

4th ITU Green Standards Week

Overview of ITU-T Study Group 5 Environment and Climate Change

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of ITU-T Study Group 5



ITU-T Study Group 5



Mandate

Lead study group for:

- environment and climate change;
- electromagnetic compatibility and electromagnetic effects
- resistibility and grounding.

ITU-T Study Group 5

Regional presence

Study Group 5
Regional Group
for the
Americas

Study Group 5
Regional Group
for **Asia and the
Pacific**



Study Group 5
Regional Group for
the **Arab Region**

Study Group 5
Regional Group
for **Africa**



ITU-T Study Group 5

Structure

Question 12
Terminology

5 Questions

WP1/5
Damage
prevention
and safety

7 Questions

WP3/5
ICT and climate
change

WP2/5

Electromagnetic fields:
emission, immunity and
human exposure

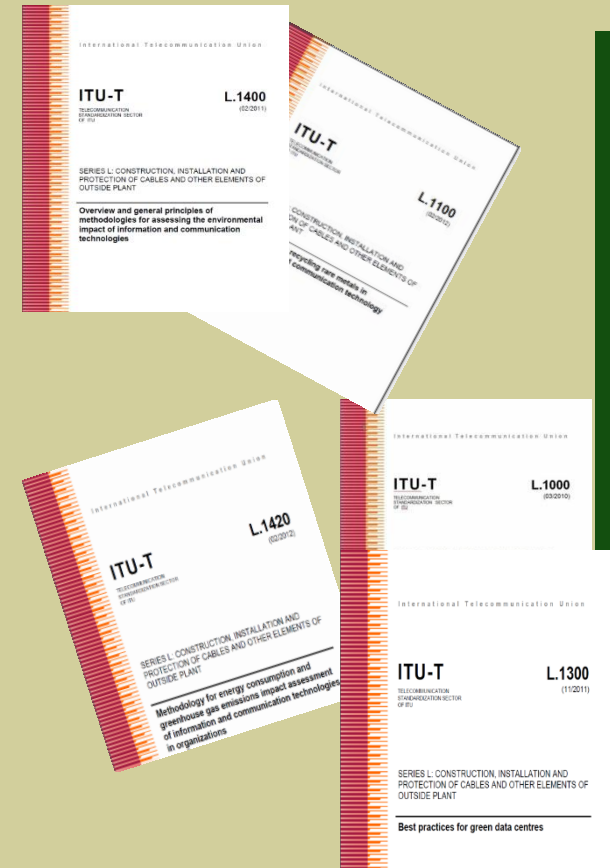
6 Questions



ITU-T Study Group 5

Tasks and objectives

- studying ICT environmental aspects of electromagnetic phenomena and climate change and protection of telecommunication networks and equipment from interference and lightning.
- studies related to electromagnetic compatibility (EMC), to safety and to health effects connected with electromagnetic fields produced by telecommunication installations and devices, including cellular phones.
- studies on methodologies for assessing the environmental impact of ICT, publishing guidelines for using ICTs in an eco-friendly way, tackling e-waste issues, and energy efficiency of the power feeding system.
- studies on how to use ICT to help countries and the ICT sector to adapt to the effects of environmental challenges, including climate change.
- It is also identifying the needs for more consistent and standardised eco-friendly practices for the ICT sector (e.g. labelling, procurement practices, eco-rating schemes for mobile phones)



Working Party 3/5: ICT and climate change

Work areas:

- Q13/5 - Environmental impact reduction including e-waste
- Q14/5 - Setting up a low cost sustainable telecommunication infrastructure for rural communications in developing countries
- Q15/5 - ICTs and adaptation to the effects of climate change
- Q16/5 - Leveraging and enhancing the ICT Environmental sustainability
- Q17/5 - Energy efficiency for the ICT sector and harmonization of environmental standards
- Q18/5 - Methodologies for the assessment of environmental impact of ICT
- Q19/5 - Power feeding systems



