



APSCO

ASIA-PACIFIC SPACE COOPERATION ORGANIZATION

APSCO's Insight on Multilateral Cooperation in Space

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UN/China 2nd Global Partnership on Space Exploration and Innovation

Session 4: Prospects and Challenges in Space Science

23 November 2022, Hainan, China



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Content

- Introduction of APSCO
- APSCO's INSIGHTS



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Member States

Natural Disasters

Different
Time Zones

Vast
Geographical
Area

Lack of (in terms of
space development):

- Budget
- Technology
- Trained Human
Resource

Large Population
4,1 billion
2/3rd of the
World's Polulation

Co-operation and
Resource Sharing!



**Member
State**

**Associate
Member**

**Signatory
State**

**Observer
State**

Signatory: Indonesia (ratification in process)

Associate Member: Egypt (ratification in process)

Observer: Mexico, ISNET



Full Members: Bangladesh, China, Iran, Mongolia, Pakistan, Peru, Thailand, Turkey



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A Multi-Lateral Cooperation Mechanism

- Independent
- Non-Profit
- Inter-Governmental
- Regional (Asia-Pacific Region)
- Full International & Legal Status

Convention registered under Article 102 of the Charter of the United Nations

Full Members: Bangladesh, China, Iran, Mongolia, Pakistan, Peru, Thailand, Turkey



Signatory: Indonesia (ratification in process)



Associate Member: Egypt (ratification in process)



