



8 June 2015

## FIRST ANNOUNCEMENT

### **The 22nd Session of the Asia-Pacific Regional Space Agency Forum (APRSAF-22)**

***“Sharing Solutions through Synergy in Space”***  
**1-4 December 2015, Bali, Indonesia**

Dear Sir/Madam,

On behalf of the co-organizers, we are pleased to announce that the twenty-second session of the Asia-Pacific Regional Space Agency Forum (APRSAF-22) will take place from 1st to 4th December 2015 in Bali, Indonesia, under the theme entitled “Sharing Solutions through Synergy in Space.” APRSAF-22 will be jointly organized by the Ministry of Research, Technology and Higher Education of Indonesia (RISTEK-DIKTI), the National Institute of Aeronautics and Space, Indonesia (LAPAN), the Ministry of Education, Culture, Sports, Science and Technology of Japan (MEXT) and the Japan Aerospace Exploration Agency (JAXA).

In response to the recommendations at the twentieth anniversary of APRSAF held in Vietnam in 2013, the activities and the areas of APRSAF focus have been reviewed with the support of participating entities from the region. With the aim of bringing more socio-economic benefits of space technologies and their applications, the new framework of APRSAF working groups have also set up in APRSAF-21 in Japan last year, e.g. space applications, space technology, space environment utilization and exploration, and space education promotion.

APRSAF-22 will bring together leading space sector in the region as well as the stakeholders and relevant entities that have actively involved in, or interested in, space endeavor and regional collaboration. We warmly welcome new participants, not only from space agencies, but also from relevant ministries, user organizations of space technologies, development aid agencies, the private sector, universities, and international/regional organizations. As an open and flexible framework for regional cooperation, APRSAF encourages voluntary participation by anyone interested in its work.

Further details of APRSAF-22, including the programme and associated events and the travel arrangements and logistics, will be made available on our website ([http://www.aprsaf.org/annual\\_meetings/aprsaf22/meeting\\_details.php](http://www.aprsaf.org/annual_meetings/aprsaf22/meeting_details.php)) soon .

We sincerely hope that you will join us at APRSAF-22, and look forward to welcoming you and your colleagues in Bali in December 2015.

Sincerely,

On behalf of the Co-organizers,



Prof. Dr. Thomas Djamaluddin  
Chairman  
National Institute of Aeronautics and Space  
Indonesia



Mr. Akinori Mori  
Deputy Director General,  
Research and Development Bureau  
Ministry of Education, Culture, Sports,  
Science and Technology of Japan



Dr. Naoki Okumura  
President  
Japan Aerospace Exploration Agency





## **The 22nd Session of the Asia-Pacific Regional Space Agency Forum (APRSAF-22)**

***“Sharing Solutions through Synergy in Space”***

**1-4 December 2015, Bali, Indonesia**

### **Background**

The Asia-Pacific Regional Space Agency Forum (APRSAF) was established in 1993 following the declaration adopted at the Asia-Pacific International Space Year Conference (APIC) in 1992 to enhance the development of space programs of countries in the Asia-Pacific region and to exchange information and views to explore possibilities for cooperation in space activities. APRSAF has held twenty one annual meetings, organized jointly by the Ministry of Education, Culture, Sports, Science and Technology of Japan (MEXT), the Japan Aerospace Exploration Agency (JAXA) and the local organizations of the host countries, to discuss current space-related issues and possible cooperation mainly in the Asia Pacific region. To date, Australia, India, Indonesia, Japan, Malaysia, Mongolia, the Republic of Korea, Singapore, Thailand and Vietnam have hosted the APRSAF sessions.

The last session, the twenty first session of APRSAF (APRSAF-21), was convened in Tokyo under the theme entitled “Leap to the Next Stage: Delivering Innovative Ideas and Solutions,” jointly organized by MEXT and JAXA. Approximately 580 people from 33 countries and regions, and 12 international organizations participated in the session. As a result of the discussions in the Plenary Session and those of the four new working groups, i.e. Space Applications working group (SAWG), Space Technology working group (STWG), Space Environment Utilization working group (SEUWG) and Space Education working group (SEWG), APRSAF-21 adopted the recommendations as contained in Appendix-A of the present document.

Through open and voluntary participation, APRSAF promotes concrete regional cooperation using space technology. To reflect a broad range of views and voices, APRSAF encourages the participation of a wide range of entities including space agencies, relevant ministries, user organizations of space technology, development aid agencies, private companies, universities, and international/regional organizations.



