



17TH
APRSAF

ASIA-PACIFIC REGIONAL
SPACE AGENCY FORUM

17 September 2010

SECOND ANNOUNCEMENT

The 17th Session of the Asia-Pacific Regional Space Agency Forum **(APRSAF-17)**

**“The role of space technology and industry
in addressing climate change”**

23-26 November 2010, Melbourne, Australia

Dear Sir/Madam,

Following the first announcement of APRSAF-17, which was distributed to its members in July 2010, we, the APRSAF Secretariat, are pleased to send you the Second Announcement, as enclosed.

On behalf of the APRSAF-17 organizers and ourselves, we invite you to join APRSAF-17 to share your valuable experiences as well as your profound thoughts and insights. We also take the liberty of requesting a good number of participation in the APRSAF-17 (including Working Group) from your own organization as well.

It would be highly appreciated that your online registration through our website, <https://www.aprsaf.org/17th/registration/1/>, is duly completed no later than 25 October 2010.

APRSAF Secretariat

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c/o Japan Aerospace Exploration Agency

Marunouchi Kitaguchi Building, 1-6-5 Marunouchi, Chiyoda-ku, Tokyo 100-8260 Japan

Tel: +81-50-3362-5880 · Fax: +81-3-6266-6908 · E-mail: secretariat@aprsaf.org · <http://www.aprsaf.org>

Further information on the final program etc. will be sent to you in due course as the final announcement.

Also we are constantly updating APRSAF-17 information on our APRSAF website. Please visit http://www.aprsaf.org/en/annual_meetings/ at your convenience.

We look forward to meeting you in Melbourne, Australia.

With warmest regards,

APRSAF Secretariat

APRSAF-17 & Relevant Events

Date	Event	Venue
20-21 Nov. 2010	Water Rocket Event	VSSEC and Cross Keys Reserve
21-22 Nov. 2010	GNSS Workshop	The Royal Melbourne Institute of Technology (RMIT)
22 Nov. 2010	SAFE Workshop	Crown Conference Centre
23-26 Nov. 2010	APRSAF-17	Crown Conference Centre
23-26 Nov. 2010	Poster Contest	Crown Conference Centre

On behalf of the co-host organizations,



Michael Green
General Manager
Innovation and Space Branch
Department of Innovation, Industry, Science and Research



Yoshikazu Kato
Deputy Director-General
Research and Development Bureau
Ministry of Education, Culture, Sports, Science and
Technology



Keiji Tachikawa
President
Japan Aerospace Exploration Agency

The 17th Session of the Asia-Pacific Regional Space Agency Forum (APRSAF-17)

“The role of space technology and industry in addressing climate change”

23-26 November 2010, Melbourne, Australia

You are invited to register for the 17th Session of the Asia-Pacific Regional Space Agency Forum (APRSAF-17), to be jointly organized and co-hosted by the Department of Innovation, Industry, Science and Research (DIISR) of Australia, 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 participation to APRSAF-17 (including each Working Group) from your entity as well.

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 sixteen annual meetings organized jointly by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) of Japan, 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, India and Vietnam. 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 16th Session of the APRSAF (APRSAF-16) was convened in Bangkok under the main theme of "Space Applications: Contributions towards Human Safety and Security" with the aim to strengthen and enable the countries in the Asia-Pacific region to enrich the quality of life of their people through enhanced use of space-based systems, activities and services. It was jointly organized by Thailand and Japan: Ministry of Science and Technology (MOST), and Geo-informatics and Space Technology Development Agency (GISTDA) of Thailand, and MEXT and JAXA of Japan. The APRSAF-16 gathered 310 participants from 27 countries and regions and 10 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)

Objectives

While the APRSAF has been an active forum to promote concrete cooperative activities to resolve common problems at the regional level, the APRSAF-17 will be held under the main theme of "The role of space technology and industry in addressing climate change" 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 and Working Groups

The Plenary session will take place in the third and fourth days of the APRSAF-17. Prior to the Plenary session, it is proposed to have parallel sessions for the 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-17.

At the Plenary session, a status report of the Sentinel Asia Project, SAFE (Satellite Applications For Environment), STAR (Satellite Technology for the Asia-Pacific Region) will be presented. Please refer Appendix-A for the outline of each working group and initiatives.

- Sentinel Asia was initiated as the first step to build a disaster risk management system in the Asia-Pacific region since the APRSAF-12, and now that entered into STEP2 Project.
- SAFE (Satellite Applications For Environment) was recommended in APRSAF-15 in 2008 as a platform for development of solution-oriented prototype systems for environmental monitoring, in particular to assess regional impacts of climate change. Its basic concept for future prototype activities is contributing to GEOSS.
- STAR (Satellite Technology for the Asia-Pacific Region) program was proposed in the APRSAF-14 as a new international cooperation scheme on small satellite development. The objective of this cooperation is to provide opportunities of capacity building on satellite development for space agency staffs in Asia-Pacific countries, to increase the number of available Earth observation satellites in this region and meet the needs of Earth observation in the future.
- In the report session of Communication Satellite Applications (CSA) WG at the plenary session, there will be a summary report of the Global Navigation Satellite System (GNSS) workshop which will be held in Melbourne just prior to the APRSAF-17 from 21 - 22 November.
- The overview of Japanese Space Education and Capacity Building Programs will be also presented at the APRSAF-17, and some of the programs will be highlighted.

Expected Attendee

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 welcome to participate in the APRSAF-17.

