FINAL ANNOUNCEMENT

The 19th Session of the Asia-Pacific Regional Space Agency Forum (APRSAF-19)

“Enriching the quality of life through innovative space programs”

11-14 December 2012, Kuala Lumpur, Malaysia

Dear Sir/Madam,

We are pleased to note that you have registered to participate in the nineteenth session of the Asia-Pacific Regional Space Agency Forum (APRSAF-19), to be held from 11 to 14 December 2012. We look forward to working with you in Malaysia to make APRSAF-19 a success.

Organizers
The 19th session of the Asia-Pacific Regional Space Agency Forum (APRSAF-19) will be co-organized by the following organizations:

Malaysia: Ministry of Science, Technology and Innovation (MOSTI)
           National Space Agency (ANGKASA)

Japan: Ministry of Education, Culture, Sports, Science and Technology (MEXT)
       Japan Aerospace Exploration Agency (JAXA)

APRSAF-19 will be also supported by the following organizations:
Office of National Space Policy, Cabinet Office, Government of Japan
Ministry of Foreign Affairs of Japan (MOFA)

In this Final Announcement, we would like to provide you with some useful information for participants as follows;
1. **Venue of APRSAF-19**

   Please find below the mailing address of the venue of APRSAF-19 and its website:
   
   Berjaya Times Square Hotel
   1, Jalan Imbi, 55100, Kuala Lumpur, Malaysia


2. **Map around the venue of APRSAF-19**

   A map around APRSAF-19 venue and the directions from the airport are found in *Appendix A*.

3. **Transportation between the airport and the venue**

   Please note that the participants are responsible for making arrangements and covering the cost of the transportation between the airport and the hotel, as well as between the hotel and the venue of APRSAF-19, Berjaya Times Square Hotel. The local transportation will NOT be provided by the co-organizers, unless otherwise indicated below. Information on the access to and from the Kuala Lumpur International Airport (KLIA) is available on the following website: [http://www.klia.com.my/](http://www.klia.com.my/).

<table>
<thead>
<tr>
<th>Transportation Means</th>
<th>Cost</th>
<th>Time required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airport Limo (TAXI)</td>
<td>MYR 74.30  (Budget)</td>
<td>60 min.</td>
</tr>
<tr>
<td></td>
<td>MYR 102.10 (Premier)</td>
<td></td>
</tr>
<tr>
<td>KLIA Ekspres (Train)</td>
<td>MYR 35.00</td>
<td>28 min. (from KLIA to KL Sentral)</td>
</tr>
<tr>
<td>Airport Coach (Bus)</td>
<td>MYR 10.00</td>
<td>60 min. – 90 min. (from KLIA to KL Sentral)</td>
</tr>
<tr>
<td>Monorail</td>
<td>MYR 1.60</td>
<td>6 min. (from KL Sentral to Imbi)</td>
</tr>
</tbody>
</table>

   * The closest station from the venue is Imbi (monorail).

4. **Registration Desk**

   The registration desk is found in *Appendix B*. It is located in front of Bronx III on 14th floor at Berjaya Times Square Hotel from 10 to 14 December 2012. The opening hours are indicated below:

5. **Registration hours**

<table>
<thead>
<tr>
<th>Day</th>
<th>Dates</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>10 December</td>
<td>8:00 – 17:00 hrs.</td>
</tr>
<tr>
<td>Tuesday - Thursday</td>
<td>11-13 December</td>
<td>8:00 – 16:00 hrs.</td>
</tr>
<tr>
<td>Friday</td>
<td>14 December</td>
<td>8:00 – 11:00 hrs.</td>
</tr>
</tbody>
</table>
6. **Working Group Sessions**
   The following four-working group sessions will be held in parallel on 11 and 12 December.
   
   A. Earth Observation (EO): Manhattan Ballroom III
   B. Space Environment Utilization (SEU): Bronx V
   C. Space Education and Awareness (SEA): Manhattan Ballroom I
   D. Communication Satellite Applications (CSA): Bronx VI

   The proposed outlines of these working groups and the tentative schedules of their sessions are contained in *Appendix C*.

7. **Plenary Session**
   The plenary session will be held on 13 and 14 December at Manhattan Ballroom II on 14th floor. Its tentative programme is contained in *Appendix D*.

8. **Reception**
   On Wednesday evening, 12 December, there will be a reception jointly hosted by MOSTI, ANGKASA and MEXT. The reception will take place from 20:00 hrs. at Manhattan V on 14th floor of Berjaya Times Square Hotel.
   On Thursday evening, 13 December, there will be another reception jointly hosted by MEXT and JAXA. The reception will take place from 20:00 hrs at Manhattan I on 14th floor of Berjaya Times Square Hotel. (Advance registration is not required)

9. **Cultural tour**
   On Friday afternoon, 14 December, the cultural tour will be organized by ANGKASA as below for those who have already registered. Information on the tour sites is available in *Appendix E*.

   Destination: Putrajaya
   Time: 14:30 - 19:00 hrs.
   15:00 - Departure from Berjaya Times Square Hotel to Putrajaya
   16:00 - Presentation by Putrajaya guided tour officer and refreshments
   17:00 - Guided tour around Putrajaya
   19:00 - Back to Berjaya Times Square Hotel
10. Side Events

- **Water Rocket Event**
  - Date: 8-9 December 2012
  - Venue: National Planetarium
    - Lot 53, Jalan Perdana, 50480 Kuala Lumpur, Malaysia
    - Website: [www.angkasa.gov.my/planetarium](http://www.angkasa.gov.my/planetarium)
  - Contact: Ms. Yayoi Miyagawa, z-kokusai@edu.jaxa.jp

- **Colloquium on Astronomy from ISS Kibo**
  - Date: 10 December 2012
  - Venue: National Planetarium
  - Contact: Ms Farahana Kamarudin, farahana@angkasa.gov.my

- **SAFE Workshop**
  - Date: 10 December 2012
  - Venue: Berjaya Times Square Hotel
  - Contact: Mr. Tomoyuki Nukui, nukui.tomoyuki@jaxa.jp

- **Kibo-ABC(Asian Beneficial Collaboration through Kibo Utilization) Workshop**
  - Date: 11 December 2012
  - Venue: Berjaya Times Square Hotel
  - Contact: Mr. Kazuhiro Miyazaki, miyazaki.kazuhiro@jaxa.jp

- **Poster Contest**
  - Theme: “Friends in Space”
  - Date: 11-14 December 2012
  - Venue: Berjaya Times Square Hotel
  - Contact: Ms. Yayoi Miyagawa, z-kokusai@edu.jaxa.jp

- **APRSAF-19 Exhibition**
  - Date: 11 - 14 December 2012
  - Venue: Berjaya Times Square Hotel
  - Contact: Mr. Ahmad Ammar Ahmad Termizi, aprsaf19@angkasa.gov.my
11. Other Event

- 4th Asia Oceania Regional Workshop on GNSS
  Date: 8-10 December 2012
  Venue: Berjaya Times Square Hotel
  Reference: http://www.multignss.asia/
  Contact: Ms. Yaka Wakabayashi, wakabayashi.yaka@jaxa.jp
            TEL: +81-50-3362-3558  FAX: +81-29-868-5987

12. Close of APRSAF Secretariat Office in Japan

Please note that APRSAF-19 Secretariat Office in Japan will be closed on Wednesday, 5 December 2012 at 17:00 Japan Standard Time (UTC+9). In case of emergency following the close of the Office, please contact the following numbers:

  APRSAF-19 Secretariat: +81 90 1042 3412 (mobile number: Mr. Tetsu Itano)
  ANGKASA: +60 3 3180 4377 (Mr. Ahmad Ammar Bin Ahmad Termizi)

Please note that the APRSAF-19 Secretariat Office on site at Berjaya Times Square Hotel will open from 13:00 hrs. Malaysia Time (UTC+8) on Saturday, 8 December 2012.

