

## Space and Climate Change

### Mr. Chair and distinguished delegates

Addressing the global challenge of climate change and impact assessment necessitate global collaboration, sustainable practices, and immediate action to reduce its effects.

### Mr. Chair

India operates the Oceansat and the third generation of the INSAT satellites for monitoring the weather parameters. The Oceansat-3 satellite provides crucial information on chlorophyll distribution and global ocean surface wind vector data, which are essential for weather forecasting and cyclone tracking. The scatterometer data is utilized by Indian weather prediction institutes as well as international institutes in Europe.

### Mr. Chair

As the Himalayas, are covered with vast snow and glaciers, their melting leads to the formation and expansion of glacial lakes in the Himalayan region, which pose significant risks, including Glacial Lake Outburst Floods.

Monitoring long-term changes in glacial lakes is essential for understanding glacier retreat rates, assessing risks, and gaining insights into climate change impacts. Satellite data of the Indian Himalayan river basins over the 40 years (1984 to 2023) reveals significant changes in glacial lakes, with one fourth of the lakes expanding more than twice their original size. Long-term satellite-derived analyses provide valuable insights into glacial lake dynamics, crucial for assessing environmental impacts and developing strategies for GLOF risk management and climate change adaptation in glacial regions.

### Mr. Chair

India is actively promoting renewable energy sources such as solar, wind, hydro, and biomass, aiming to achieve 500 GW of installed capacity from non-fossil fuel sources by 2030. The country has developed a Solar Atlas using Global Horizontal Irradiance (GHI) data from Indian geostationary satellites.

India has also proposed a 'G20 Satellite Mission for Environment and Climate Observation,' which will be built by India and host payloads from G20 nations, with data to be made available to the global community.

The NASA-ISRO SAR (NISAR) mission will provide critical data on Earth's surface changes, to monitor and understand climate change impacts such as glacier melt, sea level rise and ecosystem shifts.

India remains committed to focusing on renewable energy solutions to mitigate global climate risks and will continue to work within a multilateral framework for environmental sustainability.

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