Roles and Activities of the APT in Spectrum Issues in Asia-Pacific Region and in WRC-23 Preparations

2nd India Spectrum Management Conference

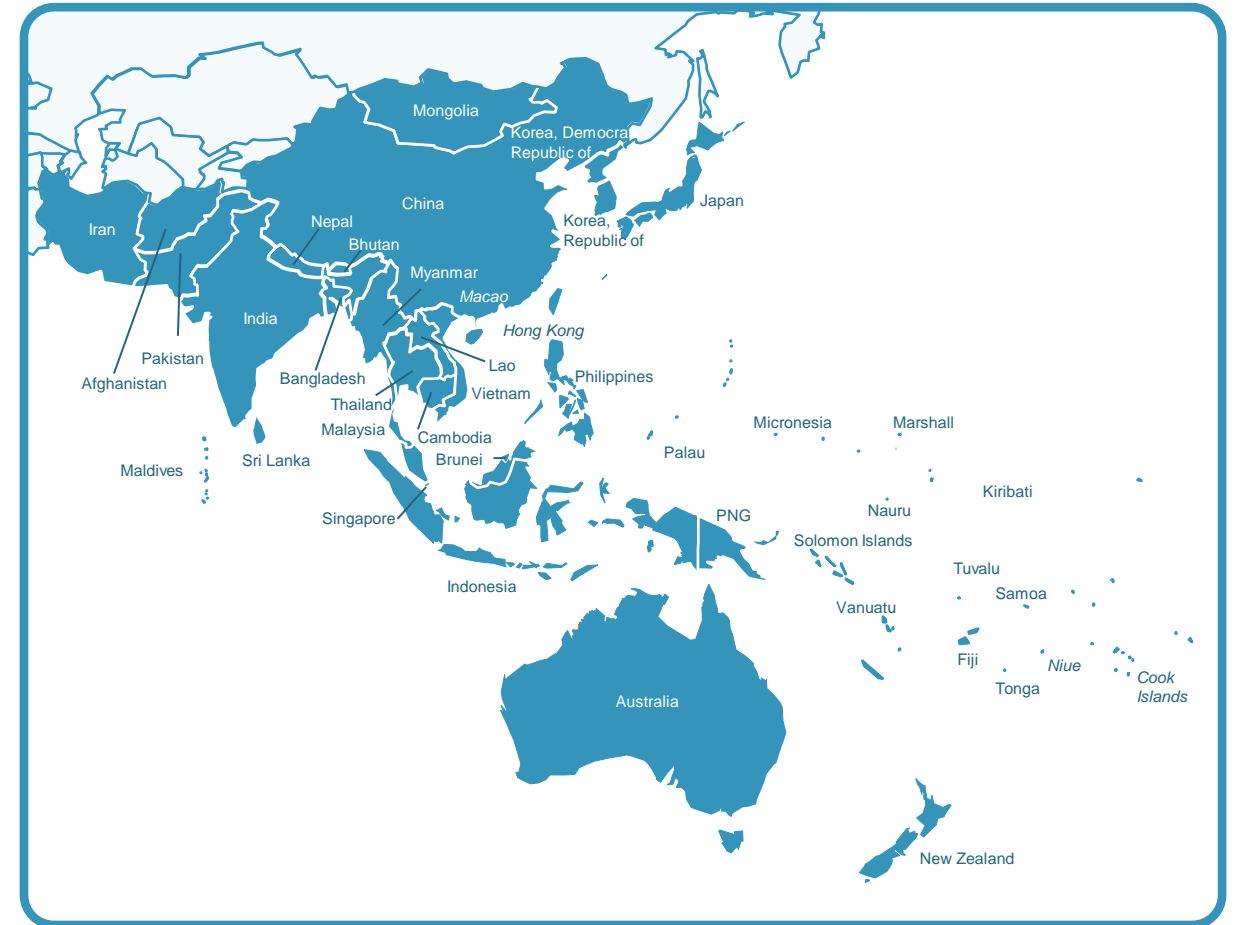6 – 7 December 2022

Over 40 Years in service!

APT fosters the development of telecommunication services and information infrastructure throughout the Asia-Pacific region.

