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Study | 07.12.2021

Digital technologies in Europe

An environmental life cycle approach

The first quarter of the 21st century marked an unprecedented surge in reports of forest fires, floods and extreme weather events. It is clear that our current development model has reached its limit and now poses a direct threat to our civilisation and planet. Scientific reports are becoming increasingly precise and alarming.

A constant and uncontrolled increase in our green-house gas emissions will make our reality one of cataclysmic and irreversible climate change.

Biodiversity is under unparalleled attack, with the sixth mass extinction underway. In the Anthropocene era, the evidence that our “extractivist” industrial model and our “consuming” society disrupt the Earth’s natural cycles is indisputable. We need to take action.

This study highlights the resounding impact of digital technology and the IT sector on our environment. It deconstructs the notion that the digital world is light and dematerialised - “virtual”, “in the clouds” - and that it has no impact on the physical world.

The COVID-19 pandemic has highlighted the Euro-pean Union’s heavy dependence on critical resources for the production of our digital devices. This is not just an environmental threat, but is precarious for the EU’s digital sovereignty. How can we ensure our digital resilience for the times to come?

A systemic approach to change is fundamental. The industrial revolution saw a tenfold increase in humanity’s mechanical and energy capacity, but brought with it an environmental sacrifice that has taken us centuries to fully comprehend. The digital revolution will bring about equally fundamental changes - be they ecological, social, economic, democratic or geopolitical. We need to ensure that we do not usher in a similar Trojan horse.

Data will be key to ensuring that the digital and cli-mate transitions do not hamper each other. Knowing the exact environmental cost of technology is a pre-requisite for green digital innovation. In order to make strong policy decisions for the future, we urgently need to assess the ecological impact of digital technology and its contribution to the European Green Deal. This must be backed up by action in European legislation: we need environmental standards for digital technologies, networks and infrastructures for their entire life cycle and condition our digital strategic decisions to their cost/benefits in terms of environmental impact.

The European Commission, under the presidency of Ursula Von der Leyen, has declared its ambition to adapt the European economy to the urgency of our time with its flagship policies, the European Green Deal and Europe Fit for the Digital Age. Reconciling the dual ecological and digital transitions will be an essential pillar of future EU legislation.

Accurately assessing the impact of our digital technology will encourage sustainable digital innovation. This is the best way to ensure that digital advancement stays in line with the European Green Deal.

A European approach is essential to achieving a green and sustainable digital economy. We hope that this study will help lay the evidence-based foundations for the urgent political decisions that we must take to meet the challenges of our time.

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Responsible MEPs



David Cormand

Member



Kim Van Sparrentak

Vice-President

Contact person



Narmine Abou Bakari

Digital Rights campaigner

Attached documents

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