# Internet governance and the impact on the environment

# ELECTRONIC WASTE

- Refers to all items of electrical and electronic equipment (EEE) and its parts that have been discarded by its owner as waste without the intent of re-use (ITU)

- e-Waste contains harmful chemicals such as cathode rays, beryllium, barium, nickel, arsenic, lead and mercury

# ELECTRONIC WASTE

## SOME IS REUSED

In some cases, old electronics are reused, whether they are re-certified and resold or sent to developing countries for reuse. In some cases, electronics sent to developing countries for reuse are only used a short time and then dumped in areas that don't have proper hazardous waste facilities.

## E-WASTE IN LANDFILLS

Unfortunately, much of the e-waste ends up in landfills today. The toxic chemicals found in e-waste often leach into the ground or may be released into the air, impacting the environment and local communities.

## E-WASTE IS EXPORTED

It's common for e-waste to be exported to other countries, such as India and China, where e-waste scrap yards take care of the electronic waste.

# ELECTRONIC WASTE

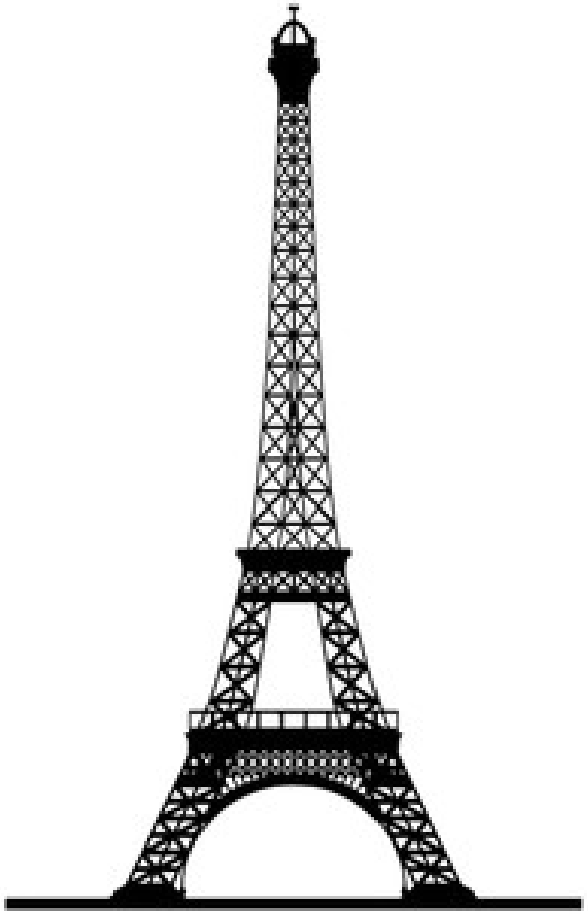
## E-WASTE IS INCINERATED

Some e-waste is incinerated, but this is problematic because it results in the release of heavy metals into the air.

## E-WASTE IS RECYCLABLE

Only a small percentage of e-waste is actually recycled. While recycling helps ensure that raw materials are reused, workers often end up handling hazardous chemicals, causing harm to the workers, the local community, and the local environment.

# ELECTRONIC WASTE



In 2016, **44.7** million metric tonnes of e-waste were generated.

This is an equivalent of almost **4,500** Eiffel towers.

www.itu.int/

# ELECTRONIC WASTE


www.itu.int/

# ELECTRONIC WASTE

- Electronic waste keeps growing and growing
- Environmental effects of e-waste
- Tons e-waste is shipped overseas
- Health implications of electronic waste
- **Electronic waste and data security**

# ENERGY CONSUMPTION

## Energy Consumption Calculator

**1 KWh generates 0.458 Kg of CO2**

146KWh/year = 66.8 Kg of CO2

**1 tree compensates for 24 kg of CO2 / year**

2.78 trees to compensate 66.8 Kg of CO2

# ENERGY CONSUMPTION

> The communications industry could use 20% of all the world's electricity by 2025, hampering attempts to meet climate change targets and straining grids as demand by power-hungry server farms storing digital data from billions of smartphones, tablets and internet-connected devices grows exponentially. - theguardian.com

# ENERGY CONSUMPTION

> Billions of internet-connected devices could produce 3.5% of global emissions within 10 years and 14% by 2040 - Climate Home News

# ENERGY CONSUMPTION

- ICT could create up to 3.5% of global emissions by 2020 – surpassing aviation and shipping – and up to 14% 2040

- We have a tsunami of data approaching.
- 5G is coming, IP traffic is much higher than estimated, and all cars and machines, robots and artificial intelligence are being digitalised, producing huge amounts of data which is stored in data centres.

# ENERGY CONSUMPTION

- Pressed by Greenpeace and other environment groups, Google, Facebook, Apple, Intel and Amazon, have promised to use renewable energy to power data centres. In most cases they are buying it off grid but some are planning to build solar and wind farms close to their centres.

- There is a real risk that it all gets out of control. Policy makers need to keep a close eye on this.

# Remote Work (Telecommuting)

- Telecommuting can play a key role in saving the environment:

- Conserving energy
- Reducing fuel consumption
- Reducing pollution.

# ¿Should IG address sustainable development?

**IG sectors**

- Government
- Private sector
- Civil Society
- Academic Sector
- Technical Sector
- International Organisations (i.e. World Bank, OECD, WWF)
- Intergovernmental Organisations (i.e. UN Agencies, Intergovernmental Panel of Climate Change)

1 policy recommendation related with climate change and environmental sustainability

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