## **APRSAF-22**

### **Dates and Venue**

Dates: 1-4 December 2015

Venue: Discovery Kartika Plaza Hotel

Jl. Kartika Plaza PO BOX 1012 | South Kuta 80361 Bali, Indonesia

<http://www.discoverykartikaplaza.com/>

### **Organizers**

APRSAF-22 will be co-organized by the following organizations:

**Indonesia:** Ministry of Research, Technology and Higher Education of Indonesia (RISTEK-DIKTI)  
National Institute of Aeronautics and Space, Indonesia (LAPAN)

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

### **Objectives**

While serving as an open and flexible forum to promote concrete cooperation, APRSAF aims to contribute to solving socio-economic problems in the region by further expanding the use of space technology and its applications.

With this in mind, the twenty-second session of APRSAF (APRSAF-22) will be held under the theme entitled “Sharing Solutions through Synergy in Space,” APRSAF-22 organizes four working groups – Space Applications, Space Technology, Space Environment Utilization, and Space Education – to share information about the activities and future plans of each country and region and to discuss further cooperation in these respective areas. At the Plenary Session, it will feature information exchange on space policy and structure of each country and discuss regional common issues and interests.

### **Expected Participants**

Space agencies, relevant ministries, user organizations of space technology, development aid agencies, private companies, universities, and international/regional organizations are expected to participate in APRSAF-22.

### **Overall Schedule of APRSAF-22**

Dates	Event	Venue
28-29 November 2015	Water Rocket Event	Hotel Oranje
30 November 2015	SAFE Workshop	Discovery Kartika Plaza Hotel
	Kibo-ABC Workshop	
	New Cooperation Session	

1-4 December 2015	<b>APRSaf-22</b> ➤ Dec. 1-2 <b>Working Group Session</b> ➤ Dec. 3-4 <b>Plenary Session</b>	Discovery Kartika Plaza Hotel
	Poster Contest	
	Exhibition	
2 December 2015	Welcome Reception	Bali Art Centre
4 December 2015	Cultural Tour	Pura Luhur Uluwatu and Kecak Dance

### **Plenary and Working Groups**

The plenary session will take place on the third and fourth days of APRSAF-22, i.e. on 3-4 December. It will feature reports by APRSAF participating countries as well as by the APRSAF initiatives, i.e. Sentinel Asia (disaster management support system in the Asia-Pacific region), SAFE (Space Applications For Environment), and Kibo-ABC (Asian Beneficial Collaboration Through “Kibo” Utilization). Two APRSAF related projects, i.e. UNIFORM (University International Formation Mission), which successfully completed its project in March, 2015, and MGA (Multi-GNSS Asia), will also report their activities at the plenary session.

The first and second days of APRSAF-22, i.e. on 1-2 December, will be devoted to the sessions of the four working groups, i.e. Space Application working group (SAWG), Space Technology working group (STWG), Space Environment Utilization working group (SEUWG) and Space Education working group (SEWG), which will meet in parallel.

### **APRSaf Activities**

On November 30, workshops will be held by two APRSAF Initiatives, i.e. SAFE and Kibo-ABC. Water Rocket Event, Poster Contest and Exhibition will also be held prior to or in parallel with APRSAF-22.

### **Side Events**

An “APRSaf Side Event” is a meeting, conference, or other similar event proposed and performed by APRSAF participating organizations during the APRSAF annual session. The APRSAF Secretariat is now accepting proposals for an APRSAF Side Event. The closing date for submission is 15 July, 2015. The Guidelines & Request Form are in Appendix-B. The relevant information is available on the APRSAF website: [http://www.aprsaf.org/annual\\_meetings/aprsaf22/side\\_events.php](http://www.aprsaf.org/annual_meetings/aprsaf22/side_events.php)

## **Points of Contact for APRSAF-22**

If you have any inquiries concerning APRSAF-22, please contact:

**Ms. Mami Sasamura**

APRSAF-22 Secretariat, c/o Japan Aerospace Exploration Agency (JAXA)

ochanomizu sola city, 4-6 Kandasurugadai, Chiyoda-ku, Tokyo, 101-8008, Japan

E-mail: [aprsaf22@aprsaf.org](mailto:aprsaf22@aprsaf.org) or FAX: +81-3-5209-3205

## **APRSAF Activities**

### ■ **New Cooperation Session**

**Date:** 1 December 2015

**Venue:** Discovery Kartika Plaza Hotel

<Contact for further information>:

APRSAF Secretariat: E-mail: [aprsaf22@aprsaf.org](mailto:aprsaf22@aprsaf.org) FAX: +81-3-5209-3205

### ■ **SAFE Initiative Workshop**

**Date:** 30 November 2015

**Venue:** Discovery Kartika Plaza Hotel

**Reference:** <http://www.eorc.jaxa.jp/SAFE/>

<Contact for further information>:

