

# **Applications of Korean Earth Observing Satellites: Relevance to GEOSS**

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Based on the National Space Development Plan established in 1996, Korea plans to develop 14 satellites including a geostationary satellite by 2015. The planned Earth observing satellites will carry different types of payload instruments such as optical (visible and infrared) sensors, synthetic aperture radar, and meteorological imager. Data acquired from early mission satellites like KOMPSAT-1 and KOMPSAT-2 have been used in thematic mapping, surveillance, monitoring of land use and land cover change, and monitoring of natural disasters such as Asian dust, forest fire, and typhoon. Besides, there are some other applications in the areas of ocean, forestry, agriculture, and GIS. Main applications of MI and GOCI sensors onboard the geostationary satellite COMS are meteorology and ocean color, respectively; however, supplementary applications are being explored. Some results of the above satellite applications are indeed in line with the societal benefits of the Global Earth Observation System of Systems (GEOSS). Since Korean government pursues the promotion of use of space development results as one of strategies for its space vision, the participation in the GEOSS related activities will be a natural step to move forward.

*“The vision of GEOSS is to realize a future wherein decisions and actions for the benefit of humankind are informed by coordinated, comprehensive, and sustained Earth observations and information (GEOSS 10-Year Implementation Plan Reference Document)”* For the purpose of GEOSS implementation, GEOSS defines the following nine societal benefit areas that could be derived from a coordinated global observation system: disasters, health, energy, climate, water, weather, ecosystems, agriculture, and biodiversity. Each benefit area sets the observational requirements necessary for the identification of data quality and attributes. We do not perform such verification for our satellite data at this stage. Instead we examine the past experience and practices from early satellite missions and the perspectives of forthcoming satellite missions to sort out the potential applicability to GEOSS. We also present the GEOSS related activities at KARI.