



Report ITU-R SM.2093-1
(09/2010)

Guidance on the regulatory framework for national spectrum management

SM Series
Spectrum management



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Foreword

The role of the Radiocommunication Sector is to ensure the rational, equitable, efficient and economical use of the radio-frequency spectrum by all radiocommunication services, including satellite services, and carry out studies without limit of frequency range on the basis of which Recommendations are adopted.

The regulatory and policy functions of the Radiocommunication Sector are performed by World and Regional Radiocommunication Conferences and Radiocommunication Assemblies supported by Study Groups.

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***Note:** This ITU-R Report was approved in English by the Study Group under the procedure detailed in Resolution ITU-R 1.*

Electronic Publication
Geneva, 2011

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(2007-2010)

TABLE OF CONTENTS

	<i>Page</i>
1 The international context	2
1.1 International principles governing spectrum use	3
1.2 Multilateral agreements	4
1.2.1 International Telecommunication Union (ITU)	4
1.2.2 Regional harmonization	5
1.2.3 Specialized international organizations	10
1.2.4 The World Trade Organization (WTO)	11
1.3 Standardization at the international, regional and national levels which might have implications on the regulatory framework for national spectrum management	12
1.3.1 The structure of international standardization	12
1.3.2 An example of standardization at a regional level: the structure of European standardization	12
1.3.3 The global level according to WTO rules	14
1.4 Multilateral agreements	14
2 The national context	15
2.1 Principles of national spectrum use	15
2.1.1 Rights and obligations with regard to the spectrum	15
2.1.2 Examples of possible approaches to management of national spectrum organization	17
2.1.3 Transparent management	18
2.1.4 Economic aspects	19
2.2 The linkage between international and national regulations	20
2.2.1 Allocations	20
2.2.2 Assignments	20
2.2.3 Authorizations (or licences)	21
2.2.4 Monitoring the spectrum	21
2.2.5 Interference	22
2.2.6 International representation	22

	<i>Page</i>
2.3 Factors affecting legal approaches.....	22
2.3.1 Objectives, scope of spectrum management	22
2.3.2 Legal framework, regulation.....	22
2.3.3 Geography, geopolitical environment.....	23
2.3.4 Society, administrative and legal culture	23
2.3.5 Level of economic development	23
3 Conclusion.....	24
Annex 1 – Possible approaches to management of national spectrum organizations.....	24
Annex 2 – Extract from the Handbook on National Spectrum Management Best practices for national spectrum management.....	38
Annex 3 – GATS: Article VI Domestic Regulation	40

1 The international context

The telecommunication sector, including radiocommunications, is organized internationally within the framework of the International Telecommunication Union (ITU), which provides the basic framework for the global coordination and management of the radio-frequency spectrum (see § 1.2.1). In between ITU and the national administrations, two other kinds of organizations, regional organizations and specialized international organizations, are also involved in spectrum management, at either regional or global level.

At the regional level, organizations have been founded that bring together administrations, in some cases associating industry or radiocommunication operators. Their aim is to establish common positions in preparation for ITU decisions, to harmonize national frequency allocations within the relatively flexible framework set by ITU so as to facilitate the coordinated introduction of new services, and to harmonize the standards and procedures for certification of equipment with a view to its free circulation and use in the countries concerned. This is the case in particular for the European Conference of Postal and Telecommunications Administrations (CEPT), and to a lesser extent for the Inter-American Telecommunication Commission (CITEL), the Asia-Pacific Telecommunity (APT) and the Arab Council of Ministers for Telecommunication and Information, which in pursuing these objectives intend to promote the emergence of regional markets and hence to accelerate the development of radiocommunication services.

At the global and regional levels, specialized international organizations also exist in sectors of activity that use radiocommunications and are therefore dependent on spectrum availability: civil aviation, the maritime sector, meteorology, broadcasting, radio amateurs, radio astronomy and research. Section 1.2.3 contains an overview of those organizations, which have close ties with ITU.

The World Trade Organization, within the framework of the General Agreement on Trade in Services (GATS) (see § 1.2.4), while recognizing the sovereign right of States to manage the frequency spectrum in terms of their own objectives, works to develop the instruments required so that exercise of that right does not in fact result in barriers to trade in services between its members.

