



第三届联合国教科文组织名录遗产与可持续发展黄山对话会
The 3rd Huangshan Dialogue on UNESCO Sites and Sustainable Development

中国·黄山
HUANGSHAN·CHINA

主题：UNESCO名录遗产可持续发展
Theme: UNESCO Sites facilitating Sustainable Development



Asia-Pacific Plan of Action on Space Applications for Sustainable Development (2018-2030): Encouraging Multi-Stakeholder Partnerships for Harnessing the Potential of Space

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Asia-Pacific Plan of Action on Space Applications for Sustainable Development (2018-2030) – Why?

- Integrating geospatial dimensions with digital innovations
- Digitally driven innovations driving Geo-spatial Information Systems
 - Faster and more versatile digital connectivity, higher resolution satellite-derived images and geographic information systems
 - Generating more and more data to inform decision-making in real time

Asia-Pacific Plan of Action on Space Applications for Sustainable Development (2018-2030) – Why?

- The Asia-Pacific region is rapidly evolving into a hub of innovation, advances in digital innovations including the Internet of things, artificial intelligence, big data, cloud computing, robotics and automation
- Space applications have significant potential to contribute to the SDGs, particularly in the areas of,
 - Disaster risk reduction and resilience,
 - natural resource management,
 - connectivity,
 - social development,
 - energy
 - and climate change

Asia-Pacific Plan of Action on Space Applications for Sustainable Development (2018-2030) – Why?

Significant Gaps and Challenges in

Capacity and resources,
information-sharing

integration of geospatial data in official statistics, and its
utilization for accurate and evidence-based decision-making;

And procedural constraints for acquiring, sharing and
utilizing space-based products and services



Asia-Pacific Plan of Action on Space Applications for Sustainable Development (2018-2030) – Why?

In Summary,

while rapid digital innovations continue to augment the availability of geospatial information on providing countries of Asia and the Pacific, including those with special needs, with an expanded choice of tools to implement the 2030 Agenda, there exist major gaps and challenges.

A Regional Plan of Action will help to harness opportunities and address challenges in a collective way

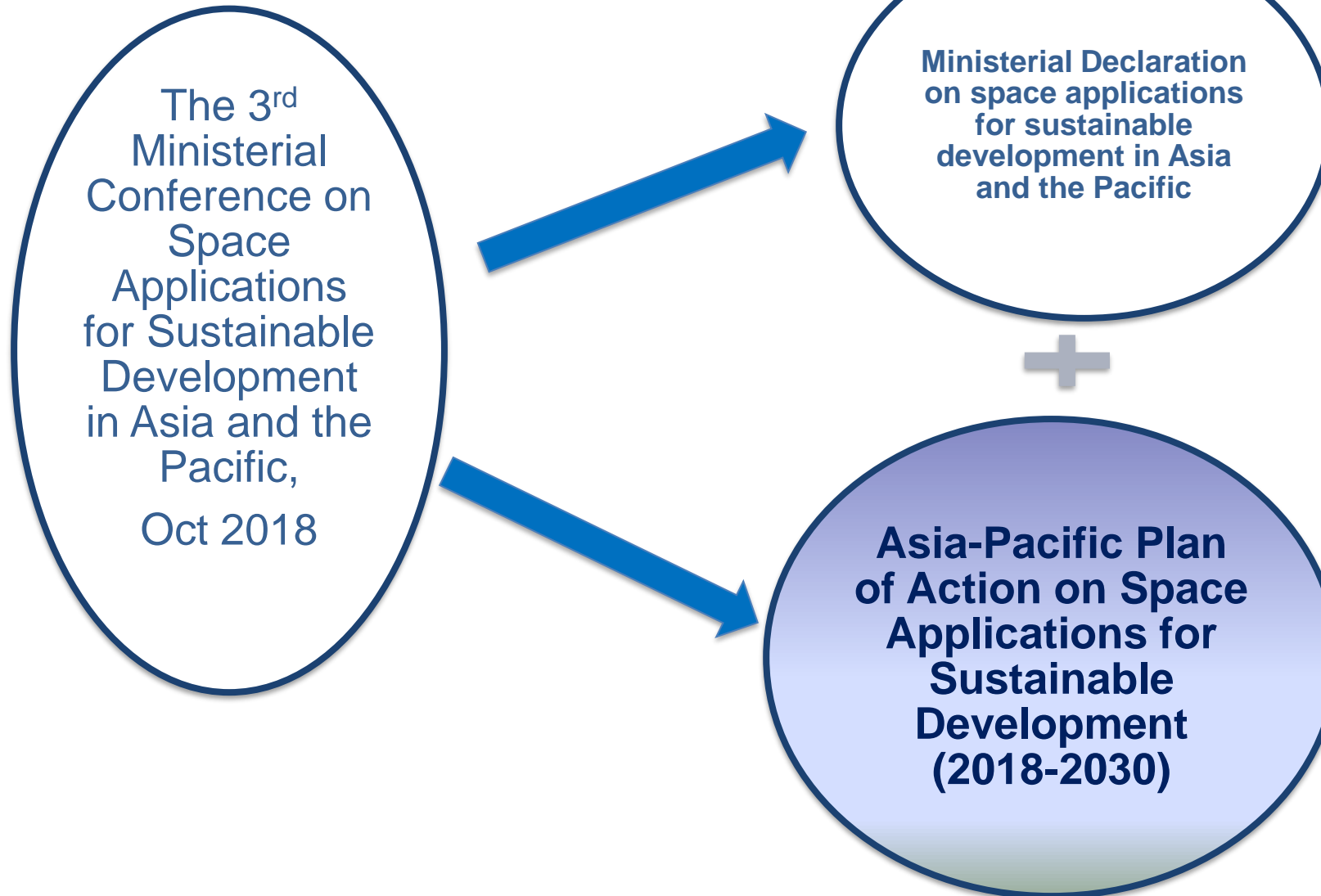
Formulation of the Regional Plan of Action (2018-2030)