We look forward to seeing you at APRSAF-19 in Malaysia!

Akiko Suzuki
Executive Secretary
Asia-Pacific Regional Space Agency Forum (APRSAF)

Attachments:
Appendix A: Map around APRSAF-19 venue and directions from the airport
Appendix B: Floor Map of APRSAF-19 venue
Appendix C: Proposed outlines of the working groups and their tentative schedules
Appendix D: Tentative overall programme of APRSAF-19
Appendix E: Information on the tour sites
Map around the Venue

Berjaya Times Square Hotel: 1 Jalan Imbi 55100 Kuala Lumpur, Malaysia

From Airport to the Venue

Berjaya Times Square Hotel

Kuala Lumpur International Airport
FLOOR MAP (14th Floor of Berjaya Times Square Hotel)

- Dec 11-12: SEA
- Dec 11-12: EO
- Dec 11-12: SEU
- Dec 11-12: CSA

- Registration
- Exhibition
- Poster Contest
- Coffee Break
- Lunch on Dec 13-14
- Lunch on Dec 11-13

- Secretariat
- Bronx III
- Escalator Smoking Area
- Staging Area

- Floor Map (14th Floor of Berjaya Times Square Hotel)
Nineteenth Session of the Asia-Pacific Regional Space Agency Forum (APRSAF-19)

**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, and Climate R³: Regional Readiness Review for Key Climate Missions). The upcoming EOWG will focus on consulting Asia rice crop component in a work plan for the intergovernmental Group on Earth Observation (GEO) Global Agriculture Monitoring initiative (GEO-GLAM) in G20, sharing the progress of SAFE and Climate R³, and stimulating discussion on agriculture / food security, and water to start up new activities that respond to a wider spectrum of user requirements.

1) SAFE
SAFE workshop will be held on Day-0 of EO working group, on 10 December 2012. New proposal of SAFE prototype will be presented, reviewed by SAFE review board members and approved by SAFE workshop participants. SAFE on-going prototype activities will be also reported.

2) APRSAF Regional Readiness Review for Key Climate Missions (Climate R³)
Climate R³ was proposed by Australia as a major outcome of APRSAF-17 to determine the ability of APRSAF countries and institutions to benefit from the data and information which will be provided by selected climate-related satellite missions in coming years. In APRSAF-18, it has been adopted as an ongoing initiative of APRSAF.
Two workshops for SAFE and Climate R³ in Perth were held so far in this framework. The workshops brought together current and prospective data users from the Asia-Pacific region and data supply agencies from around the world including representatives from Japan, Thailand, Pakistan, Sri Lanka, Vietnam, Indonesia, Cambodia, Bangladesh, Laos, Mongolia, India, Korea and Australia.
Following the results of the 2nd workshop on 22-25th May in Perth, Climate R³ aims to establish a coordination function of satellite data request and usage in Asia-Pacific region
related to the Global Forest Observation Initiative (GFOI) and GEO-GLAM, both are initiatives of the GEO. We will discuss the framework and functions, including Continuity of Earth Observation Data for the Asia Pacific study (CEOD-AP) proposed by Climate R³ at EOWG.

3) Work plan for the GEO-GLAM
In this session, we will discuss the working plan to adapt the Asia rice crop monitoring component for Asia-Pacific countries to propose to GEO-GLAM as EOWG communities.

4) Country Reports and Private Sectors
In this session, participating countries, private sectors, donor organizations and international organizations are kindly invited to contribute Country Reports about satellite data utilization by using earth observation satellite data for agriculture / food security and water.
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.

2. The Results of EOWG Activities at APRSAF-18
See attached: APRSAF-18 adopted recommendations.

3. The Draft of the Agenda
1) Opening Session
2) Review of the Last EOWG in Singapore
3) EOWG Focus & Agenda Adoption
4) SAFE Initiative (Completing Report, Progress Report, and New proposal briefing)
5) Climate R³ Initiative (Discussion and Adoption of the CEOD-AP proposal)
6) Private Sector Initiatives (Agriculture / Food Security, and water management)
7) Country Reports (Agriculture / Food Security, and Water)
8) Discussing the work plan for the GEO-GLAM
9) Overall Discussions and the Way Forward
10) Conclusions of EOWG and Wrap-up
APPENDIX: TENTATIVE AGENDA
SAFE Workshop & Earth Observation Working Group
10, 11, 12 Dec 2012

**[TENTATIVE]**

Day0: Dec 10 SAFE workshop

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:00-10:30</td>
<td><strong>Registration</strong></td>
</tr>
<tr>
<td>10:00-10:30</td>
<td><strong>Pre-Review Board Meeting</strong> (Closed)</td>
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<tr>
<td></td>
<td>Self introduction</td>
</tr>
<tr>
<td></td>
<td>Explaining situation of applications (SAFE secretariat, 5min)</td>
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<td></td>
<td>Sharing review point for each new proposals, etc</td>
</tr>
<tr>
<td>10:30-18:00</td>
<td>SAFE Workshop (5H50M)</td>
</tr>
<tr>
<td>10:30-11:15</td>
<td><strong>Opening session</strong></td>
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<tr>
<td></td>
<td>Opening Remark (Honorable Chair, Mr. Toru Fukuda, Director EORC/JAXA)</td>
</tr>
<tr>
<td></td>
<td>Introductions by all participants</td>
</tr>
<tr>
<td></td>
<td>Agenda adoption</td>
</tr>
<tr>
<td>11:15-11:30</td>
<td><strong>Report of the 4th SAFE Workshop outcomes</strong> (SAFE secretariat)</td>
</tr>
<tr>
<td>11:30-12:10</td>
<td><strong>Proposal of new prototyping</strong> (each 20mins)</td>
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<tr>
<td></td>
<td>TBD</td>
</tr>
<tr>
<td>13:00-14:10</td>
<td><strong>Lunch Break</strong></td>
</tr>
<tr>
<td>14:10-15:00</td>
<td><strong>Progress Report of On-going prototyping 1</strong></td>
</tr>
<tr>
<td></td>
<td>(25mins each, including 10mins Q&amp;A/Discussion)</td>
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<tr>
<td></td>
<td>Mapping and Change Detection of Wetlands in South Eastern River Basin in Sri Lanka using Optical and PALSAR Remote Sensing (Mr. Ajith Gunawardena, Ast. Director, CEA)</td>
</tr>
<tr>
<td></td>
<td>Assessment of drought impact on rice production in Indonesia by satellite remote sensing and dissemination with web-GIS (Dr. Rizatus Shofiyari, ICALRD, IAARD - MOA, Indonesia)</td>
</tr>
<tr>
<td>15:00-15:30</td>
<td><strong>Review Meeting</strong> (Closed)</td>
</tr>
<tr>
<td></td>
<td>(15:15-15:30 <strong>Coffee Break</strong>)</td>
</tr>
<tr>
<td>15:30-17:30</td>
<td><strong>Final report of Prototypes expect completion</strong></td>
</tr>
</tbody>
</table>

-3-
(30mins each, including 10mins Q&A/Discussion)