In this context, the establishment of standards at regional and global levels constitutes one of the fundamental means of promoting efficient and economical use of the spectrum and the development of radio services. Standardization is discussed in § 1.3.

1.1 International principles governing spectrum use

The radio-frequency spectrum is a non-depletable but limited natural resource available in all countries and in outer space. Since any transmitting radio station may cause harmful interference to spectrum uses on Earth or in space, the spectrum is a common resource of mankind that requires rational management by a treaty level agreement among all countries. In that spirit, ITU has been drawing up legal instruments for over a century, so that spectrum use is based on the following fundamental principles set forth in the ITU Constitution (CS):

- a) “while fully recognizing the sovereign right of each State to regulate its telecommunication...” (ref CS-1), “... to avoid harmful interference between the radio stations of different countries” (ref CS-11);
- b) “... to improve the use made of the radio-frequency spectrum for radiocommunication services and of the geostationary-satellite and other satellite orbits” (ref CS-12);
- c) to “facilitate the worldwide standardization of telecommunications, with a satisfactory quality of service” (ref CS-13), and “... to harmonize the development of telecommunication facilities, ... with a view to full advantage being taken of their possibilities” (ref CS-15);
- d) to “foster international cooperation and solidarity ...” (ref CS-14).

The ITU Radio Regulations (RR)¹ constitutes the principle regulatory framework within which States undertake to operate radio services and the basic tool for international spectrum use. They have international treaty status and are periodically reviewed (about every three years) by World Radiocommunication Conferences (WRC), which are attended by most ITU Member States.

The RR specify, *inter alia*, the frequency bands allocated to radio services and the regulatory conditions and procedures that administrations must follow for implementing radio stations providing those services. The guiding principle underlying all RR provisions is that new uses must avoid causing harmful interference to the services provided by stations using frequencies assigned to them in accordance with the RR and recorded favourably in the Master International Frequency Register (MIFR).

The RRs, as drawn up by successive WRCs in the past years, aims to allow each country the greatest possible flexibility with regard to spectrum use. In particular, the Table of Frequency Allocations (RR Article 5) authorizes several radiocommunication services in each band; those services are not necessarily compatible locally, but each country can select those it wishes to implement on its territory. The RR’s regulatory provisions and procedures then enable each country to coordinate, as required, the stations providing the services selected with those of other countries that may be affected, thus maximizing the efficient utilization of the spectrum.

This relatively flexible framework has the advantage of respecting the wide range of countries’ spectrum needs and their sovereign right to meet those needs as long as it does not place undue constraints on other countries. It has the disadvantage of limiting economies of scale and the capacity for interoperability required to develop radiocommunications, in particular within the framework of worldwide services or those intended for the general public (e.g. mobile telephony, satellite broadcasting). For this reason, a major effort has been made in the past years to harmonize

¹ In the following text, the acronym RR when using the singular refers to the document itself (the ITU Radio Regulations).

spectrum use at regional, or even global level, in particular with regard to mobile telephony. The activity towards harmonization has been to identify specific frequency bands for applications, corresponding to specific standards (see § 1.2.2 and 1.3). The purpose of this harmonization is to increase economy of scales and decrease interference and incompatibilities.

1.2 Multilateral agreements

1.2.1 International Telecommunication Union (ITU)

The agreements, which in fact are a treaty binding the Member States within the framework of ITU, lay the foundation for spectrum management worldwide. ITU international agreements recognize that utilization of the radio-frequency spectrum is a matter of State sovereignty, but that to be efficient it must be regulated. They are the basic global instruments with which, States, in ratifying such a work, undertake to respect common rules for sharing and using the spectrum, the goal being efficient utilization and equitable access.

The ITU instruments relevant to spectrum management are the Constitution (CS), the Convention (CV) and, mainly, the Radio Regulations (RR). These instruments are only binding on the Member States among themselves.

Article 6 No. 37 of the CS states “The Member States are bound to abide by the provisions of this Constitution, the Convention and the Administrative Regulations in all telecommunication offices and stations established or operated by them which engage in international services or which are capable of causing harmful interference to radio services of other countries, except in regard to services exempted from these obligations in accordance with the provisions of Article 48 of this Constitution”.

