

EARTH OBSERVATION SYMPOSIUM (B1)  
Earth Observation Applications and Economic Benefits (5)

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A NEW INITIATIVE TO BRIDGE THE GAP BETWEEN EARTH OBSERVATION DATA AND END  
USERS: THE CLIMATE ONLINE USER DATA (CLOUD)

**Abstract**

2015 has been a major milestone in the fight against climate change and the United Nations Climate Change Conference (COP21) has been a decisive step: several space-faring nations have announced their will to fund new generation of satellites in order to ensure continuity in the monitoring of climate change impacts.

Space technologies provide a substantial contribution to environment monitoring thanks to their ability to precisely monitor variables on a large scale. As of today, satellite data and measurements about the climate condition are gathered daily by a full range of institutional and commercial missions. Nevertheless, satellite data are not used to their fullest potential.

During the 2015 Space Generation Congress (SGC) of the Space Generation Advisory Council (SGAC), the Earth Observation Working Group has been invited to consider the matter and concluded that the issue is not the lack of data but the lack of awareness about data availability by the communities, from the decision makers to the general public. Satellites are producing a huge amount of data, becoming a Big Data challenge, and there are currently very few algorithms and applications that can convert the data into useful information for immediate use. The ones that do exist are not accessible to the general public and the different data formats make it difficult for most people to comprehend the actual information.

The Earth Observation Working Group focused its work on how to bridge the gap between the satellite data and the end users. The solution presented is a processing platform for satellite data that can meet the needs of every user. Climate Online User Data (CLOUD) is a single platform that provides space-based information in a consistent format, enabling easy access for the general public or the scientific community. The main features of CLOUD are 1) a data and information storage archive to store all freely available space-based raw data; 2) a core system consisting of elaborated or partially processed data derived from the query results; 3) a user-friendly interface to enable the users to search and generate information.

The paper will present in an interdisciplinary approach a comprehensive solution to facilitate access to global climate space data, in a way that will increase public awareness regarding climate change.