

**Developing Specialized Human Resources and National Capacity
in Space Science and Technology for Socio-Economic
Development of Pakistan**

Najam Abbas Naqvi¹

¹*Chairman / Central project Director National Center of GIS and
Space Applications, Institute of Space Technology, Islamabad,
Pakistan*

This contribution unveils the pivotal role of the National Center of GIS & Space Applications, an initiative spearheaded by the Higher Education Commission of Pakistan to meet the emerging demands of space applications for the socio-economic development of Pakistan. The center is committed to promoting technological innovation and enhancing research and entrepreneurial capacities in the areas of space science, technology and its application including astronomy, astrophysics, small satellite development, global navigation satellite systems, spatial decision support systems, disaster management, water & forest resource management, geological applications of geographic information science and remote sensing, environmental studies, agriculture, and space education & awareness. The National Center encompasses a consortium of seven state-of-the-art research laboratories strategically distributed across seven renowned academic institutions of Pakistan equipped them with cutting-edge technology and skilled personnel. The NCGSA laboratories collectively contribute to a diverse array of research domains within GIS and space applications playing a crucial role in mentoring students and early-career professionals, fostering their talents, and setting the stage for future innovations. The National Center of GIS & Space Applications vigorously promotes collaboration both within Pakistan and globally, establishing partnerships with government agencies, academic institutions, and industry stakeholders to harness expertise and resources for significant research and innovation. Through these collaborative efforts, the center aims to not only contribute to the scientific community but also play a pivotal role in addressing global challenges in GIS and space exploration and shaping the future of space science & technology in driving the socio-economic growth of Pakistan.