And further, No. 38 of the same article states “The Member States are also bound to take the necessary steps to impose the observance of the provisions of this Constitution, the Convention and the Administrative Regulations upon operating agencies authorized by them ...”

Compliance with these instruments therefore presupposes that each State may also take, to the extent outlined above, the measures necessary (legislation, regulations, clauses in licences and authorizations) to extend into the domestic regime the obligations of such instruments to other spectrum users (operators, administrations, individuals, etc.).

1.2.1.1 The ITU Constitution: General organization and basic principles

The Constitution is the basic instrument of the Union. It deals essentially with matters of organization, Article 4 (CS 31) giving the RR international treaty status and Chapter II dealing with the Radiocommunication Sector. It also sets forth the basic principles for spectrum management, in particular in Article 1 (purposes of the Union), Nos. 11 and 12, and Chapter VII.

Thus, each State is free to regulate radiocommunications as it sees fit, provided it does not interfere with the rights of other States. Those rights, and their respective priority, are defined in the RR.

In that context, the Constitution entrusts ITU’s Radiocommunication Sector (ITU-R) with the task of ensuring “rational, equitable, efficient and economical use of the radio-frequency spectrum by all radiocommunication services” (CS-78).

1.2.1.2 The ITU Convention: A complement to the Constitution

The Convention essentially complements the Constitution in terms of how the Union’s institutions function. In particular, § 5 describes the functioning of the Radiocommunication Sector, *inter alia*, the study groups, the Radiocommunication Bureau (BR) and the Radio Regulations Board (RRB), all of which play a major role in international spectrum management: the study groups develop Recommendations and reports that are recognized worldwide (only Recommendations incorporated

by reference into the RR are binding); the BR manages (initiating procedures, verifying compliance with the rules, registering assignments thus establishing priorities) requests for usage rights made by the States; and the RRB approves when needed the Rules of Procedure to be used by BR in applying the Radio Regulations and examines any problem concerning the application that cannot be resolved by applying those Regulations.

1.2.1.3 The Radio Regulations (RR)

The RR contains detailed provisions on frequency use. They are the basic treaty document establishing the relative rights of States when differing uses may give rise to mutual interference. The RR specifies, in particular, compiled in relative Articles and Appendices, among other regulations:

- the Table of frequency allocations for the different radio services and their relative status (Article 5). The table was drawn up with a view to allowing each frequency band to be shared by a maximum number of services whose operation by the countries concerned is considered to be compatible, if necessary through coordination;
- the maximum values of the power radiated by the radio stations (Articles 21 and 22) and the regulatory procedures (Articles 9, 11, 12) for ensuring compatibility through coordination and notifications;
- for certain services in certain bands, the Plans giving each country guaranteed access to the spectrum for the operation of those services, in particular mobile services (Appendices 25, 26 and 27), HF broadcasting (Article 12), satellite broadcasting (Appendices 30 and 30A), and fixed-satellite service (Appendix 30B) and recently the Plans emanating from the Regional Radiocommunication Conference (RRC-06);
- the methods and technical criteria for determining whether the implementation of a radio station calls for coordination with other administrations (Appendices 4, 5, 7 and 8);
- various administrative provisions, including Article 18 which requires each Member State to grant a licence to any transmitting station to be operated by any private person or any enterprise.

The principle underpinning all these provisions is set forth in RR No. 4.3, which stipulates that any new assignment (i.e. any new authorization to operate a radio station) must be made in such a way as to avoid causing harmful interference to services rendered by stations using frequencies assigned in accordance with the Table of Frequency Allocations (Article 5) and the other provisions of the Radio Regulations, the characteristics of which are recorded in the Master International Frequency Register (MIFR).

In particular, a new assignment can only be recorded in the MIFR with a favourable finding after completion of a procedure (for instance, Articles 9 and 11) aimed at ensuring that it will not cause harmful interference to assignments made in accordance with the RR and previously recorded.

1.2.2 Regional harmonization

This section gives an overview of regional activities.

1.2.2.1 APT

The Asia Pacific Telecommunity² comprises 32 Member States along with Associate Members and Affiliates. It commenced its activities in 1979 and has a mandate, amongst other matters, to develop regional cooperation in areas of common interest, including radiocommunications and standards development.