- Monitoring Water Cycle Variations and Assessing the Climate Change Impacts (Dr. Rasul Ghulam, PMD, Pakistan)
- Use of satellite data derived ocean color and SST information for Thailand Fishery (Dr. Phutchapol Suvanachai, DOF, Thailand)
- Modeling ocean frontal zones using high resolution satellite and float data to locate tuna fish aggregations in Sri Lankan waters (Mr. Jagath Rajapaksha, NARA, Sri Lanka)
- Carbon stock calculating and forest changes assessment toward REDD+ for mangrove (Mr. Dien Tien Vu, FIPI, Vietnam)

17:30-18:00 **Wrap-up**

- Summarizing comments and discussion for prototyping
  - On-going prototyping
  - Completing prototyping
- Report of Review board meeting and decision taken for approval of new proposal
- Group photo

18:00 **Adjourn**
### Day 1 Dec 11 EO-WG

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00-9:20</td>
<td>Opening session&lt;br&gt;  - Introductions &amp; Welcome address by co-chair&lt;br&gt;  - Review of the last EOWG (Australian colleagues)&lt;br&gt;  - EOWG focus &amp; agenda adoption (Co-chair)</td>
</tr>
<tr>
<td>9:20-11:00</td>
<td><strong>SAFE initiative (1H40M)</strong>&lt;br&gt;  - SAFE overview&lt;br&gt;  - Report of the SAFE Workshop result at the previous day (Co-chair)&lt;br&gt;  - Summary of Approved New prototypes (10mins each)</td>
</tr>
<tr>
<td>9:50-11:00</td>
<td>Summarized Result Report of Prototypes expect completion (10mins each, Including the result of the previous day’s discussion, No-Q&amp;A/Discussion)&lt;br&gt;  - Monitoring Water Cycle Variations and Assessing the Climate Change Impacts (Dr. Rasul Ghulam, PMD, Pakistan)&lt;br&gt;  - Modeling ocean frontal zones using high resolution satellite and float data to locate tuna fish aggregations in Sri Lankan waters (Mr. Jagath Rajapaksha, NARA, Sri Lanka)&lt;br&gt;  - Use of satellite data derived ocean color and SST information for Thailand Fishery (Dr. Phuchapol Suvanachai, DOF, Thailand)&lt;br&gt;  - Carbon stock calculating and forest changes assessment toward REDD+ for mangrove (Mr. Dien Tien Vu, FIPI, Vietnam)</td>
</tr>
<tr>
<td>10:30-11:00</td>
<td>Wrap-up of SAFE session</td>
</tr>
<tr>
<td>11:00-11:15</td>
<td>Coffee Break</td>
</tr>
<tr>
<td>11:15-12:30</td>
<td><strong>Climate R3 initiative and way forward, including coordination of GFOI and GEO GLAM (Led by Australian colleagues, 1H15M)</strong>&lt;br&gt;  - Overview and 2012 Activity&lt;br&gt;  - Options for future Climate R3 Activity&lt;br&gt;  - GFOI – potential engagement through Climate R3&lt;br&gt;  - GEO GLAM – potential engagement through Climate R3&lt;br&gt;  - Discussion</td>
</tr>
<tr>
<td>12:30-14:00</td>
<td>Lunch Break</td>
</tr>
<tr>
<td>14:00-15:20</td>
<td><strong>Climate R3 initiative and Evolution of EOWG (1H20M)</strong>&lt;br&gt;  - Future evolution of APRSAF and EOWG in particular&lt;br&gt;  - Role for Climate R3 in EOWG&lt;br&gt;  - Discussion</td>
</tr>
<tr>
<td>15:20-16:45</td>
<td><strong>CEOD-AP study in support of APRSAF Objectives (1H25M)</strong>&lt;br&gt;  - Outline of proposal for Continuity of Earth Observation Data for the Asia Pacific study (CEOD-AP) (Mr. Stephen Ward, Support, Australia Space Policy Unit, Australia)</td>
</tr>
</tbody>
</table>
### Appendix C

**Discussion**

- Wrap-up of the session
- Adoption of CEOD-AP proposal

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>16:45-17:00</td>
<td>Summary of Day 1</td>
</tr>
<tr>
<td>17:00</td>
<td>Adjourn</td>
</tr>
</tbody>
</table>

**Day 2: Dec 12 EO-WG**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00-9:10</td>
<td>EO-WG Day 2 opening session</td>
</tr>
<tr>
<td>9:10-10:20</td>
<td><strong>Integrated Water Resource management session</strong> (1H10M)</td>
</tr>
<tr>
<td>9:10-9:25</td>
<td>Cambodia (Mr. So Im Monichoth, MOWRAM,)</td>
</tr>
<tr>
<td>9:25-9:40</td>
<td>Bangladesh (Mr. Mohammad Shariful Islam, Senior Assistant Engineer, GIS/MIS Unit, LGED)</td>
</tr>
<tr>
<td>9:40-9:55</td>
<td>Malaysia: IWRM Implementation in Malaysia: Initiative at the Catchment Level (Langat River Basin) (Dr. Rahmah Elfithri, Senior Lecturer/Research Fellow, Institute for Environment and Development (LESTARI), Universiti Kebangsaan Malaysia)</td>
</tr>
<tr>
<td>9:55-10:10</td>
<td>Kazakhstan: Water and Flood Monitoring in Kazakhstan (Dr. Malis Absametov, Director National center of space researches and technologies, Institute of space researches)</td>
</tr>
<tr>
<td>10:10-10:20</td>
<td>Wrap-up of the session</td>
</tr>
<tr>
<td>10:20-11:35</td>
<td><strong>Agriculture and Food Security 1</strong> (1H15M)</td>
</tr>
<tr>
<td>10:20-10:35</td>
<td>Indonesia (M.Sc Ir. Agus Hidayat, National Institute of Aeronautics and Space LAPAN)</td>
</tr>
<tr>
<td>10:35-10:50</td>
<td>Vietnam: (Assoc. Prof, Doan Minh Chung, PhD, Director Space Technology Institute, Vietnam Academy of Science and Technology)</td>
</tr>
<tr>
<td>10:50-11:05</td>
<td>Sri Lanaka (Mr. Ajith Gunawardena, Ast. Director, CEA)</td>
</tr>
<tr>
<td>11:05-11:20</td>
<td>Malaysia: Application of remote sensing technique for rice precision farming (Dr. C.C. Teoh, C.W. Chan, Abu. H. D, Mechanization &amp; Automation Research Centre, Malaysian Agricultural Research and Development Centre, Malaysian Agricultural Research and Development Institute)</td>
</tr>
<tr>
<td>11:20-11:35</td>
<td>Myanmar: (TBD)</td>
</tr>
<tr>
<td>11:35-11:50</td>
<td>Coffee Break</td>
</tr>
<tr>
<td>11:50-16:15</td>
<td><strong>Agriculture and Food Security 2</strong> (3H00M)</td>
</tr>
<tr>
<td>11:50-12:05</td>
<td>IRRI : RIICE - Remote Sensing Based Information and Insurance for Crops in Emerging Economies (Dr. Andrew Nelson, Geographer)</td>
</tr>
<tr>
<td>12:05-12:20</td>
<td>MRC : (Dr. Heng Suthy, Remote Sensing Specialist, Information and Knowledge Management Program Technical</td>
</tr>
<tr>
<td>Time</td>
<td>Session</td>
</tr>
<tr>
<td>------------</td>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td>12:20-12:35</td>
<td>AFSIS: The possibility of satellite data for ASEAN + 3 Food Security Information System (Mr. Montol Jeamchareon, Advisor of OAE and Project manager, AFSIS)</td>
</tr>
<tr>
<td>12:35-12:50</td>
<td>ADB: Space technology application for water and agriculture in ADB (Mr. Yusuke Muraki, Space Technology Specialist, Regional Sustainable Development Department)</td>
</tr>
<tr>
<td>12:50-14:00</td>
<td>Lunch</td>
</tr>
<tr>
<td>14:00-14:15</td>
<td>SUPARCO- Pakistan: Remote Sensing Applications in Pakistan (Mr. Jawed Qureshi, Space Technology Applications Directorate, SUPARCO Pakistan) (TBD)</td>
</tr>
<tr>
<td>14:15-14:30</td>
<td>ISRO – India (TBD)</td>
</tr>
<tr>
<td>14:30-14:45</td>
<td>GISTDA- Thailand (TBD)</td>
</tr>
<tr>
<td>14:45-15:15</td>
<td>Explanation of Asia rice crop monitoring in GEO-GLAM working plan</td>
</tr>
<tr>
<td>15:15-15:30</td>
<td>Coffee Break</td>
</tr>
<tr>
<td>15:30-16:15</td>
<td>Wrap-up of Agriculture session</td>
</tr>
<tr>
<td>16:15-17:10</td>
<td><strong>Private sector’s applications and international organization’s initiative for agriculture &amp; food security and integrated water resource management</strong> (1H15M)</td>
</tr>
<tr>
<td>16:15-16:25</td>
<td>Japan: Role of RESTEC for Earth Observation in Asia-Pacific region (Mr. Yukio Haruyama, Special Assistant to Director, Applications &amp; Services Dept. RESTEC)</td>
</tr>
<tr>
<td>16:25-16:35</td>
<td>ICIMOD: Delineation of Community Forest User Group (CFUG) Area on Ground using Geospatial Tools in REDD+ Pilot Project of Nepal (Mr. GOVINDA JOSHI, GIS Specialist, MENRIS)</td>
</tr>
<tr>
<td>16:35-16:45</td>
<td>APSCO: Data-Sharing platform for Disaster Management in Asia-Pacific Region (Dr. Ahmad Talebzadeh, Director General, Department of External Relations and Legal Affairs, Asia-Pacific Space Cooperation Organization)</td>
</tr>
<tr>
<td>16:45-16:55</td>
<td>Malaysia (Dr Makhdzir Mardan, CEO. BRAINTREE Technologies Sdn Bhd) (TBD)</td>
</tr>
<tr>
<td>16:55-17:05</td>
<td>PASCO: Disaster monitoring utilizing remote sensing technology (Dr. Sasagawa, Tadashi, )</td>
</tr>
<tr>
<td>17:05-17:10</td>
<td>JAMSS (TBD)</td>
</tr>
<tr>
<td>17:10-17:40</td>
<td>Wrap-up of the EO-WG</td>
</tr>
<tr>
<td>17:40</td>
<td>Adjourn</td>
</tr>
</tbody>
</table>
Appendix C

