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Methodologies developed by ITU-T relatively to climate change

Jean-Manuel Canet
Rapporteur, Question on methodologies, ITU-T SG5

jean-manuel.canet@orange.com

The Paris Agreement in COP 21 : selected extracts (1/2)

- "Holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursue efforts to limit the temperature increase to 1.5 °C above pre-industrial levels" (Article 2, § 1)

- "Increasing the ability to adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emissions development" (Article 2, § 1)

The Paris Agreement in COP 21 : selected extracts (2/2)

- "Parties aim to reach global peaking of greenhouse gas emissions as soon as possible, recognizing that peaking will take longer for developing country Parties "

  (Article 4, § 1)

- "Each Party shall prepare, communicate and maintain successive nationally determined contributions that it intends to achieve" (Article 4, § 2)

- "Each Party shall communicate a nationally determined contribution every five years in accordance with decision 1/CP.21 (…)" (Article 9, § 9)

Development of ITU-T methodologies : a cooperative effort

- Mitigation purposes : Methodologies related to the assessment of footprint

- Adaptation purposes : framework, best practices, adapting infrastructure

ITU-T Energy and carbon footprint methodologies (1/2)

- **L.1400**- Overview and general principles
  - https://www.itu.int/rec/T-REC-L.1400

- **L.1410** - Environmental impact of ICT **goods, networks and services**
  - 2 Parts : cover **first order and second order effects of ICT**
  - **Revision 1 in force prepared jointly with ETSI**
  - https://www.itu.int/rec/T-REC-L.1410

- **L.1420** - Environmental impact of ICT in **organisations, published**
  - Includes 3 scopes of ISO 14064-1
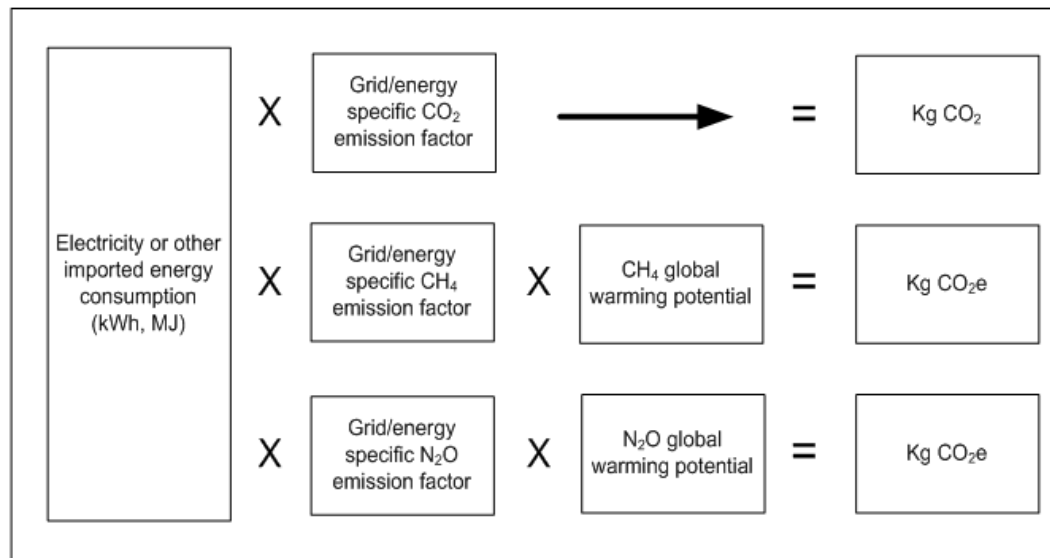 - Covers both ICT sector organisations and ICT in other organisations
  - https://www.itu.int/rec/T-REC-L.1420

ITU-T Energy and carbon footprints methodologies (2/2)

- **L.1430** Environmental impact of **ICT projects**
  - a complement to ISO standard ISO 14064-2 and the Project Protocol of the Greenhouse Gas Protocol (GHG Protocol)
  - it provides guidance for the application of a specific methodology to assess the environmental impact of information and communication technology (ICT) greenhouse gas (GHG) and energy project
  - https://www.itu.int/rec/T-REC-L.1430

