

IAF EARTH OBSERVATION SYMPOSIUM (B1)  
Mitigating the Climate Crisis from Space (6)

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THE ROLE OF SPACE-BASED DATA IN EUROPEAN CLIMATE POLICIES

**Abstract**

Space-based data provide essential information on the past, current, and future state of climate change. Satellite data widely contribute to scientific research conducted by recognized institutions such as the IPCC, which underpin most climate policies in Europe. In addition, half of the Essential Climate Variables (ECVs), which are necessary to monitor climate change, directly come from satellite data. However, the role of space is not always accurately reflected in Europe's climate policies, with only a few direct references to ESA's or EU's space programmes and data.

Against this background, this paper aims to provide an in-depth assessment on the actual role played by space-based data in the definition and implementation of European climate policies. Based on the outcomes of a year-long research conducted in collaboration with the European Space Agency, the paper will first analyze the use and references to space-based data in over 500 climate policy documents of the 22 ESA Member States. Subsequently, it will address some potential blocking points to the use of space in the climate policymaking process in the analyzed European countries. By doing so, the paper will also look into aspects related to science communication, the science-to-policy divide as well as the climate governance in ESA Member States. Finally, this paper will provide recommendations to increase the use of space-based data in the climate policymaking process