

20 July 2017

**The 24th Session of the Asia-Pacific Regional Space Agency Forum**  
***“Space Technology for Enhanced Governance and Development”***  
**14-17 November 2017, Bengaluru, India**

Dear Sir/Madam,

With reference to the 24th Session of the Asia-Pacific Regional Space Agency Forum (APRSaf-24), the convening of which was communicated to you in the First Announcement distributed earlier, we are pleased to forward to you the Second Announcement. As you will note, this announcement contains further details of the scheduled meetings, including those of the four working groups, an updated schedule of events, and other important information addressing registration, accommodation, and visa requirements.

APRSaf-24 will be held from 14 to 17 November 2017, in Bengaluru, under the theme “Space Technology for Enhanced Governance and Development.” The main plenary will include a special session that introduces examples of space applications for the betterment of decision-making, a session presented by the heads of space agencies that will explore the socioeconomic benefits of space development, and a session on future space exploration. Furthermore, a new session on space for future society and a workshop on space policy will facilitate dialogue among governments, the private sector, academia, and civil society.

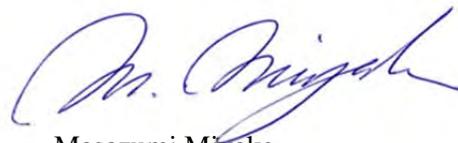
On behalf of the co-organizers and the Executive Committee (ExCom) of APRSAF, we would like to emphasize that your participation is very important for the success of APRSAF-24. With your extensive experience and your valuable thoughts and insights, we believe that APRSAF-24 will be able to yield tangible results. We also count on your support to ensure good representation of experts and managers from your organization joining us at APRSAF-24.

To ensure that all necessary arrangements are made in time for APRSAF-24, we would be grateful if you would register your participation **no later than 5 October 2017** through the following APRSAF website: [http://www.aprsaf.org/annual\\_meetings/aprsaf24/registration.php](http://www.aprsaf.org/annual_meetings/aprsaf24/registration.php)

Additional information concerning APRSAF-24 will be sent directly in due course to those who have registered, and this information will be made available at our website: <http://www.aprsaf.org/>

We look forward to seeing you in Bengaluru at APRSAF-24.

With warmest regards,



Masazumi Miyake  
Chairman  
Executive Committee (ExCom) of APRSAF

## **The 24th Session of the Asia-Pacific Regional Space Agency Forum**

**“Space Technology for Enhanced Governance and Development”**

**14-17 November 2017, Bengaluru, India**

### **1. About APRSAF-24**

#### **A) Organizers**

The 24th session of the Asia-Pacific Regional Space Agency Forum (APRSAF-24) will be co-organized by the following organizations:

- India: Department of Space (DOS)  
Indian Space Research Organisation (ISRO)
- Japan: Ministry of Education, Culture, Sports, Science and Technology (MEXT)  
Japan Aerospace Exploration Agency (JAXA)

APRSAF-24 will also be supported by the following organizations:

- India: Indian Society of Remote Sensing (ISRS) Bangalore Chapter  
Ministry of Earth Sciences (MoES) (*planned*)  
Department of Science and Technology (DST) (*planned*)  
Antrix Corporation Limited (ACL) (*planned*)
- Japan: Japan Meteorological Agency (JMA)  
Japan International Cooperation Agency (JICA)

#### **B) Dates and Venue**

- Date: 14-17 November 2017
- Venue: Sheraton Grand Bangalore Hotel at Brigade Gateway  
26/1 Dr. Rajkumar Road, Malleswaram-Rajajinagar, Bengaluru, Karnataka, 560055, India  
<http://www.sheratongrandbangalore.com/>

#### **C) Registration**

Please visit the following registration website and complete your registration online **no later than 5 October 2017**: [http://www.aprsaf.org/annual\\_meetings/aprsaf24/registration.php](http://www.aprsaf.org/annual_meetings/aprsaf24/registration.php)

Participation in APRSAF-24 is free of charge; however, participants are responsible for their own travel and accommodation costs.

## 2. Program

### Overall Schedule of APRSAF-24

Dates	Event	Venue
11-12 November 2017	Water Rocket Event	Kendriya Vidyalaya, NAL Campus
13 November 2017	SAFE Workshop	Sheraton Grand Bangalore Hotel at Brigade Gateway
	Kibo-ABC Workshop	
	Space Policy Workshop	
14-17 November 2017	<b>APRSAF-24</b> ➤ 14-15 November Working Group Sessions ➤ 16-17 November Plenary Session	
	Poster Contest	
	Exhibition	
15 November 2017	Evening Session: Space for Future Society	
16 November 2017	Welcome Reception hosted by ISRO	
16 November 2017	Cultural Tour	Bengaluru sight seeing

For the tentative program, please refer to **Appendix-A**.

### A) **Plenary Session**

The Plenary Session of APRSAF-24 will be held from 16 to 17 November 2017.

**The general co-chairs are:**

**Mr. A. S. Kiran Kumar**

Secretary, Department of Space (DOS), India /

Chairman, Indian Space Research Organisation (ISRO)

**Ms. Mami Oyama**

Deputy Director General, Research and Development Bureau, Ministry of Education,

Culture, Sports, Science and Technology (MEXT), Japan

### B) **Working Groups**

Prior to the Plenary Session, the following working group sessions will take place in parallel from 14 to 15 November 2017. The concept notes for four working groups and initiatives as well as some events are detailed in **Appendix-B**. Participants who wish to present are requested to send abstracts (approximately 400 words in length) to the APRSAF Secretariat through the conference website after registering at: [http://www.aprsaf.org/annual\\_meetings/aprsaf24/registration.php](http://www.aprsaf.org/annual_meetings/aprsaf24/registration.php)

**The Working Group co-chairs are listed below:**

**Space Applications Working Group (SAWG):**

Mr. Shantanu Bhatawdekar	Director, Earth Observation System, ISRO Headquarters
Mr. Kazuo Tachi	Technical Counselor/Senior Chief Officer of Satellite System Development & Senior Chief Officer of Space Applications, Space Technology Directorate I, JAXA

**Space Technology Working Group (STWG):**

Dr. M. Annadurai	Director, ISRO Satellite Center (ISAC)
Mr. Ryoichi Imai	Vice President /Director General of Research and Development Directorate, JAXA

**Space Environment Utilization Working Group (SEUWG):**

Dr. S. Seetha	Programme Director, Space Science Office, ISRO Headquarters
Mr. Fumiaki Tanigaki	Associate Senior Researcher, Japanese Experiment Module (JEM) Utilization Center, Human Spaceflight Technology Directorate, JAXA

**Space Education Working Group (SEWG):**

Dr. A. Senthil Kumar	Director, Indian Institute of Remote Sensing, Dehra dun
Dr. Nozomu Sakuraba	Director, Space Education Office (Space Education Center), JAXA

**C) APRSAF Activities**

**i. SAFE Initiative Workshop**

Date:	13 November 2017
Reference:	<a href="http://www.eorc.jaxa.jp/SAFE/">http://www.eorc.jaxa.jp/SAFE/</a>

**ii. Kibo-ABC Initiative Workshop**

Date:	13 November 2017
Reference:	<a href="http://www.aprsaf.org/initiatives/kibo_abc/">http://www.aprsaf.org/initiatives/kibo_abc/</a>

**iii. Space Policy Workshop**

Date:	13 November 2017
Organizer:	National Institute of Advanced Studies (NIAS), India University of Tokyo Graduate School of Public Policy, Japan

The workshop program consists of two sessions: Perspectives of National Space Policy and Latest Space Programs [Part I]; and Panel Discussion on “Space Exploration: Emerging Issues of Space Policy and Possibility for Collaboration.” These sessions will share a vision toward future exploration as well as identifying pressing issues such as space debris mitigation [Part II]. Distinguished speakers are invited from various countries in the region to share their views on desirable approaches to space exploration.

**iv. Evening Session: Space for Future Society**

Date: 15 November 2017

This new session aims to collect ideas and discuss how aerospace technology, such as GNSS and remote sensing, can contribute to creating future society. Appropriate themes are: smart systems of energy management, transportation, healthcare, disaster reduction, agriculture, industry, environment monitoring and so on. With this in mind, the session provides presentation opportunities for those who have proposals of ideas for future society.

