Agenda Item - 10: Space and Water

Mr. Chair,

Judicious management of Water resources is necessary to address the increasing fluctuations in its distribution in space and time, and Nations give top priority to this. Space technology plays an important role in assessing the dynamics of water resources and for its effective management. Indian Space Research Organization (ISRO) and the Water Resources ministry in India (Ministry of Jal Shakti) have successfully demonstrated and implemented the utilization of Space technology for many aspects of water resources management, including for risk reduction from hydrological disasters.

A few of the success stories of use of Space technology for Water resources in India include reservoir sedimentation assessment, irrigation command area monitoring, irrigation infrastructure & potential assessment, snow; glacier and glacial lakes' monitoring, aquifer management, flood forecasting & monitoring, etc. India's C-band microwave imaging satellite; EOS-04, gives crucial inputs for these programmes, in addition to data from host of other Indian and Global satellite missions.

Mr. Chair,

As part of the National Hydrology Project (NHP), which is being implemented by Ministry of Water Resources, ISRO is executing the development of geospatial products and services. National Hydrological Modelling System, Satellite data-based Evaporative Flux Monitoring System, Glacial Lake inventory & Outburst Flood Risk Assessment, Spatial Snowmelt runoff and flood forecast modelling, Hydrological drought Products & Services, etc are addressed in this programme.

Sustainable development of ground water resources is given much impetus in India. Space based inputs are effectively used in assessing the sustainability and prospects of groundwater resources at habitation level. Space technology is used for decision support in planning and implementation of various water conservation measures, under the flagship programmes of the Government.

As part of the Government's initiative for urban development, an Urban Water Body Information System is implemented, using space inputs and geospatial tools, for decision support in the rejuvenation and conservation of water resources.

Mr. Chair,

India has implemented a national level geospatially enabled Water Resources Information system. An automated system for periodic generation of surface water spread information from the satellite data is also developed. This data feeds into the water body information System (WBIS), which provides spatio-temporal dynamics of water bodies at frequency of upto 5 days.

India gives much importance to effective implementation and utilisation of irrigation schemes. Space technology inputs and geospatial tools are used for assessing the irrigation potential planned, generated and utilised, in addition for irrigation scheduling.

ISRO and the Water Resources Ministry have jointly established a standard framework for re-assessment of water availability in the river basins of India, incorporating remote sensing derived inputs. The methodology has been utilized by the Ministry for deriving the latest update on country's water resources.

Mr. Chair,

Space based inputs, as well as Geospatial tools & services are also effectively used for managing various hydrological disasters in the country. Some of the important endeavors include developing flood forecast models, flood hazard assessment, GLOF risk assessment, monitoring flood inundation, and flood damage assessment.

Mr. Chair

India gives much importance to using Space technology in the Water resources sector. ISRO and the Ministry of Water Resources, Government of India, jointly work for effective utilisation of Space technology and allied inputs for assessment of availability, distribution, and decision support for water resources management.

The Indian delegation would like to reiterate its willingness to share its experience with member nations, towards conservation, management and sustainable utilization of water resources.

Thank you Mr. Chair and distinguished delegates.