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Is Space R&D Truly Fostering A Better World For Our Future? (2)

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ADDRESSING SOCIETAL NEEDS THROUGH A FUTURE ANTARCTIC RESEARCH MISSION FOR
SPACE HABITATS, AND PSYCHOLOGICAL ADAPTATION, AS WELL AS FOSTERING
INNOVATIVE CROSS-INDUSTRY COLLABORATION

Abstract

Concepts towards colonizing the final frontier, achieving human settlements on Mars and eventually creating multi-planetary human societies in the solar system where diversity is fostered have been topics of discussion. For these to happen we need to start modifying the way we handle research and deliberately welcome diversity. We propose non-traditional research methods, promoting international partnerships and non-space sector collaboration in order to better understand the different factors, mechanisms, and the psychological impacts involved in starting the process of moving our species to another planet. Antarctica has been related to Mars due to its remoteness as well as its extreme weather conditions in terms of temperature and dryness, and therefore offers an ideal environment for experimental research. The proposed female-led Antarctica research program will not only bring together multiple industries, partners and technologies, but also provide a platform for education and public outreach. This paper will summarize the program's crucial information on the mission planning, experiment development, resource management, legal aspects, procedures, and all that is involved in a cross-discipline and cross-industry Antarctic research mission. It further outlines the research practices along with making the case for non-traditional collaboration as a way to enhance academic research. We argue that these experiences can be transferred to non academic groups, thereby enhancing society overall.