Resolution 673 (WRC-07)
Radiocommunications use for Earth observation applications

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resolves to invite ITU-R

to carry out studies on possible means to improve the recognition of the essential role and global importance of Earth observation radiocommunications applications and the knowledge and understanding of administrations regarding the utilization and benefits of these applications,

Background

- Global and increasing importance and essential role of Earth observations, in particular in:
  - meteorological activities,
  - climate change monitoring
  - disaster prediction, monitoring and mitigation
  - a broad range of other societal benefits related to human health, energy, water, ecosystems, agriculture and biodiversity
- Earth Observations have a considerable societal value and provides relevant elements for policy-makers
- Mostly incommensurable in financial terms, as they relate to preventing large losses of lives or threats to socio-political stability and security
- **Earth Observations (in-situ, remote) fully depend on the availability of radio-spectrum**

Background

- there is a general lack of understanding of the use and importance of these radio applications

- Indeed, it appears that number of Administrations:
  - are unaware of the importance for their own and other countries benefit of the data that is obtained through Earth Observation applications, in particular satellite remote sensing.
  - consider that these applications are dedicated to “pure science”
  - Believe that these applications are only for the advantage of few developed countries that operate them, instead of being to the benefit of the whole international community.

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- Was adopted at WRC-07, under proposal from CEPT and WMO
- Although asking for studies toward means to improve the recognition of the essential role, already stresses the importance of Earth Observations applications (under the Earth exploration-satellite (active and passive), meteorological satellite, meteorological aids and radiolocation services
- It is already a big step, making a clear link between EO and necessary radio-frequencies
- As such, was welcomed by the Ministerial Summit on EO (Cape Town, Nov 07) and referenced in the final declaration :

> *"We welcome the resolution of the World Radio Conference-07 on radio communication use for Earth observation applications and the support it provides for the international protection and long term availability of frequencies for terrestrial, oceanic, air-borne, and space-based observations, including passive measurements"*

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- that Earth observations are performed for the benefit of the whole international community and all mankind, are shared among all countries and are generally available at no cost (***considering e)***)

- that the importance of Earth observation radiocommunications applications has been stressed by a number of international bodies such as the Group on Earth Observation (GEO), the World Meteorological Organization (WMO) and the Intergovernmental Panel on Climate Change (IPCC) and that collaboration of ITU-R with these bodies could be important (***noting futher a)***)

- that, in particular, GEO is leading a worldwide effort to build a Global Earth Observation System of Systems (GEOSS) to provide comprehensive and coordinated Earth observations from thousands of instruments worldwide, transforming the collected data into vital information for society and mankind (***noting futher b)***)

Follow-up

- Covered under AI 8.1.1 (Issue C); the Report of the Director of the Radiocommunication Bureau

- ITU-R currently working on a Report on "The essential role and global importance of radio spectrum use for Earth observations and for related applications" (see 7C/TEMP/59), :

  - o includes an extensive overview of the use of spectrum by Earth observation radiocommunications applications.

  - o describes the considerable societal weight and economic benefits of spectrum use for Earth observation

Follow-up

- This Report should serve as a basis for WRC-12 work under AI 8.1.1 c) to providing Earth Observation and related radio frequency use the necessary recognition from and for ITU-R members

  - Resolution 673 (WRC-07) is already widely known and should be kept as a reference document

  - Reference in Volume 1 of the RR (Article, Note,…) should be targeted

"Between 1980 and 2005, more than 7000 natural disasters worldwide took the lives of over 2 million people and produced economic losses estimated at over 1.2 trillion US dollars. Ninety per cent of these natural disasters, 72% of casualties and 75% of economic losses were caused by weather-, climate- and water-related hazards, such as droughts, floods, severe storms and tropical cyclones."

Reference : WMO-ITU Handbook on radio spectrum for meteorology : Weather, Water and Climate monitoring and prediction

Thank you for your attention