**Mr. Ko Hamamoto**

TEL: +81-50-3362-7938 FAX: +81-29-868-2961 E-mail: [hamamoto.ko@jaxa.jp](mailto:hamamoto.ko@jaxa.jp)

### ■ **Kibo-ABC Initiative Workshop**

**Date:** 30 November 2015

**Venue:** Discovery Kartika Plaza Hotel

**Reference:** [http://www.aprsaf.org/initiatives/kibo\\_abc/](http://www.aprsaf.org/initiatives/kibo_abc/)

<Contact for further information>:

**Ms. Yoshimi Osada**

TEL : +81-50-3362-3387 FAX : +81-29-868-3950 E-mail: [Kibo-ABC@aprsaf.org](mailto:Kibo-ABC@aprsaf.org)

### ■ **Water Rocket Event**

**Co-organizers:** LAPAN and JAXA

**Date:** 28 -29 November 2015

**Venue:** Hotel Oranjje

Jl. Hayam Wuruk no. 302, Denpasar, Bali, Indonesia 80231

### ■ **Poster Contest**

**Theme:** “Careers in Space”

**Co-organizers:** LAPAN and JAXA

**Date:** 1-4 December 2015

**Venue:** Discovery Kartika Plaza Hotel



**<Contact for further information on the Poster Contest and the Water Rocket Event>:**

**Mr. Takaaki Okano, JAXA Space Education Center**

**TEL: +81-50-3362-6438 FAX: +81-42-759-8612 E-mail: z-kokusai@edu.jaxa.jp**

More information on the Water Rocket Event and Poster Contest will be made available in due course. Please check the APRSAF website (<http://www.aprsaf.org>) for any updates.

**■ APRSAF-22 Exhibition**

**Date: 1-4 December 2015**

**Venue: Discovery Kartika Plaza Hotel**

The relevant information of APRSAF-22 Exhibition will be available on the APRSAF website in due course: [http://www.aprsaf.org/annual\\_meetings/aprsaf22/](http://www.aprsaf.org/annual_meetings/aprsaf22/)

**APRSAF Related Project**

**■ 7th Asia Oceania Regional Workshop on GNSS**

**Date: 6-8 December 2015**

**Venue: Brunei (site: TBD)**

**Reference: <http://www.multignss.asia/>**

**<Contact for further information>:**

**Dr. Johta Awano,**

**TEL : +81-50-3362-5488 FAX : +81-29-868-5987**

**E-mail: [awano.johta@jaxa.jp](mailto:awano.johta@jaxa.jp)**

**Other matters**

Further details of APRSAF-22, including arrangements for logistics, updates of the program and online registration will be made available in due course. Please check the latest information on APRSAF website at: <http://www.aprsaf.org>.

The information on APRSAF can also be provided via APRSAF News Mail and APRSAF News Letter. To subscribe them, please visit [https://www.aprsaf.org/newsmails\\_newsletters/form/](https://www.aprsaf.org/newsmails_newsletters/form/).

Participation in APRSAF-22 is free of charge while participants are responsible for covering their travel and accommodation costs.

**Attachments**

Appendix-A ..... Recommendations Adopted at APRSAF-21

Appendix-B ..... APRSAF Side Event Guidelines & Request Form

**Summary and Recommendations of  
the 21<sup>st</sup> Session of the Asia-Pacific Regional Space Agency Forum  
(APRSAF-21)  
December 2-5, 2014  
Tokyo, Japan**

The 21<sup>st</sup> Session of the Asia-Pacific Regional Space Agency Forum (APRSAF-21) was successfully held in Tokyo from December 2-5, 2014, with the overall theme, “Leap to the Next Stage: Delivering Innovative Ideas and Solutions.” The session was attended by 580 participants from 33 countries and regions, as well as 12 international organizations.

The participants of APRSAF-21:

1. Welcomed the reorganization of working groups for this session to facilitate outcome-oriented activities in accordance with APRSAF's reform proposal, which has been discussed by the Executive Committee (ExCom) for the past year in response to the recommendations made at the 20<sup>th</sup> commemorative session.
2. Welcomed that the leaders of space agencies in the Asia-Pacific region who participated in APRSAF-21 and made a Joint Statement toward stronger regional cooperation entitled, “Toward the Advancement of Activities in Exploration and the Utilization of Outer Space for a Better Future for People on Earth” (Annex-1).
3. Re-emphasized the importance of contributing to the solving of social problems with maximum utilization of space technology, reinforcing cooperation with user organizations and development aid agencies, and providing sustainable solutions.
4. Confirmed the common goal of further dissemination of space technology and its applications.
5. Welcomed the research and development on the International Space Station (ISS) and the promotion of human resource development and capacity building.
6. Welcomed the discussion of space exploration, which has been studied globally, and encouraged active support for its implementation.
7. Confirmed the importance of cooperation in rule-making for long-term space activities.
8. Confirmed the further promotion of the human resource development of our youth as the next generation of leaders.
9. Welcomed activity reports from four initiatives and four re-organized working groups, recognized their lively activities, confirmed the outcomes in each area, and provided recommendations for future activities that are listed below.



