Space and Water

Mr. Chair and distinguished delegates,

India is enabling utilization of the space technology for water resources management, development of decision support systems and planning mitigation measures for hydrological disasters.

India has recently completed the development of geospatial products and services for the water resources sector, under the National Hydrology Project (NHP) which includes evaporative flux monitoring system, hydrological drought indices, Glacial Lake Outburst Flood risk modelling & assessment, snowmelt runoff modeling & forecasting, and spatial flood early warning system.

A decision support system, namely, 'IRrigation Information System (IRIS)' is designed and developed to enhance irrigation scheduling for major and medium command areas. Development of sustainability measures for urban aquifers is carried out using space and ground based observations.

Mr. Chair,

Surface water spread information is generated using satellite data on weekly basis for waterbodies of area more than one hectare, as the Waterbody Information System (WBIS) with functionalities like water spread meter, Elevation-Area-Capacity curve generation, regional analytics etc.

An indigenous operational algorithm was developed for generation of surface soil moisture product at 500m resolution using Indian microwave satellite data.

India has initiated various activities to assess the extent of salt water intrusion in coastal aquifers through an integrated approach, using space and ground observations.

Mr. Chair,

ISRO is preparing inventory of rock glaciers and their kinematics in the Himalaya using remote sensing data. The rock glaciers are important as store house of water for the future.

India is working with French national space agency to realise TRISHNA, a Thermal Infra-Red Imaging Satellite, to study crop water stress and for deriving inputs for improved crop advisories, irrigation scheduling, drought management, etc.

Space inputs are used in India for managing natural hazards, including hydrological hazards like floods. Flood hazard; risk and flood early warning are being addressed, in addition to flood inundation monitoring.

Mr. Chair,

India is open to share its experience with member nations, on the use of space technology towards conservation, management and sustainable utilization of water resources.

Thank you Mr. Chair and distinguished delegates, for your kind attention.