² <http://www.aptsec.org> (11/2003).

The APT works to harmonize the views of its member states on radio spectrum use and management, particularly in terms of proposals to ITU WRC, but does not have a mandate to undertake a wider spectrum management or regulatory role in the region. Harmonization of WRC proposals is undertaken through a preparatory group (APG) in a way that recognizes the agenda items of the particular WRC.

Other harmonization on a voluntary approach may be undertaken on specific matters from time to time as required. For example IMT services in the area are being harmonized through the APTIF forum, and telecommunications standards are addressed through ASTAP, both part of the APT organization.

1.2.2.2 The Arab Council of Ministers for Telecommunication and Information

This Council is the supreme organ in the League of Arab States (LAS) dealing with telecommunication, information and postal services for the Arab world. It comprises the 21 Member States of the League. The Council created permanent Committee and permanent groups for different activities, reporting directly to its executive branch, composed of seven ministers by election and meeting twice a year in order to prepare the work for the whole council.

Among the permanent groups is the Arab Spectrum Management Group (ASMG).

1.2.2.2.1 ASMG

The ASMG was created by the Arab Council of Ministers in 2001 as a permanent group mandated with the following main tasks:

- a) Exchange experiences on:
 - National planning of the spectrum allocation and national procedures for assignments.
 - Technical means to monitor the use of the spectrum, including the collaboration for this monitoring.
 - Resolving incompatibilities in the use of the radio spectrum, through the application of the RR.
- b) Exchange of recognized national specialization and type approval procedures for radio equipment in order to harmonize and unify such specializations and approved them as far as possible.
- c) Propose efficient and rationalized means for the use of the spectrum in order to meet the spectrum needs for the Arab States.
- d) Unify national spectrum management legislation among Arab States for the use of the radio equipment.
- e) Coordinate Arab States position vis-à-vis all conferences dealing with the radio spectrum, in particular for WRC and RRCs, in order to establish common proposals and positions depending the interest of the Arab States.
- f) Collaborate efficiently with groups, and participate actively in spectrum coordination meetings of such groups.
- g) Encourage the use of modern means for notification and recording of the spectrum including the adoption of common software for such aim.
- h) Coordinate Arab States positions in ITU-R Study Groups, as well as for the RAG and the Special Committee and the follow up of the RRB activities.
- i) Any other tasks assigned by its executive branch or by the Council of Ministers.

1.2.2.3 Rules on spectrum use and CEPT

The European Conference of Postal and Telecommunications Administrations³ (CEPT) comprises 46 European administrations. In the 1990s, it opened a permanent office in Copenhagen (ERO, European Radiocommunications Office) that provides support for CEPT activities, especially the dissemination of information (working papers, publications, conferences), and preparatory work (questionnaires, tables, studies).

Following the merging of the radio (ERC) and telecommunication (ECTRA) committees in the autumn of 2001, CEPT has two current committees, the Electronic Communications Committee (ECC) and the other on postal matters (CERP). CEPT activities are conducted mainly by the committees and decisions are usually adopted by consensus. Those decisions are not binding, however, and all CEPT activities are based on a voluntary approach. The experience of the past ten years has shown that most CEPT decisions are implemented by a large majority of the members, even though they are not binding, and even if some administrations have not signed the decisions in question. This is true of most important matters (UMTS, S-PCS) and has also been observed at WRCs, where joint European positions enjoy the broad support of the European countries.

In the field of radiocommunications, CEPT deals mainly with spectrum management, spectrum engineering and regulatory questions within three working groups. They have a shared objective to define frequency use in Europe on the basis of the RR. This is done one level of detail up from the global level, which greatly facilitates the work of national administrations. The groups' output can be obtained on ERO's website⁴.

A major study has been carried out since 1993 within the framework of the Detailed Spectrum Investigation (DSI) project in order to forecast trends in spectrum organization. The final phase was completed in early spring 2001. The study led to the adoption of the European Common Allocation Table (ECA) of ERC Report 25, available on ERO's website.

CEPT decisions designate frequency bands, conditions of use, and, if necessary, the conditions for sharing and the schedule of band availability for the services, applications and systems concerned. Each decision also lists the national administrations that implement it. CEPT decisions are adopted by consensus among the European administrations and are not binding. Their implementation is therefore the responsibility of the national authorities only.