- *Inclusive, Collective, and Country-needs-driven...*

Milestones

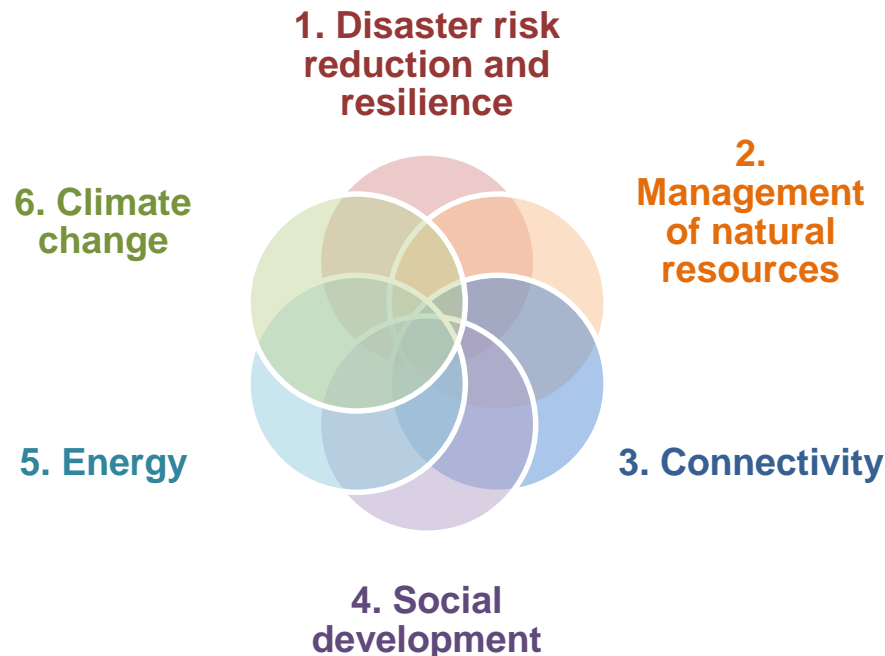


Adoption at the Ministerial Conference



Focus of Interventions under the Plan of Action

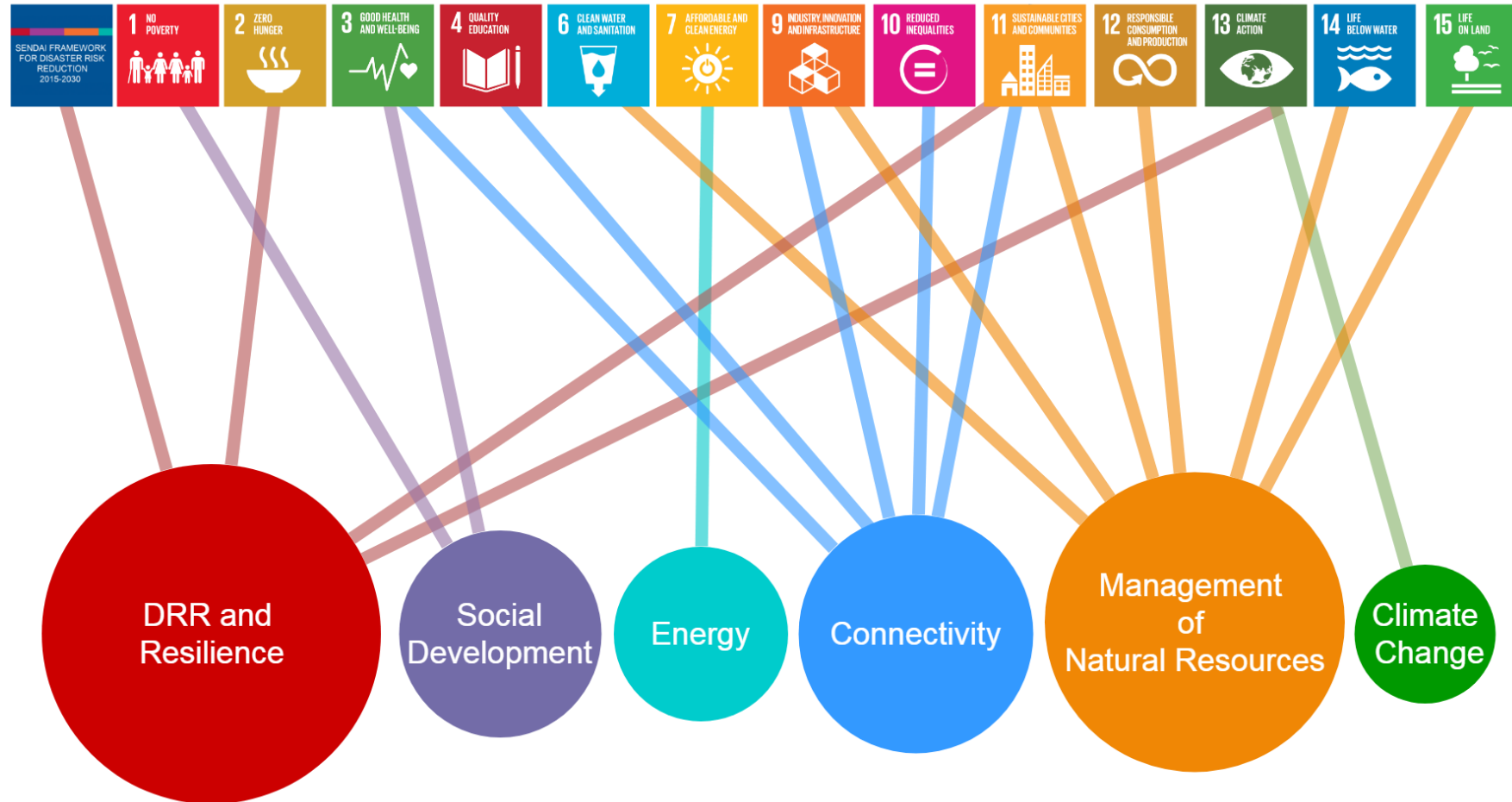
- Build on good practices and experiences that emerged from the implementation of the previous Asia-Pacific Plan of Action (2012-2017)
- In line with the thematic areas contained in ESCAP's Regional Road Map on SDG Implementation, the current plan of action addresses the following thematic areas:



