Subject: The 15th Session of the Asia-Pacific Regional Space Agency Forum (APRSAF-15)  
“Space for Sustainable Development”  
09-12 December 2008, Hanoi and Ha Long Bay, Vietnam

Dear Colleagues,

Following the first announcement of APRSAF-15, which was distributed to its members in July 2008, we, the APRSAF Secretariat, are pleased to send you the Second Announcement, as enclosed.

On behalf of the APRSAF-15 organizers and on our own behalf, it is our great pleasure to invite you to personally join us to the APRSAF-15 to share your valuable thought and keen insights. We also take this opportunity to request for a good participation to APRSAF-15 (including WG) from your entity as well.

Earth Observation (EO), Communication Satellite Applications (CSA) and Space Education and Awareness (SEA) WGs will start on December 9, Space Environment Utilization (SEU) WG will start on December 10.

It would be highly appreciated if the on-line registration, which is stated at our web site, https://www.prime-intl.co.jp/aprsaf15/registration.html, is duly completed no later than October 24, 2008.

More information on the final program etc. will be sent to you at a later stage.

We will be constantly updating the APRSAF-15 web site: http://www.aprsaf.org/text/ap15_info.html
We look forward to meeting you in Vietnam.

With warmest regards,

On behalf of the co-host organizations,

Hoang Van Sinh  
Deputy Director-General  
Department of International Cooperation  
Ministry of Science and Technology

Chu Tri Thang  
Director for International Cooperation Department  
Vietnam Academy of Science and Technology

Takayuki Asoh  
Director for International Space Cooperation  
Space and Aeronautics Policy Division  
Ministry of Education, Culture, Sports, Science and Technology

Hitoshi Tsuruma  
Manager of International Relations Department  
Japan Aerospace Exploration Agency

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http://www.aprsaf.org
Second Announcement
The 15th Session of the Asia-Pacific Regional Space Agency Forum (APRSAF-15)
“Space for Sustainable Development”
09 – 12 December 2008, Hanoi and Ha Long Bay, Vietnam

You are invited to register for the 15th Session of the Asia-Pacific Regional Space Agency Forum (APRSAF-15), to be jointly organized and co-sponsored by Ministry of Science and Technology of Vietnam (MOST), the Vietnam Academy of Science and Technology (VAST), the Ministry of Education, Culture, Sports, Science and Technology (MEXT) of Japan and the Japan Aerospace Exploration Agency (JAXA). We also take this opportunity to request for a good participation to APRSAF-15(including each WGs) from your entity as well.

Details of APRSAF-15 are provided below.

Please note that you are responsible for your own travel and accommodation expenses.

We look forward to welcoming you to Vietnam.

Background

The Asia-Pacific Regional Space Agency Forum (APRSAF) was established in 1993 in response to the declaration adopted at the Asia Pacific International Space Year Conference (APIC) held in 1992, to enhance the development of each country’s space program and to exchange views toward future cooperation in space activities in the Asia-Pacific region. The APRSAF has held fourteen annual meetings organized jointly by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) of Japan, the Japan Aerospace Exploration Agency (JAXA) and co-host organizations of countries participating in the APRSAF, to discuss current space-related issues and possible cooperation among countries mainly in the region. The co-host countries have been Mongolia, Malaysia, the Republic of Korea, the Kingdom of Thailand, Australia, the Republic of Indonesia and India. The APRSAF features to promote concrete regional cooperation on space-related matters through open and voluntary participation. To reflect a broad range of views and voices, the APRSAF intends to ensure wider participation of space agencies, government entities, regional and international organizations and institutions responsible for space applications.

The 14th Session of the APRSAF (APRSAF-14) was convened under the main theme of "Space for Human Empowerment" with the aim to bring together participating agencies from
the region to cooperate in the use of space activities for the common cause. It was jointly organized and co-sponsored by the India Space Research Organisation (ISRO), MEXT and JAXA. The APRSAF-14 gathered more than 130 participants from 18 countries as well as from 6 international organizations. As the results of the discussions at the plenary session and the four working groups (Earth Observation (EO), Communication Satellite Applications (CSA), Space Environment Utilization(SEU) and Space Education and Awareness (SEA)), the APRSAF-14 adopted the recommendations as shown in Appendix-A.

Objectives

While the APRSAF has been an active forum to promote concrete cooperative activities to resolve common problems at the regional level, the APRSAF-15 will be held under the main theme of “Space for Sustainable Development” with the aim to contribute toward solving problems not only of the Asia-Pacific region but also of the entire world as well as to exploit space technology development and utilization for sustainable development of countries in the Asia-Pacific region.

Plenary Session and Working Groups

The Plenary session will take place in the third and fourth days of the APRSAF-15. In addition to the Plenary session, it is proposed to have parallel sessions of four working groups (WGs): Earth Observation (EO) WG, Communication Satellite Applications (CSA) WG, Space Education and Awareness (SEA) WG and Space Environment Utilization (SEU) WG in the first and second days of the APRSAF-15. The tentative concept paper of each working group is provided in Appendix-B.

