sustainable development**



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B. Mitigation and adaptation to climate change

- Reference to Paris Agreement
- Cancun adaptation framework: Sharing information, good practices, experiences and lessons learned, Strengthening institutional arrangements, Strengthening scientific knowledge on climate, support decision-making
- The role of space-based science and technology in the context of climate change is essential, but, unfortunately, not yet obvious to all stakeholders at national, regional or global levels.
- A coordinated approach, as promoted under thematic priority 6, is thus ever more important.



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C. 2030 Agenda for Sustainable Development

- **Baseline data** for several of the targets **remains unavailable**, and they call for increased support for strengthening data collection and capacity building in Member States
- The role of space-based science and technology in this context is essential.
- In view of the scale of actions needed in establishing data collection systems, providing capacity building and in promoting the benefits of space-based science and technology, partnerships at all levels are necessary and must be well coordinated



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D. Space infrastructure resiliency

- The **Dubai Declaration** (first High Level Forum on 24 November 2016), **notes the stronger interconnectedness between actions to enhance the safety, security and sustainability of outer space activities, including the protection of space assets, space systems and critical infrastructures.**
- It also asserts that **space exploration is a long-term driver for innovation**, strengthening international cooperation and creating new opportunities for addressing global challenges
- This area could benefit from establishing an exploration and innovation coordination mechanism at the global level



Cross cutting elements

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- A. Integrated space applications
 - Integration applications of satellite technologies
 - Multilateral, multi-stakeholder cooperation mechanisms
 - multi-hazard early warning systems and disaster risk information
 - B. Interoperability between space-based systems and ground/in-situ systems
 - legislation on interoperability of data
 - NSDI
 - C. Consideration of user needs in data acquisition systems design and operations
 - Open access
 - Coordinated planning
 - geographical areas that are not sufficiently monitored (SIDS, LDCs, LLDCs)
 - D. Governance and cooperation mechanisms for the implementation of thematic priority 6
 - Engagements at international, regional and national level
 - Global Partnership for the Coordination of the Development, Operation and Utilization of Space related Infrastructure, Data, Information and Services in support of the 2030 Development Agenda



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One Road map

- a roadmap for **coordination between the Office for Outer Space Affairs and relevant entities** to ensure synergies between climate change mitigation efforts, disaster risk reduction and global development;
- a roadmap for **enhanced resiliency of space-based systems, population and infrastructure**, built on applications of Earth observation, global navigation satellite systems and telecommunication constellations for disaster risk reduction, climate change monitoring and mitigation/adaptation and promoting integrated development; and
- a strategy for the **global partnership for the coordination of the development, operation and utilization of space related infrastructure, data, information and services in support of the 2030 development agenda (SPACE for SDGs)**.



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Specific Recommendations

- UNISPACE+50 to declare 'space infrastructure' as critical.
- The Office for Outer Space Affairs to fully implement the UNGA resolution 61/110 on UN-SPIDER.
- A UN-SPIDER 2030 Strategy is used for strengthening UN-SPIDER with Member States getting benefits from its abilities and experience in other fields, also taking advantage of its RSOs network.
- The Office for Outer Space Affairs to implement the roadmap for thematic priority 6 as presented in this report.
- The Office for Outer Space Affairs to implement the global partnership – SPACE for SDG.
- The Office for Outer Space Affairs to enhance regional presence to cover important regions such as establishing the office in Bangkok to cover Asia and the Pacific region and reinforcement of the Beijing Office to cover wider areas than UN-SPIDER.



United Nations International Conference on Space-based Technologies for Disaster Risk Reduction - "Building Resilience through Integrated Applications", in October 2017 in Beijing



- Integrated applications for disaster risk management
- The conference highlighted various aspects of integration
 - **policy and institutional arrangements** for integrating ‘space’ in decision making
 - integration of **space and in-situ** data needed for disaster risk reduction
 - **integration of various space technology** components Earth observation, global navigation satellite system and telecommunication constellations
 - The conference featured specific cases, tools, methods and technologies keeping the focus on integrated applications to build resilience.
 - Message: **‘Space’ is not a standalone component in the efforts to build resilience, but needs to be integrated at all levels** covering policy, coordination, partnerships and technologies so that space is mainstreamed in integrated applications