- ✓ Significantly contributes to the implementation of 14 SDGs and Sendai Framework for DRR
- ✓ Directly contributes to achieving 37 targets

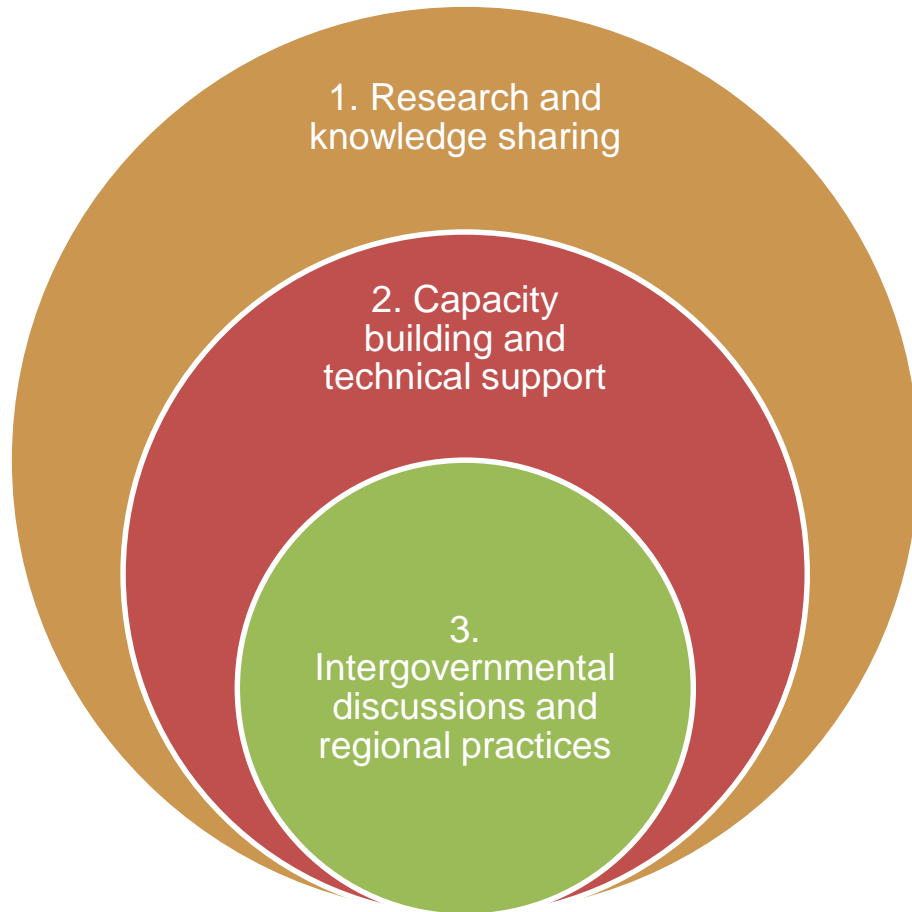


Integrating Geospatial Dimensions for a Sustainable Asia-Pacific



- **14 Goals:** where space applications can significantly contribute to global framework
- **37 Targets:** as prioritized by the space community for the Asia-Pacific region

