

Staff working paper series
Information and Communications Technology and
Disaster Risk Reduction Division

Good practices and emerging trends on geospatial technology and
information applications for the Sustainable Development Goals in
Asia and the Pacific

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Abbreviations

| | |
|--------|--|
| AI | Artificial Intelligence |
| APRSAF | Asia-Pacific Regional Space Agency Forum |
| APSCO | Asia-Pacific Space Cooperation Organization |
| ASEAN | Association of Southeast Asian Nations |
| CNSA | China National Space Administration |
| DRM | Disaster Risk Management |
| DRR | Disaster Risk Reduction |
| EO | Earth Observation |
| ESCAP | United Nations Economic and Social Commission for Asia and the Pacific |
| EWS | Early Warning Systems |
| GDP | Gross Domestic Product |
| GIS | Geographic Information Systems |
| GISTDA | Geo-Informatics and Space Technology Development Agency – Thailand |
| GNSS | Global Navigation Satellite Systems |
| ICC | Intergovernmental Consultative Committee |
| ICT | Information and Communications Technology |
| IoT | Internet of Things |
| ISRO | Indian Space Research Organisation |
| ITU | International Telecommunication Unit |
| JAXA | Japan Aerospace Exploration Agency |
| KARI | Korea Aerospace Research Institute |
| LDCs | Least Developed Countries |
| LLDCs | Land-Locked Developing Countries |
| NASA | National Aeronautics and Space Administration |
| NGO | Non-governmental organization |
| PIC | Pacific Island Countries |
| RESAP | Regional Space Applications Programme for Sustainable Development |
| SAARC | South Asian Association for Regional Cooperation |
| SAFE | Space Applications for Environment |

| | |
|---------|--|
| SDGs | Sustainable Development Goals |
| SFDRR | Sendai Framework for Disaster Risk Reduction |
| SIDS | Small Island Developing States |
| UAV | Unmanned Aerial Vehicle |
| UN OCHA | United Nations Office for the Coordination of Humanitarian Affairs |
| UN-GGIM | United Nations Committee of Experts on Global Geospatial Information Management |
| UNISDR | United Nations Office for Disaster Risk Reduction |
| UNITAR | United Nations Institute for Training and Research |
| UNOOSA | United Nations Office for Outer Space Affairs |
| UNOSAT | United Nations Institute for Training and Research (UNITAR) Operational Satellite Applications Programme |
| WMO | World Meteorological Organization |
| WRF | Weather Research and Forecasting |

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Space applications for sustainable development

Geospatial services, stemming from space applications and geospatial data, are defined as services provided by geographic components, such as data and information. Geospatial services play a large role in all parts of our lives and are deeply embedded in everyday activities, from weather forecasting maps to navigation systems to ordering online deliveries. These services have a significant impact on all aspects of everyday life and were recognised at the 2018 United Nations World Geospatial Information Congress for their utility in service of social, economic and environmental development¹.

The Asia-Pacific has become a hub of innovation which is transforming the way we live, work, and relate to one another. Digital innovation such as artificial intelligence, big data, the Internet of things and cloud computing brings new and innovative solutions to pressing global problems. Faster and more versatile digital connectivity, satellite data, geographic information systems and spatial analysis have become increasingly accessible and available, generating more evidence-based data to support real-time decision-making. Geospatial information is also seeing increased incorporation into development planning, leading to more accurate monitoring and evaluation of development interventions.

Although many governments have realised the value that geospatial services play, developments in geospatial services are still focused on traditional applications and methods. A number of countries lack human, technical and financial resources required to undertake the most basic space-related activities. With increasing importance in transforming our world and working towards a more sustainable future, the need to provide geospatial benefits has grown in importance. Geospatial services are recognized as innovative technologies in supporting the implementation of the global development agendas, including Transforming our World: the

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