

Space for sustainable development: technology and its applications, including the United Nations Programme on Space Applications**Madam Chair and Distinguished delegates,**

Indian delegation would like to inform this august gathering of its significant accomplishments in the use of space technology to support Sustainable Development. India has always advocated the path of sustainable development to sought balance between the environment and development. Towards this, Space technology plays a vital role in planning and monitoring of developmental activities to meet the societal needs, at the same time minimising their adverse impacts on ecology and environment.

Madam Chair,

Indian Space Programme is unique, in the sense it is user driven, wherein missions are defined based on societal requirements. Through the institutional mechanism involving the triad of Government-Academia-Industry, the space applications are driven through progressive enhancements using constructive feedback mechanisms.

Madam Chair,

India has various National level programmes for mapping and monitoring of natural resources like wetlands, biodiversity, coral reef, forest cover, snow cover area, glaciers and waterbodies, using space inputs. During 2024, the 18th cycle of annual national level mapping of Land Use Land Cover (LULC) has been carried out at 1:2,50,000 scale and the LULC changes and its impact of environment are quantified. The outcomes of these activities are provided as inputs to United Nations Framework Convention on Climate Change (UNFCCC).

Madam Chair,

India gives high priority to research and innovations in space applications for agriculture sector to ensure global food security. India actively utilises the space inputs for agriculture monitoring and crop production forecasting for ten major crops. Work is underway to extend it for more crops. The space inputs are also used for village level crop yield estimation and for optimising the crop cutting experiments (CCEs) required for crop yield assessment.

Madam Chair

India has showcased the potential of space inputs in implementation and monitoring of world's largest rural employment guarantee programme under Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA). Space technology has been used for mapping/monitoring more than 6 crore assets/activities generated under the scheme. Changes brought in, due to the implementation of monitoring Natural

Resources Management activities with the help of high-resolution satellite data (GeoMGNREGA).

High resolution thematic database (Land Use / Land Cover, Drainage, Settlements, Rail & Road) is generated using space inputs as part of Space-based Information Support for Decentralised Planning (SIS-DP) initiative. This database and asset planning tools are made accessible across the country through 'Bhuvan Panchayat 4.0' portal, to support the decentralised planning activities.

Madam Chair

Capacity Building of human resources to exploit the potentials of Earth Observation data in Sustainable Development is well acknowledged by the India. Through the UN affiliated Centre for Space Science and Technology Education in Asia and the Pacific (CSSTEAP), over the past 29 years, 70 Post Graduate (PG) and 87 specialised short courses are conducted benefitting 4095 participants from more than 65 countries.

Madam Chair

India has developed necessary expertise to take the benefits of space technology to the grass root level and has demonstrated the same through various application projects for sustainable development in various sectors.

Thank you Madam Chair and Distinguished delegates.