- **L.1440** Environmental impact of **ICT in cities**
  - Part I relates to the first order effects from the use of ICT goods and networks in a city´s organizations and households.
  - Part II relates to the first and second order effects from ICT projects and services applied in the city.
  - https://www.itu.int/rec/T-REC-L.1440
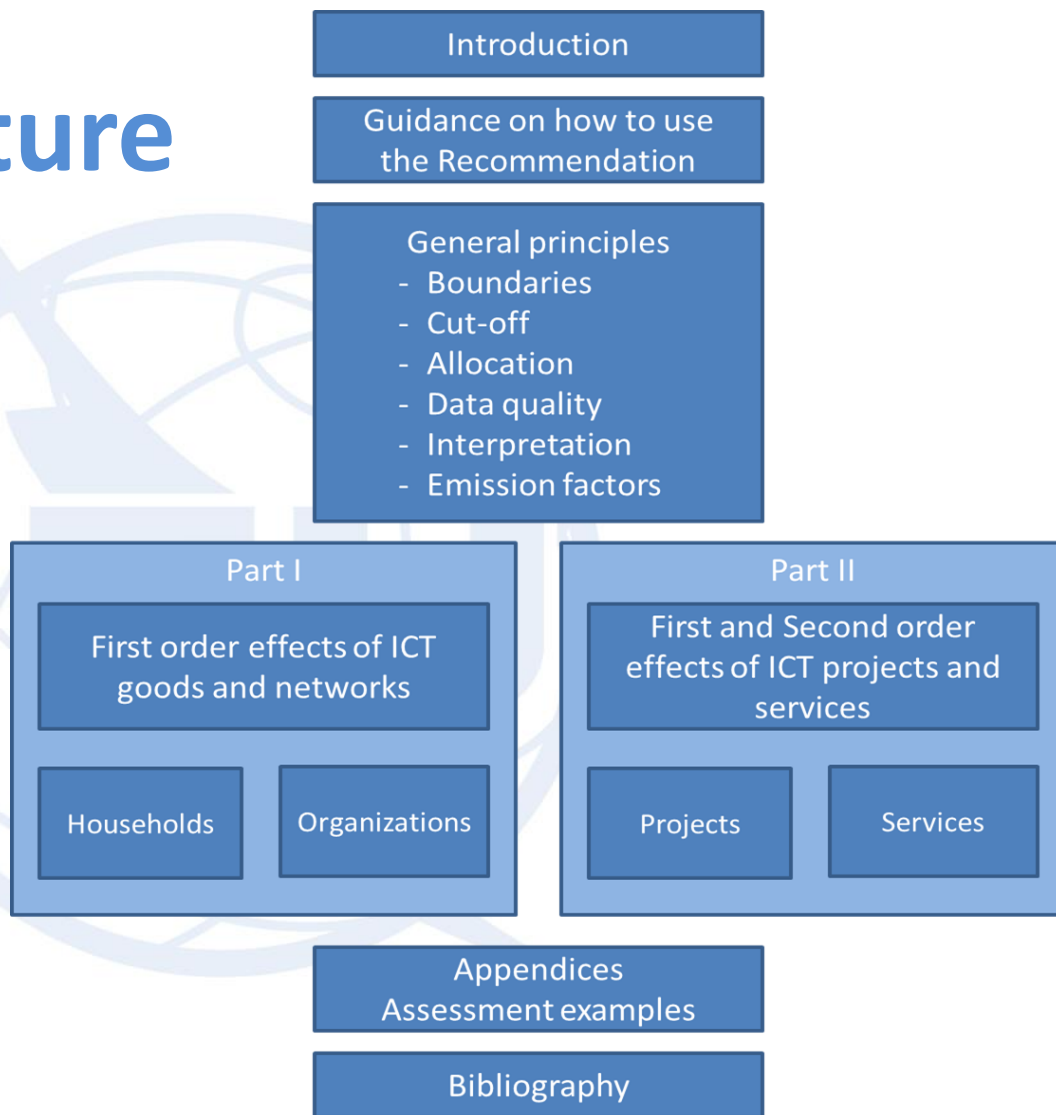
General principles

- Relevance
  - Select GHG sources, data and methods appropriate to the assessment of the GHG emissions of ICT activities and organizations.

- Completeness
  - Include all specified GHG emissions that provide a material contribution to the assessment of GHG emissions arising from products.

- Consistency
  - Enable meaningful comparisons in GHG-related information.

- Accuracy
  - Reduce bias and uncertainties as far as practicable.

