

# Press Release

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## Space serving climate IPCC report exploits extensive record of satellite oceanography data

Wednesday 25 September, the Intergovernmental Panel on Climate Change (IPCC) published a special report on the consequences of global warming for the oceans and cryosphere. This is the third and penultimate report in a series of Special Reports produced in the IPCC's Sixth Assessment Cycle since 1990, providing a precise assessment of the scientific literature on climate change. In the field of ocean research, the panel looked at numerous datasets acquired by French and U.S. altimetry satellites, and called on the expertise of CNES and the LEGOS space geophysics and oceanography research laboratory, for which CNES is one of the overseeing authorities.

The Special Report on Oceans and Cryosphere in a Changing Climate has just been examined at the 21<sup>st</sup> session of the IPCC in Monaco. The report assesses the physical processes and impacts of climate change on ocean, coastal, polar and mountain ecosystems, as well as the consequences for human communities that depend on them and options for adaptation and climate-resilient development.

Water is a core element of Earth's climate, storing and transporting most of the energy the Earth system receives from the Sun. It follows a global cycle whose main components can be observed by satellites. This cycle is being disrupted by current climate change and altimetry is one of the best tools for monitoring these disruptions. CNES has been developing world-renowned expertise in this field for over 25 years since the launch of TOPEX/Poseidon in 1992, later followed by the Jason and Sentinel missions. For example, altimetry satellites have revealed the global rise in sea level of 3.6 millimetres a year, of which two-thirds is being caused by the melting of glaciers and polar ice caps as a result of a warming climate.

In 2021, the French-U.S. SWOT mission (Surface Water and Ocean Topography) is set to provide a global picture of water levels at high resolution over all land surfaces and oceans. These data will serve to improve oceanography models and to observe coastal regions where rising sea level is impacting populations.

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