APC and DEF submission to the ITU Council Working Group on International Internet-related Public Policy Issues (CWG-Internet)

Online Open Consultation on "The Environmental Impacts and Benefits of the Internet"

Association for Progressive Communications and Digital Empowerment Foundation

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Summary

We cannot afford to underestimate the environmental impacts of the internet and digital technologies. The large-scale extraction of raw materials, such as lithium, have devastated natural ecosystems and deepened ecological crises, particularly in the global South.[1] Communities in the global South are disproportionately affected by environmental degradation and air and water pollution caused by the production, use and disposal of electronic devices. Moreover, the internet and digital technologies are increasingly being used to censor, surveil, threaten and attack land and environment defenders, and to spread disinformation about the science of climate change.[2]

At the same time, the internet and digital technologies are being harnessed to raise public awareness and to advocate and act collectively for meaningful change. There is enormous potential for the internet and digital technologies to contribute to environmental justice and sustainability; however, this potential will be unrealised without addressing the root causes of the environmental impacts of the internet, and substantial investment in local community-led initiatives to monitor changes in ecosystems, collectively prepare for extreme weather, and mitigate and adapt to the effects of climate change.

Regulation of the information and communications technology (ICT) sector can help to address the worst environmental impacts of the internet. Mitigating the negative environmental impacts of the internet and digital technologies requires precautionary approaches, greater transparency and accountability across the ICT sector, and shifting priorities towards durability, repairability and sustainability of ICT infrastructure. Innovation and collaboration to reduce the negative environmental impacts of the internet must centre the experiences of environmental rights defenders and communities most affected in order to uphold the right to a healthy environment for everyone, everywhere.

Introduction

The Association for Progressive Communications (APC)[3] and the Digital Empowerment Foundation (DEF)[4] welcome the opportunity to contribute to the open consultation on "The Environmental Impacts and Benefits of the Internet"

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1 Tapia, D. Pena, P. (2020) White gold, digital destruction: Research and awareness on the human rights implications of the extraction of lithium perpetrated by the tech industry in Latin American ecosystems. In A. Finlay (Ed.), Global Information Society Watch 2020: Technology, the environment and a sustainable world: Responses from the global South. APC & Sida. https://giswatch.org/node/6247

2 Poetranto, I, Chan, S, & Anstis, S. (2020) On/offline: Multidimensional threats faced by environmental human rights defenders in Southeast Asia. In A. Finlay (Ed.), *Global Information Society Watch 2020: Technology, the environment and a sustainable world: Responses from the global South*. APC & Sida. https://giswatch.org/node/6228

3 https://www.apc.org

4 https://www.defindia.org/our-belief

launched by the ITU Council Working Group on International Internet-related Public Policy Issues (CWG-Internet).

APC is an international network of civil society organisations founded in 1990 dedicated to empowering and supporting people working for peace, human rights, development and protection of the environment, through the strategic use of ICTs. APC has been a sector member of ITU-D and ITU-R since 2014.

DEF is a Delhi-based not-for-profit organisation founded in 2002 to find solutions to bridge the digital divide in India. DEF's mission is to empower marginalised communities in information-dark regions to access, consume and produce information online using digital interventions and ICT tools.

The internet and digital technologies are increasingly impacting all life on our planet, including the environment and ecosystems that sustain us. We believe that the environmental benefits of the internet and digital technologies will only be realised if the increasingly negative impacts of ICTs are adequately addressed.

1. What effects does the internet have on the environment, and vice versa?

There is a growing body of research on the impacts of the internet on the environment, and the effects that extreme weather and other climate change-related issues will have on the internet and ICT infrastructure. The focus of APC and DEF's contribution to the open consultation is on the impacts of digital technologies throughout their life cycle. We emphasise urgent environmental and human rights concerns in the extraction and mining of natural resources, and improper disposal of electronic devices.

The mining and extraction of natural resources for ICT infrastructure is contributing to deepening injustice and inequalities in responding to the worst effects of climate change. Formal and informal mining are in desperate need of regulation, while the design and manufacturing of devices need to ensure that materials are sourced and used in such a way that environmental, labour and people's rights are protected. A mobile phone is composed of about 70 chemical elements that include scarce minerals, alloys, plastics and other natural resources, including water. In Chile, mining of lithium in the Atacama salt flats has led to irreversible damage to the local ecosystem, including depletion of already scarce freshwater supplies to clean machinery. The region is now experiencing persistent drought as rivers, wetlands and meadows have drained.[5]

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5 Tapia, D., & Pena, P. (2020) White gold, digital destruction: Research and awareness on the human rights implications of the extraction of lithium perpetrated by the tech industry in Latin American ecosystems. In A. Finlay

Electronic waste or e-waste is one of the fastest-growing waste streams in the world. It is most often discarded with general waste, leading to pollution of groundwater and other natural systems. Informal workers, including children, sort and process e-waste for valuable minerals and resources, causing severe health effects, and polluting the air, water and land in their communities. Despite efforts to prevent the transboundary movement of hazardous waste, such as through the Basel Convention, the fate of 82.6% of global electronic waste generated in 2019 was uncertain.[6]

2. How can we improve the environmental impacts of the internet and harness its potential to help address climate-related issues?