Certain CEPT decisions refer to the European Telecommunications Standards Institute⁵ (ETSI) standards. These are non-binding reference documents used to prepare decisions and required for their application (trials, masks, etc.). CEPT and ETSI have signed a memorandum of understanding with a view to guaranteeing the compatibility of their activities. A detailed description of the organization of standardization is given in § 1.3.

CEPT has also signed a memorandum of understanding with the European Commission in order to coordinate its activities with those of the Commission.

1.2.2.3.1 Radio-frequency spectrum regulation and the EU

The European Union (EU) has general competence for spectrum policy since the adoption of the Radio Spectrum Decision 676/2002/EC by the Council and the European Parliament in March 2002. This decision is part of the new EU regulatory framework for electronic communications. The Decision establishes a cooperation mechanism through the Radio Spectrum Committee (RSC), which allow the European Commission (EC) to address mandates to CEPT on the harmonization of frequency use. The Radio Spectrum Committee (RSC) has the status of

³ <http://www.cept.org> (11/2003).

⁴ <http://www.ero.dk> (11/2003).

⁵ <http://www.etsi.org> (11/2003).

a committee of Member States and is chaired by the European Commission under the Spectrum Decision. The RSC's purpose is to assist the Commission in the development and adoption of technical implementing measures aimed at harmonizing the conditions for the availability and efficient use of radio spectrum, as well as ensuring the availability of information related to the use of radio spectrum. The EU Decision replaces the case by case approach applied before and which governed frequencies covering mainly two fields: mobile communications (second and third generations, known as GSM and UMTS respectively) and S-PCS (satellite personal communications services).

A consultative group, the Radio Spectrum Policy Group (RSPG) established under a separate Commission Decision with representation of high level governmental experts from Member States, advises the Commission on radio spectrum policy issues, including radio spectrum availability, harmonization and allocation of radio spectrum, provision of information concerning allocation, availability and use of radio spectrum, methods for granting rights to use spectrum, refarming, relocation, valuation and efficient use of radio spectrum as well as protection of human health. RSPG consults extensively with stakeholders (CEPT, ETSI), both commercial and non-commercial, as well as with any other interested parties, in full transparency.

In addition to the regulations on communication services, the EU has adopted the Radio and Telecommunications Terminal Equipment Directive (R&TTE) in 2001, making the free circulation of such equipment mandatory. The R&TTE Directive also imposes transparency and the publication of information on radio interfaces and national frequency allocation tables. Although the R&TTE Directive applies only to equipment, it has a definite impact on spectrum management, imposing a high degree of harmonization among EU countries.

The European Union finalized the establishment of a regulatory framework for strategic planning and the harmonization of spectrum use within the Union⁶ with the following objectives:

- to establish a framework of procedures to ensure effective implementation of radio-frequency spectrum regulations throughout the EU;
- to ensure that information on radio spectrum use is provided in a timely and coordinated manner and that it is available throughout the EU;
- to protect EU interests in international negotiations when modification to the use of the radio spectrum could affect EU policy.

1.2.2.3.2 European sector organizations

Three organizations must be mentioned: ESF-CRAF, Eurocontrol and EBU, dealing respectively with astronomy, civil aviation and broadcasting.

The European Science Foundation (ESF) represents all fields of science. It established a committee on the sciences of engineering and physics, which includes the Committee on Radio Astronomy Frequencies, or CRAF⁷. CRAF has observer status with CEPT and cooperates on CEPT issues that are relevant to its members' activities.

Eurocontrol⁸ manages air traffic in European air space (38 countries). Because of the huge rise in traffic, special efforts have been made to keep average delays below 3.5 min per flight while maintaining the required safety levels. That objective calls for efficient communication and hence the availability of frequencies in good conditions.

⁶ http://europa.eu.int/information_society/topics/telecoms/radiospec/radio/index_en.htm (11/2003).

⁷ <http://www.esf.org> and <http://www.astron.nl/craf> (11/2003).

⁸ <http://www.eurocontrol.int>.

