Statement of the Pakistan Delegation at the 67th Session of the United Nations Committee on the Peaceful Uses of Outer Space 19 - 28 June 2024

Agenda Item No. 12 - Space and Climate Action

Thank you Chair,

The Asia-Pacific region including Pakistan is experiencing the negative effects of climate change, with higher temperatures, a rise in sea level and an increase in extreme weather events. In the coming years, these events are likely to intensify, straining regional economies and natural and physical assets and potentially compounding development challenges.

One such challenge is that of air pollution that poses a transnational threat. In this regard, in Pakistan, every year, thick and noxious smog engulf the central parts of the country. It has led to detrimental impacts on the country's economy with adverse impact across multiple sectors such as agriculture as well as long term health issues.

Mr. Chair,

Pakistan is already incorporating Space Applications into its climate response strategies. The national space agency, SUPARCO, is assisting national stakeholders through satellite and high tech ground-based monitoring data for source identification of smog for immediate remedial actions. Taking the benefit of Sentinel-5P's capability of mapping gaseous pollutants and aerosol index in atmosphere, during winter smog 2023, the satellite data was used for monitoring atmospheric concentrations and varying trends of gaseous pollutants: sulphur dioxide (SO2), nitrogen dioxide (NO2), carbon monoxide (CO), ozone (O3), formaldehyde (HCHO); as well as aerosol index (AI). Satellite data was also corroborated with ground based measurements of atmospheric pollutants. The spatial and temporal variations of selected atmospheric pollutants by using Sentinel-5P TROPOMI were found consistent with extent of smog, stubble burning events as well as meteorological conditions. It is an encouraging element that temporal trends of Sentinel-5P aerosols have good correlation with ground-based measurements for aerosols.

Mr. Chair,

SUPARCO is planning to collaborate with SickKids Centre for Global Child Health, Toronto, Canada, in partnership with The Agha Khan University of Pakistan for improved local decision-making in health and nutrition preparedness and response to complex crises in climate change and poverty-affected populations in Badin District, Pakistan. This would represent a novel approach to integration and application of new technologies to existing data sources to improve response strategies. The success of this innovation would demonstrate the possibility of optimizing the information system for action at even the lowest administrative unit feasible, with clear potential for scaling this novel approach to other geographies in Pakistan and elsewhere.

Mr. Chair,

SUPARCO also utilizes satellite observations to monitor glacial lakes, which are vulnerable to outburst floods due to glacial retreat. These projects focus on early detection and monitoring of glacial lakes, contributing to disaster risk reduction strategies and ensuring the safety of vulnerable communities.

The National Space Policy of Pakistan underscores the importance of Satellite Remote Sensing (SRS) for environmental monitoring, including tracking changes in air, sea, and land environments. The policy focuses on the use of SRS for monitoring fog and smog patterns, water quality, and coastal ecosystems, providing essential data for assessing and mitigating the impacts of climate change.

I thank you.