**v. Water Rocket Event**

Co-organizers: ISRO and JAXA

Date: 11-12 November 2017

Venue: Kendriya Vidyalaya, NAL Campus,  
near Jeevan Bima Nagar Bus terminal, Bengaluru -560017, India

Reference: [http://www.aprsaf.org/working\\_groups/se/](http://www.aprsaf.org/working_groups/se/)

**vi. Poster Contest**

Theme: “United Through Space”

Co-organizers: ISRO and JAXA

Reference: [http://www.aprsaf.org/working\\_groups/se/](http://www.aprsaf.org/working_groups/se/)

**vii. APRSAF-24 Exhibition**

Date: 14-17 November 2017

Venue: Pre-function Area of Sheraton Grand Bangalore Hotel at Brigade Gateway

Exhibition Application: Please see **Appendix-C**

Further details: [http://www.aprsaf.org/annual\\_meetings/aprsaf24/exhibition.php](http://www.aprsaf.org/annual_meetings/aprsaf24/exhibition.php)

**D) Welcome Reception**

A reception will be organized and hosted by the ISRO at the Grand Ball Room of Sheraton Grand Bangalore Hotel at Brigade Gateway on Thursday evening, 16 November 2017 to welcome the participants of APRSAF-24. The schedule will be announced in due course.

**E) Cultural Tour**

Destination: Bengaluru sight seeing

Location: In and around Bengaluru city

Date: 16 November 2017

Time: 15:00 PM to 19:00 PM

Fee: To be announced

For details about the Cultural Tour, please refer to **Appendix-D** or visit the APRSAF website at:

[http://www.aprsaf.org/annual\\_meetings/aprsaf24/cultural\\_tour.php](http://www.aprsaf.org/annual_meetings/aprsaf24/cultural_tour.php)

### **3. Logistic Information**

#### **A) Visa**

It is important for participants from overseas to check whether they require a visa for entry into India. It is strongly recommended that you contact the Indian Embassy or a consulate in your country to ascertain whether you require a visa, and to determine the requirements for obtaining a visa if required. Please note that it may take several weeks to obtain a visa following submission of a visa application. Before applying for a visa, please ensure that you have a passport that is valid for at least six months from your date of arrival in the India.

For further details, please go to the following URL:

■ **Indian Visa Online, Government India**

<https://indianvisaonline.gov.in/visa/index.html>

Visas can be applied for in person or by post at the High Commission of India based in the country from where the candidate intends to depart for India. For attending the conference, a conference visa needs to be applied. Please note that any costs involved in obtaining a visa are the responsibility of the participant. If any participant requires an invitation letter from a local organization in India for purposes of obtaining conference visa, please contact:

**Dr. Rajeev Kumar Jaiswal**

Scientist, EOS

ISRO HQ., New BEL Road, Bengaluru 560094

TEL: +91-80-22172446, E-mail: [aprsaf24@isro.gov.in](mailto:aprsaf24@isro.gov.in)

## B) Accommodation

APRSAF participants are offered special rates at Sheraton Grand Bangalore Hotel at Brigade Gateway, the venue of APRSAF-24.

### Sheraton Grand Bangalore Hotel at Brigade Gateway

26/1 Dr. Rajkumar Road, Malleswaram-Rajajinagar, Bengaluru, Karnataka, 560055, India

Tel: +91 80 4252 1000 Fax: +91 80 4252 0100

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

**Premier Deluxe —Single: Rs 8000+Taxes, Double: Rs 9000+Taxes**

**Sheraton Club Room —Single: Rs 10000+ Taxes, Double: Rs 11500+ Taxes**

Per room per night. Breakfast is included in both Premier Deluxe (at Feast) and Sheraton Club Room (at Feast and Club Lounge). Sheraton Club Room will have access to Club Lounge. Taxes are applicable as per government policy.

These rates are applicable **until 18th October 2017**. After this date, the rates would be as per Best Available Rates. For reservations, please complete the form at the following URL:

<https://www.starwoodmeeting.com/StarGroupsWeb/res?id=1707140672&key=2AA36D37>

Alternatively, you may book the rooms by sending an e-mail request for room to;

**Sheraton.Bangalore@sheraton.com**

**cc: Pooja.patil@sheraton.com; aprsaf24-sec@aprsaf.org**

The following hotels are located near the APRSAF-24 venue, the Sheraton Grand Bangalore Hotel at Brigade Gateway. The location of each hotel can be found on the attached hotel map (**Appendix-E**).

1	Vivanta By Taj-Yeshwantpur	<a href="https://vivanta.tajhotels.com/en-in/yeshwantpur-bangalore/">https://vivanta.tajhotels.com/en-in/yeshwantpur-bangalore/</a>	3-minute-walk from Goraguntepalya Metro Station. From Goraguntepalya, it is 2 stops to Sandal Wood Factory Station, which is the nearest station to the venue.
2	Mövenpick Hotel & Spa Bangalore	<a href="http://www.movenpick.com/en/asia/india/bangalore/hotel-bangalore/overview/">http://www.movenpick.com/en/asia/india/bangalore/hotel-bangalore/overview/</a>	15-minute-drive from the venue.
3	RG Royal Hotels	<a href="http://www.rgroyalhotels.com/">http://www.rgroyalhotels.com/</a>	15-minute-walk, 10-minute-drive from the venue.
4	Parijatha Gateway	<a href="http://www.parijathahotels.com/">http://www.parijathahotels.com/</a>	5-minute-walk from the venue. (near the Sandal Wood Factory Station, which is the nearest station to the venue)
5	Minla Hotel	<a href="http://minlahotels.com/">http://minlahotels.com/</a>	8-minute-walk, 5-minute-drive from the venue.

\*Please note that room reservations are the responsibility of participants. APRSAF-24 Secretariat cannot take any responsibility for issues associated with the room reservation.

\*Please note that completion of a room reservation does not constitute registration of APRSAF-24.

For APRSAF-24, please register at: [http://www.aprsaf.org/annual\\_meetings/aprsaf24/registration.php](http://www.aprsaf.org/annual_meetings/aprsaf24/registration.php)

### **C) International and Local Transportation**

Please note that participants are responsible for making arrangements and covering the costs of their international travel to and from India as well as local transportation costs, including between the airport and the hotel and between the APRSAF-24 venue and any other hotel. **Local transportation will not be provided by the organizers.**

### **D) Insurance**

We strongly recommend that participants arrange for their own overseas travel insurance. The organizers of APRSAF-24 are unable to take any responsibility for arrangements or costs associated with any accident, injury, or illness.

## **4. Contact Information**

### **A) General Information**

#### **i. Website**

Further details about the program, registration and logistics of APRSAF-24 will be made available in due course. Please check for updates on the APRSAF website at: <http://www.aprsaf.org>.

#### **ii. Point of Contact**

##### **Ms. Yoko Kagiwada, APRSAF-24 Secretariat**

c/o Japan Aerospace Exploration Agency (JAXA)

Ochanomizu Sola City, 4-6 Kandasurugadai, Chiyoda-ku, Tokyo, 101-8008, Japan

E-mail: [aprsaf24@aprsaf.org](mailto:aprsaf24@aprsaf.org) TEL: +81-50-3362-5880

### **B) APRSAF Program**

#### **i. Working Groups**

##### **(1) Space Applications Working Group (SAWG)**

Dr. Shin-ichi Sobue

E-mail: [sobue.shinichi@jaxa.jp](mailto:sobue.shinichi@jaxa.jp) TEL: +81-50-3362-5782

##### **(2) Space Technology Working Group (STWG)**

Mr. Junichi Moriuma

E-mail: [moriuma.junichi@jaxa.jp](mailto:moriuma.junichi@jaxa.jp) TEL: +81-50-3362-7194

##### **(3) Space Environment Utilization Working Group (SEUWG)**

Mr. Kazuo Umezawa

E-mail: [SEUWG@aprsaf.org](mailto:SEUWG@aprsaf.org) TEL: +81-50-3362-2669

**(4) Space Education Working Group (SEWG)**

Ms. Mika Hosobata

E-mail: kokusai\_edu@ml.jaxa.jp TEL: +81-50-3362-7590

**ii. APRSAF Activities**

**(1) SAFE Initiative Workshop**

Mr. Ko Hamamoto

E-mail: hamamoto.ko@jaxa.jp TEL: +81-50-3362-7938

**(2) Kibo-ABC Initiative Workshop**

Mr. Kazuo Umezawa

E-mail: Kibo-ABC@aprsaf.org TEL: +81-50-3362-2669

**(3) Evening Session: Space for Future Society**

APRSAF 24 Secretariat

E-mail: aprsaf24@aprsaf.org TEL: +81-50-3362-5880

**(4) Water Rocket Event**

Mr. Yuki Ishida

E-mail: kokusai\_edu@ml.jaxa.jp TEL: +81-50-3362-6438

**(5) Poster Contest**

Mr. Yuki Ishida

E-mail: kokusai\_edu@ml.jaxa.jp TEL: +81-50-3362-6438

**(6) Exhibition**

APRSAF-24 Secretariat

E-mail: aprsaf24@aprsaf.org TEL: +81-50-3362-5880

**5. APRSAF Side Events**

During the session of APRSAF-24, there will be side events. Please refer to **Appendix-F** or [https://www.aprsaf.org/annual\\_meetings/aprsaf24/side\\_events.php](https://www.aprsaf.org/annual_meetings/aprsaf24/side_events.php), for details of each event, such as date and time, venue.