Tentative Program

Please see Appendix-B.

Date and Venue for APRSAF-17

Date: 23 to 26 November 2010

Venue: Crown Conference Centre, in Melbourne, Australia

Address: 8 Whiteman Street, Southbank VIC, Australia, 3006

Telephone: +61 3 9292 6968

Fax: +61 3 9292 5397

Website: <http://www.crowneventsandconferences.com.au/>

Registration

Please visit the on-line registration site and complete your registration **no later than 25 October 2010.**

<https://www.aprsaf.org/17th/registration/1/>

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

*If you have completed First Registration, please proceed to Second Registration.

Accommodation

We have the special conference accommodation at the following two hotels. The room rates below are only available using the reservation form to be downloaded from the APRSAF website. (http://www.aprsaf.org/annual_meetings/aprsaf17/meeting_details.php)

Please send a filled reservation form to either hotel via e-mail or fax.

A. Crown Promenade Hotel A\$200 Per Night (Single / Double, Exclusive GST)

<http://www.crownpromenade.com.au/>

Online reservation is also available from;

https://reservations.ihotelier.com/crs/g_reservation.cfm?groupID=496638&hotelID=3513

B. Travelodge Southbank A\$135 Per Night (Single / Double, Inclusive GST)

A\$145 Per Night (Single / Double, Inclusive GST & Breakfast)

<http://www.travelodge.com.au/travelodge-southbank-melbourne-hotel/home>

Points of Contact

For Participants from Australia:

If you have any inquires concerning the APRSAF-17, please feel free to contact:

Ms. Michele Clement

Manager

Space Policy Unit

Department of Innovation, Industry, Science and Research

TEL:+61 2 6213 7669, FAX:+61 2 6290 8923

E-mail: michele.clement@innovation.gov.au

For Participants from the countries except Australia:

If you have any inquires concerning the APRSAF-17, please feel free to contact:

Ms. Yukiko Okabe

APRSAF-17 Secretariat

TEL:+81-50-3362-5880, FAX:+81-3-6266-6908

E-mail: aprsaf-17@aprsaf.org

Technical Tour

On the afternoon of 26 November, Technical Tour will be hosted by DIISR, Australia. Please inform us of your attendance with the on-line registration (by stage 2 registration form).

Destination: Bureau of Meteorology (BOM) or

Victorian Space Science Education Centre (VSSEC)

Time: 14:00 – 17:00

14:00-15:00 Presentation will be held at Promenade Room.

15:00-17:00 Facility Tour

Tour buses for each facilities are departing at 15:00.

Overview:

This tour will provide informative presentations and tours of BOM's and VSSEC's related operations and facilities. The tour to BOM is focusing on the theme of APRSAF-17 "The role of space technology and industry in addressing climate change" and VSSEC is presenting their activities in support of space education and awareness.

Evening reception

All participants will be invited to the following evening receptions:

Evening on 24 November, hosted by MEXT of Japan.

Evening on 25 November, hosted by DIISR of Australia.*

*Transportation is arranged for 18:30 from Crown to the venue.

Transportation

Transportation between the Melbourne International Airport and the Crown Promenade Hotel / Travelodge Southbank will be provided on 22 and 23 November for arrival and on 26 and 27 November for departure, according to participants' flight schedules informed by 8 November 2010. Information on the transportation will be announced in the APRSAF-17 page (http://www.aprsaf.org/en/annual_meetings/) and the final announcement in due course.

Visa

Visa applicants must demonstrate that they meet all the legislative requirements for an Australian visa. It is extremely important for international participants to start their applications at least **6 to 8 WEEKS BEFORE** their intended date of travel. This will ensure sufficient time for processing the applications and permits any problems that may arise to be sorted out.

Please refer to the website of the Department of Immigration and Citizenship, Australian Government Website at: <http://www.immi.gov.au/immigration/>

Also, please refer to Appendix-C

Any participant who requires an invitation letter in order to obtain a visa, please contact:

Mr. Adam Sandilands

Policy Officer

Space Policy Unit, Manufacturing Division

Department of Innovation, Industry, Science & Research

space@innovation.gov.au

In your request please supply the following information:

- Full name as it appears on their passport;
- Passport number; and
- Date of birth

Insurance

Participants are highly recommended to arrange their own overseas travel insurance. The APRSAF-17 Secretariat does not take any responsibility for your travel accident.

Others

For up-to-date information for APRSAF-17, please visit <http://www.aprsaf.org>.

Final announcement will be provided in due course.

APRSAF-17 Side & Relevant Events

■ APRSAF-17 Water Rocket Event

Theme: 'Which country will be the first to Mars'

Co-organizers: DIISR, VSSEC and JAXA

Date: November 20-21, 2010

Venue: VSSEC and Cross Keys Reserve, Strathmore, Melbourne, Victoria, Australia

Reference: http://www.aprsaf.org/data/aprsaf17_data/APRSAF17_WRE_Outline.pdf

■ APRSAF-17 Poster Contest

Theme: "Space Technology to Help the Earth"

Co-organizers: DIISR, VSSEC and JAXA

Date: During the sessions of APRSAF-17

Venue: Crown Conference Centre, Melbourne, Australia

Reference: http://www.aprsaf.org/data/aprsaf17_data/APRSAF17_Poster_Contest.pdf

Contact for further information (Poster contest & Water Rocket Event)

Ms. Yayoi Miyagawa, JAXA Space Education Center

Tel: +81-50-3362-7590

Fax: +81-42-759-8612

Email: aprsaf17@edu.jaxa.jp

Further detailed information on the program, registration and logistics of the APRSAF-17 will be available in due course. Please visit the APRSAF website at: <http://www.aprsaf.org>

■SAFE Workshop

The Space Applications For Environment (SAFE) Workshop will be conducted on the afternoon of 22 November 2010 (Day 0), within the framework of APRSAF EOWG.

