

Space Education and Awareness Working Group

CONCEPT PAPER

Space permeates many aspects of human activities today. It has also been an important part of civilizations. Throughout the human history, the quest for knowledge of the universe has guided humankind to learn more about its past and present, and to expand its imagination about where it is going.

Over half a century following the successful launch of Sputnik-1, space has increasingly become an essential, integral part of our daily lives. Benefits yielded by space science and technology and their applications have enhanced safety, security, predictability, responsiveness, stability and convenience at the societal level. Images and information of various parts of our planet provided by Earth observation satellites assist us in the management of natural resources, disasters and environment. Means provided by communications satellites enable us to exchange voluminous information around the world at a much faster speed than ever imagined before. These are only a few examples of how space applications bring practical benefits to our society.

In spite of the growing evidences of the usefulness of space science and technology for the society, the level of appreciation of their importance is still limited among the general public and policy makers. Efforts should continue to increase awareness of the usefulness and importance of space science and technology and their applications to enhance the quality of our lives and to support sustainable development of our society.

It is equally important for our young generations to realize that we live in the society that greatly benefits from the advancement of space science and technology and their applications. Especially for young people, space activities provide more than useful tools and information. They serve as the source of interest, imagination and inspiration. Attractive space materials can be effectively used to spark intellectual flame in the minds of young people not only in science and technology but also in many other aspects of human activities. Effectively used, examples of the past achievements and efforts to overcome challenges in the use and exploration of outer space can motivate young people to pursue excellence in whatever they do and can guide them to appreciate the power of collective efforts toward common goals.

Some teachers and educators in different parts of the region are aware of such positive impact of space subjects and materials on the minds of young people. However, many of them are struggling through their isolated efforts to effectively use space materials to help young people pursue their dreams, and motivate them to make their dreams come true. If provided with appropriate and sufficient skills, knowledge and materials, and if supported and motivated by the coalition of like-minded teachers and educators across the borders, they could, together, enlighten minds of a large number of young people. Efforts should be strengthened to provide more training opportunities, teaching materials and support systems to teachers, educators and community leaders to use attractive space materials to enhance education for young people, at home, at school and in the community.

It is with such conviction that the Space Education and Awareness Working Group was established to address issues relating to: i) the use of space materials to enhance education for young people; ii) education and training opportunities for young people in the fields of space science and technology; and iii) efforts to increase public awareness of the societal benefits and importance of space activities.

Starting from APRSAF-11 in 2003, the Working Group has begun to identify concrete actions to address those issues. Within the framework of APRSAF, the Working Group has organized the following activities since 2004: i) APRSAF Water Rocket Event (2005, 2006 and 2007); ii) APRSAF Poster Contest (2006 and 2007); iii) APRSAF Space Education Forum and Seminar (twice in 2006); iv) International CanSat Seminar (2007); and v) APRSAF International Water Rocket Education Workshop (2008) .

It is hoped that through its educational and awareness increase activities, the work of the Working Group would result in enhancing human development at the individual level, particularly for young people, in Asia and the Pacific and increasing public recognition of the essential role that space activities plays in the enhancement of the society, and human civilizations, in various manners. It is also hoped that a network of education and awareness efforts through space activities would eventually lay the foundation of lasting peace and harmony among the peoples in the region of Asia and the Pacific.

<Note: The list of discussion items and objectives is contained in the annex to the present paper. For more details of the work to be conducted during APRSAF-15, please refer to “Provisional Agenda” of the Working Group (document APRSAF/SEA-WG/2008/1) to be issued.>

Annex: List of discussion items and objectives

Discussion items

1. General exchange of views on space education and awareness increase
2. Joint educational activities for primary and secondary school students and teachers
 - a) Water rocket activities
 - b) Poster contest
 - c) Space education forum and seminar
 - d) Educational activities for the celebration of the International Year of Astronomy in 2009
 - e) Any other activities
3. Joint educational initiatives for university and graduate students and young professionals
4. Ways and means to promote collaborations among space scientists and engineers and educators to expand space education activities for young people
5. New and innovative funding sources to support space education activities

Objectives

- Establish the support base for space education in more countries in Asia and the Pacific by continuously organizing space education activities at the regional level for primary and secondary school students (discussion items 1, 2 and 4);
- Increase the availability of teaching and learning materials in various languages spoken in the region to enhance space education (discussion items 1, 2 and 4);
- Increase training opportunities for teachers and instructors to acquire knowledge and skills to carry out space education activities for primary, secondary and tertiary students and establish and strengthen a mechanism to support those teachers and instructors (discussion items 1, 2, 3 and 4);
- Identify new and innovative funding sources to further expand space education in the region (discussion items 1 and 5).