



## Toulouse Space Show – 2018 Space Climate Observatory is ‘go’

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**On the eve of the One Planet Summit organized by President Emmanuel Macron in December 2017, CNES brought together the world’s leading space agencies to step up their cooperation in the field of climate monitoring. The agencies endorsed the concept of a Space Climate Observatory (SCO), an international initiative combining satellite and *in-situ* data with modelling capabilities to better understand and gauge the impacts of climate change at global and local scales, with a view to informing decisions about mitigation and coping strategies.**

Rising sea level threatening coastlines, melting glaciers, intense droughts and catastrophic floods are just some of the consequences of climate change that humankind will increasingly have to face in the future. The SCO is set to complement existing major international climate programmes, operating further downstream. Its ultimate goal is to help nations to ready for the challenges posed by climate change, to build realistic scenarios and to track at territorial scales the impacts we are already seeing and will see in the future. Giving them the ability to adapt to global changes by scaling responses to their territory and population will enable more-effective solutions.

CNES is leading this initiative within a wide-ranging international partnership through which space agencies and international organizations are committing to pool data and resources to build the climate observatory together. CNES’s main partners from the French scientific community—CNRS, IRD and Meteo-France—are already on board and working towards this goal. During Prime Minister Edouard Philippe’s visit to China on 25 June, an agreement to implement the SCO was signed with the China National Space Administration (CNSA). A partnership has also been put in place with Morocco’s Royal Centre for Remote Sensing (CRTS) and more agreements are in the pipeline. The observatory was officially launched at the Toulouse Space Show today during the roundtable session on ‘Space Climate Observatory: Toward a World Observatory on the Impacts of Climate Change’. Numerous international experts took part in this session, notably the representative of the African Union, the representative of the Group on Earth Observations (GEO) climate programme and representatives of the Ministry for the Ecological and Inclusive Transition, Meteo-France and CNES. The roundtable highlighted the SCO’s future role in responding to the urgent need to adapt to climate change.

CNES’s stand at the event also rolled out a first version of the SCO website produced with CNSA, CRTS and the scientific community. This demonstrator illustrates the SCO’s potential in real-world scenarios and is already offering access to a first set of data, highlighting how satellites are helping to better predict the impacts of climate change at pilot sites. The challenge now is to transpose these analyses across the globe, a task that will require extensive computing resources leveraging the latest big data and artificial intelligence technologies.