Contact for further information on the SAFE Workshop:

SAFE Secretariat (c/o Japan Space Forum (JSF))

TEL: +81-3-5200-1302

FAX: +81-3-5200-1420

E-mail: safe@jsforum.or.jp

Other

■Asia-Oceania Regional Workshop on GNSS

Date: 21-22 November 2010

Venues: The Royal Melbourne Institute of Technology (RMIT) in Melbourne, Australia.

*Further detailed information will be released in due course <http://www.multignss.asia/>

Contact for further information on the Workshop on GNSS

Mr. Hiroaki Tateshita

Satellite Applications and Promotion Center (SAPC), JAXA

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Email: ws@multignss.asia

*Seventeenth Session of the Asia-Pacific Regional Space Agency Forum
(APRSAF-17)
EO(Earth Observation)WG activities
Proposed Outline*

1. The Scope/Objectives of EO WG activities

The EOWG has been exploring opportunities to expand the potential use of EO satellite data for disaster applications (Sentinel Asia) and the environment (SAFE: Space Application for Environment). The upcoming EOWG will focus on monitoring the progress of SAFE, and stimulating discussion to start up new activities that respond to a wider spectrum of user requirements.

1) SAFE Progress Report

SAFE workshop will be held at day 0 of EO working group. New proposal of SAFE prototyping will be presented, reviewed by SAFE review board members and approved by SAFE workshop participants. SAFE on-going prototyping activities will be also reported.

In addition, the SAFE secretariat will report on current SAFE updates at day 1 of EO working group; in particular, new SAFE prototyping activities approved by SAFE 2nd workshop in Sri Lanka this June, ongoing SAFE prototyping activities, successful story of SAFE prototyping activities, and will ask participants of the EOWG to discuss about the promotion of SAFE prototype activities and its successful results to participating entities through knowledge transfer and capacity building.

2) Country Reports

In this session, participating countries and international organizations are kindly invited to contribute Country Reports. The co-chairs expect the presenters to report EO activities for each country (or organization) related to the climate change mitigation and adaptation topic by using space technology. Of course, we welcome the presenters to include proposals for new activities for EO working group in the report.

**Please understand that we cannot provide time slots for all member countries because of the schedule. The co-chairs will lead the arrangements with the APRSAF secretariat.*

3) Potential of New Subjects: Private Sector Initiatives

This is a session for participants from private sectors. The co-chairs expect the presenters to explain how their business field is related to EO, as well, to show how they may contribute to the APRSAF, especially for climate change mitigation and adaptation topic by using space technology as private sectors.

**Please understand that we cannot provide time slots for all participating companies because of the schedule. The co-chairs will lead the arrangements with the APRSAF secretariat.*

2. The Results of EOWG Activities at APRSAF-16

See attached: APRSAF-16 adopted recommendations.

3. The Draft of the Agenda

- 1) Opening of the Session
- 2) Adoption of the Agenda
- 3) Self-introductions
- 4) Review of the Last EOWG in Bangkok, Thailand
- 5) Focus of EOWG
- 6) Keynote Speeches
- 7) SAFE Progress Report
- 8) Country Reports
- 9) Potential of New Subjects: Private Sector Initiatives
- 10) Overall Discussions and the Way Forward
- 11) Conclusions of EOWG and Wrap-up

***Seventeenth Session of the Asia-Pacific Regional Space Agency Forum
(APRSAF-17)
CSA (Communication Satellite Application) WG activities
Proposed Outline***

1. The scope /objectives of CSA WG activities

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.

Based on the previous APRSAF-16 discussion, the outline of the CSA WG in the APRSAF-17 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 WINDS satellite communications experiments, which were proposed in the APRSAF, are conducting. 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 with an active participation of satellite operators

2) Promotion for the activities on the Global Navigation Satellite System (GNSS) in the Asia-Pacific region

The Satellite Positioning, Navigation and Timing (PNT) is one of the important satellite applications and becomes widely used in the Asia-Pacific countries. According to the recommendation of the APRSAF-15, successful completion of the first Asia Oceania regional workshop on Global Navigation Satellite Systems (GNSS) was confirmed. The CSA WG should support these activities.

2. The result of CSA WG activities in APRSAF 16
See attached the APRSAF-16 adapted the recommendations.

3. The Draft of Agenda

- 1) Opening of the session
- 2) Adoption of the agenda
- 3) General introduction and guidance of CSAWG
- 4) Presentations of communications satellite systems and applications
 - a. Communications Satellite Systems
 - b. Current Status in Asia Pacific Region
- 5) Activity reports in the field of tele-education, tele-medicine and disaster management
 - a. Study report
 - b. Country report
 - c. General Discussion
- 6) Report on the Multi GNSS Workshop
- 7) Other matters
- 8) Closing of the session

*Seventeenth Session of the Asia-Pacific Regional Space Agency Forum
(APRSAF-17)
SEA (Space Education and Awareness)WG Activities
Proposed Outline*

1. Background and Objectives of SEA WG activities

Space has been an important part of human civilization. Throughout the human history, the quest for knowledge of the universe has led humankind to learn more about where they have come from, where they stand and to expand their imagination about where they are going.