**Attachments**

Appendix-A .....	Overall Program Structure (tentative)
Appendix-B .....	Concept Notes for the APRSAF Working Groups/Initiatives, Evening Session and Space Policy Workshop
Appendix-C .....	APRSAF-24 Exhibition Information
Appendix-D .....	Cultural Tour
Appendix-E .....	Hotel Map and Transportation
Appendix-F .....	APRSAF Side Events

	Monday, 13 November	Tuesday, 14 November	Wednesday, 15 November	Thursday, 16 November	Friday, 17 November
	INITIATIVE WS	WORKING GROUPS	WORKING GROUPS	PLENARY	MAIN PLENARY
9:30	SAFE WS   Kibo-ABC WS	SA WG   ST WG   SEU WG   SE WG	SA WG   ST WG   SEU WG   SE WG	Opening & Welcome Remarks	Opening Ceremony
				Country Reports: Focus on Space Policy & Space Cooperation in the Asia-Pacific Region	Keynote Speech
13:00	Lunch	Lunch	Lunch	Lunch	Photo Session
14:00	SAFE WS   Space Policy WS	SA WG   ST WG   SEU WG   SE WG	SA WG   ST WG   SEU WG   SE WG	Lunch	Press Conference/Coffee Break
					Reports: Working Group/Initiative, AP23, ExCom
17:45				Cultural Tour	Heads of Agency Session
	Side Event (TBD)	Side Event (TBD)	Evening Session: Space For Future Society	Reception	Lunch
					Special Session "Space Technology for Enhanced Governance and Development" (organized by ISRO)
					Space Exploration Session
					Space Leaders' Roundtable
					Joint Statement
	11/11 - 11/12 Water Rocket Event	11/14 - 11/17 11/14 - 11/17	Poster Contest APRSAF-24 Exhibition		

<Other Side Event>

①The 4th Asia-Pacific Space Generation Workshop (Space Generation Advisory Council): 11/11-12 @TBD

\* Time or title of each session is subject to change. Details will be announced in due course.

*The 24th Session of the Asia-Pacific Regional Space Agency Forum (APRSAF-24)*

*Space Applications Working Group (SAWG)*

*Concept Note*

**1. Scope and Objectives of SAWG Activities**

The Space Applications Working Group (SAWG) was established following the 20th anniversary of the APRSAF, and its first meeting was held at APRSAF-21 in Tokyo in December 2014. Part of the motivation for forming the SAWG was to foster enhanced cooperation with local operational agencies in each country in the Asia-Pacific region, as well as with development aid agencies and international organizations, through the promotion of the sustainable operation of space applications, especially for disaster management, integrated water and land resource management, agriculture and other Asian regional topics. Representatives and experts from existing initiatives, including Sentinel Asia and Space Applications for Environment (SAFE), outlined their plans to better serve end users. At APRSAF-24 in Bangalore, India, we would like to share information on the progress of the SAWG and its key initiatives, and to discuss further steps for sharing solutions and knowledge development by employing synergies among key space technologies with international and regional organizations.

1) Sentinel Asia

Sentinel Asia is an international collaboration among space agencies, disaster management agencies, and international agencies to apply remote sensing and Web-GIS technologies to support disaster management in the Asia-Pacific region. Sentinel Asia has been successfully operated through the voluntary contributions of Asia-Pacific members since its launch in 2006. In 2006 and 2012, a data dissemination system to support disaster management agencies—the backbone of Sentinel Asia—was established as Step 1 and Step 2. In 2013, APRSAF-19 approved Sentinel Asia to proceed

to Step 3 to cover disaster cycles as a whole with the contributions of multiple space applications, and the number of the members has increased to almost 100 organizations from 25 Asia-Pacific countries. At APRSAF-21 in Tokyo, to further contribute to disaster management for disaster-prone Asia-Pacific countries, three strategic pillars for the evolution of Sentinel Asia were endorsed: strategic management, end-user-oriented activities, and cooperative promotion. The Steering Committee for the Strategic Management of Sentinel Asia was formed in 2015, and the success of Sentinel Asia with respect to landslide early warning activity using space technology will be reported at the SAWG meeting.

## 2) SAFE (Space Applications for Environment)

SAFE is a voluntary initiative to encourage long-term environmental monitoring to better understand environmental changes. The SAFE workshop will be held on Day 0 of the SAWG (13 November, 2017). During this workshop, current SAFE prototype leads will report on the status of their prototype activities and the results of their prototyping efforts, as well as the follow-up activities for SAFE prototypes. A planned revision of the TOR of the SAFE initiative to promote APRSAF active participation will be presented and reviewed by the review board. Reports will be made and discussions of SAFE updates will be held at the SAWG meeting.

## 3) Thematic sessions

The application fields of disaster, agriculture, land and water resources, and Geostationary Earth Observation – Low altitude Earth Observation (GEO-LEO) applications (forest fire, haze monitoring, etc.) are the prioritized social-benefit areas of the SAWG and SAFE framework in collaboration with international/regional organizations such as UN ESCAP and international donor agencies such as ADB. We will focus on discussing these areas in thematic sessions in which representatives of participating countries are invited to contribute by presenting their utilizations of satellite data. However, we do not intend to limit our discussions to these areas, and presentations proposing new activities for the SAWG, especially those critical for participating countries, are also welcome. The SAWG also appreciates the sharing of experiences, the results of regional cooperation

in satellite data utilization, capacity building, and so forth. In addition, we would like to invite representatives of India, as the host country, to organize a special session for their priority areas including knowledge development and/or capacity building.

## **2. Results of SAWG Activities at APRSAF-24**

See attached: Recommendations adopted at APRSAF-23.

## **3. Draft Agenda**

- 1) Opening session
- 2) Review of the last SAWG meeting
- 3) Host country special session
- 4) Reports on initiatives and activities
  - Sentinel Asia Initiative
  - SAFE Initiative
  - Inter-space technologies
- 5) Thematic sessions
  - Disaster, agriculture, and forest monitoring
  - Integrated land and water resource management
- 6) Overall discussions and determining the way forward
- 7) Conclusions and recommendations of the SAWG

*The 24th Session of the Asia-Pacific Regional Space Agency Forum (APRSAF-24)*

## ***SAFE (Space Applications For Environment)***

### ***Concept Note***

#### **1. Scope and Objectives of SAFE activities**

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

This session aims to report on the current activities of SAFE, and includes a discussion by the Space Applications Working Group (SAWG).

##### 1) SAFE Workshop

The SAFE workshop will be held on Day 0 of the SAWG (13 November, 2017). During this workshop, current SAFE prototype leads will report on the status of their prototype activities and the results of their prototyping efforts, as well as the follow-up activities for SAFE prototypes. In addition, there is a plan to review the Terms of reference (TOR) of the SAFE initiative so as to invite active contribution from APRSAF participants in the SAFE Review Board Meeting during the SAFE workshop

##### 2) SAFE Initiative Report in the SAWG

The SAFE Secretariat is going to report on current SAFE updates on Day 2 of the SAWG (15 November, 2017); the updates will mainly focus on ongoing and completed SAFE prototype activities and some instances of success stories with follow-up activities. The SAFE Secretariat will call on participants in the SAWG to discuss and revise the TOR with the active participation and the promotion of SAFE as an initiative and in consideration of the value of prototyping results to participating entities through knowledge transfer and capacity building.

##### 3) Announcement of the next SAFE Workshop

The SAFE secretariat will announce the date of the next SAFE Workshop.