At the Plenary session, the status reports of Sentinel Asia which was confirmed that the pilot project achieved its overall goals and agreed the launch of the next phase at the APRSAF-14, and APRSAF satellite cooperation which was proposed, welcomed at the floor and incorporated into the Recommendations adopted at the APRSAF-14 will be presented and participants will be expected to discuss its enhancement.

Expected Attendance

Senior officials of relevant Ministries as well as heads and other representatives of space agencies, remote sensing agencies, and interested institutions from government, academy and industries including private sectors are very much welcomed to participate in the APRSAF-15.

*Participants from Vietnam will be/ need to be invited by VAST and MOST.*
Tentative Program

See Appendix-C.

Date and Location of APRSAF-15

The APRSAF-15 will be held from December 9 (Tuesday) through 12 (Friday), 2008. See Appendix-D for your reference of the location of the venues in Hanoi.

<table>
<thead>
<tr>
<th>Date</th>
<th>Location</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>December 9 – 10</td>
<td>Vietnam Academy of Science and Technology (VAST)</td>
<td>Add. 18 Hoang Quoc Viet, Hanoi, Vietnam</td>
</tr>
<tr>
<td>December 11</td>
<td>International Conference Center (ICC)</td>
<td>Add. 11 Le Hong Phong Street, Hanoi, Vietnam</td>
</tr>
<tr>
<td>December 11 – 12</td>
<td>Saigon Halong Hotel</td>
<td>Add. 168 Halong road, Baichay ward, Halong city, Quangninh province, Vietnam</td>
</tr>
</tbody>
</table>

Registration

Please visit the on-line registration site; https://www.prime-intl.co.jp/aprsaf15/registration.html and complete it no later than October 24, 2008.

If you have any inquires or any problems, please contact to the APRSAF-15 Secretariat as referred in Points of Contacts.
*Note: Vietnamese participants need to contact directly to the local organizer as referred in Points of Contacts.

Accommodation

The following hotel can be reserved at a special discount rate for APRSAF-15 participants by completing the on-line hotel reservation; https://www.prime-intl.co.jp/aprsaf15/registration.html
*Your requests may not be accepted depending on the situation.
*Note: Hotel might be changed due to the number of participants.
HOTEL informations

< Hanoi >

Appendix-D is the location of the hotels in Hanoi, for your reference.

Melia Hanoi Hotel

- Address: 44B - Ly Thuong Kiet Street Hanoi - Vietnam
- Tel: +(84-4) 9343343 / Fax: +(84-4) 9343344
- URL: [https://www.meliahanoi.com/](https://www.meliahanoi.com/)
- Room charge from December 8 check-in to 11 check-out is USD 140++/ night.
  (The rate is subject to 5% service charge and 10% VAT.)
- Cancellation policy:
  - You need to guarantee the reservations and payment by credit card number.
  - *Any cancellation within 05 days before the arrival date will be charged for 1 room/ night fees.*
  - *Any cancellation within 24 hours of the arrival date or no-show or shorten stay will be charged for full duration of stays reserved.*
  - These cancellation fees will be automatically deducted from the pre-payment or charged to the credit card provided for guaranteeing.

*Note: Hotel might be changed due to the number of participants.
*This rate is valid only for reservations through the Secretariat.
*For the reservations before December 8, please contact the Secretariat through the on-line hotel reservation.
*For lower price hotels, please refer to “Others”, the last page of this Announcement.

< Ha Long Bay >

Saigon Halong Hotel

- Address: 168 Halong road, Baichay ward, Halong city, Quangninh province, Vietnam
- Tel: +(84-33) 845845 / Fax: +(84-33) 845849
- URL: [http://www.saigonhalonghotel.com](http://www.saigonhalonghotel.com)
- Room charge on December 11 check-in to 12 check-out is USD 80/ night.
  (The rate is inclusive of service charge and VAT.)
- Cancellation policy:
  - You need to guarantee the reservations and payment by credit card number.
  - *Any cancellation within 15 days before the arrival date will be charged for 1 room/ night fees.*

*Note: Hotel might be changed due to the number of participants.
*This rate is valid only for reservations through the Secretariat.
Cultural Tour

On **December 12 (Day 4) from 12:00-16:30**, Cultural Tour in Halong Bay will be hosted by VAST, Vietnam.

To participate in the tour, please register through on-line registration **by October 24, 2008**.

For the detailed information will be provided through the APRSAF-15 website.