Activities in space have increasingly become an essential, integral part of our human life. Benefits derived from space applications have transformed the way we look at our environment and our planet, the way we communicate and interact with each other and the way we move from one place to another, dramatically increasing the safety, security, accuracy, predictability and convenience in our daily lives.

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

For young people, space activities provide a source of interest, imagination and inspiration. Attractive space educational materials can spark intellectual flames 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 help them understand how important, and how rewarding, it is to work together with many others to serve the society.

It is with such conviction that the SEA WG was established at the 8th session of APRSAF, in July 2001, with the aim of: i) effectively using space materials to enhance education for young people; ii) providing education and training opportunities for young people in space science and technology; iii) contributing to enhancing mutual understanding among countries in the region through exchange opportunities for young people; and iv) increasing public awareness of the societal benefits and importance of space activities.

2. The Results of SEA WG Activities at APRSAF-16

See attached the APRSAF-16 adopted recommendations.

3. The Draft of the Agenda¹

- (1) Opening of the session
- (2) Adoption of the agenda
- (3) General exchange of views on space education and raising awareness
- (4) 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. Effective uses of satellite images for schools
 - e. Other activities
- (5) Joint educational initiatives for university and graduate students and young professionals
- (6) Ways and means to exchange space education materials effectively
- (7) New and innovative funding sources to support space education activities
- (8) Other matters
 - a. Review of the outcomes of the work of the Working Group and possibilities of revising its terms of reference and developing a plan of action
 - b. Other matters

¹ For more details of the work to be conducted during APRSAF-17, please refer to “Provisional Agenda” of the Working Group (document APRSAF17/SEA-WG/2010/1) to be issued.

*Seventeenth Session of the Asia-Pacific Regional Space Agency Forum
(APRSAF-17)
SEU (Space Environment Utilization) WG activities
Proposed Outline*

1. The scope /objectives of Space Environment utilization WG activities

“Space Environment Utilization WG (SEU)”, has discussed the road map in several ways to facilitate effective joint utilization of the space environment among Asia-Pacific countries since APRSAF-12, and has expanded its scope to general space environment utilization beyond International Space Station (ISS)/Kibo utilization.

The Japanese Experiment Module “Kibo” of ISS has been fully operational since 2009. The assembly of the entire ISS will be completed within a year as well. To make good use of this unique facility by promoting the further cooperation in Kibo utilization, JAXA established a new office, “Kibo Utilization Office for Asia (KUOA)” in 2010.

Space environment utilization is a rather new field of space activities but has unlimited potential. It is also a comprehensive activity in which a large variety of scientific and technological expertise has to be synthesized. Thus the ISS/Kibo utilization is not only for space development but also for every field of human activities including science, technology, education and culture. With the assembly of ISS nearing completion, space environment utilization activities will enter a new stage and further cooperation among Asia-Pacific countries in this area will become more important.

Significant cooperation on Kibo with Malaysia has started with the protein crystal growth experiment in 2009. A new proposal from Asian space agencies to launch and return the plant seeds is in preparation phase and will be realized in the next H-II Transfer Vehicle (HTV; launch 2011). The fifth in a series of parabolic flights with Asian students is scheduled to take place this December 2010.

Based on this current status, any presentations and practical proposals from the participants concerning international cooperation in scientific and technological as well as educational utilization of the space environment are welcome. Reports of current cooperation plans and activities, experiences & lessons learned, pending issues to be resolved for further cooperation, and the new proposals from agencies would be particularly appreciated.

2.The results of Space Environment utilization WG activities in APRSAF-16
See attached the APRSAF-16 recommendations.

3.The Draft Agenda

- 1) Status report on the APRSAF-16 recommendations and actions.
- 2) Status report related to ISS program
- 3) Status of bilateral cooperation
 - a) Feasibility Study
 - b) Protein Crystal Growth Experiment
 - c) Others
- 4) Status of “Space Seed for Asian Future 2010”
- 5) Status of Student Parabolic Flight Experiment
- 6) Others (all)
- 7) Discussion on lesson learned, issues and future plan (all)

***Seventeenth Session of the Asia-Pacific Regional Space Agency Forum
(APRSAF-17)
Sentinel Asia activities
Proposed Outline***

1. The scope /objectives of Sentinel Asia Initiatives activities

The Sentinel Asia (SA) was established in 2005 as a collaboration between space agencies and disaster management agencies under the APRSAF initiative, applying remote sensing and Web-GIS technology to assist disaster management in the Asia-Pacific region. A step-by-step approach for implementation of this dissemination system was adopted, and SA Step1 (2006-2007) has achieved its overall goals, demonstrating recent advancement in web-mapping technology and the ICT system. At APRSAF-14 held in Bangalore, India, in November, 2007, the recommendation on SA Step2 was adopted, and the new JPT meeting was held in Kobe, Japan, in June, 2008. Thus the Sentinel Asia Step2 (2008-2012) was initiated. Now the Join Project Team (JPT) consists of 59 organizations from 23 countries/region and nine international organizations.

At APRSAF-17, it will be provided with STEP2 activity report.

2. The result of Sentinel Asia Initiative activities in APRSAF -16
See attached the APRSAF- 16 adapted the recommendations.

