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Statement of the Pakistan Delegation at the
68th Session of the United Nations Committee on the Peaceful Uses of Outer Space
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Agenda Item No. 11 - Space & Climate Change [FULL VERSION]

Thank you Mr. Chair,

The catastrophic impacts of climate change are being felt across the globe. Specifically, the South Asian region is experiencing the excessive 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.

Mr. Chair,

For developing countries such as Pakistan, climate change is increasingly becoming a harsh reality. According to the Global Climate Risk Index 2023, Pakistan ranks among the top ten most climate-vulnerable nations. Pakistan's climate crisis manifests in multiple devastating forms. Our cities now regularly experience lethal heat waves – in 2022, Jacobabad, Sindh recorded 51°C, a temperature surpassing human survivability limits, as confirmed by the World Meteorological Organization. In our northern regions, 7,253 glaciers are retreating at an alarming rate of 74 meters annually as per UNDP's 2023 Pakistan Glacier Report, threatening the water security of millions. According to an estimate by the World Bank, combined risks of extreme climate-related events, environmental degradation, and air pollution are projected to reduce Pakistan's GDP by at least 18 to 20% by 2050, crippling our development progress.

This suffering becomes even more tragic when considering emission disparities. Pakistan contributes less than 1% of global carbon dioxide emissions, yet we endure severe consequences from regional pollution. This directly impacts Pakistan through deadly trans-boundary air pollution and accelerated Himalayan glacier melt that threatens our entire river system.

Mr. Chair,

In this crisis, space technology offers vital solutions. Pakistan gives high priority to the utilization of satellite Earth observation and geospatial data for monitoring environmental change, assessing climate impacts, and improving public-sector decision-making. The integration of Earth observation with statistical and

demographic data has empowered national institutions to conduct near real-time analysis of environmental conditions and model complex, dynamic risk scenarios.

A flagship initiative in this regard is collaboration between SUPARCO, Pakistan's national space agency with the National Disaster Risk Management Fund (NDRMF) - a government-owned entity that finances projects aimed at enhancing Pakistan's resilience to climate and disaster risks– for the development of the **Natural Catastrophe (NatCat) Model**. This pioneering initiative, the first of its kind in the region, uses geo-referenced data to assess disaster risks from both hydro-meteorological hazards such as floods, droughts, and tropical cyclones, and geophysical hazards. The model aims to provide comprehensive risk assessments, vulnerability analysis, and financial impact projections at the sub-district level, thereby supporting risk-informed investment decisions and enhancing national resilience. Moreover, SUPARCO is also assisting national stakeholders through satellite and high tech ground-based monitoring data for source identification of smog for immediate remedial actions.

Mr. Chair,

Pakistan recognizes the vital role played by international cooperation in the application of space technologies to tackle challenges posed by climate change and is proud to host the UN-SPIDER Regional Support Office. Moreover, under Asia Pacific Space Cooperation Organization (APSCO), Pakistan has undertaken several joint initiatives, including the completion of Forest Carbon Stock Assessment using Geospatial Technologies and Mangrove Watch from Space - both of which contribute to climate adaptation and environmental monitoring, aligned with SDGs 13, 15, and 17.

We are also pursuing collaborative research with Institute of Tibetan Plateau, Chinese Academy of Sciences (ITP-CAS) under Third Pole Environment (TPE) framework to study atmospheric composition, climate change patterns and their impacts on snow cover and glaciers across Hindu Kush-Karakoram-Himalaya (HKH) range in Pakistan since 2010. Under the ambit of this collaboration, a "Glacier Atlas" which comprises of a comprehensive inventory of glaciers in Pakistan using historical satellite imagery has been developed. So far, ten joint field expeditions have been undertaken jointly with ITP-CAS in the HKH region.

Pakistan also participates in the Asia-Pacific Regional Space Agency Forum (APRSAF), contributing to working groups focused on space applications, climate change, disaster management, and satellite data utilization. Through APRSAF's SAFE initiative and Sentinel Asia, Pakistan benefits from collaborative projects in flood monitoring, forest fire tracking, and drought early warning systems - further aligning with the Sendai Framework and multiple SDGs.

Mr. Chair,

The path forward is clear. We must choose between continuing emission-heavy policies that endanger our collective future, or, harnessing space technology for

climate justice. Pakistan stands ready to work with all nations to ensure our space capabilities serve as instruments of planetary protection and equity.

I thank you.

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