## APRSAF Initiatives

### [Sentinel Asia]

10. Noted that Sentinel Asia is the first Initiative originated by APRSAF with a growing number of involved players and has established a disaster management support system in which space agencies and disaster management agencies are collaborating with each other. It is currently in its Step-3 phase, which aims to enhance activities in the prevention and recovery phases of natural disasters.
11. Confirmed the necessity of evolving Sentinel Asia in order to activate and reinforce its expected functions.
12. Reviewed the evolution plans for Sentinel Asia, which were discussed at the Joint Project Team (JPT) meeting and the Space Applications Working Group at APRSAF-21.
13. The evolution plan consists of three concepts: joint drive, end-user-oriented, and strategic management:
  - Joint drive: To encourage participating organizations to be actively involved, and to strengthen and make activities more effective and sustainable cooperation with development agencies—such as the Asian Development Bank (ADB), the Japan International Cooperation Agency (JICA), and the World Bank (WB). Also, collaboration with other relevant global frameworks should be undertaken.
  - End-user-oriented: To respond to the needs of disaster areas and communities directly and quickly, Sentinel Asia should accumulate information both pre- and post-disasters, such as hazard maps, as well as education through which communities can enhance their capability to respond when disasters happen.
  - Strategic management: To realize the above plan, a steering committee should be established.

### <Recommendations>

14. The following recommendations were provided regarding Sentinel Asia:
  - A) To welcome the evolution proposals made by the JPT and to promote its activities under the leadership of the Ministry of Education, Culture, Sports, Science and Technology (MEXT) and the Japan Aerospace Exploration Agency (JAXA), along with the active involvement of member organizations.
  - B) To encourage the establishment of a steering committee, whose secretariat will be served by JAXA, for the development of an action plan to be discussed at the next APRSAF.

### [SAFE] (Space Applications for Environment)

15. Welcomed the launch of prototyping activities in relation to “Decision Support in

Transboundary Catchments,” proposed by the Mekong River Commission, and confirmed the steady progress of the current prototype(s).

16. Recognized and appreciated the successful completion of four prototypes: drought monitoring by the Indonesian Center for Agricultural Land Resources Research and Development (ICALRD) and Indonesia’s Ministry of Agriculture (MOA), water and food security by Cambodia’s Ministry of Water Resources and Meteorology (MOWRAM), coastal monitoring by Bangladesh’s Local Government Engineering Department (LGED), and mangrove monitoring by Indonesia’s LAPAN, as well as the subsequent efforts to realize the sustainable use of their outcomes.
17. Welcomed the successful and sustainable operation of the results by ICALRD for monitoring drought, with cooperation among local stakeholders.
18. Confirmed that the social issues, space technology needs, and actions for solving actual problems were presented at the stakeholder meetings and the two international conferences (the Institution of Geospatial and Remote Sensing Malaysia (IGRSM) and the Asian Conference on Remote Sensing (ACRS)) to enhance partnerships with user organizations and development aid agencies.
19. Confirmed, based on the reorganization of Space Applications Working Group (SAWG), the consideration of preliminary studies in such areas as precision farming by utilizing the technologies of Earth observation, positioning, and communication.

<Recommendations>

20. The following recommendations were provided regarding SAFE:
  - A) To encourage prototyping activities sustainable at local levels after the completion of their two-year activities, while expanding cooperation with relevant user organizations and development aid agencies.
  - B) To encourage a preliminary study of the synergistic use of Earth observation, positioning, and communication technologies, and request that the study results be reported at the next APRSAF.

**[Climate R<sup>3</sup>] (Regional Readiness Review for Key Climate Missions)**

21. Confirmed that Climate R<sup>3</sup> has played an important role in promoting and coordinating satellite data needs and applications for climate monitoring in the Asia-Pacific region through dedicated workshops and research activities.

<Recommendations>

22. The following recommendations were provided regarding Climate R<sup>3</sup>:
  - A) To archive Climate R<sup>3</sup> at APRSAF-21 with the various accomplishments of the three years since its launch.

- B) To encourage activity toward the potential launch of a new APRSAF initiative that will best serve the Asia-Pacific region by fully utilizing the results of Climate R<sup>3</sup>.