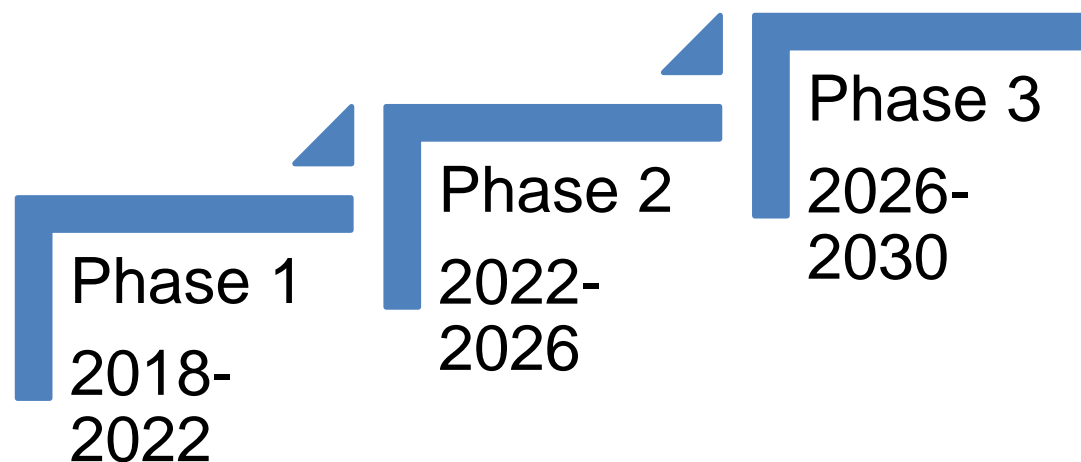
Implementation modalities



- ✓ Among the three, capacity building and technical support has been recommended by the ICC as a priority for most Asia-Pacific countries in implementing the plan of action
- ✓ Focus is on geospatial information applications

Review phases of the plan of action

As the plan of action covers a long implementation period until 2030, the ICC, at its ad hoc session on 8-9 October 2018, recommend to review implementation of the Plan of Action at Ministerial level every 4 years.



Means of implementation

- An ongoing collective effort.
- Foresees *partnerships at the regional level*, between existing RESAP members, intergovernmental mechanisms, international and technical organizations.
- Leverages existing capacities in the region.
- Primary responsibility of implementation is with governments on a voluntary basis, and tailored to country needs and development priorities.
- A Trust Fund is proposed to be established to support national and regional implementation.



Plan of Action

Disaster Risk Reduction and Resilience

Goals and targets	<i>Action Area 1</i> <i>Research and knowledge-sharing</i>	<i>Action Area 2</i> <i>Capacity-building and technical support</i>	<i>Action Area 3</i> <i>Intergovernmental discussions and regional practices</i>
<p>Sendai Framework for Disaster Risk Reduction</p> <p>Targets: 1, 2, 3, 4 Sustainable Development Goal 11: Sustainable cities and communities</p> <p>Target: 11.5</p>	<ul style="list-style-type: none"> Identify interfaces between, and integration of, traditional space-based information and frontier technologies to address disaster risk management and build resilience. Research opportunities for including Global Satellite Navigation System for infrastructure and utilities mapping, relevant to disaster damage assessment and early warning systems. Research on tele-health solutions using space technology to improve the capacity to react to emergency health situations. 	<p>Innovation</p> <ul style="list-style-type: none"> Develop capacity in integrating and utilizing space and geo-informatics applications with new methods, tools and technologies, from other digital innovations, for the mapping process. Contribute to the sustainable reconstruction phase of infrastructure in the post-disaster phase and to the reinforcement of resilience through the Recovery Observatory concept. 	<ul style="list-style-type: none"> Promote the use of geospatial information management systems, global navigation satellite systems and communications satellite systems towards disaster risk reduction and management at the policy level. Discuss and promote the potential concept of a common regional information technology system to support activities related to space applications for sustainable development. Promote discussions on data and information protocols for the use of global navigation satellite systems in all phases of disaster management. Provide support to mitigate the effects of disasters occurring in Asia and the Pacific through the International Charter on Space and Major Disasters.

