



ITU activity for Space Science

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First human space flight

- Gagarin's flight April 12, 1961 - the Vostok 1 capsule
- Lasted 108 minutes for a single orbit around the Earth.

"I see Earth! It is so beautiful!"



UN and space monitoring

- “United Nations agencies have acknowledged the importance of spacebased technologies for monitoring the Earth’s climate system” (B.Ki-Moon, UN SecGen)
- WSIS action plan: Establish monitoring systems, using ICTs, to forecast and monitor the impact of natural and man-made disasters.



ITU Overview

191 Member States
+700 Sector Members

ITU

Helping the World Communicate

ITU-T

Telecommunication
standardization of
network and service
aspects



ITU-D

Assisting implementation
and operation of
telecommunications in
developing countries

ITU-R

Radiocommunication
standardization and
global radio spectrum
management

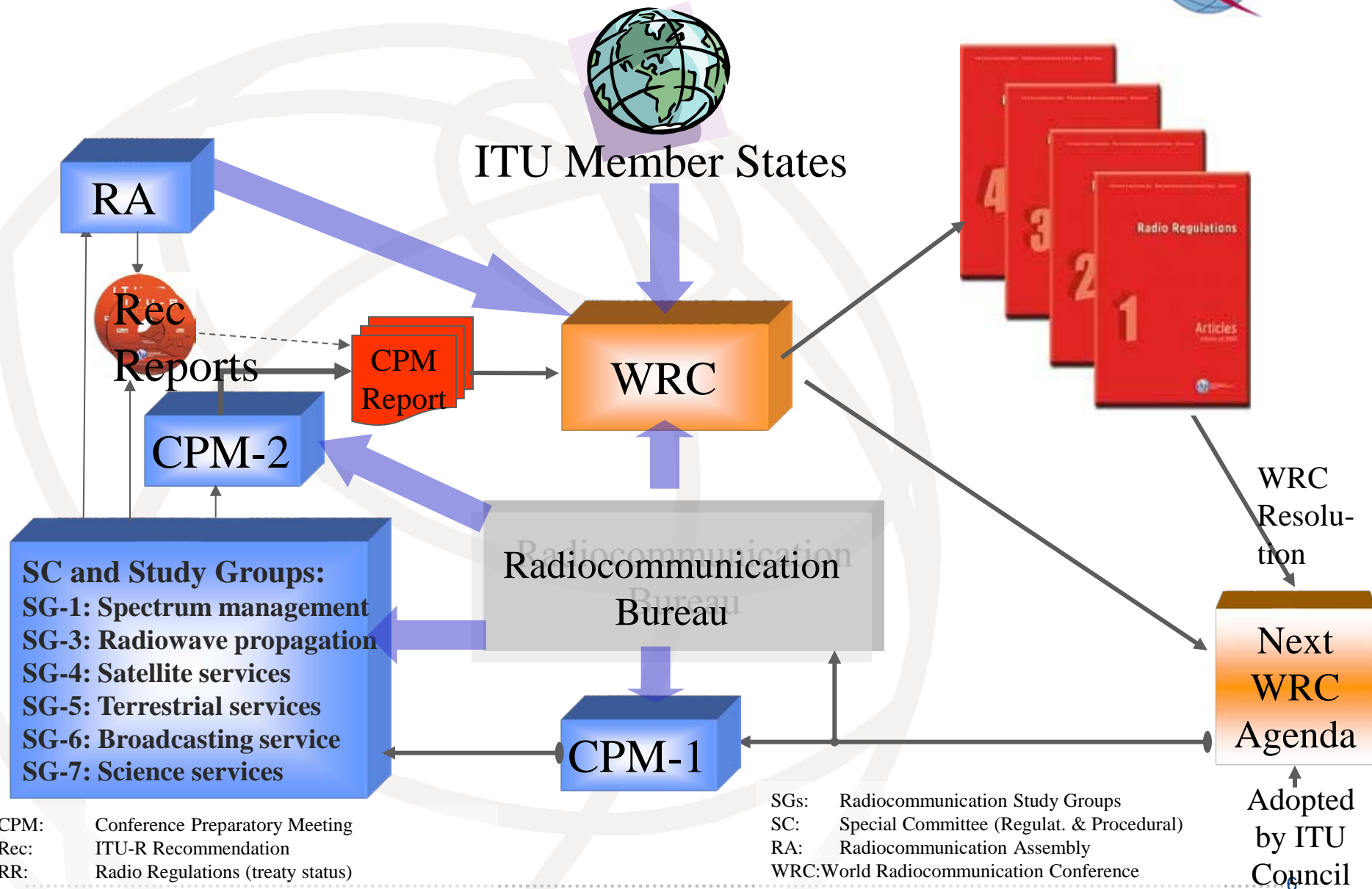
ITU-R

The strategic goal of ITU-R

- To ensure interference-free operations of radiocommunication systems by implementing the Radio Regulations
- To establish Recommendations intended to assure the necessary performance and quality in operating radiocommunication systems
- to ensure the rational, equitable, efficient and economical use of the radio-frequency spectrum and satellite-orbit resources

