

IAF EARTH OBSERVATION SYMPOSIUM (B1)
Assessing and Mitigating the Global Freshwater Crisis (6)

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WATER SECURITY IN THE FACE OF CLIMATE CHANGE: THE ROLE OF SPACE ASSETS

Abstract

Water security is a major challenge for many populations across the globe. For example, Latin America, home of 650 million people, has experienced over the last decade more intense and frequent climate

fluctuations, wildfires, extended periods of drought, and heavy rainfall, all of which has negatively affected several important quality of life factors, including water, energy, and agriculture.

A rapidly changing world of unequal water resources, polluted water bodies, growing demands, increasing climate variability and climate change, and weak institutions puts high stress on water resources management. In these circumstances, climate change could prevent from sustainable development and create more difficulty addressing the inequality that already represents significant challenges for many countries. The complexity of these challenges requires making choices, establishing priorities, and negotiating solutions among different stakeholders.

One of the main challenges is enabling access to practical information on a climate risk assessment that could support establishing public policy planning and implementation across multiple levels, particularly at national, subnational, and sector levels. Space assets can potentially address these challenges with the goal to meaningfully help the public and private sectors act on water security risk and adaptation. This is the topic of a study performed by the participants of the Space Studies Program of the International Space University (ISU) which took place in July-August 2023 at Sao José dos Campos in Brazil.