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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December 2018

Acknowledgements

This working paper was prepared by Ayeisha Sheldon, of Space Applications Section. Substantive comments were provided by Keran Wang Chief, Space Applications Section, Kelly Hayden, Ingrid Dispert, Syed T. Ahmed, Rishiraj Dutta, and Eric Roeder, under the general guidance of Tiziana Bonapace, Director, Information and Communications Technology and Disaster Risk Reduction Division of the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP). Patricia Budiyanto provided administrative support.

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 development[1].

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