*Note: Accompany persons need to pay the tour fee.*

Events

All participants will be invited to the events hosted by the following organizations:

<table>
<thead>
<tr>
<th>Date</th>
<th>Venue</th>
<th>Host</th>
</tr>
</thead>
<tbody>
<tr>
<td>December 10 (Day 2)</td>
<td>Melia Hanoi Hotel</td>
<td>MEXT (Japan)</td>
</tr>
<tr>
<td>17:30-19:30</td>
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</tr>
<tr>
<td>December 11 (Day 3)</td>
<td>Saigon Halong Hotel</td>
<td>VAST (Vietnam)</td>
</tr>
<tr>
<td>20:00-21:30</td>
<td></td>
<td></td>
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</tbody>
</table>

*Note: Detailed information will be provided later.*

*Note: Participants are required to wear the badges that will be given at the registration.*

Transportation

The following charged bus will be provided:
1. From Hanoi Airport to Melia Hanoi Hotel on December 8 and 9 *
2. Between Melia Hanoi Hotel and the venues (VAST or ICC) on December 9 – 11
3. From ICC in Hanoi to Saigon Halong Hotel in Ha Long Bay on December 11
4. From Saigon Halong Hotel to the Cultural Tour on December 12
5. From Ha Long Bay to Hanoi Airport and Melia Hanoi Hotel on December 12 (after the Cultural Tour)

*The secretariat will arrange the check-in counter for transportation to Melia Hanoi Hotel at the Hanoi Airport. Detailed information will be provided later.*
Visa Application

If you need VISA, please check the “VISA required” along with passport details (full name/nationality/date of birth/passport number/ passport type/ date and place of issue/date of validity/ country and city to apply VISA) when you register through the website by **October 24, 2008**.

After that, VAST will provide invitation to support your visa application to enter Vietnam. In case you do not know if you need VISA or not, please contact your Government. **Appendix-E** is for your reference to check if you need VISA. But it is not the guarantee of your VISA requirement or not, please be sure to ask the appropriate department of your Government about VISA requirement.

Insurance

Participants are highly recommended to arrange their own overseas travel insurance. The APRSAF-15 Secretariat do not take any responsibility for your travel accident.

Points of Contacts

(1) For Non-Vietnamese Participants
If you have any inquires concerning APRSAF-15, please feel free to contact:

Ms Kiyomi Murakami  
APRSAF-15 Secretariat  
c/o Prime International Co. Ltd.  
Tel: +81-3-6277-0117   Fax: +81-3-6277-0118  
E-mail: aprsaf15@aprsaf.org  
#601, 1-13-10, Ebisu Shibuya-ku, Tokyo 150-0013 Japan

(2) For Vietnamese Participants
Dr. Pham Anh Tuan  
Vice Director  
Vietnam Academy of Science and Technology(VAST), Space Technology Institute(STI)  
18 Hoang Quoc Viet, Hanoi, Vietnam  
Tel: +84-4-7915106   Fax:+84-4-7914622  
E-mail: patuan@sti.vast.ac.vn
Others

For up-to-date information on APRSAF-15, please refer to our website at:
http://www.aprsaf.org/text/ap15_info.html

For your information, the APRSAF-15 Secretariat shows you the following 2 hotels in Hanoi. However, you are responsible for all the arrangements such as the reservation and the transportation. We do not take any responsibility for your travel arrangement of these hotels.

Sunway Hotel
Address: 19, Pham Dinh Ho Street, Hai Ba Trung District, Ha Noi City, Vietnam
Tel: +(84-4) 9713888 / Fax: +(84-4) 9713555
URL: http://www.sunway-hotel.com/vietnam/hotel_overview.jsp
Room charge is approx. USD 130++.

Hoa Binh Hotel
Address: 27 Ly Thuong Kiet, Ha Noi City, Vietnam
Tel: +(84-4) 8253315 to 8253692 / Fax: +(84-4) 8269818
URL: http://www.hoabinhhotel.com/
Room charge is approx. USD 80++.

List of Appendixes
Appendix-A : The APRSAF-14 adopted the recommendations
Appendix-B : The tentative concept paper of each working group
Appendix-C : Tentative Program
Appendix-D : The map of the venue and hotels in Hanoi
Appendix-E : Visa requirement list
Recommendations of the fourteenth session of
the Asia-Pacific Regional Space Agency Forum (APRSAF-14)
"SPACE FOR HUMAN EMPOWERMENT"
21-23 November 2007
Bangalore, India

Recognizing the use of space technology and its applications to substantively contribute
to human empowerment in improving the quality of life and bringing other benefits to
humanity in the Asia-Pacific region,

Recognizing also the importance of regional cooperation through space-based
technology applications that would address disaster management and environmental
issues for more secure and prosperous society, tele-education and tele-medicine through
enhanced connectivity, as well as the importance of fostering the hopes and dreams of
young generations for the future,

Hereby affirm that we, the participants of APRSAF-14,

[Sentinel Asia]
1. Declare the completion of the Sentinel Asia pilot project successfully with the efforts
of the current Joint Project Team. This pilot project has successfully shared
disaster-related information obtained by several Earth Observation satellites, especially
those of the Japan Aerospace Exploration Agency (JAXA) and the Indian Space
Research Organisation (ISRO) along with training and technical support;

2. Declare the launch of the next phase of Sentinel Asia starting from 2008 to 2012 with
the goal to expand utilization of disaster-related information including environmental
changes together with its member countries and international organizations, increasing
the number of Earth observation satellites from the Korea Aerospace Research Institute
(KARI), the Geo-Informatics and Space Technology Development Agency (GISTDA)
of Thailand, and some other entities, as well as satellite communication;
3. Agreed to establish the new Joint Project Team for implementation of the second phase of Sentinel Asia early next year, where JAXA will serve as a secretariat;