3. The Draft of Agenda

Plenary Agenda as follows:

- 1) STEP2 activity report
- 2) Activity report by Asian Disaster Reduction Center (ADRC)
- 3) Achieved result report on Sentinel Asia #1
- 4) Achieved result report on Sentinel Asia #2
- 5) Near Future Plan

***Seventeenth Session of the Asia-Pacific Regional Space Agency Forum
(APRSAF-17)
SAFE (Space Applications For Environment)
Proposed Outline***

1. The Scope/Objectives of SAFE activities

SAFE (Space Applications For Environment) is a voluntary initiative for environmental monitoring, endorsed at APRSAF-15.

This session aims to report the current activities of SAFE, including the discussion of the EOWG.

1) SAFE Progress Report

SAFE workshop will be held at day 0 of EO working group. New proposal of SAFE prototyping will be presented, reviewed by SAFE review board members and approved by SAFE workshop participants. SAFE on-going prototyping activities will be also reported.

In addition, the SAFE secretariat will report on current SAFE updates at day 1 of EO working group; in particular, new SAFE prototyping activities approved by SAFE 2nd workshop in Sri Lanka this June, ongoing SAFE prototyping activities, successful story of SAFE prototyping activities, and will ask participants of the EOWG to discuss about the promotion of SAFE prototype activities and its successful results to participating entities through knowledge transfer and capacity building.

2) SAFE Prototype Activities

In this session, SAFE members will report on the status of SAFE prototype activities in various phases. Some of them are finishing their prototyping activities, and others have just started.

3) Announcement of the Third SAFE Workshop

The SAFE secretariat will announce the next SAFE event, called “the Third SAFE Workshop”.

2.The result of SAFE activities in APRSAF-16

See attached:APRSAF-16 adapted recommendations.

3.The Draft of the Agenda

- 1) SAFE Progress Report
- 2) SAFE Prototype Activities
 - a. Water Cycle & Agriculture Monitoring (Cambodia)
 - b. Forest Monitoring (Laos)
 - c. Sea Level Rise on Coastal Zone (Sri Lanka)
 - d. Potential Drought Monitoring (Indonesia)
 - e. Fishery monitoring (Sri Lanka)
 - f. Water resource management (Pakistan)
- 3) Announcement of the Third SAFE Workshop

*Seventeenth Session of the Asia-Pacific Regional Space Agency Forum
(APRSAF-17)*

***STAR Program activities
Proposed Outline***

1. The scope /objectives of the STAR Program activities

The STAR Program provides the opportunities to develop human resources for the space agency staff in the Asia-Pacific region. It was proposed by JAXA at APRSAF-14, Bangalore, India. It is consisted of two major activities as follows.

- 1) Development of experimental satellite, Micro-STAR (50-100kg class)
- 2) System study of Earth observation satellite, EO-STAR (300-500kg class)

Since the STAR Program started in June 2009, 13 participants from 7 organizations joined it and stayed at the JAXA Sagami-hara campus (This number is as of August 2010 and increasing). They have studied conceptual design of the satellites and made prototype of some circuits, eagerly. Some of them teach basic space technology to others and discuss technical issues each other.

The STAR Program is an international project born in APRSAF and supported by participating organizations. JAXA provides technical support and a dedicated building for the STAR Program. One of participating organizations is preparing to provide an on-board experimental instrument. Moreover, the other organization is offering to develop on-board and ground software.

(STAR: Satellite Technology for the Asia-Pacific Region)

2. The result of STAR Program activities in APRSAF 16

See the attached APRSAF-16's adapted recommendations.

3. The Draft of Agenda

- 1) Progress of EO-STAR system study and Micro-STAR development
(Tsuji, JAXA)
- 2) Report of the 2nd STAR Program Coordination Group meeting in Jakarta
(TBD, STAR Program participating organization)
- 3) Experience and expectation in STAR program
(TBD, STAR Program participating organization)
- 4) Future plan
(Tsuji, JAXA)

Tentative Program

The 17th Session of the Asia-Pacific Regional Space Agency Forum (APRSAF-17)

as of 17 September 2010

<Day 0> 22 November, Monday

[Work Shop : 13:00-18:00]

	Start 13: 00 End 18:00			
	SAFE W.S. (A. Earth Observation W.G.)	B. Communication Satellite Applications W.G.	C. Space Education & Awareness W.G.	D. Space Environment Utilization W.G.
13:00-15:00	[Co-chairs] Dr. Shinichi Sobue Associate Senior Engineer, Earth Observation Research Center, JAXA Dr. Adam Lewis Group Leader, National Earth Observation Group, Geospatial and Earth Monitoring Division Geoscience Australia	/	/	/
15:00-15:15	Coffee Break			
15:15-18:00	SAFE W.S. (A. Earth Observation W.G.)	/	/	/

Tentative Program

The 17th Session of the Asia-Pacific Regional Space Agency Forum (APRSAF-17)

~ Main Theme / The role of space technology and industry in addressing climate change ~

23-26 November 2010

The Crown Conference Centre, Melbourne, Australia

<Day 1> 23 November, Tuesday

[Registration : 08:00-9:00]

[Working Group Session : 9:00-17:00]