## **2. Result of SAFE Activities in APRSAF-23**

See Recommendations adopted at APRSAF-23:

[http://www.aprsaf.org/annual\\_meetings/aprsaf23/recommend.php](http://www.aprsaf.org/annual_meetings/aprsaf23/recommend.php)

## **3. Draft Agenda**

[SAFE Workshop]

- 1) Review of the outcome of the APRSAF/SAFE-ESCAP Meeting
- 2) Reports on ongoing prototypes
  - a. Smoke Haze Monitoring in Indonesia (Indonesia)
- 3) Reports on completed prototypes
  - a. Promote rice-planted areas and production estimation using space based technologies (Cambodia)
  - b. Promote a Department of Agricultural Land Management and Statistics (DALMS) system by using innovative rice crop area mapping and yield monitoring with space based technologies (Myanmar)
  - c. Mapping and Monitoring Oil Palm Plantations Using Optical and SAR Spaceborne Data (Indonesia)
  - d. Developing and Implementing an Operational Prototype for Advanced Flood Forecasting, Early Warning, and a Data-sharing System in the Kalu Ganga Basin, Sri Lanka (Sri Lanka)
- 4) Reports on follow-up activities
  - a. Rice Crop Monitoring in the Mekong Delta, Vietnam (Vietnam)
  - b. Efficient oil-palm management prototyping using 3D GIS (Malaysia)
- 5) Review Board meeting report and proposal to revise TOR

[SAFE Initiative Report in SAWG]

- 1) Update of SAFE initiative including APRSAF/SAFE-ESCAP Meeting and the APRSAF-24 Workshop
- 2) Reports on ongoing prototypes
- 3) Reports on completed prototypes
- 4) Results of review board meeting and revision of TOR

[SAFE Initiative Report in Plenary Session]

- 1) Summary of the APRSAF/SAFE-ESCAP Meeting



<Appendix-B>

- 2) Report on results of the APRSAF-24 SAFE Workshop
- 3) Revise TOR with evolution of SAFE initiative
- 4) Announcement of the date of the next workshop

*The 24th Session of the Asia-Pacific Regional Space Agency Forum (APRSAF-24)*

## *Space Technology Working Group (STWG)*

### *Concept Note*

#### **1. Background and Objectives**

The Space Technology Working Group (STWG) aims to enhance and support space technology development in the Asia-Pacific region by active information exchange among experts from space agencies, academic institutions as well as from the private sector in the region. The third session of the STWG was successfully held in 2016 at APRSAF-23, and dealt with topics ranging from small satellites, end-to-end space technologies, and joint efforts with other working groups. The STWG recognized strong interest among participants for small satellites especially, and also observed increasing collaborations among various countries, universities, and pioneering private sector organizations. At the same time, the STWG was aware of the expectation of new collaborative work to increase space development capacity. Therefore, participants agreed to continue the STWG for the next APRSAF session and expressed interest in discussing a range of topics that includes small satellites, space technology for the Asia-Pacific region, and capacity building. At the conclusion of the meeting at APRSAF-23, the following recommendations were provided for the STWG:

- A) To encourage information exchange on activities and experience of end-to-end space technologies, which include satellite and mission instrument technologies, ground systems and operations, launch and experiment opportunities, testing, engineering management, and data utilization of each country in the Asia-Pacific region, aiming to enable and sustain space activities, particularly in the development and utilization of small satellites, and to strengthen relationships that will bring more opportunities for participation and cooperation;
- B) Further to encourage information exchange on capacity-building programs and training opportunities in the region;
- C) To call for discussion and information exchange on international rules for addressing space debris toward further space development;

- D) To encourage cooperation among space agencies, universities, research institutes, and the private sector for enhanced synergy and interaction;
- E) To affirm the continuation of this working group in order to create an environment for new cooperation activities and promote innovation in space technology that contributes to the space industry in the region, and to continue the cooperation among working groups for topics of common interest;

## **2. STWG Program Structure**

Based on the recommendations for the STWG activities listed above, the draft program structure of the STWG for this year's session is given below. The STWG co-chairs are pleased to call for presentations (approximately 15 minutes per presentation) on each topic in space technology from the Asia-Pacific region as well as from other regions and industries, and we expect a lively exchange of information and views among experts, researchers, and engineers in relevant areas.

Participants in this STWG are also expected to contribute to the discussion on ways to promote future collaborative activities on development of small satellites, which will be proposed by co-chairs in this STWG, and to work toward drafting recommendations for the working group output to be presented at the APRSAF-24 Plenary, which will be held on 17 November 2017.

### Space Technology Working Group Sessions

Date: 14-15 November 2017

1. Opening of the session
2. General introduction and guidance for the STWG
3. Technical sessions
  - Technical Session 1: Recent trends in technology development for satellites

In this session, relevant governments, institutes or space agencies in the Asia-Pacific region are mainly expected to present information on their own nations' current trends in space technology development. In

particular, this session intends to address the following two topics regarding satellites development:

- a) The current and future space technology development roadmap and its function;
- b) Advanced, cutting-edge and innovative technologies (satellite bus, devices, components, satellites application facilities and ground operation facilities) that completed its development.

In each presentation, presenters will be expected to share their reason for setting their roadmaps, or introduce the technological barriers that they face or have faced. Thanks to this information, we can discuss and understand their solutions broadly and easily during the session.

- **Technical Session 2: Capacity building**

This session mainly focuses on capacity building at the “higher education” level. Relevant educational entities such as national institutes or universities in the Asia-Pacific region are mainly expected to present information on their capacity-building programs which open opportunities internationally.

\*Please be aware that this session focuses on “higher education” such as university level or working engineer level. Please apply to the SEWG if you want to present about youth education.

- **Technical Session 3: Industry participation for innovation**

In this session, industries—including small and medium enterprises and/or relevant governments, institutes and space agencies in the Asia-Pacific region that support such industries—are mainly invited. Presenters will be expected to introduce advanced, cutting-edge, and innovative technologies delivered by industries in their own countries or by the presenters themselves. It would be most welcome if presenters were to present those technologies that are expected to be applied commonly or to solve common technological barriers in the Asia-Pacific region.

- **Technical Session 4: Space debris**

This session will share space debris countermeasures that relevant governments, institutes or space agencies in the Asia-Pacific region

are taking. The STWG specifically focuses on exchanging information from the technical point of view. Nations that launch satellites, and institutes or agencies from spacefaring nations are most welcome at this presentation.

\*Topics on space debris will be also discussed in the Space Policy Workshop to be held on 13 November just prior to APRSAF in Bengaluru. This workshop will mainly focus on government policy-making issues.

- **Technical Session 5: Proposal of collaborative development of small satellites in the Asia-Pacific region**

In this session, co-chairs will propose collaborative activity on small-satellite development under APRSAF STWG. This plan aims to pool the great capacities of various entities and create a new concept satellite with innovative technologies. Co-chairs will present several ideas and other current activities that bring synergies to this plan. All participants are strongly invited to attend this discussion to realize this plan in concrete form.

\*The expected participants are not limited to the above. Presenters from other entities are also welcome to each presentation and will be able to present as well as participate in discussion provided their contents are appropriate to the session.

\*Please note that the topics of the technical sessions are subject to change.

4. Overall discussion, future work of the STWG, and drafting observations and recommendations

5. Closing of the session

*The 24th Session of the Asia-Pacific Regional Space Agency Forum (APRSAF-24)*

*Space Environment Utilization Working Group (SEUWG)*

### *Concept Note*

#### **1. Scope and Objectives**

The Space Environment Utilization Working Group (SEUWG) is intended to encourage countries in the Asia-Pacific region to use the Japanese Experiment Module (JEM), also called “Kibo,” which means “hope” in Japanese. Kibo is a human space facility that provides unique research capabilities in the International Space Station (ISS). In addition to enhancing the use of Kibo, the SEUWG aims to create cooperative projects for its utilization by participating countries.

Kibo consists of the Pressurized Module, the Exposed Facility, a Logistics Module, a Remote Manipulator System, and an Inter-Orbit Communication System unit. Various scientific and engineering research activities are conducted onboard Kibo to take advantage of the unique environment of the low Earth orbit. Research is currently conducted aboard Kibo in the fields of life science, medical science, materials science, space environment monitoring, Earth observation, and demonstrations of advanced technology. The SEUWG promotes the utilization of the Kibo Module in the Asia-Pacific region in the aforementioned fields as well as for other areas and topics.

#### **2. Results of SEUWG Activities at APRSAF-23**

See Recommendations adopted at APRSAF-23.