[APRSAF satellite]
4. Welcome the APRSAF satellite cooperation proposed by JAXA, which consists of two parts, i.e. a joint study on the small satellite concept which shall meet the needs of the Asia-Pacific region such as disaster management, and a pilot project to develop the technology for the APRSAF satellite, to provide opportunities for capacity building, and encourage to hold technical workshops for a joint study on the APRSAF satellite. JAXA, ISRO and other interested agencies will jointly evolve a detailed proposal for the realization of the APRSAF satellite at the earliest;

[Earth observation]
5. Promote satellite data applications, through the Earth Observation Working Group (EO WG), in socially beneficial areas such as disaster management and environmental monitoring;

[Communication satellite applications]
6. Share the experiences for realizing cooperation among countries in the Asia-Pacific region through the Communication Satellite Applications Working Group (CSA WG), regarding applications of satellite communication for tele-education, tele-medicine and disaster management, taking into account the needs to resolve the digital-divide in the region;

[Space education and awareness]
7. Promote educational activities through the Space Education and Awareness Working Group (SEA WG) to further stimulate interest of primary and secondary school children as well as university and graduate students in, and increase their awareness of, space science and technology and their applications;

8. Encourage the exchange of education materials and teaching experiences in enhancing education using the outputs yielded by space activities and addressing
space-related subjects, taking into account the need to make more materials available in the languages spoken in Asia and the Pacific to better meet the needs of the countries in the region;

9. Recognizing the need for capacity building in the region, the Forum noted the significant role played by the UN Affiliated Centre for Space Science and Technology Education in Asia and the Pacific (UN-CSSTEAP) located at the Indian Institute of Remote Sensing (IIRS), Dehradun, India, and recommend the APRSAF participating countries and organizations to fully utilize the center;

[Space Environment Utilization]
10. Share and update information in the field of space environment utilization among Asia-Pacific countries, through the Space Environment Utilization Working Group (SEU WG), and encourage to realize the cooperation on space experiments following the current feasibility studies of the ISS/Japan Experiment Module (JEM) utilization;

11. Encourage to realize cooperation on a micro-gravity platform on board the Space Recovery Experiment capsule (SRE) of ISRO among Asia-Pacific countries;

[Space for Human Empowerment]
12. Appreciate the examples provided by ISRO on the use of space technology for human empowerment to provide services to village areas in the Asia-Pacific countries.
The tentative concept paper of each working group
Earth Observation Working Group (EOWG): P. 1-6
Communication Satellite Application Working Group (CSA WG): P. 7
Space Education and Awareness Working Group (SEA WG): P. 8-10
Space Environment Utilization Working Group (SEU WG): P. 11

* Please visit the following URL for your registration:
  https://www.prime-intl.co.jp/test_aprsaf15/regist_g.html

The 15th Session of the Asia-Pacific Regional Space Agency Forum (APRSAF-15)
Earth Observation Working Group (EOWG)
(9-10 December, Hanoi & Halong bay, Vietnam)

PROVISIONAL AGENDA

1. Opening of the session (EOWG co-chairs)

2. Adoption of the agenda (All)

3. Self-introduction (All)

4. Review of the last EOWG at Bangalore, India (ISRO or co-chairs)

5. Focal point of EOWG (co-chairs)

6. Keynote speeches
   a. Presentation by Vietnam
   b. Presentation by Japan

7. General exchange of views on Earth environment issues
   a. G8 declaration on GEOSS acceleration (JAXA)
   b. Environment change & global warming disasters (JAXA)
   c. Other topics (All)
8. Proposal of SAFE (Space Application for Environment) prototyping
   a. General introduction (JAXA)
   b. On going prototyping (Vietnam & Japan)
   c. Next prototyping candidates (All)

9. Country reports (including international organizations)

10. Overall discussions and way forwards (All)

11. Conclusions of EOWG and wrap up (co-chairs)

Annex: Indicative schedule of work
1. **Opening of the session (EOWG co-chairs)**
   At first, Prof. Tran Manh Tuan, Chairman of Scientific Council of Space Technology Institute (STI) will declare opening the APRSAF-15 EOWG, and make a welcome address as a co-chair and host organization of Vietnam. Following the Prof. Tuan, Dr. Takashi Moriyama, Fellow of JAXA, co-chair of EOWG, will welcome and introduce the aim of EOWG.

2. **Adoption of the agenda (All)**
   The WG members would be invited to review the provisional agenda for adoption. If there are opinions and suggestions to change the agenda, co-chair may consider and do it if appropriate.

3. **Self-introduction (All)**
   The WG members are kindly requested self-introduction in turn to know each other. The co-chair should be considered such those participants for the first time to participate the EOWG.

