

Agenda item 4 c,

“Space education forum and seminar”

INFORMATION NOTE

APRSAF / UNESCO / LAPAN Space Education Seminar (11-12 December 2006, Jakarta)

The attached is the Information Note for APRSAF/UNESCO/LAPAN Space Education Seminar on “Space Science and Technology and Their Applications”, to be held in Jakarta, Indonesia, from 11 to 12 December 2006. The attached is circulated to the APRSAF Space Education and Awareness Working Group for information only.

**Asia-Pacific Regional Space Agency Forum (APRSAF) /
United Nations Educational, Scientific and Cultural Organization (UNESCO) /
National Institute of Aeronautics and Space of Indonesia (LAPAN)¹**

**Space Education Seminar on
“Space Science and Technology and Their Applications”
11-12 December 2006, Jakarta Indonesia**

INFORMATION NOTE

Background

Space science and technology permeates into our daily lives in many different ways. Various services made available by satellites, for example, greatly enhanced our ability to communicate around the world, transmit and receive images to and from other parts of the world, better predict weather and climate, to prepare ourselves for extreme weathers, and travel on road, on the sea as well as in the air with increased safety and accuracy. As demonstrated in the emergency response and rescue operations following the series of recent natural disasters, the effective use of Earth observation, communications and positioning satellites, for example, leads to saving many lives.

The study on the universe leads us to new discoveries on its origin and the possibilities for its future, linking our past, present and future. Space activities also link people around the world. Numerous space missions have been carried out through as a result of cooperation among scientists, engineers, policy makers and lawyers, working toward the common objectives over years.

Space science and technology and their applications have had unique impact on our society, on the way we think and act. Learning about space activities provides excellent opportunities to think about our living environment, our culture and civilizations, as well as our future. Particularly for young people, space has been the object of their interest and the source of their imagination and inspiration.

Recognizing those unique opportunities that space activities offer, the Asia-Pacific Regional Space Agency Forum (APRSAF), at its twelfth session held in October 2005 in Kitakyushu, Japan, adopted a recommendation to consider holding a space education event, to increase

¹ Lembaga Penerbangan Antariksa Nasional.

public awareness of the importance of space science and technology and their applications for the enhancement of the society. Following that recommendation, Japan Aerospace Exploration Agency (JAXA), the United Nations Educational, Scientific and Cultural Organisation (UNESCO) and National Institute of Aeronautics and Space of Indonesia (LAPAN) took the initiative to jointly offer opportunities to school teachers and educators to learn about space science and technology and their applications as well as their benefits for the society and how to introduce space subjects and materials into classroom teaching and school activities. Immediately following the thirteenth session of APRSAF, JAXA, UNESCO, LAPAN will hold **the Space Education Seminar on “Educating the Educators on Space Science and Technology and Their Applications” on 11 and 12 December 2006, in Jakarta, Indonesia.**

Objectives

The Space Education Seminar will aim to achieve the following objectives:

- i) To enhance understanding of space science and technology and their applications among high school teachers;
- ii) To increase appreciation by school teachers of the benefits of space science and technology and their applications for the society;
- iii) To encourage high school teachers to better address and expand science subjects at their schools using space materials;
- iv) To promote interactions between space scientists and educators to enhance science education.

Programme

Day 1:	Monday, 11 December 2006	
8:00 – 8:50	Registration of participants	
<i>Opening Session</i>		
9:00 – 9:10	Welcome address	<i>TBD</i> , Ministry of Research and Technology of Indonesia
9:10 – 9:20	Opening remarks	Y. Berenguer, Space Education Programme, UNESCO
9:20 – 9:30	Opening remarks	K. Oyama, Co-Chairman, APRSAF Space Education and Awareness Working Group (APRSAF-SEA WG)
9:30 – 9:40	Opening remarks	<i>TBD</i> , National Institute of Aeronautics and Space of Indonesia (LAPAN), Indonesia
<i>Session 1: Perspectives of Space Education and Awareness Increase</i>		
9:40 – 10:00	International efforts to promote space education and its importance for developing countries	Y. Berenguer, Space Education Programme, UNESCO
10:00 – 10:20	Enhancing space education in Asia and the Pacific	K. Oyama, Co-Chair, Space Education and Awareness Working Group, Asia-Pacific Regional Space Agency Forum (APRSAF)
10:20 – 10:40	<i>Coffee/tea break</i>	
10:40 – 11:10	Benefits of space science and technology for our daily lives	Jose L. E. Aban, Department of Science and Technology, Philippines
11:10 – 11:40	Benefits of space applications for the people of Indonesia	Ratih Dewanti, LAPAN, Indonesia
11:40 – 12:30	Questions and answers	
12:30 – 13:30	<i>Lunch</i>	