	Start 09:00 End 17:00	Start 09:00 End 17:00	Start 09:00 End 17:00	Start 09:00 End 17:00
	A. Earth Observation W.G.	B. Communication Satellite Applications W.G.	C. Space Education & Awareness W.G.	D. Space Environment Utilization W.G.
09:00-10:30	[Co-chairs] Dr. Shinichi Sobue Associate Senior Engineer, Earth Observation Research Center, JAXA Dr. Adam Lewis Group Leader, National Earth Observation Group, Geospatial and Earth Monitoring Division Geoscience Australia	[Co-chairs] Mr. Hiroki Kohhata Senior Engineer, Satellite Applications and Promotion Center, JAXA Prof. Andrew Parfitt Pro Vice Chancellor and Vice President, Division of Information Technology, Engineering and the Environment, University of South Australia (UniSA)	[Co-chairs] Dr. Takashi Kubota Professor, Department of Spacecraft Engineering, JAXA Prof. Graham Durant Director of Questacon	[Co-Chairs] Mr. Shigeki Kamigaichi Deputy Director, Space Environment Utilization Center, JAXA Dr. Miriam Baltuck Director Canberra Deep Space Communication Complex (CDSCC)
10:30-10:45	Coffee Break			
10:45-12:30	A. Earth Observation W.G.	B. Communication Satellite Applications W.G.	C. Space Education & Awareness W.G.	D. Space Environment Utilization W.G.
12:30-13:30	Lunch : hosted by DIISR at Mesh Restaurant			
13:30-15:00	A. Earth Observation W.G.	B. Communication Satellite Applications W.G.	C. Space Education & Awareness W.G.	D. Space Environment Utilization W.G.
15:00-15:15	Coffee Break			
15:15-17:00	A. Earth Observation W.G.	B. Communication Satellite Applications W.G.	C. Space Education & Awareness W.G.	D. Space Environment Utilization W.G.

Tentative Program

The 17th Session of the Asia-Pacific Regional Space Agency Forum (APRSAF-17)

~ Main Theme / The role of space technology and industry in addressing climate change ~

23-26 November 2010

The Crown Conference Centre, Melbourne, Australia

<Day 2> 24 November, Wednesday

[Registration : 08:30-9:00]

[Working Group Session : 09:00 - 17:00]

	Start 09:00 End 17:00	Start 09:00 End 17:00	Start 09:00 End 17:00	Start 09:00 End 17:00
	A. Earth Observation W.G.	B. Communication Satellite Applications W.G.	C. Space Education & Awareness W.G.	D. Space Environment Utilization W.G.
09:00-10:45	[Co-chairs] Dr. Shinichi Sobue Associate Senior Engineer, Earth Observation Research Center, JAXA Dr. Adam Lewis Group Leader, National Earth Observation Group, Geospatial and Earth Monitoring Division Geoscience Australia	[Co-chairs] Mr. Hiroki Kohhata Senior Engineer, Satellite Applications and Promotion Center, JAXA Prof. Andrew Parfitt Pro Vice Chancellor and Vice President, Division of Information Technology, Engineering and the Environment, University of South Australia (UniSA)	[Co-chairs] Dr. Takashi Kubota Professor, Department of Spacecraft Engineering, JAXA Prof. Graham Durant Director of Questacon	[Co-Chairs] Mr. Shigeki Kamigaichi Deputy Director, Space Environment Utilization Center, JAXA Dr. Miriam Baltuck Director Canberra Deep Space Communication Complex (CDSCC)
10:45-11:00	Coffee Break			
11:00-12:30	A. Earth Observation W.G.	B. Communication Satellite Applications W.G.	C. Space Education & Awareness W.G.	D. Space Environment Utilization W.G.
12:30-13:30	Lunch : hosted by DIISR at Pre Function Area Central			
13:30-14:30	A. Earth Observation W.G.	B. Communication Satellite Applications W.G.	C. Space Education & Awareness W.G.	D. Space Environment Utilization W.G.
14:30-14:45	Coffee Break			
14:45-17:00	A. Earth Observation W.G.	B. Communication Satellite Applications W.G.	C. Space Education & Awareness W.G.	D. Space Environment Utilization W.G.
18:00	Reception : hosted by MEXT, JAPAN			

Tentative Program
The 17th Session of the Asia-Pacific Regional Space Agency Forum
(APRSAF-17)

~ Main Theme / The role of space technology and industry in addressing climate change ~

23-26 November 2010

The Crown Conference Centre, Melbourne, Australia

<Day 3> 25 November, Thursday

General Co-Chairs

Australia : Dr. Michael Green, General Manager, Innovation and Space Branch, Manufacturing Division, DIISR

Japan : Dr. Tetsuhiko Ikegami, Chairman, Space Activities Commission (SAC) / MEXT

[Registration : 08:00-08:45]

[Plenary Session : 09:00-12:00]

Time	Title	Speaker
09:00-09:15	Opening remarks	AUSTRALIA
		JAPAN
09:15-09:30	Key note addresses by co-host organizations	AUSTRALIA
09:30-09:45		JAPAN
09:45-10:00	Summary of APRSAF-16	THAILAND
10:00-10:30	Photo Session and Coffee Break	
10:30-10:45	Country report	
10:45-11:00	Country report	
11:00-11:15	Country report	
11:15-11:30	Country report	
11:30-11:45	Country report	
11:45-12:00	Country report	
12:00-13:00	Lunch : hosted by DIISR at Mesh Restaurant	

Tentative Program
The 17th Session of the Asia-Pacific Regional Space Agency Forum
(APRSAF-17)

~ Main Theme / The role of space technology and industry in addressing climate change ~

23-26 November 2010

The Crown Conference Centre, Melbourne, Australia

<Day 3> 25 November, Thursday

[Plenary Session : 13:00-17:30]

