

Addressing Environmental Challenges: The role of Information and Communication Technologies (ICTs) and the Internet

Information and communication technologies (ICTs) can improve environmental performance and address climate change across all sectors of the economy. Smarter and cleaner environmental and economic strategies will tackle the challenge of global warming and contribute to “green growth” and clean innovation in the economic crisis and recovery.

ICTs and the Internet have key roles in increasing energy efficiency, reducing energy use and managing scarce resources. Smart ICT applications and the Internet can enable energy efficiency improvements in areas as diverse as buildings, transport and logistics, electricity generation, distribution and consumption. Sensor-based broadband applications can foster effective responses to environmental change as well as improving efficiency of current systems. As products and services become ‘digital’, online delivery can also reduce environmental impacts across all sectors of the economy.

At the same time, rising energy demands of some ICT infrastructures need to be addressed to lower the environmental impact of a rapidly widening range of ICT products and applications products. The ICT sector needs to mitigate its own environmental impact through better life-cycle audits of ICT products and production processes, and R&D and innovation to improve product design.

The role of the OECD

The OECD plays an important role in fostering international debate on how to effectively apply ICTs and the Internet to tackle environmental challenges. The *OECD Ministerial Meeting on the Future of the Internet Economy* concluded that research and analysis of the environmental impact of ICTs and the Internet and the introduction of appropriate policies are essential for the development of the global Internet economy.

The *Meeting of the OECD Council at Ministerial Level* in June 2009 will co-ordinate international policy approaches to build a “stronger, cleaner, fairer economy”. ICT innovation is a key element to achieve OECD government objectives in response to the economic crisis and environmental challenges.

OECD work on ICTs and environmental challenges

The OECD’s Committee for Information, Computer and Communications Policy is developing a range of activities through its Working Party on the Information Economy:

Analytical work

- Developing a **framework for analysis** of ICTs and environmental challenges. The aim is to comprehensively model environmental effects of ICT production, use and their application across industry sectors.
- Surveying **policies on ICTs and environmental challenges** to compare and review existing policies and programmes that aim to minimise the environmental impact of the ICT industry and the enabling effects of ICT applications in other industries.

- Analysing **existing indicators and statistics** on the relationship between ICTs and the environment with the aim of improving availability and comparability of official statistics.
- Identifying **priority areas for policy action** including life cycle analyses of ICT products and assessments of ICT applications to address environmental challenges. This includes the potential of sensor-based technologies and broadband networks to monitor and address climate change and facilitate energy efficiency across all sectors of the economy.

This work could lead to an OECD Council Recommendation on improving the environmental impact of ICTs.

Workshops and conferences

- High-level **OECD Conference on ICTs, the Environment and Climate Change**, 27-28 May 2009, Helsingør, Denmark. Hosted by the Danish Ministry of Science, Technology and Innovation, National IT and Telecom Agency.
- **Workshop on ICTs and Environmental Challenges**, May 2008, Copenhagen, Denmark. Hosted by the Danish Ministry of Science, Technology and Innovation, National IT and Telecom Agency.

Multi-stakeholder approach

As a global forum, the OECD has an important role in communicating the potential of ICTs for tackling environmental challenges. Recent outreach activities of the organisation are important to engage in a dialogue with emerging economies such as China and India that have a major role in addressing environmental impact. The Committee for Information, Computer and Communications Policy is involving key stakeholders in the debate around ICTs and environmental challenges:

- Governments and regulatory authorities from 30 member countries and beyond (including OECD accession countries and enhanced engagement countries; regular committee observers),
- businesses (e.g. through BIAC, the Business and Industry Advisory Committee to the OECD),
- labour organisations (e.g. through TUAC, the Trade Union Advisory Committee to the OECD),
- consumers and other civil society (e.g. with the OECD Committee on Consumer Policy),
- environment and energy groups (e.g. the OECD Environment Directorate, IEA),
- international organisations (e.g. UNEP, ITU),
- researchers and academic groups.

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