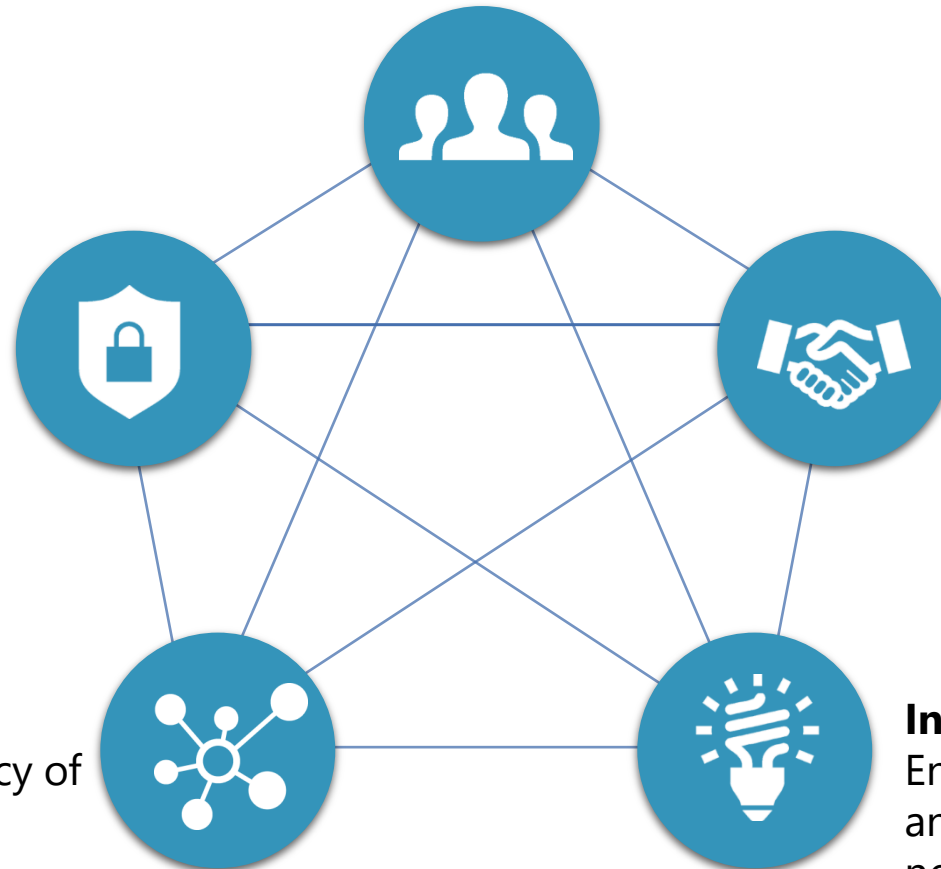Find out more about Asia-Pacific Telecommunity →

APT at a glance

- ✔ An Intergovernmental Organization established based on International Treaty

- ✔ 38 Members, 4 Associate Members (States/Territories in the region);

- ✔ 139 Affiliate Members (as of 25 November 2022) (Open to any Enterprise, Agency, Institute, Organization, Academia, etc. active in ICT/Telecommunication area in the region)

Strategic Plan for 2021-2023

Inclusion & Capacity building:
Promoting inclusiveness
and enhancing digital skills and literacy

Trust & Safety:
Ensuring secure cyberspace, security
and resilience
through telecommunication/ICT

Collaboration & Partnership:
Solidifying strategic
Collaboration with stakeholders

Connectivity:
Enhancing access and efficiency of
Digital Infrastructure

Innovation:
Enabling conducive environments
and harnessing the benefits of
new technologies

Spectrum Management and Radiocommunication in Strategic Plan 2021-2023

- ✅ Comes under two strategic pillars 'Connectivity' and 'Innovation' with the objectives of

    - ✅ Objective a.2: To improve the policies, regulations and measures for spectrum, which is a critical resource for delivering connectivity

    - ✅ Objective b.1: To foster the development and adoption of the new and emerging telecommunication/ICT and appropriate international standards

Spectrum Management and Radiocommunication in Strategic Plan 2021-2023 (2)

Objective a.2: *To improve the policies, regulations and measures for spectrum, which is a critical resource for delivering connectivity*

a.2.1 Assist in ensuring fair, predictable and transparent policy and regulation to access spectrum resources effectively that enable the use of mobile and fixed wireless and satellite technologies to enhance connectivity

a.2.2 Assist to ensure the availability of sufficient and harmonized spectrum bands for the adoption of IMT-2020 (5G) and other wireless technologies while recognizing the continued importance of 3G and 4G to connect people and businesses in some areas of the APT region, where necessary

a.2.3 Provide support in assessing the spectrum management practices of members including spectrum sharing, re-farming, licensing, pricing, valuation, monitoring and protection, developing spectrum roadmap and action plans for the development of spectrum management infrastructure, procedures and tools; and

a.2.4 Encourage and promote collaboration and cross-border coordination among members for improving spectrum management practices, including regional and sub-regional harmonization and efficient utilization of spectrum for innovative usage.