Time	Title	Speaker
13:00-13:15	Country report	
13:15-13:30	Country report	
13:30-13:45	Country report	
13:45-14:45	Special Session (TBD)	
14:45-15:00	Coffee Break	
15:00-17:30	Report sessions	15:00-16:00 Sentinel Asia: Disaster Management Support System in the Asia-Pacific Region
		16:00-16:45 STAR: Satellite Technology for the Asia-Pacific Region
		16:45-17:30 SAFE: Space Applications For Environment
19:00	Reception hosted by DIISR, AUSTRALIA	

Tentative Program
The 17th Session of the Asia-Pacific Regional Space Agency Forum
(APRSAF-17)

~ Main Theme / The role of space technology and industry in addressing climate change ~

23-26 November 2010

The Crown Conference Centre, Melbourne, Australia

<Day 4> 26 November, Friday

[Closing Plenary : 09:00-13:50]

Time	Title	Speaker
09:00-09:15	Remarks	
09:15-09:45	Speeches by international organizations	
9:45-10:45	Japanese Space Education and Capacity Building Programs (TBD)	
10:45-11:00	Coffee Break	
11:00-11:15	Summary reports of WGs	Earth Observation WG
11:15-11:40		Communication Satellite Applications WG (including Summary Report of GNSS Workshop (TBD))
11:40-11:55		Space Education & Awareness WG
11:55-12:10		Space Environment Utilization WG
12:10-12:40	Adoption of Recommendations of APRSAF-17	
12:50-13:00	Announcement of APRSAF-18	
13:00-13:10	Closing remarks	AUSTRALIA
		JAPAN
13:10-14:00	Lunch : hosted by DIISR at Promenade Room	
14:00-15:00	Technical Tour (Presentations)	The Bureau of Meteorology (BOM)
		Victorian Space Science Education Centre (VSSEC)
15:00-17:00	Technical Tour (Facility Tour)	The Bureau of Meteorology (BOM)
		Victorian Space Science Education Centre (VSSEC)

- VISA Requirements for all APRSAF-17 Delegates -

The Australian Department of Immigration has advised that under Australia's universal visa system, all APRSAF-17 delegates visiting Australia from overseas must have a valid visa to travel to and enter Australia.

Visa applicants must demonstrate that they meet all the legislative requirements for an Australian visa. It is extremely important for international participants to lodge their applications at least **6 to 8 WEEKS BEFORE** their intended date of travel. This will ensure sufficient time for processing the applications and permits any problems that may arise to be sorted out. Some countries will find this application process quicker than others, depending on which visa they are eligible to apply for.

Please note that these VISA requirements are extremely important to all APRSAF-17 delegates to ensure their attendance.

The factsheet (<http://www.immi.gov.au/visitors/pdf/general-events.pdf>) provides background information in relation to visa options for business events within Australia. Please also refer to the following link for further visa information:
<http://www.immi.gov.au/skilled/business/business-visit-visa-options.htm>

Further information of eligible countries is below:

VISA Options:

ETA eligible countries

Passport holders from Electronic Authority Travel (ETA) countries (listed below) are able to apply for a visa online to travel to and enter Australia.

(Charge amount: Nil * A service charge of \$20 applies)

- * Brunei
- * Canada
- * Hong Kong (SAR)
- * Japan

- * Malaysia
- * Singapore
- * South Korea
- * Taiwan
- * United States of America

Please refer to <http://www.immi.gov.au/skilled/business/956-977/> for further visa information.

eVisitor eligible countries

EU passport holders are able to apply individually online for authorisation to travel to and enter Australia. Please refer to <http://www.immi.gov.au/visitors/tourist/evisitor/> for further visa information.

(Charge Amount: Nil)

APEC Business Travel Card

Individual members of APEC participating countries are able to apply online for an APEC Business Travel Card. Please refer to:

<http://www.immi.gov.au/skilled/business/apec/>

There are 17 Asia Pacific Economic Cooperation (APEC) economies currently participating in the APEC Business Travel Card scheme:

(Charge Amount: \$200)

- * Brunei Darussalam
- * Chile
- * Hong Kong (China)
- * Indonesia
- * Japan
- * Republic of Korea
- * New Zealand
- * Papua New Guinea
- * People's Republic of China
- * The Philippines
- * Malaysia
- * Peru

- * Singapore
- * Chinese Taipei
- * Thailand
- * Vietnam
- * Australia

Note: Delegates from countries on both of the above-mentioned lists (ETA countries and APEC participating countries) are recommended to apply for ETA if they need a visa exclusively for APRSAF-17.

Paper-based applications

All other passport holders need to submit a paper-based application for a Business (Short Stay) visa (subclass 456). Please refer to:

<http://www.immi.gov.au/skilled/business/456/>

(Charge Amount: \$105)

Point of Contact

Any participant who requires an invitation letter in order to obtain a visa, please contact:

Mr. Adam Sandilands

Policy Officer

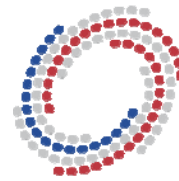
Space Policy Unit, Manufacturing Division

Department of Innovation, Industry, Science & Research

space@innovation.gov.au

In your request please supply the following information:

- Full name as it appears on their passport;
- Passport number; and
- Date of birth

**16TH**
APRSAFAsia-Pacific Regional
Space Agency Forum

**Recommendations of the sixteenth session of
The Asia-Pacific Regional Space Agency Forum (APRSAF-16)
"Space Applications: Contributions towards Human Safety and Security"
26-29 December 2009
Bangkok, Thailand**

