

India

Agenda Item – 9 Space based Disaster Management Support

Mr. Chairman and Distinguished delegates

Space based inputs play a significant role in the Disaster Management scenario in India. Indian Space Research Organisation (ISRO) has implemented a Disaster Management Support Programme synergising Earth Observation, Communication and Navigational capabilities, for providing necessary support towards reducing the risk from natural hazards in the country. ISRO jointly works with the nodal Departments responsible managing various disasters for optimum and efficient utilisation of space technology in Disaster Management.

Mr. Chairman,

In 2021, several districts in India were affected by floods. All the major flood affected states were monitored in near-real time using satellite data. About 275 flood inundation maps were disseminated to the concerned departments to support the relief and rehabilitation efforts.

Using historical information on floods using satellite data, flood hazard atlases were updated and published for the state of Bihar. Flood hazard atlases were also finalised for West Bengal and Andhra Pradesh States, and is in progress for Uttar Pradesh.

Spatial flood forecast models are developed for Godawari, Tapi and Brahmaputra river basins, and flood alerts were provided for the concerned States during the flood season in 2021.

Mr. Chairman,

Extreme rainfall events triggered many landslides in the hilly tracts of the country, especially in the States of Kerala, Uttarakhand, Maharashtra and Arunachal Pradesh. Satellite data were used for generating the landslide inventory and also for damage assessment due to landslides.

Mr. Chairman,

The updated National Database on Emergency management has been implemented with enhanced features, and disaster forecast services from forecasting agencies. Multi lingual support and new decision support tools are additional features in the updated version. An Integrated Control Room for Emergency Response (ICR-ER) is also being implemented by the Government, with technical collaboration from ISRO.

Mr. Chairman,

Near-real time forest fire detections were done 6 to 8 times daily during January to June every year, and were used as inputs by the ground teams for managing forest fires. During 2021, nearly 7.7 lakh fire detections were disseminated to the central & state nodal organizations managing forest fires at ground level.

Mr. Chairman,

Indian coasts witness many cyclonic events every year, and space based inputs are enabled for early warning on genesis, track, intensity and landfall of cyclonic storms, jointly with the nodal Ministry. During 2021, space based support was provided during Extremely Severe Cyclonic Storms like Tauktae and Yaas, and Severe Cyclones like Gulaab and Jawad.

Mr. Chairman,

The Satellite Aided Search and Rescue (SASAR) Programme has been providing operational services to the users in India and seven neighbouring countries. During 2021, a total of 1191 alerts were received and search & rescue supports were provided to 13 real distress incidents in Indian service area which contributed in saving 36 human lives.

Mr. Chairman,

ISRO responds positively to the international requests and supports the global initiatives in Space technology use for Disaster Management. ISRO as the signatory of International Charter “Space and Major Disasters” and APRSAF initiative Sentinel Asia, supports the disaster management activities across the globe, by planning acquisition and dissemination of data from various Indian Remote Sensing Satellites. International Charter and Sentinel Asia were activated on 4 occasions in 2021 to provide satellite data support to address the flood hazard in India.

ISRO has officiated as the Charter Lead in 2021, enabling 31 Activations, publishing of two newsletters, supporting Universal Access, and interfacing with UNOOSA, UN-SPIDER and GEO. During 2021, ISRO supported the Sentinel Asia activities by providing about 40 IRS satellite products to 11 countries addressing 20 disaster events. More than 150 IRS datasets were provided to International Charter for supporting the global disaster management efforts of International Charter.

Mr. Chairman,

ISRO is ready to extend its support and cooperation, on the use of Space Technology for Disaster Management support

Thank you Mr. Chairman and distinguished delegates