

Agenda Item - 12: Space and Climate Change

Mr. Chairman and distinguished delegates

The impact of climate change is being experienced globally. Sixth Assessment Report of Intergovernmental Panel on Climate Change spelt out that the coming decades would see rise in global warming level of 1.5°C or even 2°C if significant reduction in greenhouse gas emissions at large a scale is not realized. Other than increase in temperature, climate change is triggering multiple extreme events. These include changes in the hydrologic cycle such as, heavy and erratic rainfall, floods, drought, cyclone with varying intensities. Recognizing the detrimental impact of climate change on global scale, India recognizes this problem can be addressed by global cooperation based on the multilateral framework of the United Nations and committed to the global responses to tackle the adverse effect of climate change.

Mr. Chairman

India is continuously upscaling the renewable energy, that can propel the growth of the industrial and service sectors significantly. Green technologies initiatives spread across energy demanding sectors including industry, agriculture, business and commerce.

India has adopted several climate change mitigation measures. Considering the seriousness of the issue, at the COP-26 summit in Glasgow, India pledged to decrease the total projected carbon emission by 1 billion tonnes by 2030, reduce the carbon intensity of the nation's economy by less than 45% by the end of the decade and net-zero carbon emissions by 2070. Moreover, India will enhance non-fossil energy capacity to 500 GW by 2030.

Mr. Chairman

Earth observation satellites for climate information are recognized as vital for detecting critical climate baseline change. In this regard, India has built comprehensive Earth Observation Infrastructure to collect data on atmosphere, oceans and land over the globe. The intensity of a tropical cyclone and its movements over the ocean have been studied using ARGOS and ALTIKA payloads, on board SARAL satellite. The weather satellites, INSAT-3D and INSAT-3DR are providing frequent data on atmospheric temperature & humidity profiles, geophysical parameters like fog, fire, total ozone concentration in the atmospheric column and land surface temperature.

Megha-Tropiques satellite carried humidity profiler SAPHIR and SCARAB sensor, which provided useful information for studying water cycle and radiation budget over the tropical regions, respectively.

ISRO has carried out a study on the impact of climate change on five major coral reef regions of India based on modelled and satellite derived Sea Surface Temperatures for the last three decades. The study found that Indian coral reef regions have different regional, thermal and bleaching thresholds corresponding to their individual warmest months and warmest quarters. A prototype coral bleaching alert system based on these regional thresholds has also been developed.

Mr. Chairman

National Information System for Climate and Environment Studies (NICES) programme has been setup to promote the generation, dissemination and subsequent use of climate data gathered through satellites. NICES web portals, hosting substantial database of more than 60 geophysical variables pertaining to Terrestrial, Ocean and Atmosphere, mainly derived from Indian and international EO satellites.

Meteorological & Oceanographic Satellite Data Archival Centre (MOSDAC) is data repository of ISRO's related satellite missions and ground based systems. The data products are disseminated through web based services for the needs of scientific and research community. The web portal also hosts weather services including cloud bursts and heavy rain alerts, genesis of tropical cyclones along with track and intensity prediction.

Mr. Chairman

Climate change can affect crop production in the country undermining the resilience of agriculture systems which may lead to food scarcity. In this regard, India has been continuously focusing on advanced strategies of adaptation and mitigation of future climates on agriculture. It includes, varietal development with specific traits of drought resistance & short growing period, management of cropping systems, enhancing water use efficiency, pest & disease resistance etc.

India has made plans to make the transport sector green through e-mobility. India has stabilized, protected and enhanced its forest and tree cover over the years. India's commitment to rapidly increasing the renewable energy capacity reflects its strong commitment to limiting the rise in global temperatures.

To conclude, India will continue to focus on climate friendly technology and is committed to work in a multilateral framework for environmental sustainability.

Thank you Mr. Chairman and distinguished delegates.