[http://www.aprsaf.org/annual\\_meetings/aprsaf23/recommend.php](http://www.aprsaf.org/annual_meetings/aprsaf23/recommend.php)

#### **3. Activities and Discussion Points**

Through discussion among participating nations, the SEUWG aims to

contribute to building cooperative projects for Kibo utilization and to provide a variety of benefits for the Asia-Pacific region.

### ■ **Opportunities for launch and deployment of microsatellites from Kibo/J-SSOD\***

The demand from Asia-Pacific nations for microsatellite deployment has been increasing. Kibo has an airlock through which experiments are transferred and exposed to the external environment of space. Almost 200 satellites have been deployed from Kibo and the deployment system/J-SSOD has been attracting global attention as a new transportation system for satellites. The KiboCUBE collaboration between the JAXA and the United Nations Office for Outer Space Affairs (UNOOSA), which aims to provide educational and research institutions from developing countries with opportunities to deploy CubeSats (1U), is also in progress.

\* J-SSOD: JEM Small Satellite Orbital Deployer

<http://iss.jaxa.jp/en/kiboexp/jssod/>

### ■ **New exposed experiment system of Kibo/ExHAM\***

Using an Exposed Facility (EF) and a robotic arm, ExHAM enables experimentation for a short period of time with a lightweight existing experiment sample, and is therefore useful for satellite design. It is currently gaining wide attention from the countries in the Asia-Pacific region, with representatives of entities in Indonesia, Malaysia, and Singapore expressing interest in its utilization. The SEUWG will organize discussions about opportunities for use of ExHAM by participating nations.

\* ExHAM: Experiment Handrail Attachment Mechanism

[http://iss.jaxa.jp/en/kuoa/news/pdf/10\\_SEKUW\\_Exposed\\_Facility\\_in\\_Kibo\\_\(ExHAM\).pdf](http://iss.jaxa.jp/en/kuoa/news/pdf/10_SEKUW_Exposed_Facility_in_Kibo_(ExHAM).pdf)

### ■ **Special joint session with the Space Technology Working Group (STWG): Utilization of J-SSOD, ExHAM, and More**

We will have a special joint session of the SEUWG and the STWG at APRSAF-24 to encourage activities in the development, launch, deployment, and applications of microsatellites. The Exposed Facilities (J-SSOD and ExHAM) are useful and readily available for application.

Further opportunities of the launch services may also be discussed.

### ■ **Microgravity science using Kibo's Pressurized Module and other opportunities**

Since experiments in microgravity represent unique fields of research, proposals for Kibo utilization from Asian countries, although valuable, were previously limited in number. However significant progress has recently been observed. Indonesia and Malaysia have developed plans and proposals for space experiments using the Pressurized Module and Exposed Facility of Kibo. Active discussions have facilitated effective and fruitful exchange of opinions and information among member countries. Any experimental proposal in Kibo's Pressurized Module is welcome and open for discussion at this WG.

Information of microgravity science using small rocket, parabolic flight, and drop tower will also be shared in order to expand further experiment opportunity.

### ■ **Space Environment and Kibo Utilization Workshop (SEKUW)**

The SEKUW is an international workshop whose purpose is to find potential space experiments to be conducted in Kibo as part of activities of the APRSAF/SEUWG.

The Third SEKUW was successfully held at the Vayupak Convention Center, Bangkok, Thailand on 9-10 February 2017. About 90 people from 36 organizations including Thai and foreign universities, institutes, government agencies and private companies participated in active discussions on Kibo utilization. As a result, an announcement of opportunity and a feasibility study of the proposals were initiated in Thailand, and the status of these activities will be reported at the SEUWG.

## **4. Draft Agenda**

- 1) Opening session
- 2) Review of the last SEUWG meeting at APRSAF-23 in Manila
- 3) Activity reports
  - ✓ Launch and deployment of microsattellites (Kibo and launch vehicles)
  - ✓ Projects using the Exposed Facility of Kibo
  - ✓ Microgravity science (Kibo, small rocket, parabolic flight and drop

tower)

- ✓ Kibo-ABC initiative
  - ✓ Space Environment and Kibo Utilization Workshop
  - ✓ Other topics
- 4) Host country session
  - 5) Overall discussion, future work, conclusions and recommendations

*The 24th Session of the Asia-Pacific Regional Space Agency Forum (APRSAF-24)*

*Asian Beneficial Collaboration through Kibo utilization*

*(Kibo-ABC)*

*Concept Note*

**1. Scope and Objectives**

Kibo-ABC is a collaborative program established by the Space Environment Utilization Working Group (SEUWG) of the APRSAF that aims to promote utilization of the Japan Experiment Module (JEM)—also called “Kibo,” which means “hope” in Japanese—in the Asia-Pacific region. Kibo is a human space facility that enhances the unique research capabilities of the International Space Station. Kibo-ABC accumulates and shares experience among participating space agencies, researchers and engineers in Asia, and enhances cooperation projects in Kibo utilization between the member countries and Japan.

The Kibo-ABC Workshop will be held on 13 November 2017.

- ✓ Discussions and considerations for creating and conducting Kibo utilization projects
- ✓ Development of multilevel cooperative relationships among participating countries

**2. Results of Kibo-ABC Workshop at APRSAF-23**

See Recommendations adopted at APRSAF-23.

[http://www.aprsaf.org/annual\\_meetings/aprsaf23/recommend.php](http://www.aprsaf.org/annual_meetings/aprsaf23/recommend.php)

**3. Activities of Kibo-ABC and Discussion Points of the Workshop**

■ Asian Try Zero-G (2011 - Present):

With the goal of promoting manned space experiments aboard Kibo, Japanese astronauts have been conducting selected small experiments covering the themes proposed by young people in this region. The next Asian Try Zero-G 2017-2018 experiments will be performed by the Japanese astronaut Norishige Kanai with the participation of seven Asian countries: Indonesia, Japan, Malaysia, Philippines, Singapore, Thailand, and Vietnam. The mission status and activities, including publicity events

in participating countries, will be reported.

■Space Experiment for Asian Future Program, SSAF/Space Seeds for the Asian Future (2010 - Present):

The third mission of this program, “Asian Herb in Space (AHIS),” was presented by Malaysia. Malaysian National Space Agency (ANGKASA) and JAXA have conducted feasibility studies and ground experiments from both scientific and technical perspectives with the aim of conducting plant growth experiments as part of Kibo-ABC. The preparatory activities, experiment plan, and additional mission to AHIS will be discussed among participating countries.

■Other topics:

- ✓ Kibo-ABC Monthly Multilateral Web Meeting:  
Discussion for improvement

*The 24th Session of the Asia-Pacific Regional Space Agency Forum (APRSAF-24)*

## *Space Education Working Group (SEWG)*

### *Concept Note*

#### **1. Background and Objective of SEWG Activities**

The goal of the Space Education Working Group (SEWG) is to develop a talented future workforce through space education activity. Our actions are intended to shape the futures of not just the children of the Asia-Pacific region, but of those all over the world.

In every place and culture on Earth, children love the natural world and look at life with wonder. They take pleasure in nature's blessings, and stand in awe in the face of nature in all its power. Children may ask what lies beyond the stars they see, or how to overcome environmental crises. In the 60 old years that humanity has been exploring space, doing things in space has increasingly become an integral part of our lives. Today, we have numerous players in aerospace, hailing from a range of countries and industries, seeking to broaden humanity's horizons, dreaming of a more prosperous future.

The Space Education and Awareness WG was established at the 8th session of the APRSAF in 2001, changing its name to the Space Education WG in 2014. The working group has been actively pursuing a variety of programs in close collaboration with educators from the Asia-Pacific region, in service of a goal: to encourage young minds to see the world through a larger, more cosmic perspective, and channel the spirit of the seeker, the adventurer and the maker to make a contribution to the global community, to become a part of the solution to the ills that plague today's society.

The SEWG has three major programs, held concurrently with the annual meeting of the APRSAF. The first program is the Poster Contest that is

open to children aged between 8 and 11. Its aim is to encourage the imagination, through that year's space-related theme; the theme for the next Poster Contest is generated and selected at the WG's annual meeting. Delegates to the annual meeting of the APRSAF are encouraged to vote for the best poster. The SEWG's second program, the Water Rocket Event, is for students aged 12 to 16, and consists of a water rocket competition and cross-cultural activities. Because water rockets can be constructed from common materials such as plastic bottles, plastic sheets and plasticine, it is an ideal way to study the principles of rocketry as well as engineering. A great deal can be learned through the process of designing, building, and launching, then making modifications to improve performance. The program also gives students an opportunity to interact with different cultures and further understand their own background. And the last program, the Educator Workshop, provides a valuable opportunity for educators to gather and trade experiences, insights and achievements from their own space education activities. The aim is to enhance the quality of teaching, nurturing the kind of next-generation talent capable of true innovation. Additionally, the WG holds its Space Education Seminar for Educators once a year to promote space education within the region, organized in close collaboration with the host agency to meet the specific needs of the host country. The WG considers it important to make the seminar both participatory and practical, so that attendees can incorporate what they learn into their everyday curriculum.