Nineteenth Session of the Asia-Pacific Regional Space Agency Forum (APRSAF-19)

**CSA (Communications Satellite Application) WG activities**

*Proposed Outline*

1. The scope /objectives of CSA WG activities

The CSA WG has been discussing many topics on satellite communications 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 will share the experiences for realizing cooperation among countries in the region, regarding applications of satellite communications for tele-education, tele-medicine and disaster management, taking into account the needs to resolve the digital divide in the region. On the other hand, new satellite applications appeared and became available in last few years. The space-based automatic identification system (AIS), which is a new application of satellite communications, is one of the solutions of ship monitoring and the satellite-based Positioning, Navigation and Timing (PNT) is also one of the important satellite applications.

In consideration of the above situation and previous APRSAF-18 discussion, the outline of the CSA WG in the APRSAF-19 is as follows:

1) Sharing experiences and opportunities in order to diffuse the use of applications regarding tele-education, tele-medicine, disaster management and mitigation, and discussing new applications or concepts of the satellite communications

Until the previous meetings, many discussions have been made and useful information has been exchanged. In the last APRSAF-18, the CSA WG recognized the significance and effectiveness of satellite communications in the disaster relief and restoration activities, and shared the experiences learned from the recent activities. The CSA WG will discuss continuously these issues. Moreover, some new applications and efforts were planned, demonstrated and operated in the region. The CSA WG will also have more meaningful discussion
about mechanisms for technology transfer with the aim of not only demonstration but also continuous use, the CSA WG will continue these activities under the regional cooperation and aim to promote new applications or concepts of the satellite communications in the region with active participation of satellite operators.

2) Sharing the information of technical trend for ship monitoring

There are several kinds of ship monitoring system, such as the automatic identification system (AIS) in the coastal area, LRIT in ocean, and so on. A space-based AIS, which is a new application of satellite communication in the world and enables to expand the monitoring area from coastal area to ocean, is one of the solutions of ship monitoring. This trend was started by Europe and America several years ago, but now some countries in Asia-pacific region are performing this space-based AIS activity. In the last APRSAF-18, the CSA WG and the EO WG held the joint session titled "Share the information of technical trend for ship monitoring in the Pacific region". The CSA WG will promote this space-based AIS activity in the region.

3) Promotion for the activities on the Global Navigation Satellite System (GNSS)

The satellite-based Positioning, Navigation and Timing (PNT) becomes widely used in the Asia-Pacific countries. According to the recommendation of the APRSAF-15, the Asia Oceania regional workshop on Global Navigation Satellite Systems (GNSS) has been continuously held and the “Asia Oceania Multi-GNSS Demonstration Campaign” was successfully established. The summary of the 4th Asia Oceania Regional Workshop on the GNSS will be reported in this WG. The CSA WG will support relevant activities and encourage the expansion of the satellite-based PNT applications commencing with the QZS-1 satellite “MICHIBIKI”. Especially, the activities of the disaster mitigation and management working group in the campaign will be introduced, and the CSA WG will discuss potential utilization of these activities for the Sentinel Asia.
2. The result of CSA WG activities in APRSAF-18
   See the attached APRSAF-18 adopted 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 of communications satellite applications
      a. Study report
      b. Country report
      c. General Discussion
   6) Activity reports of ship monitoring (Space-based AIS)
   7) Activity reports of the Multi GNSS
      ① Report of 4th Asia Oceania Regional Workshop on the GNSS
      ② Introduction of the disaster mitigation and management working group in
         the “Asia Oceania Multi-GNSS Demonstration Campaign”
      ③ Study report
      ④ General Discussion
   8) Overall discussion and future work
   9) Closing of the session
Appendix : Indicative schedule of work of the Communication Satellite Application Working Group  
(11 - 12 December 2012, Kuala Lumpur, Malaysia)

Co-Chairs: Prof. Ir. Dr Ahmad Faizal Bin Mohd. Zain (University Malaysia Pahang, Malaysia)  
Mr. Hiroki Kohata (Japan Aerospace Exploration Agency, Japan)

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Agenda Item(s)</th>
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<td>3. General introduction and guidance of CSAWG</td>
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<td>• Self Introduction</td>
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<td>• Review of the last CSAWG at Singapore</td>
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<td>4-a. Presentations of communications satellite systems and applications</td>
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<td>5-a. Activity reports of the Multi GNSS</td>
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Appendix C

Nineteenth Session of the Asia-Pacific Regional Space Agency Forum (APRSAF-19)

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-18
   See the attached APRSAF-18 adopted recommendations.