**[Kibo-ABC] (Asian Beneficial Collaboration through “Kibo” Utilization)**

23. Shared experiences and processes related to the action approach to plan a specific space experiment with the use of Kibo and the implementation of a plant growth observation study, through workshops by the Asian Beneficial Collaboration via the Japanese Experiment Module (JEM) “Kibo” Utilization (Kibo-ABC Initiative), and confirmed the importance of these activities to enhance human resource development and capacity building among the participants.
24. Agreed to launch a new plant experiment mission to improve the experience obtained through the Space Seed for Asian Future 2013 (SSAF2013), to be conducted in 2015.
25. Agreed to begin feasibility studies and ground experiments from both scientific and technical points of view to realize a space mission to germinate an Asian herb in Kibo, called “Asian Herb in Space (AHIS).”
26. Agreed that three agencies (ANGKASA, LAPAN, and JAXA) should investigate mid- and long-term roadmaps until 2020 and distribute the proposed plan to the member agencies.

<Recommendations>

27. The following recommendations were provided regarding Kibo-ABC:
- A) To encourage Kibo-ABC members to increase the number of member agencies.
  - B) To encourage members' continuous efforts toward information exchange on related activities, led by the Kibo Utilization Office for Asia (KUOA).
  - C) To recognize the importance of Kibo-ABC activities, including SSAF, Drop Tower, and Try Zero G, and to recommend that those actions continue as efforts to expand cooperation between JAXA and the other agencies, based on the understanding of the benefits to youngsters in future space environment utilization.

**APRSAF Working Groups**

**[Space Applications Working Group]**

28. Successfully launched the Space Applications Working Group (SAWG) during the 2014 session by integrating the application areas of the former Earth Observation Working Group and parts of the Communication Satellite Applications Working

Group.

29. Discussed various space application topics that support societal issues in the Asia-Pacific region through the synergistic use of space capabilities (Earth observation, communication, and navigation) and ground segment activities with ICT (cloud computing, data cube, etc.), via cooperation among space agencies, user government agencies, development aid agencies, and the private sector.
30. Acknowledged the tremendous contribution and commitment of space agencies in their data provisions toward the success of practical applications and recommended that space agencies continue their efforts to provide satellite data to further strengthen user needs.
31. Confirmed success stories in which the activities of SAFE are being applied to the Asia-Pacific region through the framework of development aid agencies.
32. Welcomed the exchange of information and opinions by focusing on important tasks for improving societal benefits of the Asia-Pacific region, and confirmed the results of activities via initiatives including Sentinel Asia, SAFE, and Climate R<sup>3</sup>:
  - Disaster response: Confirmed the status of Sentinel Asia, including Phase 3 evolution, disaster response, and success stories in the Philippines and its future direction by progressing through an international framework. Further development by utilizing global navigation systems was also discussed.
  - Forestry applications: Discussed the relationship between space technologies and international frameworks and the overall global situation through the viewpoint of carbon stock monitoring and ecosystems.
  - Agriculture: Confirmed the excellent progress of activities including rice crop monitoring via GEOGLAM Asia-Rice and the smooth provision of the rice crop outlook to the Food and Agriculture Organization (FAO) in association with the Association of Southeast Asian Nations (ASEAN). Welcomed the development of SAFE results as technical assistance projects by the ADB. Also discussed the possibility of cooperation on smart farming as a new example of solutions for societal issues.
  - Water resource management: Welcomed continuous knowledge sharing and technology developments in association with the Asian Water Cycle Initiative (AWCI) of the Global Earth Observation System of Systems (GEOSS), as well as the progress of applications in association with organizations such as the United Nations Educational, Scientific, and Cultural Organization (UNESCO) and the ADB in areas such as flood alert.
  - Future challenges: Recognized the possibility of applying remote sensing techniques for public health issues such as heat island phenomena.

<Recommendations>

33. The following recommendations were provided regarding SAWG:

- A) To encourage joint activities with development aid agencies such as the Japan International Cooperation Agency (JICA) and ADB, further cooperation with GEOSS Asia-Pacific such as mutual technical assistance, and further partnerships with international organizations such as the Economic and Social Commission for Asia and the Pacific (UN-ESCAP) and ASEAN.
- B) To establish an ad-hoc task team (to report at APRSAF-22) under SAWG to scope a potential new APRSAF initiative involving synergistic applications of geostationary orbit (GEO) (e.g., Himawari-8) and low Earth orbit (LEO) satellites (e.g., GCOM-C) with multi-GNSS and ICT.
- C) To promote efforts to improve the operation of underpinning a “data processing, distribution, and communications” backbone to support the various application studies of the SAWG.

