16th IAA SYMPOSIUM ON VISIONS AND STRATEGIES FOR THE FUTURE (D4)
Contribution of Space Activities to Solving Global Societal Issues (2)

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OBSERVING THE SUSTAINABLE DEVELOPMENT GOALS (SDGS) IN MARS ANALOG HABITATS

Abstract

Learning about the operation of Mars settlements presents a high contribution of analog habitats. In both planets, Mars and Earth, it is fundamental consider elements of sustainability pursuing to be self-sustainable in those environments. Considering the Sustainable Development Goals – SDG, proposed in the Resolution adopted by the General Assembly on 25 September 2015, and the Guidelines for the long-term sustainability of outer space activities, proposed both by United Nations, were examined in this research exams 6 Mars analog initiatives to identify how those initiatives are applying those methodologies: 1 - United States: Mars Desert Research Station – MDRS (Organizer: Mars Society – Hanksville - Utah –http://mdrs.marssociety.org); 2 - United States: The Hawaii Space Exploration Analog Simulation - HI-Seas (Organizer: University of Hawaii – Maunaloa – Hawaii - www.hi-seas.org); 3 - Canada: FMARS-Flashline Mars Arctic Research Station – MDRS (Organizer: Mars Society – Qikiqtaaluk - Nunavut – http://fmars.marssociety.org); 4 - Brazil: Habitat Marte (Organizer: Universidade Federald do Rio Grande do Norte – UFRN, Caiçara do Rio do Vento - Brazil - www.HabitatMarte.Blogspot.com); 5 - Israel: D-MARS: Desert Mars Analog Ramon Station(Organizer: based in Mizpe Ramon area – Israel - www.d-mars.org); and 6 - Oman: AMADEE-18 (Organizer: Oman National Steering Comittee / Austrian Space Forum - OeWF). The data collection was developed considering websites, blogs, Facebook and Twitter profiles, technical visits, interviews and group discussions. These research deeps in the experience of Research station Habitat Marte, based in the semiarid region of Brazil. During the Mission 2 (January 2018) in the Habitat Marte happened the opportunity of discuss about the Sustainable Development Goals and propose actions to be applied in the research station. The semiarid of Brazil has been affected by more severe droughts. The Habitat Marte can be an unique opportunity to evaluates how the development of self-sustainable habitats concepts can be applied in arid and semiarid environments. Related to the operation of some Sustainable Development Goals, some actions can be mentioned: Works with little girls teaching science and showing oportunities of scientific careers; Communication and Education about save water; The use and installation of more solar panels; Search for establish international cooperation between universities from Latin America and US and European space agencies; Investment and funds creation to estimulates research links of space and environment; and creation of more laboratories and Mars-analogue research stations to understand about the desert dynamics and new technologies.