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Contribution of Space Activities to Solving Global Societal Issues (2)

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“SPACE FOR EARTH” AT ESA TO SUPPORT SOLVING GLOBAL SOCIETAL ISSUES – THE CASE
OF “SPACE & ENERGY”

Abstract

Space applications and technologies are omnipresent though many times hidden from the end user. On the ground, at sea and in the air, they form an indispensable part of modern everyday life, work and progress. The gradual but steady integration of space technology and space-based services have made space indispensable, critical and more strategic to modern societies than it ever was. With the maturation of the space sector progressing, the value, role and importance of space is bound to further increase, opening up entirely new fields for space and services from space. At the same time, new space programmes are continuously being conceived and built, making best use of the latest technologies and opening new fields not thought of before. This year, European space celebrates its 50th anniversary, marking 50 years of cooperation within Europe and beyond to build programmes and bring knowledge and work. Within these programmes, many applications have been developed and tested. Some are now commercially or freely available. Yet, looking towards and preparing the future, going even further is becoming more important. There are global challenges and societal issues that still have to be tackled. Space, with its rich background in technology and service development, is one of the “tools” which can contribute to the global answer. Space, with its intrinsic global reach is particularly well suited as a tool for global challenges. Support from and by space can take several directions:

- Making sure all who can benefit from space know about the possibilities and are supported to use it
- Identifying needs that could be fulfilled by existing or planned space programmes or data and developing associated activities
- Identifying needs that cannot yet be fulfilled and for which programmes can be built

The “Space for Earth” initiative is meant for those challenges that have multiple space contributors from all domains and focusing on where there is a perceived need. The domains concerned range from space science to Earth observation, telecommunications, navigation, human spaceflight, microgravity, launchers or technology. Several themes are already part of “Space for Earth”, Energy, Oceans, Arctic and the Antarctic, each one linking with and benefitting from many programmes. The rationale behind each theme will be briefly presented, using space energy as an example. The approach used is covering recent activities (e.g. technology synergies between space and energy ground sector and the identification of future Earth observation missions) and potential future developments.