Observer: Mexico, ISNET



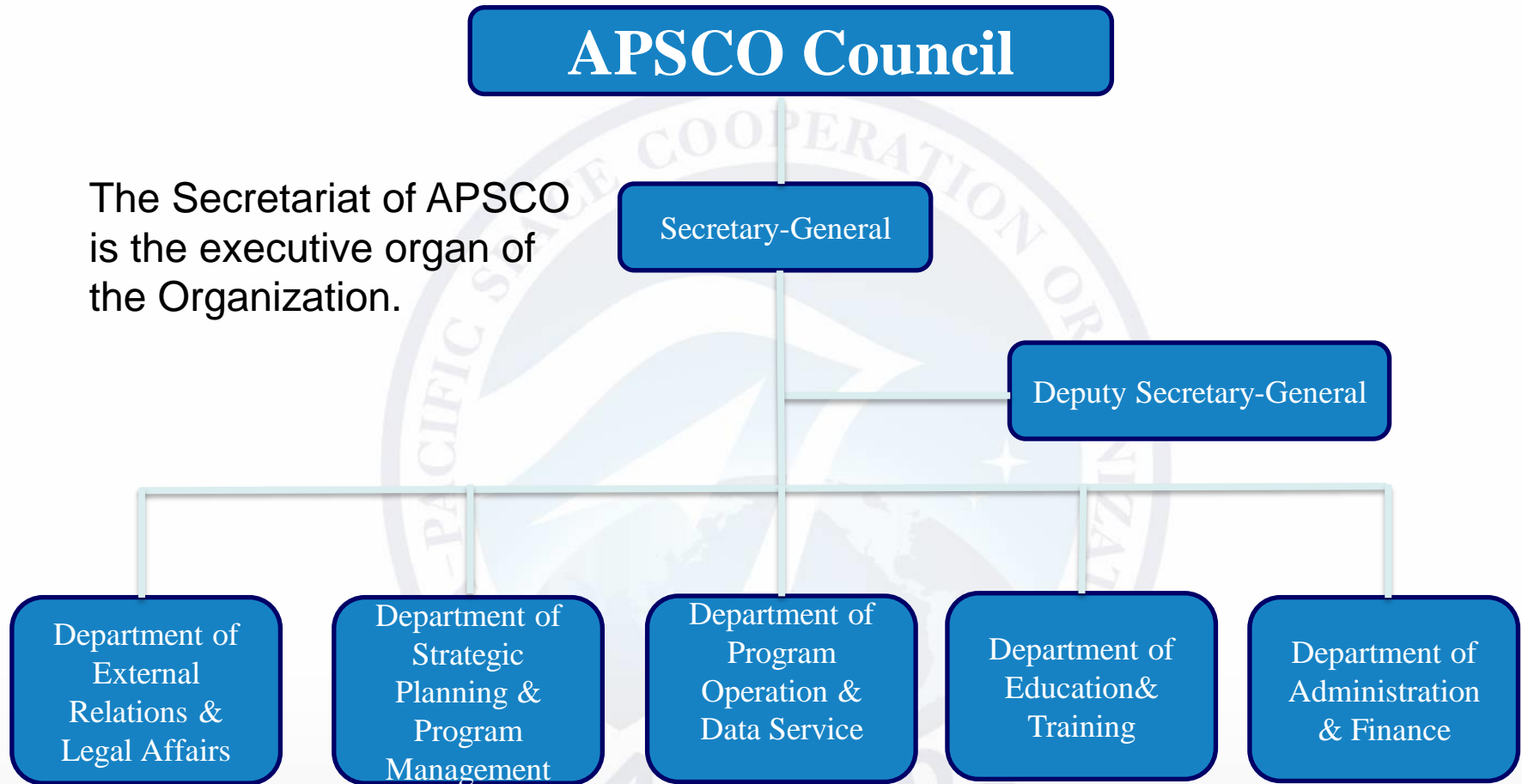


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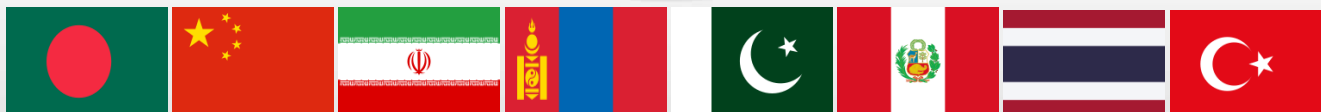
How do we work?

APSCO Council

The Secretariat of APSCO is the executive organ of the Organization.



APSCO Secretariat has international staffs from all its Member States.





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APSCO Council 2022-2024

Chairman APSCO Council



1st Vice Chairman
(Council Member)



2nd Vice Chairman
(Council Member)



Council
Member



Council
Member



Council
Member



Council
Member



Council
Member



Council
Member



SPACE TECHNOLOGY APPLICATIONS

- Earth observation applications
- Navigation and positioning applications
- Communication applications
- Experimental Technologies and applications
- Data Sharing Service Platform (DSSP) and Its Applications

SPACE TECHNOLOGY DEVELOPMENT

- Satellite system Technologies
- Satellite payloads Technologies
- Ground system engineering Technologies
- Support Technologies for space projects

SPACE SCIENCE and EXPLORATION

- Space environment, space weather and solar physics
- Study on Astronomy and deep space exploration
- Study on space life and microgravity
- Suborbital Scientific Payload

SPACE DEBRIS MITIGATION

- Space observations, monitoring and mitigation Technologies
- Space Debris Data Center
- Capacity Building on Space Debris Mitigation

EDUCATION and TRAINING

- Short training program
- Distance education program
- Degree education program
- Space education development program
- Space education for the future generation
- Space education resources network development program
- Space education international cooperation development program
- Professional Masters/Diploma Program

CAPACITY BUILDING

- Data and information sharing and service capacity
- Mission planning and implementation capacity
- Infrastructure construction and management capacity
- Standardization and policy coordination capacity
- Space training and education capacity

SPACE LAW and POLICY



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International Cooperation

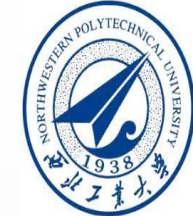
- **Observer of UN-COPUOS** (Committee on the Peaceful Uses of Outer Space)
- **Observer of GEO** (Group on Earth Observation)
- **Observer of ICG** (International Committee on GNSS)
- **Collaboration with other organization:**
 - MoU with IAF, CSA-IAA
 - UN-ESCAP, UN-SPIDER, UN-RCSSTEAP (Regional Center for Space Science Technology Education in Asia-Pacific)
 - ISSI-BJ (International Space Science Institute Beijing)
 - International Space University (ISU)
 - Membership in IAF, IISL (in 2021)

- **Collaboration with other Space Agencies**

- Protocol with ESA,
- MoU with CONAE,
- MoU with ROSCOSMOS

- **Collaboration with Universities:**

- Beihang University (BUAA)
- Harbin Institute of Technology (HIT)
- Northwestern Polytechnic University (NPU)
- Beijing Institute of Technology (BIT)
- Shanghai Jiao Tong University (SJTU)
- Air & Law School of McGill University, Canada
- Wuhan University
- Zhejiang University
- **Universities from TÜRKİYE**





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TALENTS CULTIVATING

- MASTER & PhD
- Beihang University
- HIT
- NPU
-



Degree Education

New Generation

- Space Science School
- Cansat International Competition
- APSCO Youth Space Contest



Training

Visiting Scholar

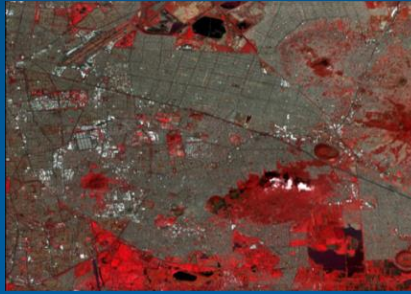
- On-site Training
- On-line Training
- Hands-on training
Student Small Satellite
(SSS) project



APSCO Quick Response for Disaster Emergency



Flood affected area in May 2017, Lima, Peru.