Highlights on deliverables



One adapter size
fits all

Recycling rare
metals in ICT
products



Green batteries

Highlights on deliverables

Climate change adaptation

- **New Recommendation ITU-T L.1500** - Framework for information and communication technologies (ICTs) and adaptation to the effects of climate change (*approved*)
- **Recommendation ITU-T L.1501** - on how countries can utilize ICTs to adapt to the effects of climate change (*consented*)
- **Recommendation ITU-T L.Infrastructure_Adaptation** - on adapting the ICT infrastructure to the effects of climate change (*under development*)
- **Recommendation ITU-T L.Cities_Adaptation** - on how ICTs can help cities to adapt to the effects of climate change (*under development*)



Highlights on deliverables

Best practices for green data centres

Recommendation ITU-T L.1300rev

- Best practices related to optimum design and construction;
- Efficient use and management of data centres, taking into account both power and cooling equipment.



For example, applying best practices to **cooling** could **reduce the energy consumption** of a typical data centre **by more than 50%**.

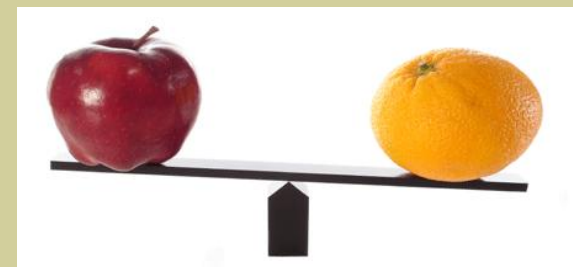


Highlights on deliverables

Energy efficiency measurement

Recommendation ITU-T L.1310rev

- Metrics and measurement methods defined for broadband wireline/wireless equipment and small networking devices
- These metrics allow for comparisons of equipment within the same class (e.g. equipment using the same technologies)



Highlights on deliverables

Common set of methodologies for the environmental assessment of ICT

- Without, it will be impossible to provide meaningful comparisons
- Helps to establish the business case to go green
- Developed in cooperation with UNFCCC, ETSI, EC and over 40 other organizations, etc..



Highlights on deliverables

Methodologies for cities, countries and organizations

- **Recommendation ITU-T L.1400** provides general principles
- **Recommendation ITU-T L.1410** complements ISO 14040 and ISO 14044 for Life Cycle Analysis of ICT Goods, Networks and Services
- **Recommendation ITU-T L.1420** complements ISO 14064-1 and GHG Protocol for the assessment of the impact of organizations from the ICT sector and the impact of ICT in all organizations
 - L.1410 and L.1420 have been successfully tested in the framework of the European Commission ICT pilots
 - L.1410 is currently being revised jointly with ETSI to take into account other feedback
- **Recommendation ITU-T L.1430** focuses on the impact of ICT projects
- **Recommendations L.ICT in cities and L.ICT in countries** are under development



Highlights on deliverables

Power Feeding Systems

Recommendation ITU-T L.1200 specifies direct current power feeding with interface direct current 260V to 400V at the power input to ICT equipment which can offer many potential benefits:

- simple power chain
- low maintenance
- modularity and power scalability
- high reliability
- high energy efficiency (gain of 5 to 20% energy consumption compared to different existing best in class powering solutions)
- low cost at same performance level



Importance of global standards

Work with us!

- **Promote a sound management of natural resources** – use less, cut e-waste, increase recycling, improve ICT products life-cycle
- **Improve the environmental performance of organizations and promote sustainability** – measure and cut GHG emissions, reduce energy consumption, improve energy efficiency, reduce energy costs
- **Reduce environmental risks and combat climate change** – monitor, mitigate and adapt to climate change, strengthen resilience of ICT infrastructure to climate change, improve disaster risk management capabilities



4th ITU Green Standards Week

- ITU-T and Climate Change
itu.int/ITU-T/climatechange
- ITU-T Study Group 5
itu.int/en/ITU-T/studygroups/2013-2016/05/Pages/default.aspx
- Symposia & Events on ICTs and Climate Change
itu.int/ITU-T/worksem/climatechange

Thank you

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