## **2. Results of SEWG Activities at APRSAF-23**

See Recommendations adopted at APRSAF-23:

[https://aprsaf.org/annual\\_meetings/aprsaf23/recommend.php](https://aprsaf.org/annual_meetings/aprsaf23/recommend.php)

### **3. Draft Agenda**

- (1) Opening of the session
- (2) Adoption of the agenda
- (3) General exchange of views on space education
- (4) Joint educational activities for educators and young people
  - a. Water Rocket Event
  - b. Poster Contest
  - c. Space Education Seminar for Educators
  - d. Other activities
- (5) The results (progress report) of the previous Space Education Seminars for Educators, presented in panel format by WG representatives.
- (6) Sharing of teaching materials, with the greater aim of enriching space education
- (7) Other business

*The 24th Session of the Asia-Pacific Regional Space Agency Forum (APRSAF-24)*

*Evening Session: Space for Future Society*

*Concept Note*

**1. Objectives**

This session aims to collect idea and discuss how aerospace technology, such as GNSS and remote sensing, can contribute to future society. Themes include smart systems of energy management, transportation, healthcare, disaster reduction, agriculture, industry, environment monitoring and others.

**2. Expected Speakers**

Policymakers, related industry, university researchers and others

**3. Program structure (Around 2 hours)**

(1) Keynote presentations

2 to 3 presentations

(2) Presentations following the concept note

5 to 7 presentations

Participants who wish to present are requested to send abstracts (approximately 400 words in length) to the APRSAF Secretariat through the conference website after registering at:

[http://www.aprsaf.org/annual\\_meetings/aprsaf24/registration.php](http://www.aprsaf.org/annual_meetings/aprsaf24/registration.php)

(3) Discussion

Facilitator: TBD

(4) Wrap-up

*The 24th Session of the Asia-Pacific Regional Space Agency Forum (APRSAF-24)*

*Space Policy Workshop*

*Concept Note*

**Workshop on “Space Policy Perspectives for ‘Governance in Space’**

Organizer	National Institute of Advanced Studies (NIAS), India The University of Tokyo Graduate School of Public Policy, Japan
Date	13 November 2017 14:30-17:30
Venue	Sheraton Grand Bangalore Hotel at Brigade Gateway,
Contact	Dr. Yuri TAKAYA yuritakaya@hotmail.com
URL	TBD

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**Overview**

This workshop, jointly organized by the University of Tokyo Graduate School of Public Policy, Japan, and the National Institute of Advanced Studies (NIAS), India, aims to provide an overview of space policy perspectives in the Asia-Pacific region and to explore further possibilities for international cooperation in the region.

The workshop program consists of two sessions: Perspectives of National Space Policy and Latest Space Programs [Part I]; and Panel Discussion on “Space Exploration: Emerging Issues of Space Policy and Possibility for Collaboration.” These sessions will share a vision toward future exploration as well as identifying pressing issues such as space debris mitigation [Part II].

Distinguished speakers are invited from various countries in the region to share their views on desirable approaches to space exploration.

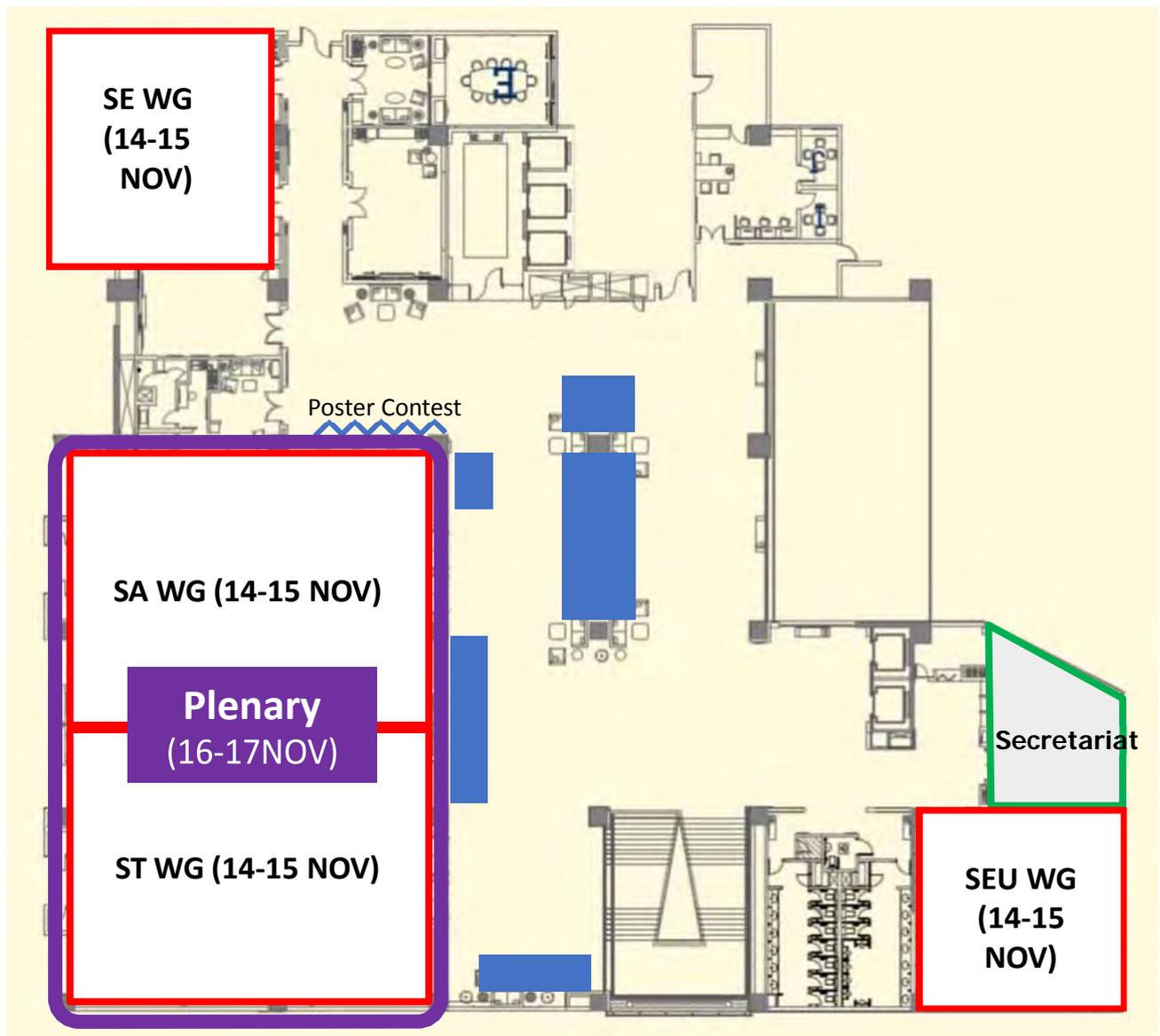
On the next day, November 14th, an additional workshop for space policy studies under academic cooperation between the University of Tokyo and the NIAS is to be held at the NIAS

## APRSAF-24 Exhibition

[Outline]

Date: 14-17 November 2017  
 Venue: Pre-Function Area,  
 Sheraton Grand Bangalore Hotel at Brigade Gateway

[Floor Plan (TBD)]



 Exhibition Area

\* Booth Size: 3X2m or 2X2m (TBD)

[Booth Type]

Type	Size	Fee	Includes
A	3 X 2 sq. m	USD 1,500 Rs 100,000/-	- 1 Table - 2 Chairs - 1 Waste paper basket - Plug Point (5 amp)
B	2 X 2 sq. m	USD 1,000 Rs 70,000/-	- 3 Spot lights - 1 fascia (sign with your organization's name.)

\* 10% additional charges will be applied for 2 side open stalls. (Premium)

- ◆ Please fill in the application form and send to the APRSAF-24 secretariat. Secretariat will contact you upon receipt of your application.

