

Wireless Spectrum in Asia-Pacific for the 5G Era: IMT Spectrum Assignment Study








Executive Summary

The key objective of this Report is to develop a resource for the ITU's Asia-Pacific member states which provides information and insights concerning IMT spectrum assignments in the region. There are five major components of this study, namely:

- Considerations underlying spectrum assignments;
- IMT spectrum assignments in the Asia-Pacific region in the last 5 years;
- Proposed IMT spectrum assignments in the Asia-Pacific region;
- Approaches to the setting reserve prices for spectrum assignments;
- Policy and regulatory settings for spectrum assignments; and
- Conclusions and recommendations.

A number of legacy cellular/mobile licenses are expiring and licences are either being renewed or auctioned to enable the latest IMT services – especially 5G - in the region. Extensive refarming of IMT assignments is also occurring in the region as MNOs utilise their legacy spectrum assignments for use for the delivery of 4G and 5G services. This regional study assesses the different practices followed for making access to all of the spectrum identified for IMT. It also analyses the pros and cons of different approaches taken to assign IMT spectrum in the Asia -Pacific region and other exemplar markets.

KEY LESSONS FROM THE STUDY

<p>1 Get ahead of the spectrum demand curve</p> <p>Release IMT spectrum early, not when demand is acute or is holding back economic growth</p> 	<p>2 Support transition to 4G and 5G NR</p> <p>Needs larger contiguous blocks of spectrum and 5 MHz increments so facilitate restacking, refarming and trading</p> 	<p>3 Commence refarming to ensure clear IMT spectrum sooner</p> <p>Start refarming of possible bands earlier as required. Establish a spectrum refarming fund</p> 	<p>4 Be technology neutral</p> <p>Support investment and improved spectral efficiency by removing technology specific restrictions on spectrum</p> 
<p>5 Facilitate industry change like FWA & legacy switch off</p> <p>Support growth of 5G FWA and legacy 2G/3G network switch off with additional spectrum and flexibility</p> 	<p>6 Make IMT spectrum more affordable in terms of price per MHz per pop</p> <p>Need to manage auction expectations and consider beauty contests or lower reserve prices</p> 	<p>7 Maintain and facilitate strong mobile competition</p> <p>Make additional IMT spectrum available to ALL MNOs at reasonable terms to support competition</p> 	<p>8 Appreciate the increasing use of TDD spectrum</p> <p>Acknowledge TDD adoption with support on synchronisation, frame structure and cross-border rules</p> <p>TDD</p>



Going forward it is critical a newer approach to granting spectrum licenses to the market be explored in the Asia-Pacific given the need of 5G era for larger contiguous blocks of IMT spectrum.

There should be strong support in Asia-Pacific for an IMT Spectrum Roadmap to include total IMT assignment targets. Specifically, subject to demand, it should be ensured that there is suitable IMT Spectrum for wireless broadband and 5G deployment in Asia-Pacific markets including allocations of mmWave spectrum (eg 26 GHz)