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SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
Water from Space: Societal, Educational and Cultural Aspects (6.-E5.4)

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WATER IN SPACE EXPLORATION: INFLUENCE AND BENEFITS FOR SOCIAL PROJECTS ON EARTH

Abstract

Water is a crucial resource for life in space and on Earth. The expansion of mankind to new lands and terrains, overpopulation of certain areas, the contamination of water resources, the exhaustion of water resources, drier seasons and torrential rains caused by the climate change are reasons why regions around the Globe, including developing and developed countries, to endure limited access to water or poor water quality. Recently the detection of water resources beyond our home planet has been confirmed. Proof of water resources were found on the Moon, Mars and several comets and are supposed as well on other objects in our Solar System as well as in extra-solar objects. These resources have not been used so far, but several exploration scenarios are state of research. As explained in this paper, the knowledge gained through research to solve water prospecting and management in these scenarios is of help in Earth-based projects.

This paper describes how Tech4People, a non-profit private initiative with the aim to make technology available and sustainable to aid communities of people in need of help, acts on the mangrove islands in the region of Casamance in Senegal and how the water problems endured by communities in the proposed remote areas are similar to those endured in space exploration and how knowledge and technology coming from the space sector can be applied to these social projects.