

**UNITED STATES OF AMERICA****DRAFT PROPOSALS FOR THE WORK OF THE CONFERENCE****Agenda item 8.1.1:** *on activities of the Radiocommunication Sector since WRC-07*

**Background Information:** This proposal addresses Issue C and Resolution **673 (WRC-07)** on radiocommunications use for Earth observation applications. Resolution **673 (WRC-07)** called for studies by the ITU-R 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. This resolution also instructed the Director of the Radiocommunication Bureau to include the results of these studies in his report to WRC-12 for the purposes of considering adequate actions in response to these ITU-R studies. The objectives of these studies do not include new allocations or additional protection.

The ITU-R completed several studies resulting in Recommendation ITU-R RS.1859 on the use of remote sensing systems for data collection for guidance in the event of natural disasters and similar emergencies and Recommendation ITU-R RS.[CLIMATE] on the use of remote sensing systems in the study of climate change and the effects thereof. The ITU-R also completed Report ITU-R RS.2178 on the essential role and global importance of radio spectrum use for Earth observations and for related applications. The work under Resolution 673 (WRC-07) is complete.

In order to improve the recognition of the importance of Earth observation systems within the Radio Regulations, this proposal seek to replace Resolution **673 (WRC-07)** with a Recommendation to reflect the conclusions of the ITU-R studies.

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**Proposal:**

ARTICLE 4  
**Assignment and use of frequencies**

**NOC** USA/8.1.1.C/1

**Reasons:** Resolution **673 (WRC-07)** notes that the ITU-R studies under this resolution should not result in additional protection or regulatory status of Earth observation systems and applications.

ARTICLE 5  
**Frequency allocations**

**NOC** USA/8.1.1.C/2

**Reasons:** Resolution **673 (WRC-07)** notes that the ITU-R studies under this resolution should not result in new allocations or additional protection of Earth observation systems and applications.

MOD USA/8.1.1.C/3

## RECOMMENDATION [673] (WRC-12)

The use of the radio spectrum for Earth observation applications

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The World Radiocommunication Conference (Geneva, [2012](#)),*considering*

- a) that *in situ* and remote Earth observation capabilities depend on the availability of radio frequencies under a number of radio services, allowing for a wide range of passive and active applications on satellite- or ground-based platforms;
- b) that the collection and exchange of Earth observation data are essential for maintaining and improving the accuracy of weather forecasts that contribute to the protection of life, preservation of property and sustainable development throughout the world;
- c) that Earth observation data are also essential for monitoring and predicting climate changes, for disaster prediction, monitoring and mitigation, for increasing the understanding, modelling and verification of all aspects of climate change, and for related policy-making;
- d) that Earth observations are also used to obtain pertinent data regarding natural resources, this being particularly crucial for the benefit of developing countries;
- e) 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,

*recognizing*

- a) that § 20 c) of the Plan of Action of the World Summit on Information Society (Geneva, 2003), on e-environment, calls for the establishment of monitoring systems, using information and communication technologies (ICT), to forecast and monitor the impact of natural and man-made disasters, particularly in developing countries, least developed countries and small economies;
- b) Resolution 34 (Rev. Doha, 2006) of the World Telecommunication Development Conference, on the role of telecommunications/ICT in early warning and mitigation of disasters and humanitarian assistance;
- c) that ITU-D Question 22/2 [studies resulted in ITU-D Report "Utilization of ICT for disaster management, resources and active and passive space-based sensing systems as they apply to disaster and emergency relief situations"](#);

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d) that ITU-R studies resulted in Report ITU-R RS.2178 “The essential role and global importance of radio spectrum use for Earth observations and for related applications”;

*noting*

a) that Earth observation applications are conducted under the Earth exploration-satellite (active and passive), meteorological satellite, meteorological aids and radiolocation services;

b) that some essential passive frequency bands are covered by No. ~~5.340~~;

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c) that certain frequency bands used by Earth observation applications have specific physical characteristics (e.g., spectral lines, propagation) that do not allow a migration to a different frequency.

*noting further*

a) 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 is important;

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b) 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;

c) that more than 90 per cent of natural disasters are climate- or weather-related;

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d

d) that some essential passive Earth observation operations currently suffer radio interference resulting in erroneous data or even complete loss of data;

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e) that, although meteorological and Earth observation satellites are currently only operated by a limited number of countries, the data and/or related analyses resulting from their operation are distributed and used globally, in particular by national weather services in developed and developing countries and by climate-change-related organizations,

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recommends administrations

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1 to recognize that Earth observation applications have economic and societal benefits as most of the data retrieved by these observations are used for applications to meteorology, climatology, environmental monitoring, agriculture, civil security and the protection of life and property;

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2 to take into account the radio-frequency requirements of Earth observation systems and, in particular, the protection and long-term availability of related frequency bands;

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3 \_\_\_\_\_ to consider the use of certain frequency bands by Earth observation applications prior to any decision potentially affecting these applications;

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4 \_\_\_\_\_ to recall their obligations under No. 5.340 of the Radio Regulations, which prohibits all emissions in the frequency bands listed in No. 5.340.

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**Reasons:** Noting the results of the ITU-R studies and related work completed in ITU-D, which led to approval of relevant recommendations and reports, the proposed recommendation completes the goal of increasing the recognition of the importance of radio spectrum use by Earth observation applications.

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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.¶  
instructs the Director of the Radiocommunication Bureau¶  
to include the results of these studies in his Report to WRC-11 for the purposes of considering adequate actions in response to *resolves to invite ITU-R* above, noting that neither new allocations nor additional protection would be objectives of such studies.¶  
invites administrations¶  
to participate actively in the studies by submitting contributions to ITU-R.¶

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