STATEMENT OF PAKISTAN DELEGATION

59TH SESSION OF THE SCIENTIFIC & TECHNICAL SUBCOMMITTEE (STSC) OF THE UNITED NATIONS COMMITTEE ON THE PEACEFUL USES OF OUTER SPACE (UNCOPUOS); 7-18 FEB 2022 – VIENNA, AUSTRIA

Agenda Item No. 06: Space Technology for Sustainable Socio-Economic Development

Mr. Chairman

Space technology especially Remote Sensing and GIS technology are being extensively used for the socioeconomic development of countries. This helps in determining appropriate actions and taking pragmatic decisions in achieving the goals set for sustainable development. SUPARCO in the last few decades, has made significant progress in developing specific applications to support the developmental needs of Pakistan.

SUPARCO is using satellite technology for monitoring and estimating crops, health monitoring and damage assessment at district level. The program aims at exploiting satellite based remote sensing techniques to monitor various crops and developing yield forecast/ estimation models. SUPARCO is also contributing in project with objective of digitalizing agriculture through the use of AI and machine learning, IoTs, data science, big data retrieval from satellites and UAVs equipped with hyper-spectral, LiDAR, microwave and thermal sensors.

Mr. Chairman

Satellites are reliable and rapid observation tools in case of large stretches with high temporal variations. Remote sensing with its capability to repetitively acquire synoptic images is being employed in classifying forest resources, monitoring aforestation/ deforestation, Reducing Emissions from Deforestation and forest Degradation (REDD+) activities and forest carbon stock assessment. SUPARCO has initiated two projects with APSCO for capacity building in advance applications such as forest carbon stock and mangrove watch. Moreover, active support is being provided to Government functionaries in climate change capacity as well.

Mr. Chairman

The Hindukush-Karakoram–Himalaya (HKH) region is considered the backbone of rivers in Pakistan. Considering this, SUPARCO is actively involved in glacier monitoring using time series optical and SAR satellite imagery. Specific areas include glaciers inventorying, glacial hazard mapping, snow and river runoff modeling and impact of climate change on glaciers.

Remote sensing technology provides information to monitor hydrological conditions at large scale. SUPARCO exploits this technology to estimate various components of water cycle such as river runoff, precipitation, soil moisture, surface energy balance and watershed characteristics. SUPARCO has been studying atmospheric composition, trans-boundary atmospheric pollution sources, climate change patterns and their impacts on snow cover and glaciers across Hindukush-Karakoram-Himalaya (HKH) range in Pakistan. Irrigation Department Government of Balochistan are being supported in monitoring of small dams in Balochistan.

Satellite technology based monitoring of coast and ocean of Pakistan is initiated with National Institute of Oceanography (NIO). The project includes erosion/accretion of coastline, monitoring of marine pollution, oil spills, creek mapping, mangrove change detection, coastal flood hazard mapping, and sea water intrusion due to sea level rise and land subsidence along coast of Sindh and Balochistan provinces and prediction of potential fishing zone along EEZ of Pakistan.

Thank You Mr. Chairman

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