

**SATRC Workshop on Spectrum**

31 January – 2 February 2023, New Delhi, India

**CONCEPT NOTE**

1. **Background**

The 22nd Meeting of the South Asian Telecommunication Regulators’ Council (SATRC-22) held virtually/online from 1 to 3 November 2021 approved the SATRC Action Plan Phase VIII (SAP-VIII) for the implementation period of 2022-2023. SAP-VIII consists of three basic activities: working groups, capacity building and web portal. SATRC Workshops are held as part of activities under capacity building with the objective of developing the capacity of human resources of the SATRC Members.

SATRC-22 approved following five work items for the activities of SATRC Working Group on Spectrum for SAP-VIII:

* Approaches towards spectrum harmonization for 5G bands
* Evaluation of spectrum utilization in SATRC Member countries
* Regulatory approaches for sharing, trading and leasing of spectrum
* Cross-border coordination for interference in SATRC countries
* SATRC action plans for the development of spectrum management infrastructure, procedure and tools

1. **Objectives**

The SATRC Workshop on Spectrum will be held as a part of implementation of SAP-VIII. The objective of this workshop is to share insights, experiences, best practices as well as engage in dialogue to identify the challenges, opportunities and possible way forward on the work items under the SATRC Working Group on Spectrum for SAP-VIII in order to have better understanding on those issues. Important issues such as approaches towards spectrum harmonization for 5G bands, evaluation of spectrum utilization, regulatory approaches for sharing, trading and leasing of spectrum, cross border coordination for interference, development of spectrum management infrastructure, procedure and tools in the context of South Asia will be discussed in depth. It will also provide an opportunity for the SATRC Members as well as industry to share their experiences and future plan on spectrum management. A number of eminent experts and speakers will be invited to the workshop to share their invaluable insights and experiences.

1. **Expected Participation**

The SATRC Workshop on Spectrum will be targeted for mid-level and senior-level officers of the SATRC Members who are involved in the work of related areas. It is expected that the experts of the SATRC Working Group on Spectrum will also attend the workshop. Further, relevant experts from industry are also welcomed to participate at the workshop.

1. **Expected outcomes**

* Enhanced understanding of the SATRC Members on above mentioned work items of SATRC Working Group on Spectrum.
* Discussion will provide guideline to SATRC Working Group on Spectrum to develop tangible outcomes on the work items during the implementation of SAP-VIII.

1. **Timing and location**

The SATRC Workshop on Spectrum will be held from 31 January to 2 February 2023 in New Delhi, India. It will be hosted by Telecom Regulatory Authority of India (TRAI). Details are provided in Information for Participants.

1. **Contact**

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1. **Tentative Programme**

The tentative programme of SATRC Workshop on Spectrum is provided in Annex A.