Recognizing that the space technology and its applications substantively contribute to development human safety and security in the Asia-Pacific region,

Recognizing that the importance of regional cooperation to cope with disaster management, environmental issue, capacity building, quality of human life, health, and other regional issues,

Hereby affirm that we, the participants of APRSAF-16,

[Sentinel Asia]

1. Confirm that the activities of the Joint Project Team for STEP 2 are going well and welcome the new STEP2 Web-GIS will be replaced from the STEP1 system from April 2010;
2. Confirm that utilization of WINDS“KIZUNA” was steadily started to transmit images rapidly;
3. Welcome that KARI and GISTDA started to provide images along with JAXA and ISRO, then let’s call “Sentinel Asia Constellation” as a generic nick name for their satellites;
4. Welcome the new working group called the Glacial Lake Outburst Flood Monitoring WG (GLOF-WG), was launched at the last JPTM held last July;
5. Welcome that Asian Disaster Reduction Center (ADRC) acting as a point of contact of emergency observation requests for Sentinel Asia, established an UN-SPIDER Regional

Support Office (RSO) from last June, and also welcome that collaboration between Sentinel Asia and International Disaster Charter to enhance capability for disaster response in the Asia-Pacific region was agreed;

6. Desire that utilization of Sentinel Asia shall be increasing used by disaster management organizations with support of UNESCAP and so on;

[STAR Program (Satellite Technology for the Asia-Pacific Region Program)]

7. Confirm that STAR program started at JAXA Sagamihara campus in June 2009, and the 2nd STAR program technical workshop was held to report the progress in Bangkok;

8. Welcome that the steady progress of development of Micro-STAR satellite and system study of EO-STAR satellite;

9. Welcome the STAR Program Coordination Group (SPCG) was established to coordinate and decide programmatic issues for the STAR program, consisted by STAR program participating organization;

10. Encourage to dispatch their staffs continuously and long term from the participating agencies for the STAR program at JAXA Sagamihara campus and concurrent engineering works at each agency;

11. Encourage the organizations concerned to provide launch opportunity for the Micro-STAR satellite, ground station operation resource, and necessary instruments;

[SAFE (Space Applications For Environment)]

12. Appreciate to see the successful story of that the SAFE prototyping activities in Vietnam ready to complete successfully as a success story of SAFE prototyping, and expect to ready to discussion to develop into practical usage

13. Confirm the progress of ongoing four SAFE prototyping and the approval of two new proposals (Sri Lanka: sea level rise and Indonesia: potential drought) as SAFE prototyping;

[Earth Observation]

14. Recognize that the participating countries and international organizations have various needs for space applications to cope with the climate change adaptation and mitigation issues , disaster management and climate change affected issues such as health, water management, biodiversity, forest cover change, and encourage SAFE prototype activities to expand their scopes and applications as well as making a bridge to practical use;

15. Realize the value to continue information exchange with private sectors and encourage their participation to implement space applications to support climate change adaptation and mitigation, as well as disaster monitoring and mitigation in Asia Pacific countries by sharing their space application expertise.

[Communication Satellite Applications]

16. Recognize the importance of continuing development of applications regarding tele-education, tele-medicine, disaster management and mitigation, and healthcare issue in the Asia-Pacific region;

17. Agree to promote the Asia-Pacific regional cooperation by sharing the experiences and the opportunities such as the WINDS satellite experiments and working on the creation of new applications;

18. Welcome the successful completion of the first regional workshop on Global Navigation Satellite Systems (GNSS), and expect to launch the Multi GNSS demonstration campaign as a new initiative for sustainable development of the Multi GNSS applications including QZSS utilization in this region in APRSAF-17.

[Space Education and Awareness]

19. Recommend that all countries and international organizations that participate in APRSAF should support space education efforts, to enhance the quality of education for young people at all educational levels and to contribute to human development at individual level;

20. Agree that efforts should be further strengthened to provide support to school teachers to facilitate the integration of space subjects and materials into the school curricula by, among other things, increasing the availability of educational materials in local languages and providing more training opportunities for teachers in space education;

21. Agree that through APRSAF, space education activities should be expanded in terms of participation, type and funding sources and that those activities should contribute to global initiatives undertaken by entities of the United Nations system and other international organizations in areas relating to space education and awareness;

[Space Environment Utilization]

22. Welcome the completion of Japanese Experiment Module “KIBO” and the success of KIBO assembly after quarter century efforts, and the success of the first HTV mission;

23. Appreciate the realized and enhanced opportunity of KIBO utilization based on 2 years operations, and recognize that education activities and outreach to public, as well as scientific experiments, are promising mission for successful “KIBO” utilization among APRSAF participating countries;

24. Recommend to expand the task force activities to realize a joint “KIBO” utilization for education and outreach to public, such as “KIBO Hi-vision EarthView” program;

25. Encourage to further promote bilateral cooperation activities among APRSAF participating countries;

[UN COPUOS]

26. Wish that the outcomes of the APRSAF-16 will be presented by the Chairman of UNCOUOS at the meetings of the UNCOUOS as well as its Scientific and Technical Subcommittee at their meetings in 2010;

27. Recommend the Chairman of UNCOUOS to present the outcomes of APRSAF-16 as regional cooperative structures to other region such as Latin America and Africa in order to promote inter-regional cooperation as mandated by UN General Assembly.