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DEVELOPMENT OF SPACE APPLICATION TECHNOLOGY FOR ECONOMIC DEVELOPMENT IN INDIA

Abstract

India has effectively developed space technology and has applied in various fields of natural resources, disaster management and environmental studies successfully. Today India is offering a variety of space services globally. India has began development of an indigenous IRS (Indian Remote Sensing Satellite) program with launching of its first satellite Bhaskara in the year 1975. The main aim of Indian Space Program has been to support the national economy in the areas of "agriculture, water resources, forestry and ecology, geology, water-sheds, marine fisheries and coastal management. Indian Earth Observation (IEO) program has been applications-driven and national development has been its prime motivation. From Bhaskara to Cartosat, India's EO capability has increased manifold. Improvements are not only in spatial, spectral, temporal and radiometric resolutions, but also in their coverage and value-added products. Some of the major operational application themes, in which India has extensively used remote sensing data are agriculture, forestry, water resources, land use, urban sprawl, geology, environment, coastal zone, marine resources, snow and glacier, disaster monitoring and mitigation, infrastructure development, etc. The Indian Space Research Organization (ISRO), under the Department of Space, is responsible for research, development and operationalization of space systems in the area of satellite communications, remote sensing for resource survey, environmental monitoring, meteorological services etc. The Indian space programme also helps 500 small, medium and large industries receiving know-how and technology transfer. India has effectively developed space technology, applied it successfully. The paper reviews capability of Indian remote sensing satellite and its applications in Indian context. It also analyses the gap areas and discusses the future perspectives.