3. The Draft of the Agenda
   (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, secondary and tertiary school students and teachers
      a. Water rocket activities
      b. Poster contest
      c. Space education forum and seminar
      d. Other activities
   (5) Ways and means to exchange space education materials effectively using IT technologies
   (6) Cooperation with international science community network
   (7) Ways and means to utilize achievements of other WGs for education
   (8) Other matters
      i) 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
      ii) Other matters

---

1 For more details of the work to be conducted during APRSAF-19, please refer to “Provisional Agenda” of the Working Group (document APRSAF19/SEA-WG/2012) to be issued.
Nineteenth Session of the Asia-Pacific Regional Space Agency Forum (APRSAF-19)

SEU (Space Environment Utilization) WG activities

Proposed Outline

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

Various kinds of outcomes from International Space Station (ISS) have been reported by the ISS Partner Space Agencies. ISS utilization is not only for space development, but involves every field of human activities including science, technology, education and culture. The purpose of this Working Group is to develop ways of sharing these values of the ISS with Asia-Pacific countries through the cooperation on ISS utilization.

In this year, some new capabilities such as fish experiment facility and small satellite deployment system were being added to Kibo Module. The space environment utilization activities are evolved continuously and further cooperation among Asia-Pacific countries is becoming increasingly important.

Kibo is open for collaboration among Asia-Pacific countries and actually several collaborative activities have been conducted. A series of protein crystallization experiments which have been conducted by Malaysia (ANGKASA) and Japan (JAXA) since 2009 is a good example of the collaborations. A joint conceptual study between Korea (KARI) and Japan (JAXA) for new experimental equipment and a feasibility study between Indonesia (LAPAN) and Japan (JAXA) are in good progress. It is expected that such activities will expand through regional cooperation in the APRSAF.

In order to create more collaborations in ISS/Kibo utilization among Asia-Pacific countries, SEUWG decided to launch a new initiative at the last session of APRSAF meeting. Various kinds of outreach and promotion activities to gain the basic experience required for implementing space environment utilization are being done in this initiative. The name of the initiative is “Kibo-ABC”, Asian Beneficial Collaboration through Kibo utilization. The activities in this initiative such as the
space seed project, scientific demonstration for students on ISS/Kibo, and small drop tower experiment seminars in Asia will be reported by participating countries in the Kibo-ABC to the SEUWG.

Another good promotion activity is micro-gravity experiment through parabolic air flight in Japan. It started in 2006 and has been providing opportunities for Asian-Pacific students to experience microgravity experiments. These opportunities not only help them to learn about microgravity science but also motivate them to develop their own scientific capabilities. The seventh series of parabolic flights is scheduled in December, 2012.

In this WG, we will discuss how we can promote and improve these activities and how we can enhance their effectiveness, etc.

2. The results of Space Environment Utilization WG activities in APRSAF-18
   See the attached APRSAF-18 conclusion and recommendations.

3. The Draft Agenda
   1) Status report on the APRSAF-18 recommendations and actions.
   2) Status report related to ISS program
   3) Status report of WG activities
      a) Protein Crystal Growth Experiment
      b) Joint Conceptual Study between KARI and JAXA
      c) Feasibility Study between LAPAN and JAXA
      d) Results of “Space Seed for Asian Future 2010”
      e) Status of Student Parabolic Flight Experiment
      f) Lessons learnt
   4) Status report of Kibo-ABC initiative activities
   5) Others
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<th>ANGKASA: Dr. M. Alauddin</th>
<th>JAXA:Miyazaki/all</th>
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Sentinel Asia

Proposed Outline

1. The scope /objectives of Sentinel Asia

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, serving as a good demonstration project to share disaster-related information obtained by several earth observation satellites. SA has moved to Step2 from 2008, enhancing and strengthening its activities based on lessons obtained by Step1.

At APRSAF-18 held in Singapore in December 2011, the recommendation on the launch of the final phase Step3 of Sentinel Asia starting from 2013 and its concept were adopted.

At APRSAF-19, it will be provided with Step3 implementation plan and introduction of new activities.

2. The result of Sentinel Asia activities at APRSAF-18

See the attached APRSAF-18 adopted recommendations.

3. The Draft of the Agenda

1) Report on results of Step2 and Step3 implementation plan
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 Workshop

SAFE workshop will be held on Day-0 of EOWG, on 10 December 2012. New proposal of prototype will be presented by applicants and reviewed by SAFE review board members, and then approved by all participants in the SAFE workshop after discussion. Each prototyping executors will make a presentation on own progress or result of prototyping.

2) SAFE session in the EOWG

SAFE session will be held in the Day1 of EOWG, and current activities will be informed. On-going prototypes will be reported and finishing prototypes and new prototypes approved will be briefed by each executors. These results and information will be shared with participating entities through knowledge transfer and capacity building.

3) Announcement of the 5th SAFE Workshop

The SAFE secretariat will make an announcement of the next 5th SAFE Workshop.

2. The result of SAFE activities in APRSAF-18
Appendix C

See attached: APRSAF-18 adopted recommendations.

3. The Draft of the Agenda

[SAFE Workshop]
1) Report of the previous SAFE Workshop held in Perth, Australia
2) Presentation of new proposal
3) Progress Report of Prototypes
   a. Water Cycle Variations and Assessing the Climate Change Impacts (Pakistan)
   b. Fishery monitoring (Sri Lanka)
   c. Fishery management (Thailand)
   d. Carbon stock calculating and forest changes assessment for mangrove (Vietnam)
   e. Mapping and Change Detection of Wetlands (Sri Lanka)
   f. Assessment of drought impact on rice production (Indonesia)
   g. Water and Flood Security under the Climate Change (Cambodia)
   h. Investigation of sedimentation process and stability (Bangladesh)

4) Review Board Meeting Report

[SAFE session in the EOWG]
1) SAFE overview
2) Report of result at the previous SAFE workshop and Day0
3) Summary Report of Approved New prototypes
4) Summary Report of completed prototypes
5) Progress Report of on-going prototypes

[SAFE Initiative Report in Plenary Session]
1) Summary Report of the result at the previous SAFE Work Shop and Day0
3) Announcement of the Next workshop
Appendix C

Nineteenth Session of the Asia-Pacific Regional Space Agency Forum (APRSAF-19)

**Climate R³ (Regional Readiness Review for Key Climate Missions)**

*Proposed Outline*

1. The Scope/Objectives of Climate R³ activities

Climate R³ (Regional Readiness Review for Key Climate Missions) was proposed by Australia as a major outcome of APRSAF-17 to determine the ability of APRSAF countries and institutions to benefit from the data and information which will be provided by selected climate-related satellite missions in coming years. At APRSAF-18, it was adopted as an ongoing initiative of APRSAF.

Two Climate R³ workshops have been held so far. The workshop discussions have focused on bringing together current and prospective data users from the Asia-Pacific region and data supply agencies from around the world. The workshops have involved participants from Australia, Bangladesh, Cambodia, India, Indonesia, Japan, Korea, Laos, Mongolia, Pakistan, Sri Lanka, Thailand, and Vietnam.

Following the 2nd workshop held in Perth in May 2012, Climate R³ is considering how to facilitate and coordinate greater involvement by the Asia-Pacific region in global activities, such as the Global Forest Observation Initiative (GFOI) and the GEO Global Agriculture Monitoring Initiative (GEO-GLAM), both of which are initiatives of the intergovernmental Group on Earth Observation (GEO). This discussion will take place as part of the EOWG on 11-12 December 2012.

At the plenary of APRSAF-19, Climate R³ will report on its current activities, including the outcome of the 2nd workshop and the discussions in the EOWG.

2. The result of Climate R³ activities in APRSAF-18

See attached: APRSAF-18 adopted recommendations.