**Annex A**

**Tentative Programme**

**SATRC Workshop on Spectrum**

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| **Time**  **(UTC+5:30)** | **Tuesday, 31 January 2023** |
| 08:30 – 09:30 | Registration |
| 09:30 – 10:00 | **Opening**   * Welcome Address by the Secretary General of Asia-Pacific Telecommunity * Opening Address by the Chair of SATRC Working Group on Spectrum * Inaugural Address by the Telecom Regulatory Authority of India * Presentation of Token of Appreciation   (Group Photograph) |
| 10:00 – 10:30 | **Coffee/Tea Break** |
| 10:30 – 11:00 | **Session 1 – Overview of the SATRC and the Workshop**   * Overview of the activities of SATRC, SATRC Action Plan Phase VIII and details the SATRC Workshop on Spectrum * Activities of the SATRC Working Group on Spectrum * Activities of APT in Spectrum Management |
| 11:00 – 12:30 | **Session 2 –** **Approaches towards spectrum harmonization for 5G bands**  5G is expected to support significantly faster mobile broadband speeds and increasingly extensive mobile data usage - as well as to enable the full potential of the Internet of Things. The speed, reach and quality of 5G services will be heavily dependent on regulators supporting timely access to the right amount and type of spectrum, and under the right conditions.  The success of 5G is dependent on harmonised mobile spectrum. Spectrum harmonisation of internationally identified spectrum bands offers many advantages:   * Lower costs for consumers, as device manufacturers can mass-produce devices that function in multiple countries on a single band. * Availability of a wider portfolio of devices, driven by a larger, international market. * Roaming or the ability to use one’s mobile device abroad. * Fewer issues of cross-border interference.   Some of the SATRC member countries have launched 5G services. Among the identified 5G spectrum bands from WRC-19, the regulators in the SATRC sub-region need to work towards aligning with global harmonised 5G bands to achieve the greatest benefits for consumers and avoid interference along their borders.  The topics to be discussed in this session include:   * Current practices/experiences/plan on 5G bands in South Asia * International standards and best practices of 5G bands * Status of Mobile Broadband in South Asia * Status of technology neutrality in frequency assignment in South Asia   **Moderator:** TBD  **Speakers:**   * SATRC Members * Industry Representatives |
| 12:30 – 14:00 | **Lunch Break** |
| 14:00 – 15:30 | **Session 3 –** **Approaches towards spectrum harmonization for 5G bands (continued)**  Continue from the previous session. |
| 15:30 – 15:45 | **Coffee/Tea Break** |
| 15:45 – 17:15 | **Session 4 –** **Evaluation of spectrum utilization in SATRC Member countries**  Utilising spectrum effectively and efficiently has become a key policy and regulation goals due to the unprecedented growth in high quality video demands in addition to ever growing user density and quality requirements. In particular, the onslaught of 5G have dramatically changed the spectrum landscape demanding careful assessment and allocation of spectrum bands. Subsequently a long-term planning is necessary at the helm of emerging spectrum needs and fast-paced technological evolution and developments. While spectrum resources are limited, growth of data demands keeps increasing exponentially. Hence, there is a challenge to harness and implement optimal use of spectrum while at the same time assessing the economic value derived from such exercises.  Therefore, it is pertinent for any administrations to adopt a mechanism for evaluating the utilisation of the spectrum in order to derive optimal spectrum usage.  The topics to be discussed in this session include:   * Existing policy and regulatory initiatives/practices to evaluate the spectrum utilization methodology/audit adopted in South Asia. * International standards and best practices for effective assessment and evaluation of spectrum usage.   **Moderator:** TBD  **Speakers:**   * SATRC Members * Industry Representatives |
| **Time**  **(UTC+5:30)** | **Wednesday, 1 February 2023** |
| 9:00 – 10:30 | **Session 5 – Evaluation of spectrum utilization in SATRC Member countries (continued)**  Continue from the previous session. |
| 10:30 – 10:45 | **Coffee/Tea** **Break** |
| 10:45 – 12:15 | **Session 6 – Regulatory approaches for sharing, trading and leasing of spectrum**  Spectrum is a scarce natural resource and with growing digitalization and uptake of wireless services, demand for spectrum has been increasing and will continue to rise. To cater to the ever-increasing data demand, it is utmost important that the spectrum is used efficiently.  Efficient utilization of spectrum has been the focal point for the country administrators while deciding on any spectrum-related policy. Keeping this in mind, most of the countries have permitted the mobile service providers to share exclusively assigned spectrum to them. The basic objective of spectrum sharing is to provide an opportunity to the telecom service providers to share their spectrum holdings and thereby improve spectral efficiency. Sharing can also provide additional network capacities in places where there is network congestion due to a spectrum crunch. Many countries have also permitted spectrum trading and opened up a secondary market.  However, with the passage of time, newer spectrum sharing techniques such as Licensed Shared Access, Licensed Assisted Access, leasing of spectrum, etc. have become prevalent in many geographies.    The topics to be discussed in this session include:   * Current policy and regulatory initiatives/practices/experiences on approaches for sharing, trading and leasing of spectrum in South Asia. * International standards and best practices on approaches for sharing, trading and leasing of spectrum.   **Moderator:** TBD  **Speakers:**   * SATRC Members * Industry Representatives |
| 12:15 – 14:00 | **Lunch Break** |
| 14:00 – 15:30 | **Session 7 – Regulatory approaches for sharing, trading and leasing of spectrum (continued)**  Continue from the previous session. |
| 15:30 – 15:45 | **Coffee/Tea Break** |
| 15:45 – 17:15 | **Session 8** – **Cross-border coordination for interference in SATRC countries**  Radio frequency spectrum is the vital strategic natural resource for the sustainable development of the global economy and society. Demand for more spectrum is increasing for new radio technology/services/applications. Due to the nature of radio wave propagation properties it challenging to fully preclude signals radiation on the territory of other countries, especially when those signals are transmitted to and from the border area of the country.  This session will discuss on policy and regulatory best practices in additional to technical and operational aspects in coordinating and managing cross-border signal interferences.  The topics to be discussed in this session include:   * Need for cross-border coordination. * Current situation in South Asia. * Different aspects of interference (harmful, accepted, permissible). * Perspectives on bilateral or multi-lateral coordination processes and efforts. * International standards and best practices to ensure minimal interference.   **Moderator:** TBD  **Speakers:**   * SATRC Members * Industry Representatives |
| **Time**  **(UTC+5:30)** | **Thursday, 2 February 2023** |
| 9:00 – 10:30 | **Session 9 – Cross-border coordination for interference in SATRC countries (continued)**  Continue from the previous session |
| 10:30 – 10:45 | **Coffee/Tea Break** |
| 10:45 – 12:15 | **Session 10** **– SATRC action plans for the development of spectrum management infrastructure, procedure and tools**  Connectivity is an important pillar for achieving the objective of digital transformation of the economy and the society. Spectrum is a key resource for delivering connectivity. Improving the policies, regulations and measures for spectrum are key activities for SATRC Members. Development of spectrum management infrastructure, procedure and tools plays an important role in this aspect.  The topics to be discussed in this session include:   * Current practices/experiences in SATRC region on Spectrum Management procedures, infrastructures, and tools. * International standards and best practices on the implementation of infrastructure facilities along with proper spectrum management practices.   Moderator: TBD  Speakers:   * SATRC Members * Industry Representatives |
| 12:15 – 12:45 | **Summary of Workshop and Closing**   * Summary of the workshop by the Chair of SATRC WG SPEC * Closing Remarks by APT * Closing Remarks by TRAI |
| 12:45 – 14:00 | **Lunch Break** |
| 14:00 | **Local Site Visit (TBD)** |