The European Broadcasting Union (EBU⁹) is an association of national broadcasters; it has 69 Members in Europe, North Africa and the Near East, and 45 Associate Members in 28 non-European countries. It provides a series of operational, technical, commercial, legal and strategic services (broadcasting rights for major sports events, management of Eurovision and Euroradio networks, programme exchanges, the promotion and coordination of co-productions). Cooperation on technical matters is one of its main activities, and to that end it set up a technical committee, the Broadcast system Management Committee (BMC), which has two principal tasks, one concerning new broadcasting systems, the other spectrum planning and management. The BMC has been a driving force for and furthered the development of digital audio broadcasting (DAB) and digital video broadcasting (DVB). CEPT and the EBU are cooperating, for example, on preparations for two DAB and DVB planning conferences in Europe. At the international level, EBU works with sister unions in other parts of the world (ABU in Asia, NABA in North America, URTNA in Africa, ASBU in the Arab States and OTI in Latin America)¹⁰.

1.2.2.4 CITEL

1.2.2.4.1 Introduction to CITEL Organization¹¹

The Inter-American Telecommunication Commission (CITEL), an entity of the Organization of American States, is the main Forum in which the governments and the private sector meet to coordinate regional efforts to develop the Global Information Society according to the mandates of the General Assembly of the Organization and the mandates entrusted to it by Heads of State and Government at the Summits of the Americas.

CITEL endeavours to make telecommunications a catalyst for the dynamic development of the Americas by working with governments and the private sector. Under the auspices of the Organization of American States, it resides in Washington, DC, USA. It has 35 Member States and over 200 Associate Members.

1.2.2.4.2 CITEL Structure and Committees

The CITEL structure, beyond the CITEL Assembly, is based on a committee organization:

- Permanent Executive Committee (COM/CITEL).
- Permanent Consultative Committee I: Telecommunication Standardization (PCC I).
- Permanent Consultative Committee II: Radiocommunication including Broadcasting (PCC II).
- Steering Committee.
- Conference Preparatory Working Group.

The CITEL Committee directly related to spectrum issues is the PCC II – Radiocommunication including Broadcasting, which objective is to act as a technical advisory body within the Inter-American Telecommunication Commission with respect to the coordination and harmonization of standards related to spectrum use and the planning and efficient use of the radio-frequency spectrum and satellite orbits for radiocommunication services, including broadcasting.

⁹ <http://www.ebu.ch>.

¹⁰ <http://www.abu.org.my>; www.nabanet.com; www.asbu.org.tn; www.urtna.org; www.esmas.cpm/oti/.

¹¹ <http://www.citel.oas.org> (11/2003).

The PCC II mandates, in accordance with the ITU Radio Regulations and taking into account ITU Recommendations, are:

- a) to promote among Member States harmonization in the utilization of the radio-frequency spectrum and the operation of radiocommunication services, including broadcasting, in all their different modalities, bearing especially in mind the need to prevent and avoid, to the extent possible, harmful interference between the different services;
- b) to stimulate and foster the development of radiocommunication services, including broadcasting, in the region;
- c) to promote the development and implementation of modern technologies and new radiocommunication services, including broadcasting, specifically their technical and operational aspects, to meet the needs of Member States;
- d) to undertake the coordination of regional preparations for ITU World and Regional Radiocommunication Conferences, including the preparation of Inter-American Proposals (IAPs) and common positions, as well as to undertake inter-regional consultations in preparation for these conferences;
- e) to undertake a coordinated effort with the different CITEU groups in those areas that, by their very nature lend themselves to joint action;
- f) to undertake the coordination and harmonization of standards related to spectrum use such as over-the-air broadcasting and common air-interfaces for radiocommunication services.

1.2.3 Specialized international organizations

1.2.3.1 Organizations using government radio frequencies

These are in principle United Nations specialized organizations. The activities concerned are aviation, marine and weather surveillance activities requiring a high level of coordination and harmonization in spectrum at world level with a view to guaranteeing the safety of life and property. It is inconceivable that these organizations should have conflicts with ITU, and the spectrum allocated to the services used by them is well recognized in the RR. These specialized organizations are ICAO, IMO and WMO.

The Convention establishing the International Civil Aviation Organization (ICAO)¹² was signed in Chicago on 7 December 1944 and has been ratified by 185 States. Spectrum access is a prerequisite for this sector, whose growth has consistently been above average.