3. The Draft of the Agenda

1) Review of the 2nd Climate R³ Workshop Outcomes
2) Presentation on proposals from the discussion in EOWG
Nineteenth Session of the Asia-Pacific Regional Space Agency Forum (APRSAF-19)

*Kibo-ABC (Asian Beneficial Collaboration through Kibo utilization)*

**Proposed Outline**

1. The background and objective of Kibo-ABC initiative
   The International Space Station (ISS) and its Japanese Experiment Module, “Kibo” provide an extraordinary environment, which provokes scientific interest among young students and the general public, as well as their application in scientific research and technological development. Recognizing the significance of optimally exploiting this unique facility for the benefit of all in the Asia-Pacific region, members of the Space Environment Utilization Working Group (SEU WG) under the Asia-Pacific Regional Space Agency Forum (APRSAF) agreed to launch an initiative.

   The SEU WG, which plans to optimize the collaboration of “Kibo” utilization, has been discussing the ways to facilitate the effective joint utilization of the space environment since APRSAF-12. At APRSAF-18, launching an initiative was proposed to further promote related activities and enlarge membership.

   The initiative aims to share the significances and values which Kibo/ISS brings to human beings and promote the establishment of Kibo utilization collaboration projects in the region.

2. The aim of the first workshop
   a) The strategy and plan of the Kibo-ABC initiative will be discussed among the members.
   b) Status of the current activities in the first year of this initiative will be reported by each members.
   c) Recruit the new members to this initiative.

3. The Draft of the Agenda
   1) Initiative activity, strategy and plan
   2) Status report of 1/2sec-μG program
   3) Status report and solicitation of “Try Zero G”, scientific demonstration
program

4) Plan and preparation status report of the new mission to demonstrate the utilization of “Kibo”
5) Possibility of other new activities
6) Others

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| December 11th | 9:00-10:45 | 9:00-9:05 Opening remark (JAXA)  
9:05-9:20 Introduction from each members(member)  
9:20-9:40 Activity report of the initiative. (JAXA, member)  
Discussion of particular activities.  
How to proceed. Share of responsibility.  
9:40-10:00 Discussion on Try zero G  
10:00-10:15 Discussion on Drop tower  
10:15-10:45 Discussion on Asian Seed 2013 | Kibo ABC member |
|            | 10:45-11:00 | Break                                                                       |                    |
|            | 11:00-13:00 | 11:00-11:10 Introduction from new comer.  
11:10-11:30 Discussion on the next step.  
11:30-12:30 Coordination of the Summary report to the APRSAF plenary session. | All                |
### Tentative Program

**The 19th Session of the Asia-Pacific Regional Space Agency Forum (APRSAF-19)**

*~Enriching the quality of life through innovative space programs ~*

11-14 December, 2012  Berjaya Times Square Hotel Malaysia

<Day 0>  10 December, Monday

Workshop

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:30-11:15</td>
<td>SAFE Workshop (A. Earth Observation Working Group)</td>
</tr>
<tr>
<td>11:15-11:30</td>
<td>Coffee Break</td>
</tr>
<tr>
<td>11:30-13:00</td>
<td>SAFE Workshop (A. Earth Observation Working Group)</td>
</tr>
<tr>
<td>13:00-14:00</td>
<td>Lunch</td>
</tr>
<tr>
<td>14:00-15:30</td>
<td>SAFE Workshop (A. Earth Observation Working Group)</td>
</tr>
<tr>
<td>15:30-15:45</td>
<td>Coffee Break</td>
</tr>
<tr>
<td>15:45-17:00</td>
<td>SAFE Workshop (A. Earth Observation Working Group)</td>
</tr>
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## Tentative Program

### The 19th Session of the Asia-Pacific Regional Space Agency Forum (APRSAF-19)

**~Enriching the quality of life through innovative space programs~**

11-14 December, 2012  Berjaya Times Square Hotel Malaysia

**<Day 1> 11 December, Tuesday**

Workshop & Working Group Session

|----------|----------------------------------|-----------------------------------------------------|---------------------------------------------|-------------------------------------------------------------------------------------------------|
| 9:00-11:15 | Co-chairs: Assoc Prof Dr Abdul Rashid Bin Mohamed Shariff, President of Malaysian Remote Sensing Society (MRSS)  
Dr. Shinichi Sobue, Manager, Earth Observation Research Center, JAXA | Co-chairs: Prof. Ir. Dr Ahmad Faizal Bin Mohd. Zain, Fellow, Academy of Sciences, Malaysia (AMS), University Malaysia Pahang  
Mr. Hiroki Kohkata, Manager, Space Applications Program Systems Engineering Office, JAXA | Co-chairs: Ms. Azreena Ahmad, Director of Education and Science Division, National Planetarium, National Space Agency (ANGKASA)  
Dr. Takashi Kubota, Professor, Department of Spacecraft Engineering, Institute of Space and Astronautical Science(ISAS)/Space Education Center, JAXA | Kibo-ABC (Asian Beneficial Collaboration through Kibo Utilization) Workshop (D. Space Environment Utilization Working Group) |
| 11:15-11:30 | Coffee Break | | | |
| 13:00-14:00 | Lunch | | | |
| | | | | Co-chairs:  
Prof. Dr. Mohd Alauddin Mohd Ali, Director of Space Science Institute, The National University of Malaysia (UKM)  
Mr. Nobuyoshi Fujimoto, Associate Senior Engineer, Kibo-Utilization Office for Asia(KUOA), Space Environment Utilization Center, JAXA |
| 15:30-15:45 | Coffee Break | | | |
| 15:45-17:00 | A. Earth Observation Working Group | B. Communication Satellite Applications Working Group | C. Space Education & Awareness Working Group | D. Space Environment Utilization Working Group |
# Tentative Program

The 19th Session of the Asia-Pacific Regional Space Agency Forum (APRSAF-19)

*~Enriching the quality of life through innovative space programs~*

11-14 December, 2012  Berjaya Times Square Hotel Malaysia

**<Day 2> 12 December, Wednesday**

**Working Group Session**

|---------------|-----------------------------------|---------------------------------------------------|---------------------------------------------|-----------------------------------------------|
| 9:00-11:00    | Co-chairs: Assoc Prof Dr Abdul Rashid Bin Mohamed Shariff  
President of Malaysian Remote Sensing Society (MRSS)  
Dr. Shinichi Sobue  
Manager, Earth Observation Research Center, JAXA | Co-chairs: Prof. Ir. Dr Ahmad Faizal Bin Mohd. Zain  
Fellow, Academy of Sciences Malaysia (AMS), University Malaysia Pahang  
Mr. Hiroki Kohhata  
Manager, Space Applications Program Systems Engineering Office, JAXA | Co-chairs: Ms. Azreena Ahmad  
Director of Education and Space Science Division, National Planetarium, National Space Agency (ANGKASA)  
Dr. Takashi Kubota  
Professor, Department of Spacecraft Engineering, Institute of Space and Astronautical Science(ISAS)/Space Education Center, JAXA | Co-chairs: Prof. Dr. Mohd Alauddin Mohd Ali  
Director of Space Science Institute, The National University of Malaysia (UKM)  
Mr. Nobuyoshi Fujimoto  
Associate Senior Engineer, Kibo-Utilization Office for Asia(KUOA), Space Environment Utilization Center, JAXA |
| 11:00-11:15   | Coffee Break                      |                                                    |                                             |                                               |
| 13:00-14:00   | Lunch                             |                                                    |                                             |                                               |
| 15:30-15:45   | Coffee Break                      |                                                    |                                             |                                               |
| 15:45-17:00   | A. Earth Observation Working Group | B. Communication Satellite Applications Working Group | C. Space Education & Awareness Working Group | D. Space Environment Utilization Working Group |
| 20:00         | RECEPTION: jointly hosted by MOSTI, ANGKASA and MEXT |                                               |                                               |                                               |
Appendix D