- Transparency
  - The organization shall disclose the information sufficiently to allow a third party to make decisions with confidence.
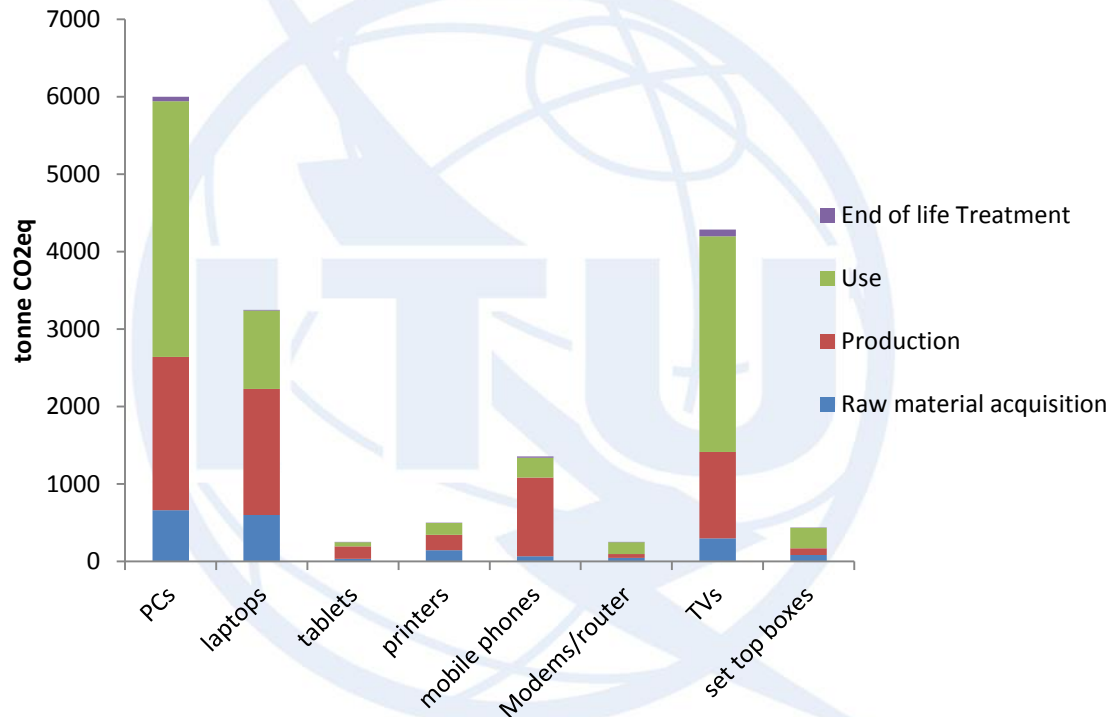
Quantification methodologies

GWP factors for GHG taken from IPCC Time frame of 100 years

L.1440 structure

Introduction

Guidance on how to use the Recommendation

General principles
- Boundaries
- Cut-off
- Allocation
- Data quality
- Interpretation
- Emission factors

Part I

First order effects of ICT goods and networks

Households

Organizations

Part II

First and Second order effects of ICT projects and services

Projects

Services

Appendices
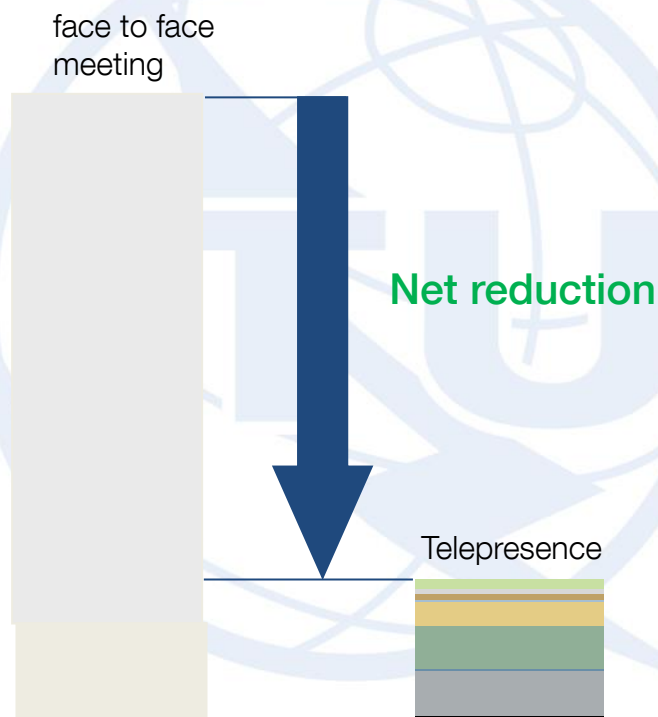Assessment examples

Bibliography

GHG Emissions in a city : example of results

Yearly city level life cycle GHG emissions related to ICT goods in all households, city with 77 500 inhabitants, Italy
source : Appendix I, L.1440

Example : GHG emissions lifecycle benefit of a Telepresence project

face to face meeting

Net reduction

Telepresence

source : Orange

Thanks for your attention