<i>Session 2: Benefits of remote sensing applications</i>		
13:30 – 14:15	Geo-spatial data and information and societal benefits, including benefits for disaster management	L. Samarakoon, Director, Geo-informatics Center, Asian Institute of Technology
14:15 – 14:40	Questions and answers	
14:40 – 15:00	<i>Coffee/Tea break</i>	
<i>Session 3: Space applications for disaster management</i>		
15:00 – 15:30	The Charter on Space and Major Disasters: “The Charter for Schools” - DVD presentation	<i>DVD developed by ESA International Relations Department and Education Department</i>
15:30 – 16:00	The Charter in action: emergency response operations by ISRO in the event of natural disasters	K. Vinod Kumar, Indian Space Research Organisation, India
16:00 – 16:30	Remote sensing applications for disaster management in Indonesia	Orbita Roswintiarti, LAPAN, Indonesia
16:30 – 17:30	Discussions	
17:45	<i>Return to the hotel</i>	
19:00	<i>Reception hosted by Prof. Oyama, Co-Chair of APRSAF Space Education and Awareness Working Group</i>	<i>Crowne Plaza Jakarta</i>
Day 2:	Tuesday, 12 December 2006	
<i>Session 4: Space science and astronomy for developing countries</i>		
9:00 – 9:30	Latest developments in planetary science	K. Oyama, Adviser to Director, Space Education Center, and Professor Emeritus, Institute of Space and Astronautical Science, JAXA, Japan
9:30 – 10:00	Space science and astronomy for developing countries	F. R. Sarker, General Secretary, Bangladesh Astronomical Society, Bangladesh
10:00 – 10:30	Astronomy today	T. Djamaluddiin, LAPAN, Indonesia
10:30 – 11:00	Discussions	
11:00 – 11:20	<i>Coffee/Tea break</i>	

<i>Session 5: Integrating space into school activities</i>		
11:20 – 11:50	Bringing space scientists and educators together for schools: activities and perspectives of Victorian Space Science Education Centre	N. Mathers, Research Scientist and Curriculum Development Officer, Victorian Space Science Education Centre, Australia
11:50 – 12:20	Working together with teachers: JAXA's approach for developing educational materials	T. Chiku, Space Education Center, JAXA, Japan
12:20 – 12:50	Discussions	
12:50 – 14:00	<i>Lunch</i>	
<i>Hands-on Session</i>		
14:00 – 14:30	Hands-on activities in Sri Lanka: increasing awareness through astronomy and water rocket activities	J. Fernando, Arthur C. Clarke Institute for Modern Technologies (ACCIMT), Sri Lanka
14:30 – 15:00	Theory of water rocket	<i>TBD, Science Center, Tama Mini Indha Indonesia (PPIPTEK/TMII), Indonesia</i>
15:00 – 16:30	Demonstration of water rocket launch	<i>TBD, PPIPTEK and J. Adassuriya, ACCMIT, Sri Lanka</i>
16:30 – 17:00	Closing remarks - including a photo session	LAPAN, UNESCO, APRSAF SEA WG

Participants

The Seminar is open to the public. The target audience are junior and senior high school teachers as well as educators interested in enhancing science components of the classroom teaching. There is no registration fee. The participation in the Seminar is free of charge.

Expected results

The Seminar could result in: i) increased awareness and enhanced understanding of high school teachers and educators of the usefulness of space science and technology and their applications for the society; ii) increased interest among educators and high school teachers in addressing space activities in classroom teaching; iii) increased motivation of high school teachers in further enhancing their teaching methods particularly for their science classes by using space materials to stimulate interest of students.

Venue

The Seminar will be held at the Science Museum (PPIPTEK), Taman Mini Indonesia Indah (TMII)

Language

The language used at the Forum is English.