**Tentative Program**

The 19th Session of the Asia-Pacific Regional Space Agency Forum (APRSAF-19)

~Enriching the quality of life through innovative space programs~

11-14 December, 2012  Berjaya Times Square Hotel Malaysia

<Day 3>  13 December, Thursday

**Plenary**

**General Co-Chairs**

**Malaysia:** Dr. Mustafa Din Subari

**Japan:** Dr. Satoru Otake

**Director General,**

National Space Agency of Malaysia

**Ministry of Education, Culture, Sports, Science and Technology (MEXT)**

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Speaker</th>
</tr>
</thead>
</table>
| 9:00-9:10  | Opening remarks           | Dr. Mustafa Din Subari, Director General, National Space Agency of Malaysia (ANGKASA), MALAYSIA  
                by General Co-chairs | Dr. Satoru Otake, Deputy Director General, Research and Development Bureau, Ministry of Education, Culture, Sports, Science and Technology (MEXT), JAPAN |
| 9:10-9:30  | Key note addresses        | Mr. Yoshinari Akeno, Deputy Director-General Office of National Space Policy, Cabinet Office, JAPAN |
| 9:30-9:45  |                            | Prof. Datin Paduka Dr. Khatijah Bt. Mohd. Yusoff Deputy Secretary General (Science) Ministry of Science, Technology and Innovation, MALAYSIA |
| 9:45-10:00 |                            | Coffee Break                                                            |
| 10:00-10:10| Summary of APRSAF-18      | Dr. Kwoh Leong Keong, Director, Centre for Remote Imaging, Sensing and Processing (CRISP), National University of Singapore, SINGAPORE |
| 10:10-10:25|                            | Dr. Michael Green  
                General Manager, Space Policy Unit, Department of Industry, Innovation, Science, Research and Tertiary Education (DIISRTE), AUSTRALIA |
| 10:25-10:40|                            | Dr. K. Radhakrishnan, Chairman (TBC)  
                Indian Space Research Organisation(ISRO), INDIA |
| 10:40-10:55| Country Reports           | Dr. Bambang S. Tejasukmana  
                Chairman, National Institute of Aeronautics and Space (LAPAN), INDONESIA |
| 10:55-11:10|                            | Dr. Keiji Tachikawa  
                President, Japan Aerospace Exploration Agency (JAXA), JAPAN |
| 11:10-11:25|                            | Dr. Talgat Musabayev  
                Chairman, National Space Agency of the Republic of Kazakhstan (KAZCOSMOS), KAZAKHSTAN |
| 11:25-11:40|                            | Coffee Break                                                            |
| 11:40-11:55| Special Presentaion       | Dr. Charles Frank, Bolden, Jr. Administrator, National Aeronautics and Space Administration (NASA), UNITED STATES OF AMERICA |
| 11:55-12:10|                            | Dr. Mustafa Din Subari  
                Director General, National Space Agency of Malaysia (ANGKASA), MALAYSIA |
| 12:10-12:25| Country Reports           | Korea Aerospace Research Institute (KARI), REPUBLIC OF KOREA |
| 12:25-12:40|                            | Dr. Anond Saidwongs  
                Executive Director, Geo-Informatics and Space Technology Development Agency (GISTDA), THAILAND |
| 12:40-12:55|                            | Prof. Doan Minh Chung  
                Director, Space Technology Institute (STI), Vietnam Academy of Science and Technology (VAST), VIETNAM |
| 12:55-14:00|                            | Lunch                                                                   |
## Tentative Program
### The 19th Session of the Asia-Pacific Regional Space Agency Forum (APRSAF-19)

**~Enriching the quality of life through innovative space programs ~**

*11-14 December, 2012 Berjaya Times Square Hotel Malaysia*

**<Day 3> 13 December, Thursday**

**Plenary**

### General Co-Chairs

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<thead>
<tr>
<th>Country</th>
<th>Name</th>
<th>Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malaysia</td>
<td>Dr. Mustafa Din Subari</td>
<td>National Space Agency of Malaysia (ANGKASA)</td>
</tr>
<tr>
<td>Japan</td>
<td>Dr. Satoru Otake</td>
<td>Ministry of Education, Culture, Sports, Science and Technology (MEXT)</td>
</tr>
</tbody>
</table>

### Time | Title | Speaker |
|--------|-------|---------|
| 14:00-15:15 | Panel Discussion | Theme: Enriching the quality of life through innovative space programs  
Moderator: Dr. Mustafa Din Subari, Director General, ANGKASA  
Panelists: Heads of Space Agencies |
| 15:15-15:30 | Coffee Break | Dr. Shamika N. Sirimanne (TBC)  
Director, Information and Communication, Technology and Disaster Risk Reduction Division, United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) |
| 15:30-15:45 | Remarks by international organization | Dr. Satoru Otake  
Deputy Director General, Research and Development Bureau, Ministry of Education, Culture, Sports, Science and Technology (MEXT) |
| 15:45-16:00 | Reports on Initiatives | Dr. Satoru Otake  
Deputy Director General, Research and Development Bureau, Ministry of Education, Culture, Sports, Science and Technology (MEXT)  
- **Sentinel Asia:** Disaster Management Support System in the Asia-Pacific Region  
- **SAFE:** Space Applications For Environment  
- **Climate R3:** The Regional Readiness Review for Key Climate Missions  
- **Kibo-ABC:** Asian Beneficial Collaboration through Kibo Utilization |
| 16:00-16:15 | Reports on Initiatives | Dr. Satoru Otake  
Deputy Director General, Research and Development Bureau, Ministry of Education, Culture, Sports, Science and Technology (MEXT)  
- **Sentinel Asia:** Disaster Management Support System in the Asia-Pacific Region  
- **SAFE:** Space Applications For Environment  
- **Climate R3:** The Regional Readiness Review for Key Climate Missions  
- **Kibo-ABC:** Asian Beneficial Collaboration through Kibo Utilization |
| 16:15-16:30 | Results of "Space Seed for Asian Future (SSAF) 2010" with the attendance of awarded Malaysian students | Dr. Satoru Otake  
Deputy Director General, Research and Development Bureau, Ministry of Education, Culture, Sports, Science and Technology (MEXT)  
- **Results of "Space Seed for Asian Future (SSAF) 2010" with the attendance of awarded Malaysian students** |
| 16:30-16:45 | Reports on Initiatives | Dr. Satoru Otake  
Deputy Director General, Research and Development Bureau, Ministry of Education, Culture, Sports, Science and Technology (MEXT)  
- **Sentinel Asia:** Disaster Management Support System in the Asia-Pacific Region  
- **SAFE:** Space Applications For Environment  
- **Climate R3:** The Regional Readiness Review for Key Climate Missions  
- **Kibo-ABC:** Asian Beneficial Collaboration through Kibo Utilization |
| 16:45-17:00 | Reports on Initiatives | Dr. Satoru Otake  
Deputy Director General, Research and Development Bureau, Ministry of Education, Culture, Sports, Science and Technology (MEXT)  
- **Sentinel Asia:** Disaster Management Support System in the Asia-Pacific Region  
- **SAFE:** Space Applications For Environment  
- **Climate R3:** The Regional Readiness Review for Key Climate Missions  
- **Kibo-ABC:** Asian Beneficial Collaboration through Kibo Utilization |
| 17:00-17:25 | Reports on Initiatives | Dr. Satoru Otake  
Deputy Director General, Research and Development Bureau, Ministry of Education, Culture, Sports, Science and Technology (MEXT)  
- **RESULTS OF "SPACE SEED FOR ASIAN FUTURE (SSAF) 2010" WITH THE ATTENDANCE OF AWARDED MALAYSIAN STUDENTS** |
| 17:30-18:00 | Reports on Initiatives | Dr. Satoru Otake  
Deputy Director General, Research and Development Bureau, Ministry of Education, Culture, Sports, Science and Technology (MEXT)  
- **Sentinel Asia:** Disaster Management Support System in the Asia-Pacific Region  
- **SAFE:** Space Applications For Environment  
- **Climate R3:** The Regional Readiness Review for Key Climate Missions  
- **Kibo-ABC:** Asian Beneficial Collaboration through Kibo Utilization |