The Convention establishing the International Maritime Organization (IMO)¹³ was signed in 1958. IMO has 158 Member States. In 1960 the Member States adopted the International Convention for the Safety of Life at Sea (SOLAS). Advances in communication technology have enabled IMO to make substantial improvements to the Global Maritime Distress and Safety System (GMDSS), which was introduced in 1992 and became fully operational in February 1999. The radio spectrum is obviously a key resource for IMO, for the development of the GMDSS and for the transition from analogue to digital technology.

The World Meteorological Organization (WMO)¹⁴ has 185 Member Organizations and provides the authoritative scientific voice on the state and behaviour of the Earth's climate and atmosphere. WMO's goal is to facilitate international cooperation in the establishment of networks of stations for making meteorological, hydrological and other observations. The World Weather Watch (WWW), whose telecommunication system comprises four polar-orbiting and five geostationary

¹² <http://www.icao.int> (11/2003).

¹³ <http://www.imo.org> (11/2003).

¹⁴ <http://www.wmo.ch> (11/2003).

satellites, about 10 000 land observation and 7 000 ship stations, is the backbone of its activities. The data collected by the system are disseminated to countless organizations throughout the world and are essential for numerous activities such as the provision of energy and water, garbage collection and public transport, agriculture and civil aviation. The means of observation also include radar using radio frequencies and telecommunications.

1.2.3.2 Organizations using frequencies for non-governmental services

This second category comprises radio amateur and radioastronomy organizations.

Because it uses an international natural resource – the radio spectrum – amateur radio must organize nationally and internationally for better mutual use of the radio spectrum among radio amateurs throughout the world, to develop amateur radio worldwide and to successfully interact with the agencies responsible for allocating and managing radio frequencies. The International Amateur Radio Union (IARU)¹⁵ has been the watchdog and spokesman for the world amateur radio community since 1925. The IARU Constitution, last amended in 1989, organizes IARU into three regional organizations that correspond to ITU-R's three Regions (1, 2, 3).

The International Astronomical Union (IAU) was founded in 1919. Its mission is to promote and safeguard the science of astronomy in all its aspects through international cooperation. Its individual members are professional astronomers all over the world. With over 8 300 individual members and 66 Adhering Countries, IAU plays a pivotal role in promoting and coordinating worldwide cooperation in astronomy. The IAU is co-sponsor, along with the Union Radio Science International (URSI) and the Committee on Space Research (COSPAR) of the Scientific Committee on Frequency Allocations for Radio Astronomy and Space Science (IUCAF)), which represents the interests of radio astronomy at ITU-R, where it is a Sector Member.

1.2.4 The World Trade Organization (WTO)¹⁶

The General Agreement on Trade in Services (GATS)¹⁷ recognizes the sovereign right of member states to regulate, and to introduce new regulations, on the supply of services within their territories in order to meet national policy objectives. That right should take into consideration Article VI (see Annex 3) and other relevant GATS provisions, notably in terms of transparency and timing.

The GATS applies to the national spectrum management process and to the attribution of licences. As stipulated in Article VI (see Annex 1), the sovereign right of each WTO member to manage frequencies should be administered in a “reasonable, objective and impartial manner” and should not nullify or impair specific commitments.

The members who have made an additional commitment under the Reference Paper on regulatory principles are bound by that text, which stipulates that when it comes to allocating scarce resources, the procedure followed should be objective, timely, transparent and non-discriminatory. The GATS, nevertheless, recognizes that spectrum management policy, if implemented in conformity with that provision, does not of itself constitute a hidden barrier to trade.

In the framework of the new round of negotiations on trade in services started in 2000, a working group has been established to develop a code of required conduct so that measures affecting licensing and procedural demands, technical standards and the requirements and procedures for qualification do not constitute pointless barriers to trade in services. This code of conduct is intended to replace the regulatory principles mentioned in the preceding paragraph. Such a code should not conflict with the principles of the RR.

¹⁵ <http://www.iau.org> (11/2003).

¹⁶ <http://www.wto.org>.

¹⁷ http://www.wto.org/english/docs_e/legal_e/26-gats.pdf.