Plan of Action

Disaster Risk Reduction and Resilience

Goals and targets	<i>Action Area 1 Research and knowledge-sharing</i>	<i>Action Area 2 Capacity-building and technical support</i>	<i>Action Area 3 Intergovernmental discussions and regional practices</i>
<p>Sendai Framework for Disaster Risk Reduction</p> <p>Targets: 1, 2, 3, 4 Sustainable Development Goal 11: Sustainable cities and communities</p> <p>Target: 11.5</p>	<ul style="list-style-type: none"> • Share knowledge on the use of space-based information to enhance people-centred early warning systems and better understand elements at risk. • Participate in holistic research and development, in cooperation with international and regional initiatives, such as the Committee on Earth Observation Satellites Working Group on Disasters, and the Group on Earth Observations Data Access for Risk Management initiative. 	<p style="text-align: center;">Risk Reduction</p> <ul style="list-style-type: none"> • Provide technical support on how to integrate, enhance and strengthen multi-hazard monitoring and early warning systems and real-time situational analysis for rapid-onset disasters, including flash floods from high-altitude lake and glacial outbursts, as well as slow-onset disasters, including drought and sand and dust storms. 	<ul style="list-style-type: none"> • Integrate geospatial analytical techniques and products into emergency and crises management processes and plans, according to national circumstances. • Promote the use of space applications in strengthening early warning systems by sharing good practices and discuss challenges in disseminating early warning information. • Promote the use of space applications for critical infrastructure mapping and support actions related to building resilient societies. • Integrate space applications to support the Sendai Framework Monitor system and relevant indicators.

Plan of Action

Disaster Risk Reduction and Resilience

Goals and targets	<i>Action Area 1 Research and knowledge-sharing</i>	<i>Action Area 2 Capacity-building and technical support</i>	<i>Action Area 3 Intergovernmental discussions and regional practices</i>
<p>Sendai Framework for Disaster Risk Reduction</p> <p>Targets: 1, 2, 3, 4 Sustainable Development Goal 11: Sustainable cities and communities</p> <p>Target: 11.5</p>	<ul style="list-style-type: none"> • Identify, collect and compile ground-based data required for disaster preparedness and response, e.g., population density, infrastructure (housing type), elements at risk and other baseline data. • Identify risk areas related to earthquakes at a regional level, through ground-based observation networks using global navigation satellite systems 	<p style="text-align: center;"><i>Disaster assessment</i></p> <ul style="list-style-type: none"> • Integrate ground-based and satellite systems for effective monitoring of hazards, disasters and critical infrastructure using global navigation satellite systems. • Provide support and access to pre-, during-and post-disaster satellite data to vulnerable and affected countries for damage assessment. • Carry out risk mapping of highly vulnerable areas and communities by identifying hazards, vulnerabilities and exposure to risks. • Identify risks from historical observations of natural hazards in preparing for natural disasters. 	<ul style="list-style-type: none"> • Consult with meteorological satellite providers to provide data and information to disaster-affected countries, e.g., through datasharing norms or the International Charter on Space and Major Disasters • Collect good practices on satellite-mapping products which can contribute to developing guidelines and principles.

Plan of Action

Disaster Risk Reduction and Resilience

Goals and targets	<i>Action Area 1 Research and knowledge-sharing</i>	<i>Action Area 2 Capacity-building and technical support</i>	<i>Action Area 3 Intergovernmental discussions and regional practices</i>
<p>Sendai Framework for Disaster Risk Reduction</p> <p>Targets: 1, 2, 3, 4 Sustainable Development Goal 11: Sustainable cities and communities</p> <p>Target: 11.5</p>	<ul style="list-style-type: none">• Develop and share tools, publications and guidelines relevant to Earth observation for disaster response.• Research and share knowledge on mobile information and communication technology tools for emergency response.	<p><i>Emergency Response</i></p> <ul style="list-style-type: none">• Support and encourage becoming parties to the International Charter on Space and Major Disasters and regional frameworks, such as Sentinel Asia.	<ul style="list-style-type: none">• Continue to ensure the smooth coordination of Earth observation data provided to disaster-affected countries, through existing global and regional mechanisms.

Plan of Action

Management of Natural Resources

Goals and targets

Action Area 1
Research and knowledge-sharing

Action Area 2
Capacity-building and technical support

Action Area 3
Intergovernmental discussions and regional practices

Sustainable Development Goal 11: Sustainable cities and communities
Targets: 11.4, 11.6, 11.b

- Research on the use of satellite data to protect and safeguard cultural and natural heritage.

Natural and Cultural Heritage

- Develop capacity for identifying and mapping cultural and natural heritage sites, including 3D modelling and terrestrial laser scanning for visualisation.

- Work with existing intergovernmental mechanisms and international and regional organizations to provide satellite data and information to support the implementation of national natural and cultural heritage protection plans.



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Thank You!