**20:00**

**RECEPTION: jointly hosted by MEXT and JAXA**
## Tentative Program

The 19th Session of the Asia-Pacific Regional Space Agency Forum (APRSAF-19)

~*Enriching the quality of life through innovative space programs*~

11-14 December, 2012  Berjaya Times Square Hotel Malaysia

<Day 4>  14 December, Thursday

### Plenary

**General Co-Chairs**

- **Malaysia:**  
  - Dr. Mustafa Din Subari  
  - Director General, National Space Agency of Malaysia (ANGKASA)

- **Japan:**  
  - Dr. Satoru Otake  
  - Deputy Director General, Research and Development Bureau, Ministry of Education, Culture, Sports, Science and Technology (MEXT)

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<tr>
<th>Time</th>
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<th>Speaker</th>
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</thead>
</table>
| 9:00-9:15  | Remarks by international organizations     | Dr. Yasushi Horikawa, Chairman, United Nations Committee on the Peaceful Uses of Outer Space (UNCOPUOS)  
Dr. Mazlan Othman, Director, United Nations Office for Outer Space Affairs (UNOOSA) |
| 9:15-9:30  |                                           | Dr. Barbara Ryan, Secretariat Director, Group on Earth Observations (GEO) |
| 9:30-9:45  |                                           | Dr. Christian Feichtinger, Executive Director, International Astronautical Federation (IAF) |
| 9:45-10:00 |                                           | Dr. Mark Mackay, Representative of Southern Hemisphere Program, International Space University (ISU) |
| 10:00-10:15| **Summary reports by Working Groups**      | Earth Observation Working Group                                           |
| 10:15-10:30|                                           | Communication Satellite Applications Working Group                       |
| 10:30-10:45|                                           | Space Education & Awareness Working Group                                |
| 10:45-11:00|                                           | Space Environment Utilization Working Group                              |
| 11:00-11:15| **Summary report by APRSAF Task Force**    |                                                                         |
| 11:15-11:35|                                           | Coffee Break                                                            |
| 11:35-12:10| **Adoption of Recommendations of APRSAF-19**|                                                                         |
| 12:10-12:20| **Announcement of APRSAF-20**              |                                                                         |
| 12:20-12:30| **Closing remarks**                        | Dr. Satoru Otake, Deputy Director General,  
Research and Development Bureau, Ministry of Education, Culture, Sports, Science and Technology (MEXT), JAPAN  
Dr. Mustafa Din Subari, Director General,  
National Space Agency of Malaysia (ANGKASA), MALAYSIA |
| 12:30-14:00| **Lunch**                                  |                                                                         |
| 14:30      | **Cultural Tour**                          |                                                                         |
Appendix E

PUTRAJAYA
10 Tourism Icons

Perdana Putra
Overlooking the Putrajaya Lake, Putra Mosque and Putra Square, this six-storey natural stone clad office complex comprises of the Prime Minister’s office, the office of the Deputy Prime Minister and Chief Secretary to the Government. The design incorporates elements of Islamic Mogul architecture in its green-glazed onion-shaped roof.

Parks of Putrajaya
Putrajaya is home to 12 unique parks. Among the top three are the Botanical Gardens, Wetland Park and the Agriculture Heritage Park. The Botanical Garden extending over 93 hectares of land is the largest in the country. Wetland Park is the first and largest constructed freshwater wetlands in the tropics. The Agriculture Heritage Park is where you can learn more about Malaysia’s commercial agriculture such as oil palm, rubber and cocoa.

Seri Perdana
Seri Perdana is the residence of the Prime Minister as well as the venue for receiving dignitaries for official state functions and banquets. It shares similar architectural features as the Perdana Putra, in the green dome, structure and Islamic design.

Melawati Palace
Built on the highest vantage point in Putrajaya is the Melawati Palace, a retreat for His Royal Highness Yang di-Pertuan Agong. Designed by an architect from the Terengganu Royal House, it is the second official residence of the King after the Istana Negara in Kuala Lumpur.

Mosques of Putrajaya
There are two main mosques in the city, the Putra Mosque and the Tuanku Mizan Zainal Abidin Mosque. The pink-domed Putra Mosque is constructed of rose-tinted granite, housing up to 15,000 worshippers. The second mosque is named after the 13th Yang di-Pertuan Agong and is impressive with its steel facade.

For more information, please contact:
Public Relations Division
Corporate Services Department
Perbadanan Putrajaya
No.24 Jalan Perdana, Precinct 3
62200 Putrajaya, Malaysia
Tel: (6) 03-8877 7033
Fax: (6) 03-8877 5013
Website: www.ppp.gov.my
PPonline: (6) 03-8877 3000

About Putrajaya
Putrajaya is a model township that has been constructed with detailed planning, innovative urban design and great respect for the environment. It is a city with a vision that also promises to keep the nation’s heritage for the country’s present and future generations. Its beautifully landscaped roads and parks as well as modern buildings are clearly reflected in the theme “City in a Garden”.

Putra Square
The 300-metre circular Putra Square has concentric stars representing the states of Malaysia and is adorned with light and water features. Flanked by the Putra Mosque, Perdana Putra, Putra Bridge and the Promenade, the square is a popular spot for tourists, family picnics and outings on weekends.

Bridges of Putrajaya
There are eight signature bridges in Putrajaya of various sizes, design and importance. The Putra Bridge is one of the most important, connecting the Government Precinct and the Mixed Development Precinct. The Putrajaya Cruise fleet is also stationed below this bridge while the upper level forms part of the Boulevard. Other bridges include the Seri Gemilang Bridge, Seri Wawasan Bridge and Seri Saujana Bridge.

Putrajaya Lake
A vast 650 hectare man-made lake, Putrajaya Lake was designed to be a climate moderator for the city. It offers a place for recreation and watersports. Another option is the Lake Cruise with its 65-foot-dining cruise boat or the ‘Dondang Sayang’, a romantic small sampan.

Putrajaya International Convention Centre (PICC)
The PICC is a landmark of Putrajaya inspired by the shape of the eye of the ‘penang perak’, a silver Malacca royal bolt buckle. The roof is said to be designed similar to the shape of a folded origami.

Pride of Putrajaya
The architectural style of the city is definitely a source of the nation’s pride, as can be seen in the international standards of design and construction of the city structure. Among the distinctive buildings are the Ministry of Finance complex with a crescent-shaped tower and a series of arches forming Islamic motifs. Another notable structure is the futuristic entrance arch of the Perbadanan Putrajaya complex, the body managing the administration of the Federal Territory of Putrajaya.