The WRC Cycle

Committed to Connecting the World



CPM2-11

- 14-25.02.11, 1101 participants, 109 Member States and 69 ITU-R Sector members
- long-range lightning detection systems in frequencies below 20 kHz
- new allocation of the band 7750-7850 MHz for meteorological satellite systems

CPM2-11

- additional spectrum between 275 GHz and 3000 GHz for Earth exploration satellite service.
- inclusion of a new provision in the RR urging administrations to duly recognize the importance of Earth observation;
- radiolocation allocations in the range 3-50 MHz for oceanographic radars

CPM2-11

- Draft Mod Resolution “Principles for the allocation of frequency bands”

New considering

“that ITU should promote the introduction of new applications to address issues such as emerging technologies, climate change(e.g. collection of Earth observation data), disaster management and other socio-economic matters”

- **WRC**-Geneva, 12-23 Jan-17 Feb 2012

ITU-R Study Groups

Services	Task	SG
Meteorological Earth exploration-satellite	Weather and climate prediction. Detection and tracking of earthquakes, tsunamis hurricanes, typhoons, forest fires, oil leaks etc. Providing warning information. Assessment of damage and providing information for planning relief activities	7
Amateur	Receiving and distributing alert messages Assisting in organizing relief operations in areas	5
Broadcasting	Disseminating alert messages, coordination of relief activities and advice to public	6
Fixed	Delivering alert messages and instructions to telecommunication centers , exchange of information between different teams/groups for planning and coordination relief activities	4,5
Mobile	Distributing alert messages, exchange information and advice to individuals and/or groups of people involved in relief activities	4,5

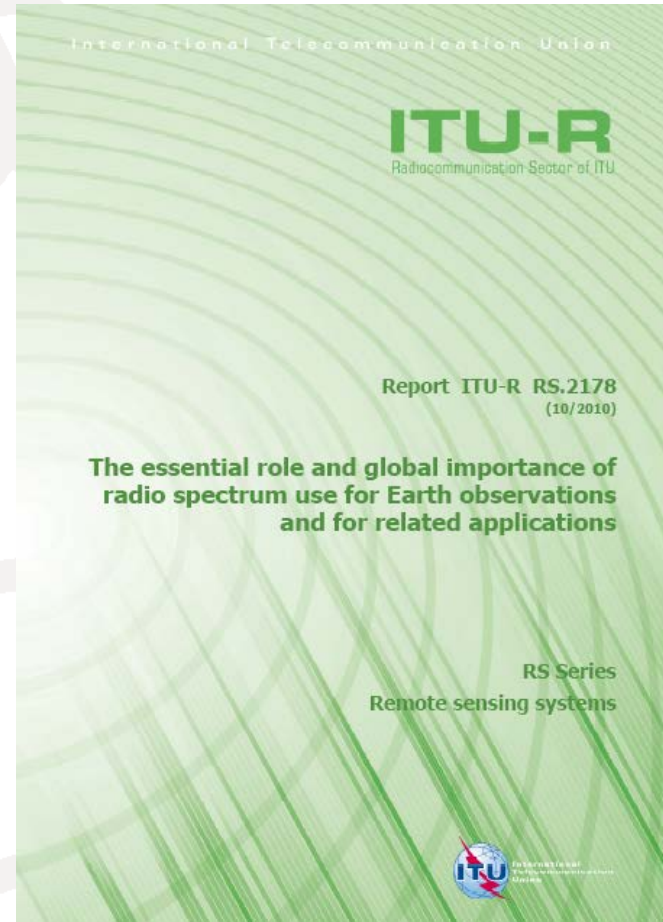
ITU-R SG 7

	WP 7B	WP 7C	WP 7D
Services	EESS, Metsat, SRS, SOS		RA
	Bus	Sensors	
Study results	Series SA 48 Recs 13 Reports Handbook	Series RS 30 Recs 15 Reports 2 Handbooks	Series RA 14 Recs. 8 Reports Handbook

