

SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
Calling Planet Earth - Space Outreach to the General Public (6)

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EFFECTIVE AND SUSTAINABLE OUTREACH OF SPACE SCIENCE AND TECHNOLOGY:
MIDDLE EAST AND CENTRAL AMERICA CASES

Abstract

The space science and technology has been a critical part of the key segments of today's science, economy, policy and security. In addition, an interest has been grown by society in the fascinating discoveries enabled by the space exploration programs all around the world. Currently, these interested people benefit mainly from the news and information sources such as articles, books, sci-fi movies, interactive museums and sometimes seminars on a specific topic. However, few of these interested people are able to become productive amateurs in a sustainable way. In order to develop the effective and sustainable outreach of space science and technology, there is a need for the improvement on the link between the practical applications and society. This is especially important for the volunteers who would like to involve in and contribute to the development of space-based applications and exploration of space.

In this study, a framework for the effective and sustainable outreach is proposed considering the dynamics and common interests between the national and international actors ranging from governmental and public institutions to universities and non-governmental organizations. Several activities such as seminars, public events, hands-on trainings, workshops, competitions and amateur science (astronomy, observation, radio, stratospheric balloons, rocketry, small satellites) which require passive and active participation are investigated and analyzed for the application of the proposed framework within the Middle East and Central America regions. Here, we evaluate the specified activities based on several metrics (such as personal gain, experience, accessibility, applicability, sustainability) which are identified and quantified through the questionnaires with former participants of these activities. With this, we discuss the effectiveness and sustainability of the proposed framework for the Middle East and Central America regions where several countries are investing in space-based applications and developing capabilities in terms of space science and technology. Finally, by comparing the Middle East and Central America cases, we explore similarities, differences and potentials within these space-developing regions as well as giving recommendations to improve the engagement of the society with space science and technology.