**[Space Technology Working Group]**

- 34. Confirmed that this Space Technology Working Group (STWG) was established from the former Communication Satellite Applications Working Group, in response to the national need for space technology development. The Working Group aims for active information exchange and human resource development to support space activities and utilization.
- 35. Discussed topics regarding small satellite development and operation, ground facilities, engineering management, and advanced technologies, and shared status reports on activities in capacity building and training.
- 36. Re-acknowledged the importance of space debris issues from the perspective of the long-term sustainability of space activities and encouraged information exchange on the mitigation and removal technologies of space debris.
- 37. Agreed to continue this WG for the next APRSAF and expressed interest in discussing a range of topics such as GNSS, payload technologies for science missions, and interoperability of ground stations for future discussions of this WG.

<Recommendations>

38. The following recommendations were provided regarding STWG:

- A) To share activities and experiences in space technology, small satellites, launch opportunities, and engineering management, as well as to promote cooperative opportunities and encourage wider participation.
- B) To promote information exchange about capacity building programs and training opportunities and encourage participation.

- C) To recognize the importance of debris issues and promote information exchange about technical matters for mitigation and removal.
- D) To maintain this WG's activities in order to realize the above-mentioned recommendations.
- E) To discuss how to deal with "inter-working group" topics, such as GNSS, at the ExCom.

**[Space Environment Utilization Working Group]**

- 39. Recognized the current status of space environment utilization in Kibo and new capabilities such as Exposed Experiment Handrail Attachment Mechanism (ExHAM) and JEM Small Satellite Orbital Deployer (J-SSOD).
- 40. Recognized the excellent results of the first protein crystal growth experiment in 2010-2012, conducted by UPM and ANGKASA in Malaysia.
- 41. Recognized the importance of the Asian students' parabolic flight program.

<Recommendations>

42. The following recommendations were provided regarding SEUWG:

- A) To initiate R&D projects on lean satellites, such as CubeSats and 50cm-class satellites, utilizing the JEM Small Satellite Orbital Deployer (J-SSOD) available in Kibo/ISS, based on collaboration efforts among Asian countries.
- B) To encourage space agencies to fully utilize the pressurized module and/or the exposed facilities in Kibo/ISS before 2020.
- C) To continue the students' parabolic flight programs in order to expand the cooperation between JAXA and the other agencies, based on the understanding of its benefits to youngsters in future space utilization.

*(Space Medicine)*

- D) To take an interdisciplinary approach to space medicine and satellite technology in order to promote "tele-epidemiology" for public health.
- E) To use the ISS as a test-bed for human space exploration, with the participation of Asian countries, through collaboration with JAXA.

*(Space Exploration)*

- F) To continue information exchange among Asian countries on international space exploration, which is a long-term global program for human being.
- G) To continue to participate in activities that build the capacity of international space exploration, depending on their capability.
- H) To hold, in addition to APRSAF, dedicated workshops once or twice a year in Asian countries, in order to ensure the firm progress of those countries in developing and conducting their own missions.

**[Space Education Working Group]**

43. Confirmed that the WG has organized a total of five seminars for teachers and educators in Asia since 2009 (this year in New Zealand) for the dissemination of space education, and that similar seminars have ensued independently at a local level. As multiple countries have asked to hold the next seminar, the time and venue of the session is to be discussed by the organizers.
44. Confirmed that the milestone 10th APRSAF Water Rocket Event, as organized by the WG for the promotion of youth education, was held in Japan this year with a record 72 qualified students from 17 countries around the world, who actively engaged in vigorous exchange. Also confirmed that the 9th poster contest with the theme “Space is the Future”—through which the WG promotes science and technology education at a regional level—received submissions from 36 qualified students from 12 countries, and confirmed that these events will be continued next year.
45. Through the above activities, reconfirmed the importance of the role of space education in the human resources development of the next generation, and successfully conducted a special session for members to utilize and experiment with educational materials and tools firsthand as a new measure to further promote these activities at the national and regional levels.

<Recommendations>

46. The following recommendations were provided regarding SEWG:
  - A) To further promote educational activities, using space as a tool, that will be beneficial for the human resource development of the next generation.
  - B) To continue to conduct the Water Rocket Event and Poster Contest as means of stimulating young people’s interest and innovative thoughts about space and science technology.
  - C) To continuously enhance and expand self-initiated activities (including seminars) so that each country can share the space education materials that they have developed, and to encourage cooperation with international organizations and enterprises to conduct space educational activities.

Programs and activities supported by APRSAF

**[Action for long-term sustainability of space activity]**

47. Found that international actions for the long-term sustainability of space exploration and utilization were reported in light of the importance of revitalizing space activity and promoting it to future generations.