Enabling policies and regulation are necessary for local communities to be able to effectively respond to the worst effects of climate change. **Community-led initiatives** to collect and analyse environmental data can greatly improve preparation and response to extreme weather and natural disasters, filling gaps in existing governmental emergency response systems.[7]

There is a clear need for **greater transparency and accountability** for the environmental and human rights impacts of digital technologies throughout their life cycle. Current approaches and models for the design, production, consumption and disposal of digital devices that power the internet are creating exponential harm for our planet and our communities, particularly in the global South. Digital devices must be designed to **maximise durability and repairability**, and minimise dependency on the extraction of raw materials, by incorporating recovered "secondary" materials from used devices and electronic waste.[8] Precautionary approaches to digital technologies must centre the experiences of environmental rights defenders and communities most affected in order to uphold the right to a healthy environment for everyone, everywhere.

A **lack of reliable data** is a major barrier to supply chain transparency in the ICT sector, and as a result, the intersecting social, economic and environmental impacts of digital devices throughout their life cycle are still not well understood. In recent

(Ed.), *Global Information Society Watch 2020: Technology, the environment and a sustainable world: Responses from the global South*. APC & Sida. https://giswatch.org/node/6247
6 Forti, V., Baldé, C. P., Kuehr, R., & Bel, G. (2020). *The Global E-waste Monitor 2020: Quantities, flows and the circular economy potential*. United Nations University (UNU)/United Nations Institute for Training and Research (UNITAR) – co-hosted SCYCLE Programme, International Telecommunication Union (ITU) & International Solid Waste Association (ISWA). http://ewastemonitor.info/wp-content/uploads/2020/07/GEM_2020_def_july1_low.pdf
7 Madhavan, A., & Sankar, S. (2020) ICT and the environment: Building a dialectical understanding. In A. Finlay (Ed.), *Global Information Society Watch 2020: Technology, the environment and a sustainable world: Responses from the global South*. APC & Sida. https://giswatch.org/node/6239
8 APC. (2021). *A guide to the circular economy of digital devices*. https://circulartech.apc.org

years there has been progress made to address the impact of so-called "conflict minerals", such as through Section 1502 of the Dodd-Frank Act, requiring "due diligence in establishing the source and chain of custody" of specific minerals.[9] Further action is needed to identify and address human rights violations and environmental harms, and to ensure access to remedy.[10] Targeted regulation can help to increase transparency and accountability for the environmental impact of the internet and digital devices throughout their life cycle,[11] including mandatory **human rights and environmental impact assessments.**

3. What are the policy and regulatory matters associated with the environmental impacts and benefits of the internet?

There are many important policy and regulatory matters associated with the environmental impacts and benefits of the internet. This submission considers only a few of the most urgent policy and regulatory matters, including:

- Supply chain transparency

- Human rights and environmental impact assessments

- Durability, repairability and recycling of digital devices and components

- Enabling policy and regulatory environments for community-led initiatives to harness environmental benefits of the internet and mitigate environmental harms.

More detailed analyses of policy and regulatory action to address the environmental impact of the internet and digital technologies can be found in APC's *A guide to the circular economy of digital devices*.[12]

Conclusions

APC and DEF appreciate the opportunity to contribute to the ITU CWG-Internet online open consultation on "The Environmental Impacts and Benefits of the Internet". We encourage and support further multistakeholder dialogue and collaboration to address the environmental impacts of the internet and uphold the right to a healthy environment for everyone, everywhere.

9 https://www.govinfo.gov/content/pkg/COMPS-9515/pdf/COMPS-9515.pdf
10 https://www.ohchr.org/EN/Issues/Business/Pages/AccessToRemedy.aspx
11 Proske, M., et al. (2020). *Life cycle assessment of the Fairphone 3*. Fraunhofer IZM.
https://www.fairphone.com/wp-content/uploads/2020/07/Fairphone_3_LCA.pdf
12 APC. (2021). *A guide to the circular economy of digital devices*. See in particular Module 11:
https://circulartech.apc.org/books/a-guide-to-the-circular-economy-of-digital-devices/page/module-11-challenges-and-ways-forward-for-policy-action-awareness-mining-design-manufacturing-and-procurement and Module 12:
https://circulartech.apc.org/books/a-guide-to-the-circular-economy-of-digital-devices/page/module-12-challenges-and-ways-forward-for-policy-action-use-reuse-and-e-waste

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