APRSAF-24 Secretariat

E-mail: [aprsaf24@aprsaf.org](mailto:aprsaf24@aprsaf.org)

Contact Person: Kuwano (Ms)

- ◆ Please note that the booth will be allocated to exhibitors on a first-come-first-served basis.
- ◆ Exhibitors are requested to register for APRSAF-24. Please go to the website and complete your registration:  
[https://www.aprsaf.org/annual\\_meetings/aprsaf24/registration.php](https://www.aprsaf.org/annual_meetings/aprsaf24/registration.php)

Date: \_\_\_\_\_

## APRSAF-24 Exhibition Application Form

Organization Name

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Address

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Contact Person

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TEL

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E-mail Address

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Date: 14-17 November 2017  
 Venue: Pre-Function Area  
 Sheraton Grand Bangalore Hotel at Brigade Gateway

We apply for;

Type-A	3 X 2 sq. m	USD 1,500 Rs 100,000/-	<ul style="list-style-type: none"> <li>- 1 Table</li> <li>- 2 Chairs</li> <li>- 1 Waste paper basket</li> <li>- Plug Point (5 amp)</li> <li>- 3 Spot lights</li> <li>- 1 fascia (sign with your organization's name.)</li> </ul>
Type-B	2 X 2 sq. m	USD 1,000 Rs 70,000/-	
Request	2 side open stall (Premium)		

\* 10% additional charges will be applied for 2 side open stalls. (Premium)

Remarks (if any)

**RETURN COMPLETED FORM TO:**  
[aprsaf24@aprsaf.org](mailto:aprsaf24@aprsaf.org) / FAX: 03-6277-0118

**Due date: 30 September 2017**

## APRSAF-24 CULTURAL TOUR

**VENUE:** Bengaluru sight seeing

**DATE:** November 16, 2017

**DURATION:** 15:00 to 19:00 hrs

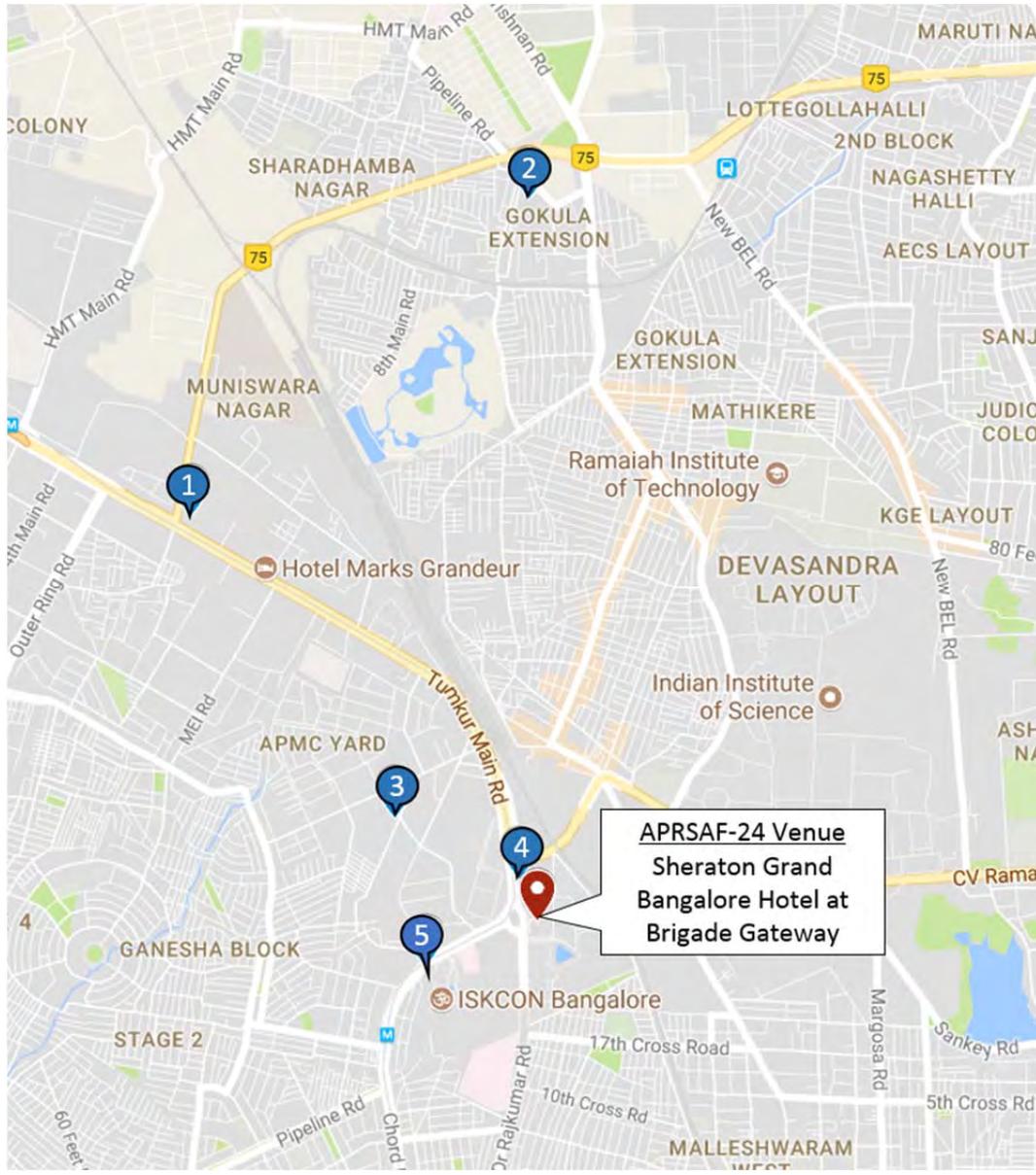
**FEE:** TO BE ANNOUNCED

**HOW TO APPLY:** Register online and pay the fee at the information desk at the APRSAF-24 Venue.

### DESCRIPTION:

- ISKCON Temple – Sri Radha Krishna Temple has deities of Radha and is one of the largest ISKCON temples in the world.
- Vidhansoudha – is the seat of the state legislature constructed in a style sometimes described as Mysore Neo Dravidian and incorporates elements of Indo Saracenic and Dravidian styles.
- Tippu Palace – The structure was built entirely teak and stands adorned with pillars, arches and balconies. It is believed that Tipu Sultan used to conduct his durbar from the eastern and western balconies of the upper floor.
- Lalbagh – is a well known botanical garden, was originally commissioned by Hyder Ali, the ruler of Mysore. Lalbagh houses India's largest collection of tropical plants.
- Karnataka Silk Emporium – is having creative handicrafts for shopping purpose.
- National Art Gallery of Modern Art – having collection of paintings, sculptures, graphic prints and examples of early photography in India which showcased the historical development of modern art in India.