### **[Multi-GNSS Demonstration Campaign in Asia and Oceania]**

48. Shared the outcome of the 6th Asia Oceania Regional Workshop on GNSS (October 2014), welcomed the discussion of activities beneficial to APRSAF participating countries, and encouraged more organizations to participate in Multi-GNSS Asia (MGA).

### **[New Cooperation Session]**

49. A new cooperation session was established at APRSAF-20 to identify new applications and technologies that had not been covered by existing working groups. Ten proposals, including the status reports proposed at APRSAF-20, were presented in the areas of industrial cooperation, micro satellite application, workshops for the younger generation, asteroid observation networks, engineering design methodology, and spaceports. These were presented by experts from various entities, such as universities, space agencies, the private sector, international organizations, NPOs, and so on.

#### <Recommendations>

50. The following recommendations were provided regarding the new cooperation session:

- A) To encourage proposers to initiate proposed activities or feasibility studies and report their progress at the next APRSAF session.
- B) To facilitate communications between APRSAF participants and proposers.

### **[UNIFORM (University International Formation Mission)]**

51. Confirmed the participation of five researchers from Kazakhstan to develop UNIFORM-2&3 and program outcomes in 2014, including the successful launch and operation of UNIFORM-1 to observe wild fires and volcanic activities.

#### <Recommendations>

52. The following recommendations were provided regarding UNIFORM:

- A) Encourage APRSAF participants to participate in the UNIFORM program for the capacity-building of micro-satellite and ground system technologies.

### **[Special Sessions]**

*(Societal Needs and Space for Practical Applications)*

53. Welcomed the discussions at the Special Session entitled “Societal Needs and Space for Practical Applications,” which showcased some ongoing projects in which



satellite-based technologies such as satellite imagery are being applied in a synergistic way. Panelists from space agencies (JAXA/Japan, LAPAN/Indonesia), local authorities from Bangladesh and the Philippines, and the cooperation sector (JICA/Japan) moderated by a research institute (CSIRO/Australia) highlighted the importance of concerted efforts in support of solving national and regional issues.

*(International Space Station “Kibo” and Beyond)*

54. Welcomed the discussion at the Special Session regarding how the International Space Station (ISS) benefits nations and students in our region and what kind of activities that utilize the ISS can be envisioned for research as well as educational purposes. The Session, moderated by Japanese astronaut Soichi Noguchi with panelists from Malaysia and Thailand, shared the value of human space activities and the future perspective on global space exploration, thereby stressing the importance of passing the torch to the next generation.

**[Special Speeches]**

[1<sup>st</sup> International Space Exploration Forum]

55. Welcomed the report of the outcome of the 1<sup>st</sup> International Space Exploration Forum (ISEF) and shared the awareness acquired from globally revitalizing discussions in the field of space exploration and support towards the 2<sup>nd</sup> ISEF, to be held in Japan.

[Japan’s Space Exploration Strategy: An interim report from MEXT’s ISS-Space Exploration Committee]

56. Welcomed the reporting of key elements of discussions within Japan, such as the outcomes achieved through participation in the ISS program, thus highlighting the importance and benefits of space exploration; also encouraged broad participation from countries and organizations in the 2<sup>nd</sup> ISEF, to be held in Japan in 2016 or 2017.

**[Presentations by International Organizations]**

57. Welcomed reports by representatives from the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), the Group on Earth Observation (GEO), and the International Astronautical Federation (IAF) on their activities.

**[Presentations on Space Cooperation in the Asia-Pacific Region]**

58. Welcomed presentations made by representatives from Japan, the United States of America, and the United Kingdom on their activities in line with space cooperation

in the Asia-Pacific region.

**[APRSAF-22 & 23]**

59. Welcomed the holding of APRSAF-22 in Indonesia in 2015, supported the offer by the Department of Science and Technology (DOST) of the Philippines to host APRSAF-23 in 2016, and expressed the expectation of preparation through ExCom.

\*\*\*

The APRSAF-21 participants are satisfied with the discussions on exploring the further possibility of the utilization and application of space technologies, reorganized working groups, and associated events, and the engagement in productive discussions on various new ideas that meet regional needs, as well as on solutions for regional issues suggested by many players, further discussion and deeper exchange with the theme, “Leap to the Next Stage: Delivering Innovative Ideas and Solutions.”

