IAF EARTH OBSERVATION SYMPOSIUM (B1)
International Cooperation in Earth Observation Missions (1)

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SPACE4CLIMATE ACTION: A UNOOSA PROJECT TO ENABLE INTERNATIONAL COOPERATION FOR CLIMATE CHANGE THROUGH SPACE APPLICATIONS AND TECHNOLOGIES

Abstract

Climate change has already impacted humanity in various ways, for example, through extreme climate-related disasters, which have doubled since 1990 and are projected to increase. Such global impacts require the use of space applications and technologies, and as such, the United Nations Office for Outer Space Affairs (UNOOSA) has a key coordination role to play in these actions. This coordination must involve shared diagnoses of the causes, effects, and evolution of climate change, and apply a wide range of methods and tools to monitor, analyze, and model the drivers and impacts of climate change. Satellite applications and technologies serve to provide this shared diagnosis through communications, geolocation, and Earth observation data that are global, uniform, high resolution, sustained over years, and regularly repeated, which facilitate visualization of changes and impacts, awareness raising, and informed decision making. These characteristics allow satellite applications and technologies to make significant contributions to more than half of the 54 Essential Climate Variables (ECV), and 65 of the 169 targets underpinning the Sustainable Development Goals (SDGs). To achieve these SDG targets, the United Nations (UN) and the international community engage in numerous efforts to secure, structure, and coordinate applications, data, and services needed to monitor climate change. Building on these efforts, UNOOSA has developed the Space4Climate Action project to coordinate the efforts of space agencies, governments, intergovernmental and non-governmental organizations, and the private sector in the development of space applications, technologies, and data for climate action. This initiative contains five main activities: (1) promoting best practices for using space technologies to meet climate objectives, (2) coordinating collaboration between government agencies, academic organizations, and UN entities to develop and implement climate adaptation and mitigation projects, (3) facilitating capacity building in the design, monitoring, evaluation, and implementation of projects that use space applications and technologies to address climate change, (4) serving as the secretariat for the International Space Climate Observatory (SCO), and (5)

providing service delivery, technical support, and analysis for space-based climate initiatives. Altogether, Space4Climate Action seeks to provide an international venue for cooperation to mitigate against the potentially severe consequences, high costs, and long-term, irreversible changes that may occur across decades and centuries from a changing climate.