4. **Review of the last EOWG at Bangalore, India (ISRO or co-chairs)**
   The participants of ISRO (hopefully Dr. Jayarman, former co-chair of EOWG of APRSAF-14) are kindly requested to make presentation about the successful results of the EOWG, and Plenary recommendations to EOWG.

5. **Focal point of EOWG (co-chairs)**
   The Sentinel Asia Step-2 was authorized at previous EOWG, and JAXA is underway developing the system for disaster operation. The status will be presented at the Plenary of APRSAF-15. The focal point of our EOWG is application of EO data for post disaster and preparedness. Also the global warming disasters are becoming much more important subject which is very closely related with environment / climate changes. One typical example of SAFE (Space Applications for Environment) prototyping will be the start point to solve the subject from the regional approach to the global.

6. **Keynote speeches**
   a. **Presentation by Vietnam**
      Kindly requested nominate the person to make a Keynote speech relating Earth Observation.
   b. **Presentation by Japan**
      Kindly requested nominate the person to make a Keynote speech relating Earth Observation.
7. General exchange of views on Earth environment issues  
a. G8 declaration on GEOSS acceleration (JAXA)  
Introduce the result of G8 environment summit at Hokkaido, by focusing G8 declarations on  
GEOSS acceleration, and discuss what we can do as a member of APRSAF. JAXA will  
itroduce the plans to respond this by satellite Earth observation.

b. Environment change & global warming disasters (JAXA)  
Introduce the Earth environment changes caused by global warming. Arctic sea ice has been  
decreasing and this may change the Earth climate. Glacier lakes increasing the number and its  
scale, this may raise large scale flood in the region. Climate disasters such as heavy rains,  
large scale typhoons / cyclones and draught, are becoming conspicuous. WG exchanges views  
and opinions to recognize what the Earth is now.

c. Other topics (All)  
Relating the Earth environment, we will welcome the topics to share the knowledge.

8. Proposal of SAFE (Space Application for Environment) prototyping  
a. General introduction (JAXA)  
JAXA will introduce the overall of SAFE.

b. On going prototyping (Vietnam & Japan)  
The prototyping for water resource management, forest & agriculture management will be  
introduced by the project member of both countries.

c. Next prototyping candidates (All)  
EOWG will discuss and define the next SAFE prototyping candidates (subject, country,  
agency) and also the future prospects of SAFE.

9. Country reports (including international organizations)  
All the participating agencies / countries and international organizations are kindly invited  
country reports at the EOWG. Co-chair would like to suggest that the reports focus on the  
environmental subjects is pleasant.

10. Overall discussions and way forwards (All)  
All the EOWG members and observers are welcomed to join the discussion for all of the  
subject dealing with the EOWG, and future of EOWG
11. Conclusions of EOWG and wrap up (co-chairs)
Co-chairs will make a paper in advance to conclude all the discussions among EOWG, and finalize as the EOWG report to the Plenary.

Annexes: (attached): Indicative schedule of work

Co-Chairs: Prof. Tran Manh Tuan, Chairman, Scientific Council of Space Technology Institute (STI)
Dr. Takashi Moriyama, Fellow, Japan Aerospace Exploration Agency (JAXA)

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Agenda Item(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>09 December</td>
<td>10:00</td>
<td>• Remarks by the Co-Chairs&lt;br&gt;• Adoption of the agenda&lt;br&gt;• Self Introduction&lt;br&gt;• Review of the last EOWG at Bangalore&lt;br&gt;• Focal point of EOWG (Coffee/tea break 11:00-11:15)&lt;br&gt;• Keynote speeches (Vietnam)&lt;br&gt;• Keynote speeches (Japan)</td>
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<td><strong>Opening of the session</strong></td>
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<td></td>
<td>12:00</td>
<td>7. • G8 declaration on GEOSS acceleration(JAXA)&lt;br&gt;• Environment change &amp; global warming disasters (JAXA)&lt;br&gt;• Other topics(all)</td>
</tr>
<tr>
<td></td>
<td>14:00</td>
<td>8. • SAFE General Introduction (JAXA)&lt;br&gt;• Ongoing prototypes (Forest Management, Vietnam and Japan) (Coffee/tea break 15:00-15:15)&lt;br&gt;• Ongoing Prototypes (Water Resource Management, Vietnam and Japan)</td>
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<tr>
<td></td>
<td>16:00</td>
<td>Adjourn</td>
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<tr>
<td>10 December</td>
<td>09:30</td>
<td>1. • Report of the Day 0 discussion&lt;br&gt;• Revision of the agenda&lt;br&gt;• Self introduction for new participants</td>
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<tr>
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<td><strong>Opening of the session</strong></td>
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<td><strong>Country reports</strong></td>
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<td></td>
<td>14:50</td>
<td>10. • Overall discussions and way forward&lt;br&gt;• Adoption of the conclusions and recommendations of the EOWG&lt;br&gt;• Wrap up</td>
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<td></td>
<td>16:00</td>
<td><strong>Concluding Session</strong></td>
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The Fifteenth Session of the Asia-Pacific Regional Space Agency Forum (APRSAF-15)

Communication Satellite Application Working Group (CSA WG)

Concept Paper

The CSA WG has been discussing many topics on satellite communication matters and has been providing good opportunities to exchange each country’s status report on, in particular, digital divide issues as well as the broadband service in the Asia-Pacific region. The CSA WG should share the experiences for realizing cooperation among countries in the region, regarding applications of satellite communication for tele-education, tele-medicine and disaster management, taking into account the needs to resolve the digital-divide in the region.

