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MAJOR CHALLENGES AND OPPORTUNITIES TO ACCELERATE SPACE BASED EARTH
OBSERVATION CAPACITY; A CASE FOR TÜRKIYE

Abstract

Space based Earth Observation has become a strategic economic field, as well as a problem solving area, which is rapidly contributing to countries' financial welfare and progress. It is now a marked oriented socio-economic growth driver for entrepreneur private firms and global investors. The global Earth Observation economy is valued around at EUR 10 billion, and is mostly driven by the upstream market. The market is estimated to grow exponentially by next decades. The most of the countries, in particular the emerging nations devote major resources to their Earth Observation activities. EO enables new solutions that respond to the needs of the global community. To access benefits fully, a holistic capacity (upstream-midstream-downstream) could be developed by countries. This provides it with freedom in exploiting and tailoring this capacity to meet its needs. The capacity building necessary in a country to develop its EO capacity contributes to the growth of diverse sectors. For many years Turkey has moved slowly than other countries in these developments, despite having a great potential and enough capacity to compete at a world level. Since 1990, there has been a serious interest and acceleration with some advanced ventures into space based activities in Turkey. This paper summarizes Turkish space based EO capacity building activities between 1999 and 2011. It briefly presents major facts and findings, successful experiences and outlines its story at background and implemented model, successful experiences, international cooperation activities and evolution steps in parallel with Turkey's potential in space activities. Turkey's investment have provided a significant jump in the threshold of a new era in space technology developments, it has come to a position producing its own upstream and downstream systems. The paper also shortly evaluate first 10 years progress, and shows how to turn fundamental infrastructure into modern EO capacity. This is a unique approach to space based capacity-building, away from the traditional methods, aimed at developing and emerging economies. Finally, capacity building activities have contributed to pave the way for the establishment of the space agency in Turkey.