## Hotel Map



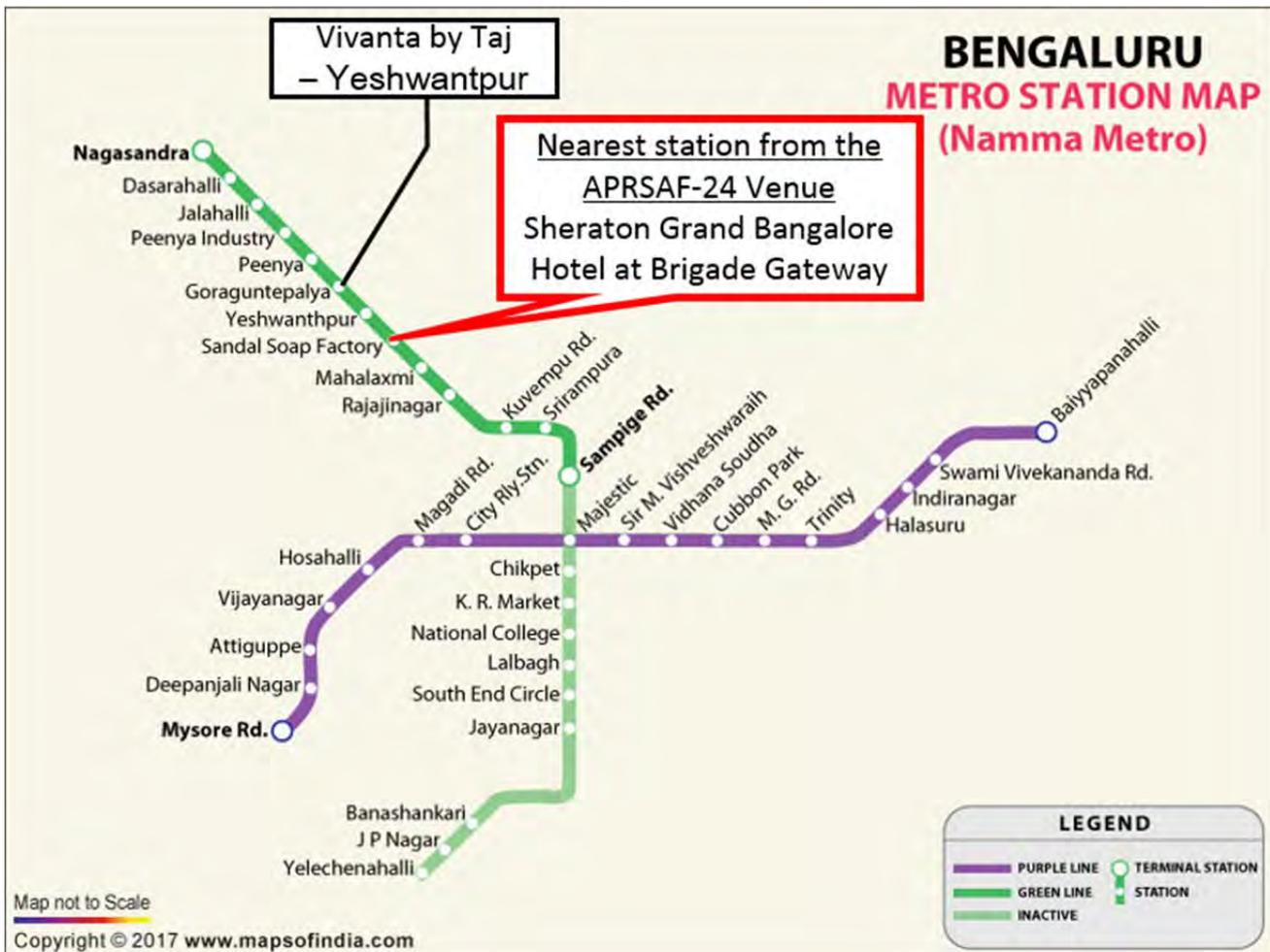
1	Vivanta By Taj-Yeshwantpur	<a href="https://vivanta.tajhotels.com/en-in/yeshwantpur-bangalore/">https://vivanta.tajhotels.com/en-in/yeshwantpur-bangalore/</a>	3-minute-walk from Metro Station, Goraguntepalya. From Goraguntepalya, it is 2 stops to Sandal Wood Factory Station, which is the nearest station to the venue.
2	Mövenpick Hotel & Spa Bangalore	<a href="http://www.movenpick.com/en/asia/india/bangalore/hotel-bangalore/overview/">http://www.movenpick.com/en/asia/india/bangalore/hotel-bangalore/overview/</a>	15-minute-drive from the venue
3	RG Royal Hotels	<a href="http://www.rgroyalhotels.com/">http://www.rgroyalhotels.com/</a>	15-minute-walk, 10-minute-drive from the venue
4	Parijatha Gateway	<a href="http://www.parijathahotels.com/">http://www.parijathahotels.com/</a>	5-minute-walk from the venue (near the Sandal Wood Factory Station, which is the nearest station to the venue)
5	Minla Hotel	<a href="http://minlahotels.com/">http://minlahotels.com/</a>	8-minute-walk, 5-minute-drive from the venue

## Metro Map

Metro is very convenient transportation in Bangalore.

The nearest station from the venue is 'Sandal Soap Factory'.

If you stay at Vivanta by Taj – Yeshwantpur, you can take Metro from 'Goraguntepalya' and it is just second stop from 'Sandal Soap Factory'. It costs Rs.15 for one way.



If you want to go to MG Road, one of the most popular shopping and entertainment area in Bangalore, please transfer to the Purple Line at Majestic station and alight at M.G. Road station.

## Transportation from the Kempegowda International Airport, Bengaluru (KIAB)

The airport is about 40km north of the Bangalore city center. It is approx. 40-60 minute drive to the venue, Sheraton Grand Bangalore at Brigade Gateway.

There are several transportation options from the airport to your accommodation. Please note that it is your responsibility to find your own transport.

If you are visiting India for the first time and arriving at midnight, we recommend that you arrange your own hotel pickup in advance.

### ➤ **Limousine Service (Car Rentals) and Taxi**

Please see the below URL for transportation from the airport;

<http://www.bengaluruairport.com/transport/transport.aspx>

#### • Limousine Service (Prepaid)

You can find counters at the arrival gate inside the terminal building. It costs Rs.1,200 for distances up to 35 kilometers, prepaid at the counters.

#### • Taxi (Metered)

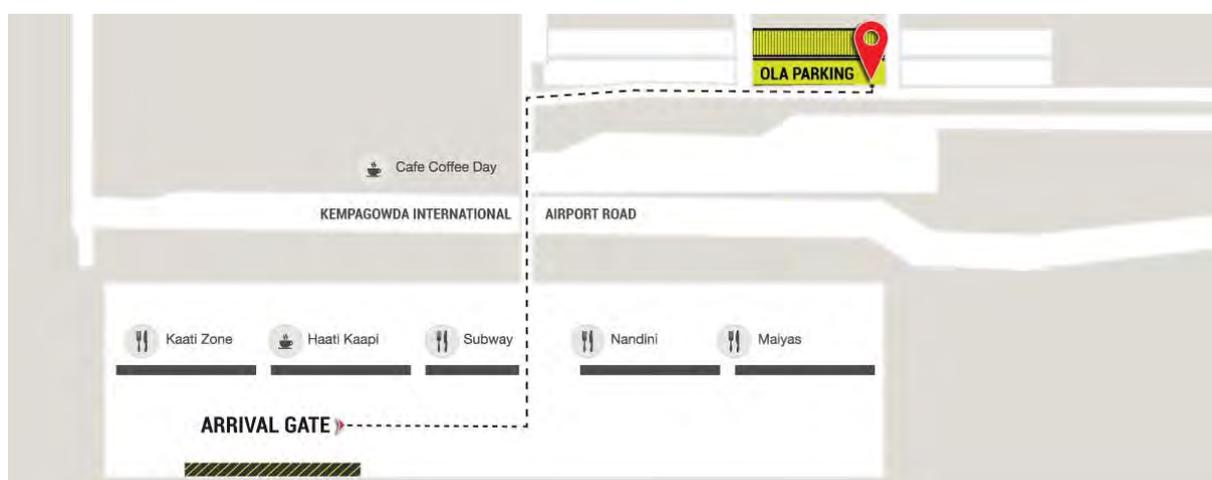
Please look for the Airport Taxi sign. It costs around Rs.900 one way. Please make sure to take authorized taxis to avoid inconvenience.

- All Airport Taxis are fitted with GPS/GPRS tracking system
- Airport Taxi driver has an official ID issued by the City Police (Traffic) and Taxi Operator
- You can find the cab number on the rear left side door panel
- Rates are charged based on the distance travelled shown on the meter
- Passengers have to pay for any toll charges / parking charges directly at the counter
- Passengers must make their payment at the end of their journey and collect a printed electronic receipt

Official Taxi operators : Karnataka Taxi, Mega Cabs and Meru Cabs

### ➤ **App-based taxi**

App-based taxi is also another mean of convenient transportation from the airport. The pickup zone for Uber and Ola Cabs is near P2 parking, just behind the BMTC Vayu Vajra bus stop. You will have to download the relevant apps in advance.



### APRSAF-24 Side Events

The following side events will be held in conjunction with the APRSAF-24. Further information will be provided in due course.

<b>The 4th Asia-Pacific Space Generation Workshop (APSGW 2017)</b>	
Organizer	Space Generation Advisory Council (SGAC)
Co-organizer	TBD
Date	11-12 November 2017
Venue	TBD
URL	TBD
Contacts	TBD
Event Description	The 4th AP-SGW is a two-day regional workshop for students and young professionals in the Asia-Pacific region to be held in Bangalore, India on November 11th (Sat) and 12th (Sun),2017. Students and young professionals below 35 years old mainly from Asia-Pacific region will continue discussing "approaches to promoting Asia-Pacific regional collaboration in the space sector - the next generation perspective." This year's focus will be how to create a sustainable regional forum based on the past AP-SGWs and on-going 4th AP-SGW for the next generation in the space sector in association with APRSAF.