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Pakistan's PRSS-1 Launch Bolsters Space Ambitions

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On July 31, 2025, Pakistan successfully launched its Pakistan Remote Sensing Satellite-1 (PRSS-1) from China's Xichang Satellite Launch Centre, marking a significant achievement for the nation's space program. The launch, facilitated by a Kuaizhou-1A rocket, underscores Pakistan's growing prowess in space technology and its strategic partnership with China. The satellite, equipped with advanced imaging systems, aims to support critical sectors like agriculture, disaster management, and infrastructure development, reinforcing Pakistan's position among space-faring nations, according to the Ministry of Foreign Affairs.

The PRSS-1, weighing 1,200 kg, operates in a Low Earth Orbit (LEO) at 640 km altitude, offering high-resolution imagery with 0.98m panchromatic and 2.89m multispectral

capabilities. Managed by the Space and Upper Atmosphere Research Commission (SUPARCO), the satellite provides a four-day revisit cycle, enabling real-time monitoring of environmental challenges such as floods, landslides, and deforestation. Its data will also support the China-Pakistan Economic Corridor (CPEC) by aiding infrastructure planning and geohazard risk assessment, as confirmed by SUPARCO officials. This capability strengthens Pakistan's ability to address socio-economic and security needs through advanced technology.

The launch follows Pakistan's first PRSS-1 mission in 2018, marking the second such satellite in its arsenal. The Ministry of Foreign Affairs highlighted the achievement as a testament to Pakistan's commitment to innovation and sustainable development. "This milestone enhances our capacity for disaster response and resource management," a ministry spokesperson stated, emphasizing the satellite's role in national progress. The collaboration with China, involving the China Electronics Technology Group Corporation (CETC) and MICROSAT, further solidifies bilateral ties in space exploration.

The PRSS-1's advanced sensors are expected to bolster precision agriculture, urban planning, and climate monitoring, offering tangible benefits for Pakistan's development goals. As the nation expands its space capabilities, this launch signals a strategic step toward self-reliance and technological advancement, positioning Pakistan as a key player in global space endeavors.