<http://www.itu.int/ITU-R/index.asp?category=study-groups&mlink=rsg7&lang=en>

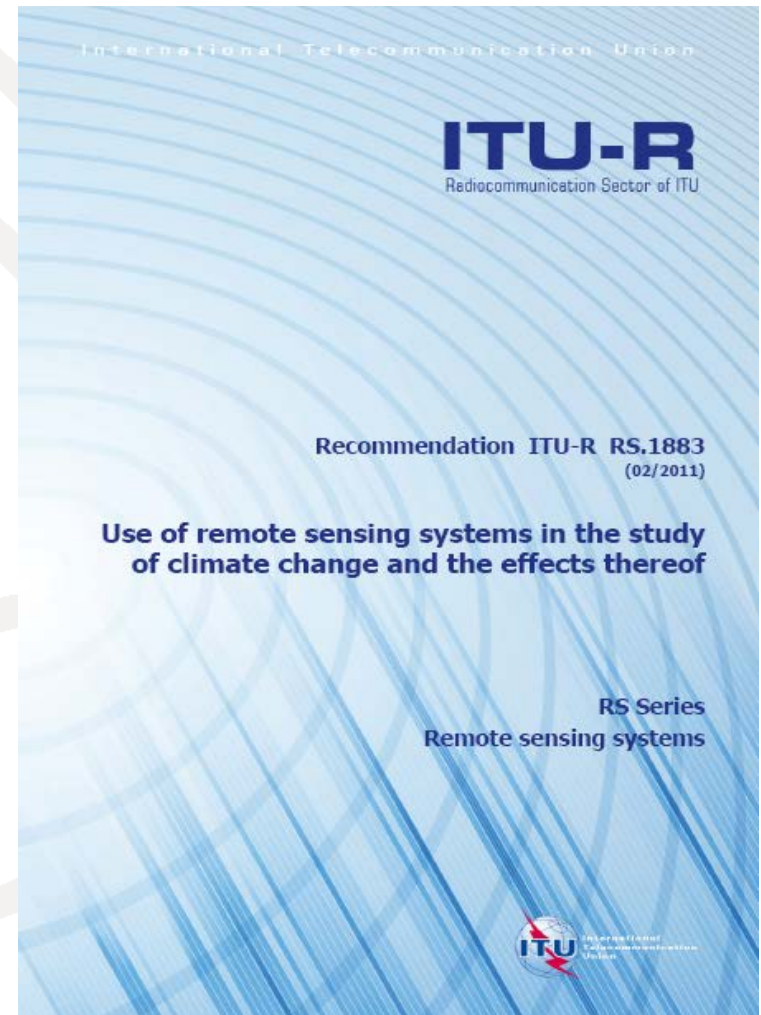
ITU-R SG7 highlights

- an extensive overview of the use of spectrum by Earth observation radiocommunication applications
- overview of solar radio monitoring applications
- benefits from spectrum use by the radio space service



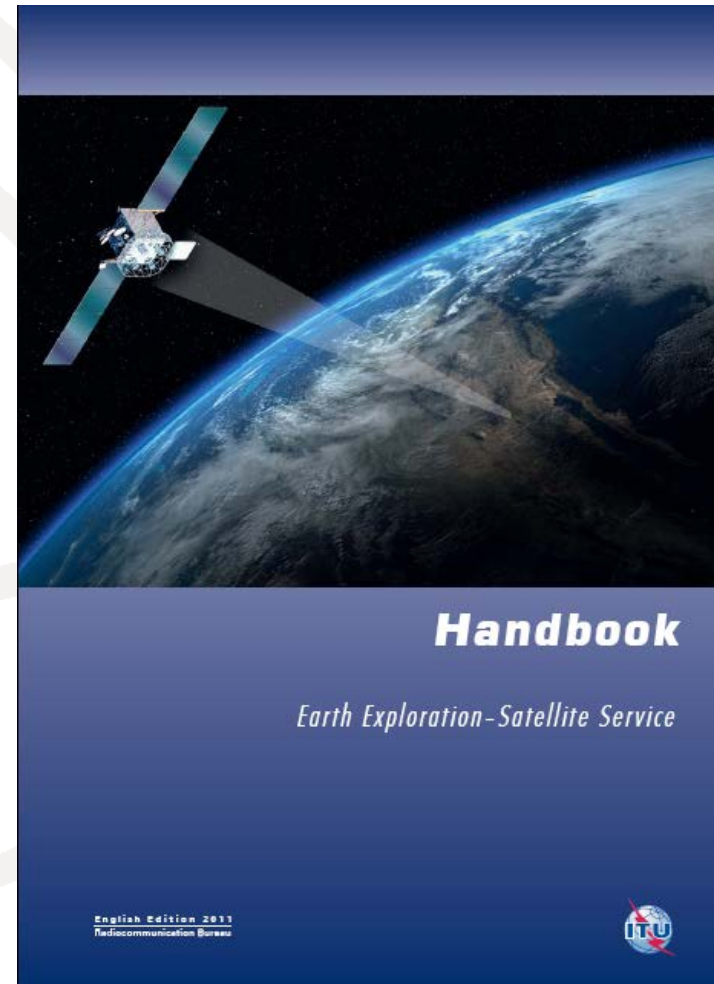
ITU-R SG7 highlights

- Guidelines on the provision of satellite-provided remote sensing data for the purpose of studying climate change
- summary of status of major climate variables and forcing factors



ITU-R SG7 highlights

- development of EESS systems. Basic definitions, technical principles and applications
- to assist administrations in spectrum planning, engineering and deployment aspects



ITU-R Notification activity

- International recognition of satellite systems derived from recording in Master International Frequency Register (MIFR)
- Recorded space science systems:
 - 50 Metsat systems
 - 140 earth exploration satellite systems



Questions?