In the APRSAF-14, the CSA WG recommended use of satellite programs of WINDS and QZSS for the above objectives.

Based on the previous discussion, the concept of the CSA WG in the APRSAF-15 is as follows:

1. New applications or concepts of the satellite communication for tele-education, tele-medicine and disaster management in the Asia-Pacific region

Until the previous meetings, many discussions concerning the digital divide issues have been made and useful information has been exchanged. Some applications were planned, demonstrated and organized to demonstrate in each country. The CSA WG should continue these activities under the regional cooperation and aim to promote new applications or concepts of the satellite communication for tele-education, tele-medicine and disaster management in the Asia-Pacific region.

2. Information exchange and sharing about satellite positioning systems in the Asia-Pacific region

Satellite positioning is one of the important satellite applications and becomes widely used in the Asia-Pacific countries. Some countries study, develop and operate their original satellite positioning systems. The CSA WG embarks on a discussion about the satellite positioning systems.

- END
Fifteenth Session of the Asia-Pacific Regional Space Agency Forum (APRSAF-15)

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).
The Concept and Agenda of
APRSAF-15 Space Environment Utilization(SEU) WG.

<Concept>
“Space Environment Utilization (SEU) Working Group”, which is renamed from previous “ISS Working Group” at the APRSAF-14, have discussed ways to facilitate effective joint utilizations of the space environment among Asia-Pacific countries and have expanded the scope to general space environment utilization beyond ISS/JEM utilization.

Any presentations and proposals from the participants concerning the international cooperation in the field of Space Environment Utilization are welcomed.

<Expected Outputs>
To ensure the common understandings on the space environment utilization status and to seek promising areas of steady and productive cooperation among Asia-Pacific countries.

<Agenda>
1. Status report on activities following the APRSAF-14 recommendation and action items
   ✓ Cooperation on space experiments following the current feasibility studies of the ISS/JEM utilization
   ✓ Cooperation on a micro-gravity platform on board the Space Recovery Experiment capsule (SRE) of ISRO
2. Activity reports of space environment utilization
   ✓ Activity reports in the field of Space Environment Utilization from all participants.
   ✓ Cooperation on Asian astronauts on board the ISS
   ✓ Zero-gravity flight experiments on the JAXA's parabolic flights by Asian students
3. New proposals to strengthen the international cooperation of space environment utilization
4. Discussions on future plans, recommendations from SEU WG, and action items
5. Conclusion
# The Tentative Program of the 15th Session of the Asia Pacific Regional Space Agency Forum (APRSAF-15)

**~ Main Theme : Space for Sustainable Development ~**

9-12 December 2008  
Hanoi & Ha Long bay, Vietnam

**as of 19 SEP 2008**

## Day 1 - 9 December

[Registration : 09:30-10:00] /Hanoi, venue ,VAST  
[Working Group Session : 10:00-16:00]

<table>
<thead>
<tr>
<th>Time</th>
<th>A. Earth Observation W.G</th>
<th>B. Communication Satellite Applications W.G</th>
<th>C. Space Education &amp; Awareness W.G</th>
</tr>
</thead>
</table>
| 10:00-11:00| [Co-chairs] Dr. Takashi Moriyama  
Fellow, Earth Observation Research Center, JAXA  
Prof. Tran Manh Tuan  
Chairman of Scientific Council of Space Technology Institute (STI) | [Co-chairs] Mr Hiroki Kohhata  
Senior Engineer, Satellite Applications and Promotion Center, JAXA  
Mr. Nguyen Minh Dan  
Director of the Department of Science and Technology, Ministry of Information and Communication | [Co-chairs] Dr. Takashi Kubota  
Associate Professor, Department of Spacecraft Engineering, JAXA/ISAS  
Dr. Doan Minh Chung  
Vice Director  
Space Technology Institute (STI) |
| 11:00-11:15| Coffee Break |
| 11:15-12:30| A. Earth Observation W.G | B. Communication Satellite Applications W.G | C. Space Education & Awareness W.G |

**[Lunch : 12:30-13:30]**

<table>
<thead>
<tr>
<th>Time</th>
<th>A. Earth Observation W.G</th>
<th>B. Communication Satellite Applications W.G</th>
<th>C. Space Education &amp; Awareness W.G</th>
</tr>
</thead>
<tbody>
<tr>
<td>13:30-15:00</td>
<td>A. Earth Observation W.G</td>
<td>B. Communication Satellite Applications W.G</td>
<td>C. Space Education &amp; Awareness W.G</td>
</tr>
<tr>
<td>15:00-15:15</td>
<td>Coffee Break</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15:15-16:00</td>
<td>A. Earth Observation W.G</td>
<td>B. Communication Satellite Applications W.G</td>
<td>C. Space Education &amp; Awareness W.G</td>
</tr>
</tbody>
</table>