Objective b.1: *To foster the development and adoption of the new and emerging telecommunication/ICT and appropriate international standards*

b.1.1 Encourage the development of emerging telecommunication/ICT, including, but not limited to, Internet of Things (IoT) and Artificial Intelligence (AI) to support the digital transformation of the economy and society and to equip the members for the advent of the new industrial revolution

b.1.2 Assist in the development of enabling policy and regulatory environments that encourage and leverage innovation and investment in new and emerging telecommunication/ICT, including the new ecosystem brought by IMT-2020 (5G) to foster an open and competitive economy;

b.1.3 Provide assistance in adopting international standards by providing relevant guidelines, implementation specifications, compatibility and interoperability reports and best practices;

b.1.4 Support to bridge the innovative gap between LDCs, LLDCs, SIDS, developing countries and developed countries in the region; and

b.1.5 Provide platforms to promote collaborative innovation and technology development and to share the knowledge of and trends in relation to emerging telecommunication/ICT and share best practice for the effective use of emerging telecommunication/ICT.

APT Work Programmes on Spectrum Management and Radiocommunication

- **APT Conference Preparatory Group for WRCs (APG)**

    - To develop regional common proposals for World Radiocommunication Conferences (WRCs)

- **APT Wireless Group (AWG)**

    - Facilitate regional harmonization of spectrum usage
    - Assist and support APT Members in using the radio frequency spectrum effectively
    - Promote the introduction and development of new radiocommunication technologies and applications in the Asia-Pacific region and to propose cost effective implementation solutions

- **APT Frequency Information System (AFIS)**

- **APT Training Programmes** on Spectrum Management and radiocommunication related issues

- **APT Symposium on Spectrum Management and APT Web Dialogue Series on Spectrum Management**

APT Conference Preparatory Group for WRCs (APG)

- Develop APT Common Proposals (ACPs) for WRCs and on matters related to ITU Radiocommunication Assemblies (RAs)

- Develop APT contributions to ITU-R Conference Preparatory Meetings (CPMs)

- Assist APT Member countries, especially developing countries, in their preparations for WRCs, RAs and CPMs

A Detail of the Activities of APG

- ✅ APG activities are attended by the highest number of delegates of APT membership

- ✅ Attended by over 500 delegates (in hybrid meetings over 700 delegates)

- ✅ In general, five or six meetings are scheduled for a WRC preparatory cycle

- ✅ Detail workplan and meeting schedule are available at https://www.apt.int/APTAPG

- ✅ Details of APT's preparation for WRC-23 will be presented at today's afternoon session

APT Wireless Group (AWG)

- AWG is developing a good number of APT Reports and Recommendations on spectrum related issues

- APT700 band plan was developed by AWG

- AWG outcomes are available at: https://www.apt.int/AWG-REPTS

A Detail of the Activities of APT Wireless Group (AWG)

✅ **New Structure (adopted in September 2021 at AWG-28):**

Working Group on Harmonization	Working Group on IMT	Working Group on Terrestrial	Working Group on Space, Aeronautical and Maritime
Sub Working Group on Spectrum Arrangement and Harmonization (Sub-WG SA&H)	Sub Working Group on IMT Spectrum (Sub-WG IMT Spec)	Task Group on Fixed Wireless and Ground-Based Radar Systems (TG FWS/GBRS)	Task Group on Satellite Systems (TG SAT)
	Sub Working Group on IMT Technologies (Sub-WG IMT Tech)	Task Group on Intelligent Transportation Systems (TG ITS)	Task Group on Aeronautical and Maritime (TG A&M)
Sub Working Group on Sharing Studies (Sub-WG SS)	Task Group on PPDR (TG PPDR)	Task Group on Wireless Power Transmission (TG WPT)	
	Task Group on High Altitude Platform Station (TG HAPS)	Task Group on Railway Radiocommunications (TG RR)	
Sub Working Group on Spectrum Monitoring (Sub-WG SM)		Task Group on Wireless Access Systems including Radio Local Access Networks (TG WAS/RLAN)	

