



Australian Government
Bureau of Meteorology

GPO Box 1289
Melbourne VIC 3001

20 June 2014

The Project Manager
Spectrum Review
Department of Communications
GPO Box 2154
CANBERRA ACT 2601

By email: spectrumreview@communications.gov.au

Dear Sir/Madam,

Comments on the Spectrum Review Issues Paper, Public Consultation May 2014

Please find attached a submission from the Bureau of Meteorology containing its response to the *Questions for Stakeholders* section in the above paper. The Bureau appreciates the opportunity to present its views as part of the public consultation process, and looks forward to making more detailed contributions in subsequent stages of the Spectrum Review.

Access to necessary and interference-free radiofrequency spectrum is crucial to the Bureau fulfilling its obligation to provide an effective and efficient meteorological service to the Australian public and to both public and private organisations. A partial or total loss of access to this spectrum, either through interference from other services or through spectrum being re-allocated and sold to commercial users via market-based mechanisms, would have a severe impact on the Bureau's operations and ability to fulfil its obligations as outlined in the Meteorology Act (1955).

If you have any questions about the content of this submission, please contact the Bureau's Spectrum Manager, Paul Hettrick, either by email to P.Hettrick@bom.gov.au, or telephone at 03 96694240.

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'Bruce W Forgan'.

Dr Bruce W Forgan
Acting Assistant Director (Infrastructure Management)

Bureau of Meteorology Response to the Department of Communications Spectrum Review Issues Paper, May 2014

Questions for Stakeholders

1. What additional issues should be considered by the review?

The Bureau has no other issues to propose.

2. Are there any issues you think should be taken off the table?

Term of Reference 6 includes the following issue which the Bureau considers should not be within the scope of this review:

- the scope and appropriateness of applying market-based principles to public interest services, including incentive auctions

The Bureau is of the view that the use of market-based methods to value spectrum, and the proposal to use them to "incentivise" more efficient public use of spectrum cannot be approached from the perspective of placing public good users such as the Bureau in competition with commercial users such as telecommunications companies. The business models of these two classes of users are not comparable, as the business model used by the telecommunications industry to value spectrum, to pay a premium for licences, and to derive an income from them, is not available nor applicable to organisations such as the Bureau. A majority of spectrum used directly and indirectly by the Bureau is for services that are not telecommunications-based, such as meteorological radars, radiosondes, remote sensing of water in the atmosphere and soil, and numerous other terrestrial and space-based passive and active sensing applications. The frequency bands for meteorological and Earth observations applications are allocated on a global basis at the ITU-R level. The benefits of globally harmonised allocations include:

- > Many allocated bands correspond to the "fingerprints of nature" which are the fixed frequencies at which natural atmospheric constituents emit electromagnetic radiation that is detected by terrestrial and space-borne sensors.
- > Equipment suppliers can minimise costs by using a more favourable production scale for equipment that use the same frequency bands worldwide.
- > The frequency ranges are optimised for a given application due to a balance between favourable atmospheric propagation and the wavelength range required to sense the targeted phenomena.
- > Data down-linked from meteorological and Earth observations satellites is available globally for the benefit of all countries.

3. Which issues should be given priority and why?

The Bureau has no view on the priority of issues.

4. Which issues can be addressed in the short term (the next 12-18 months) and which should be considered over a longer period?

The Bureau has no view on the timeframes involved.

5. What should be the extent of reform – can the framework be improved by adjusting what is currently in place or are more fundamental changes required?

While there may be some scope for reducing the complexity of the current framework, this should not be undertaken purely from the perspective of assuming that complexity is an indicator of unnecessary or excessive regulation. Spectrum management is an inherently complex process involving many diverse applications and technologies at varying levels of evolution, and which must coexist without causing interference that degrades their respective functions. Such a wide generational mix of technologies and diversity of applications has inevitably given rise to a necessarily complicated but nevertheless understandable framework within which they must operate. Any over-simplification of this framework risks allowing a too general interpretation and possible exploitation.

The Bureau is of the view that there is no need to make fundamental changes to the framework, and that adjusting what is currently in place should suffice.