---

\* \* \*

Toward the Advancement of Activities in Exploration and Utilization of  
Outer Space for a Better Future of People on Earth

**Joint Statement by Asia- Pacific Space Leaders**

Released on December 4, 2014

1. We welcomed Heads of Space Agencies and Space Leaders from the Asia-Pacific region to the 21<sup>st</sup> session of the Asia-Pacific Regional Space Agency Forum (APRSAF-21), convened on December 4, 2014, in Tokyo.
2. (Space Technology Development) We recalled the outstanding progress in the development of space technology and the contributions of its applications to socio-economic development in the Asia-Pacific region. We also noted the importance of continued dialogue and active information exchange in this region to advance space technology and its applications through the collaboration of various regional and international organizations and industries.
3. (Space Applications) We recognized the value of space technologies in promoting sustainable development and solving important national and regional issues. We confirmed our joint efforts toward tackling common issues such as natural disaster mitigation and environmental problems through Earth observation technologies (remote sensing), satellite communications, and various ground-based infrastructures.
4. (Space Exploration) We noted that space exploration is an international endeavor that benefits all on Earth, and we acknowledged the importance of enhanced cooperation toward global space exploration activities. We underscored our joint efforts toward acquiring new knowledge from space and promoting research and development.
5. (Capacity Building and Education) We emphasized the importance of developing human resources for the next generation, and we expressed our willingness to work together in the areas of capacity building and education, thus focusing on a better future.

\* \* \* \* \*

## APRSAF Side Event Guidelines

1. An “APRSAF Side Event” is a meeting, conference, contest, outdoor event, or other similar event, relating to the peaceful uses of outer space, proposed and performed by APRSAF participating organizations, such as a ministry, space agency, university, academic society, international organization and private company. This is distinct from an “APRSAF Activity,” which is a meeting, conference, contest, outdoor event, or other similar activity born in the plenary meeting, working groups or initiatives of APRSAF such as Initiative Workshop, Water Rocket Event, etc.
2. The proposed side event should be related to APRSAF goals and objectives, and be relevant to the theme of the APRSAF annual session in any way possible. As general guidelines, side events should:
  - i. Address the common interests of the Asia-Pacific region;
  - ii. Meet the societal needs of the region; and
  - iii. Be implemented through regional collaborative efforts, rather than bilateral efforts.
3. Side events may be held on any day during the APRSAF annual session, and are open to all participants of the APRSAF annual session but are independent from the APRSAF program.
4. If the proposed event is aimed for an exclusive audience (such as a closed conference), organizers are advised to consider alternative locations outside the APRSAF venue.
5. Organizations interested in hosting a side event should use the APRSAF Side Event Request Form to get approval from the co-organizers of APRSAF and the APRSAF Executive Committee. Upon receipt of the form, the co-organizers and the Committee will review the event purpose and description. As a result of the review by them, the APRSAF Secretariat might decline the request.
6. All side events will appear in APRSAF announcements, but publicizing the event is

the responsibility of the event organizers. Printed materials can be distributed during the APRSAF annual session but the APRSAF Secretariat will authorize removal of materials considered to be inappropriate.

7. Side event organizers should, on their own, directly request and arrange a meeting room and all equipment they need for the event to the venue's customer service representative. The APRSAF Secretariat will play no role in the arrangement of the venue, and all the cost of the events should be covered by the event organizers.
8. Side Event Request Form should be submitted via e-mail to the following address, about four months before APRSAF annual session. The specific submission deadline will appear in the Request Form. Requests received after the deadline will not be considered.

Asia-Pacific Regional Space Agency Forum (APRSAF) Secretariat

Tel: +81-50-3362-5880

Fax: +81-3-5209-3208

E-mail: [secretariat@aprsaf.org](mailto:secretariat@aprsaf.org)

9. Side event organizers will receive written notification of the acceptance or rejection of their request after review from the co-organizers and the Executive Committee.
10. Side event organizers will report the results of their side event to the APRSAF Secretariat after completion of the event.

For further information, please contact:

APRSAF Secretariat

ochanomizu sola city, 4-6 Kandasurugadai,

Chiyoda-ku, Tokyo 101-8008 Japan

Tel: +81-50-3362-5880

Fax: +81-3-5209-3208

E-mail: [secretariat@aprsaf.org](mailto:secretariat@aprsaf.org)

Asia-Pacific Regional Space Agency Forum  
The 22<sup>nd</sup> Session, 1 – 4 December 2015



**APRSAP**  
ASIA-PACIFIC REGIONAL  
SPACE AGENCY FORUM

## APRSAP-22 Side Event Request Form

**Submission Deadline: 15th July, 2015**

Organization:

---

Contact Person:

---

Address:

---

Telephone:

---

Fax:

---

E-mail:

---

Description of the organization (or please attach your company brochure) (400 words):

Title of the Event:

---

Event Purpose (400 words):

Event Description (400 words):

Preferred Date(s):

30th Nov.

1st Dec.

2nd Dec.

3rd Dec

4th Dec.

Other (            )

I have read and understood the APRSAF Side Event Guidelines. All cost related to the side event will be covered by:

Name of Organization:

---

Signature:

---

Printed Name:

---