Appendix-C
The Tentative Program of the 15th Session of the Asia Pacific Regional Space Agency Forum (APRSAF-15)
~ Main Theme: Space for Sustainable Development ~
9-12 December 2008
Hanoi & Ha Long bay, Vietnam

as of 19 SEP 2008

Day 2 - 10 December

[Registration: 09:00-09:30] /Hanoi, venue, VAST
[Working Group Session: 09:30-16:00]

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>09:30-10:30</td>
<td>[Co-chairs] Dr. Takashi Moriyama Fellow, Earth Observation Research Center, JAXA</td>
<td>[Co-chairs] Mr Hiroki Kohhata Senior Engineer, Satellite Applications and Promotion Center, JAXA</td>
<td>[Co-chairs] Mr. Nguyen Minh Dan Director of the Department of Science and Technology, Ministry of Information and Communication</td>
<td>[Co-Chairs] Mr. Tetsuo Tanaka Director, Space Environment Utilization Center, JAXA</td>
</tr>
<tr>
<td></td>
<td>Prof. Tran Manh Tuan Chairman of Scientific Council of Space Technology Institute (STI)</td>
<td></td>
<td></td>
<td>Dr. Doan Minh Chung Vice Director Space Technology Institute (STI)</td>
</tr>
<tr>
<td>10:30-10:50</td>
<td>Coffee Break</td>
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<tr>
<td>[Lunch: 12:30-13:30]</td>
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<tr>
<td>14:30-14:50</td>
<td>Coffee Break</td>
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<tr>
<td>14:50-16:00</td>
<td>A. Earth Observation W.G</td>
<td>B. Communication Satellite Applications W.G.</td>
<td>C. Space Education &amp; Awareness W.G</td>
<td>D. Space Environment Utilization W.G.</td>
</tr>
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</table>

[Reception hosted by MEXT at Melia Hanoi Hotel, 17:30-19:30]
The Tentative Program of the 15th Session of the Asia Pacific Regional Space Agency Forum (APRSAF-15)
~ Main Theme : Space for Sustainable Development ~
9-12 December 2008
Hanoi & Ha Long bay, Vietnam

as of 19 SEP 2008

Day 3 - 11 December

General Co-Chairs
Vietnam: Prof. Nguyen Khoa Son, Vice President of VAST
Japan: Prof. Hiroki Matsuo, Chairman, Space Activities Commission (SAC) / MEXT

[Registration : 08:30-09:00] / Hanoi & Ha Long bay, venue ICC & Saigon Halong Hotel
[Plenary Session : 09:00-12:15]

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Speaker</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:00-09:10</td>
<td>Welcome Address</td>
<td>VAST&amp;MEXT by Co-general person</td>
</tr>
<tr>
<td>09:10-09:20</td>
<td>Key Note Address</td>
<td>MOST</td>
</tr>
<tr>
<td>09:20-09:30</td>
<td>Key Note Address</td>
<td>MEXT</td>
</tr>
<tr>
<td>09:30-09:40</td>
<td>Summary of APRSAF-14</td>
<td>ISRO</td>
</tr>
<tr>
<td>09:40-10:30</td>
<td>Photo Session &amp; Coffee Break</td>
<td></td>
</tr>
<tr>
<td>10:30-10:45</td>
<td>Country Report (India)</td>
<td></td>
</tr>
<tr>
<td>10:45-11:00</td>
<td>Country Report (Indonesia)</td>
<td></td>
</tr>
<tr>
<td>11:00-11:15</td>
<td>Country Report (Dr. Keiji Tachikawa, President, JAXA/ Japan)</td>
<td></td>
</tr>
<tr>
<td>11:15-11:30</td>
<td>Country Report (Korea)</td>
<td></td>
</tr>
<tr>
<td>11:30-11:45</td>
<td>Country Report (Malaysia)</td>
<td></td>
</tr>
<tr>
<td>11:45-12:00</td>
<td>Country Report (Thailand)</td>
<td></td>
</tr>
<tr>
<td>12:00-12:15</td>
<td>Country Report (Vietnam)</td>
<td></td>
</tr>
</tbody>
</table>

[Lunch : 12:15-13:30]
The Tentative Program of the 15th Session of the Asia Pacific Regional Space Agency Forum (APRSAF-15)
~ Main Theme : Space for Sustainable Development ~
9-12 December 2008
Hanoi & Ha Long bay, Vietnam

as of 19 SEP 2008

Day 3 - 11 December

[Plenary Session : 13:30-15:00]