Ad-Hoc Group on APT Frequency Information System (Ad-Hoc AFIS)

A Detail of the Activities of APT Wireless Group (AWG)

- ☑ In general, two AWG meetings each year (March/April; August/September)

- ☑ Attended by over 200 delegates (in hybrid meetings over 400 delegates)

- ☑ Updated AWG workplan available at https://www.apt.int/APTAWG

- ☑ AWG carries out numerous surveys on frequency usage for various radiocommunication services

- ☑ Conduct the follow up activities and implementation mechanism after the completion of a WRC

A Detail of the Activities of APT Wireless Group (AWG)

Participating in AWG activities:

✅ AWG activities are open for all APT membership

✅ Governments and industry are participating and actively collaborating in the work of AWG since its inception

✅ Next AWG meeting, AWG-31, will be held 22 – 26 May 2023 in Vietnam

APT Frequency Information System (AFIS)

- A smart way to share the information on spectrum usage in APT Members countries

- Web-based portal of frequency usage available at http://www.aptafis.org/

- AFIS allow searching information on spectrum usage and comparison along with color chart of spectrum allocation

APT Frequency Information System (AFIS)

- ✅ More APT Members have inserted data into AFIS

- ✅ APT Secretariat provided physical and virtual training to some APT Members for data uploading in AFIS

- ✅ AWG has established Ad Hoc Group on AFIS to provide strategic guidance for AFIS

APT Web Dialogue Series on Spectrum Management

- Newly initiated in 2021, APT Web Dialogue Series on Spectrum Management has established itself a good channel of informal discussion and information sharing on spectrum related issues

- Organized only in virtual format

- Details are available at: https://aptwebdialogue.site/top

APT Web Dialogue Series on Spectrum Management

- In 2022, following Web Dialogue Series on Spectrum Management were organized

  - The 6GHz band and the optimal approaches for Asia-Pacific. Two episodes were organized.

  - Radio Altimeters at 4200-4400 MHz band and implementation of 5G in adjacent bands. Organized in collaboration with International Civil Aviation Organization (ICAO).

  - Expanding Wireless Access Opportunity (EWAO). Organized in collaboration with Dynamic Spectrum Alliance (DSA). Four episodes were held

  - Overview of advances in satellite and Wi-Fi technologies. Organized in collaboration with Inmarsat and Meta.

- APT Web Dialogue has been established as an informal platform for sharing information on issues related to spectrum management.

APT Training Program on spectrum related issues

- APT Training Program is one of the key activities of APT

- APT Training Courses are open for all APT members

- Yearly several Training Courses are organized on spectrum related issues

- Training courses are organized in institutes in China, India, Japan and Thailand

APT Training Program of Spectrum Related Issues

- ✅ In 2022, following training courses were organized related to spectrum

  - ✅ Spectrum Management and Monitoring (hosted in India)

    - ○ 28 participants attended. Covered topics included spectrum planning, allocation, licensing, pricing, monitoring, auditing, spectrum strategies and enforcement, and advanced technologies in spectrum management

  - ✅ 5G and IoT Network Infrastructures and Their Industry Verticals (hosted in Thailand)

    - ○ 26 participants attended. Covered topics included 5G and IoT network infrastructure, industry vertical concept and IoT-based digital services and how to integrate AI in developing 5G and IoT based services

  - ✅ Radio Spectrum Management and Monitoring for Wireless Broadband Infrastructure and IoT (hosted in Japan)

    - ○ 19 participants attended. Covered topics included administrative and technical knowledge of radio spectrum management and monitoring including the latest technologies for wireless broadband infrastructure and IoT

APT Training Program of Spectrum Related Issues (2)

- ✅ Planning for Effective Use of Radio Frequency Bands and Trends in Wireless Communication technology (hosted in Japan)

  - ○ 18 participants attended. Covered topics included policies to promote the effective use of radio waves and the latest trends in mobile communication technologies and services, and how to promote these policies in the national context.

- ✅ Disaster Management and Climate Change Monitoring with Efficient Deployment of Radio Spectrum in Pacific Island Nations (to be hosted in Japan soon)