Earthquake monitoring in 2017 and 2020, Mexico



APSCO SUPPLIER CHAIN



INFRASTRUCTURE CAPABILITY

Asia-Pacific Ground-Based Space Object Observation System Project **APOSOS**

150-mm-diameter telescopes installed in Pakistan, Peru and Iran. The APOSOS Data Centre was established in Beijing, being hosted by the National Astronomical Observatories of China (NAOC).



improvement

Asia-Pacific Space Science Observatories Project **APSSO**

600 mm in diameter, with combination of wide-field surveying telescopes and precise tracking telescopes are planned to be installed in all Member States.

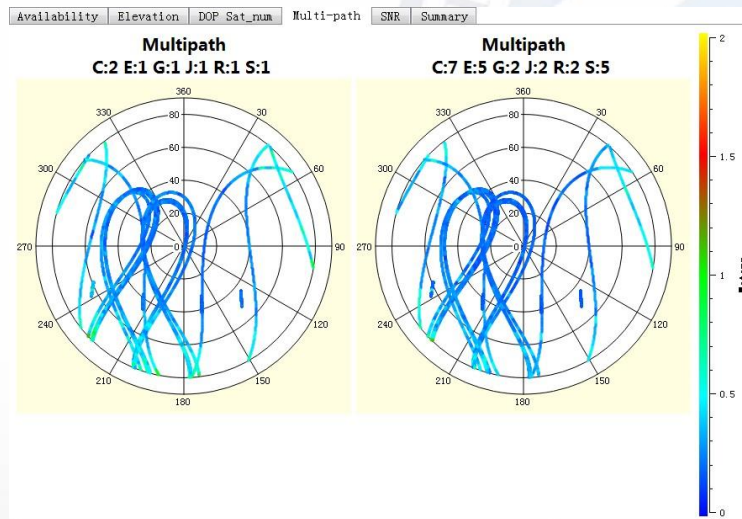




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igMA: International GNSS Monitoring and Assessment

The IGMA project was proposed by China to carry out monitoring and assessment of GNSS open services that can improve the quality of service and enhance the reliability of service. Its main aims are to build GNSS data collection points in all Member States, set up a data analysis system and carry out monitoring and assessment procedure for GNSS service performance and ionospheric delay modeling.



FY Satellite System: FY-2 Geostationary Satellite Data Receiving and Utilization System Project

As the outcome of agreement among APSCO, China Nation Space Administration (CNSA) and China Meteorology Administration (CMA), the project was proposed by China and it will provide the ability of directly receiving and processing data from FY-2 series meteorology satellites and improve the level of weather forecast for Member States.





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International Exchange Platforms

APSCO International Symposium; Space Law and Policy Workshops, Forums, Conference



APSCO's International Symposium

In order to improve the space resources usage in the Asia-Pacific region, to get common understanding on space technology and applications development amongst the Member States and extend to a wider range, the APSCO's symposium aims to encourage the experts and specialists through open, voluntary participation to share the information and exchange the views on different space aspects. 8 International Symposiums was held in Thailand, Pakistan, China, Indonesia, Turkey, Bangladesh and Peru.



APSCO has organized

- 9 international symposiums on different topics related with space science, technology and applications;
- 3 workshops, 4 forums and 1 conference on space law and policy successfully.



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Space Law Workshop



“Regional Cooperation Schemes in Space Law and Policy”

6-8 September 2021, Sanya - China



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APSCO and the National Astronomical Observations of the Chinese Academy of Sciences (NAOC)

the MoU is proposed to promote cooperation in education and research, as well as strengthen the linkages among scientists from both entities in the fields of space science.

APSCO and Hong Kong Aerospace Technology Group (HKATG)

HKATG is known for its advanced capacity in aerospace R&D and the operation of remote sensing satellite constellation. The MoU is proposed to further promote the cooperation between APSCO and HKATG in the possible fields of education/training and joint activities to assist Member States' space capacity building.

APSCO and China Space Foundation (CSF)

CFS is China's only national, non-profitable, charitable organization in space area. Specifically, CSF mainly focuses on the popularization of space science in the society and space capacity building through the facilitation of space science education. The MoU is expected to facilitate the cooperation between APSCO and CSF in the possible fields of education/training and joint activities.



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the International Lunar Research Station (ILRS)

A joint study team will be established by the Asia-Pacific Space Cooperation Organization (APSCO) and the China National Space Administration (CNSA) to carry out the study on the International Lunar Research Station (ILRS)

The MOON Mission

Change'E-6 – Scientific Payload opportunities, cubsats



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धन्यवाद

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谢谢你

Gracias

Thank You

خیلی ممنون

ขอขอบคุณ

Баярлалаа

Teşekkür Ederim