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Speaker</th>
</tr>
</thead>
</table>
| 13:30-15:00| Report Session on Sentinel Asia and APRSAF sat | 1. Status Report for SA Step 2 by JPT secretariate  
|            |                                            | 2. Presentation                              |
|            |                                            | 3. Discussion                                |
| 13:30-14:15| Sentinel Asia                              |                                              |
| 14:15-15:00| APRSAFsat                                  | 1. Status Report for APRSAFsat by JAXA        |
|            |                                            | 2. Discussion                                |
| 15:00-15:30|                                            | Move to the Bus                              |
| 15:30-19:30|                                            | Move to Halong bay (By Bus)                  |

[Reception hosted by VAST at Ha Long bay, Saigon Halong Hotel, 20:00-21:30]
## Day 4 - 12 December

[Closing Plenary : 09:00-12:00/Ha Long bay, venue Saigon Halong Hotel]

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Organizer</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:00-09:15</td>
<td>Speech by International Organization</td>
<td>UNESCAP</td>
</tr>
<tr>
<td>09:15-09:30</td>
<td>UNCPUSOS (Ambassador. Ciro Arévalo Yepes, Chairman)</td>
<td></td>
</tr>
<tr>
<td>09:30-09:45</td>
<td>ASEANSCOSA</td>
<td></td>
</tr>
<tr>
<td>09:45-10:00</td>
<td>Presentation of Summary Report</td>
<td>Earth Observation WG</td>
</tr>
<tr>
<td>10:00-10:15</td>
<td>Communication Satellite Applications WG</td>
<td></td>
</tr>
<tr>
<td>10:15-10:30</td>
<td>Space Education &amp; Awareness WG</td>
<td></td>
</tr>
<tr>
<td>10:30-10:45</td>
<td>Space Environment Utilization WG</td>
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</tr>
<tr>
<td>10:45-11:00</td>
<td>Coffee Break</td>
<td></td>
</tr>
<tr>
<td>11:00-11:40</td>
<td>Adoption of Recommendations of APRSAF-15</td>
<td></td>
</tr>
<tr>
<td>11:40-11:50</td>
<td>Announcement of APRSAF-16</td>
<td></td>
</tr>
<tr>
<td>11:50-12:00</td>
<td>Closing Remarks</td>
<td>Vietnam/Japan</td>
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<tr>
<td></td>
<td>[Cultural Tour (including Lunch) : 12:00 - 16:30]</td>
<td></td>
</tr>
</tbody>
</table>
Appendix-D

Map of Hanoi showing the location of:
- Vietnamese Academy of Science and Technology (VAST)
- International Conference Center (ICC)
- Melia Hanoi Hotel
Appendix-E

Visa requirement for participants to the APRSAF 15th meeting in Vietnam

General requirements:
- Valid passport for at least six months after the period of intended visit (Dec 12, 2008)
- You must have a return ticket or ticket to another country after leaving Vietnam
- Your staying period is for APRSAF 15 only, for longer stay in Vietnam please contact our Consular at the Ministry of Foreign Affairs

Table - Do I have to apply for a visa to enter Vietnam for APRSAF meeting?

**Yes**: you need to apply for a visa to enter Vietnam

**No**: you don’t need to apply a visa

<table>
<thead>
<tr>
<th>No</th>
<th>Country</th>
<th>Passport type</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
<td>1.</td>
<td>People's Republic of Bangladesh</td>
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<tr>
<td>2.</td>
<td>Brunei Darussalam</td>
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</tr>
<tr>
<td>3.</td>
<td>Kingdom of Cambodia</td>
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</tr>
<tr>
<td>4.</td>
<td>People's Republic of China</td>
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</tr>
<tr>
<td>5.</td>
<td>French Republic</td>
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</tr>
<tr>
<td>6.</td>
<td>India</td>
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<tr>
<td>7.</td>
<td>Republic of Indonesia</td>
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<tr>
<td>8.</td>
<td>Japan</td>
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<tr>
<td>9.</td>
<td>Republic of Korea</td>
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<tr>
<td>10.</td>
<td>Lao People's Democratic Republic</td>
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<td>Mongolia</td>
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<tr>
<td>13.</td>
<td>Union of Myanmar</td>
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</tr>
<tr>
<td>14.</td>
<td>Islamic Republic of Pakistan</td>
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</tr>
<tr>
<td>15.</td>
<td>Republic of the Philippines</td>
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</tr>
<tr>
<td>16.</td>
<td>Russian Federation</td>
<td>No</td>
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<tr>
<td>17.</td>
<td>Democratic Socialist Republic of Sri Lanka</td>
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<tr>
<td>18.</td>
<td>Kingdom of Thailand</td>
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<tr>
<td>19.</td>
<td>Australia</td>
<td>Yes</td>
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<tr>
<td>20.</td>
<td>Bhutan</td>
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<td>21.</td>
<td>Chile</td>
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<tr>
<td>22.</td>
<td>Fiji</td>
<td>Yes</td>
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<td>23.</td>
<td>Kazakhstan</td>
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<td>26.</td>
<td>Singapore</td>
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<tr>
<td>27.</td>
<td>USA</td>
<td>Yes</td>
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<tr>
<td>28.</td>
<td>Colombia</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Note**: If your country is not listed in this table, it is required that you need to apply for a visa to enter Vietnam.