Council Working Group (Internet)
Open Consultation meeting and seventeenth meeting

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Contribution submitted by the
United Kingdom of Great Britain and Northern Ireland

THE ENVIRONMENTAL IMPACTS AND BENEFITS OF THE INTERNET

Summary

Both a vital tool for climate action and a key contributor of greenhouse gas emissions, the Internet has a range of positive and negative impacts on the environment. The Covid-19 pandemic in particular has shed light on some of the benefits the Internet can offer. With interactions ranging from international meetings to social gatherings and school classrooms going online, the Internet has proved itself to be a critical alternative to in-person interactions and thus an effective way of reducing high-emission travel. At the same time, the Internet continues to be an important tool for directly monitoring and responding to climate change, be it by optimising energy use in homes, forecasting extreme weather events or facilitating research on sustainable energy sources. However, despite the Internet's positive contribution to environmental issues, it must not be forgotten that the Internet itself, or at least the Infrastructure supporting it, is a significant contributor to greenhouse gas emissions. According to a 2020 publication by The Information Technology and Innovation Foundation, ICTs account for about 4 percent of global electricity consumption, and 1.4 percent of global carbon emissions.[1] Furthermore, the growing quantity of E-waste, also known as waste electrical and electronic equipment, is another major threat to the wellbeing of our planet. An *Open Consultation* is an excellent opportunity to build knowledge and develop strategies to address these issues, thus harnessing the potential of the Internet to build a greener future for all.

1. The United Kingdom government welcomes the opportunity to comment on this Council Working Group Internet Open Consultation on the environmental impacts and benefits of the Internet. We greatly look forward to discussing the topic in both the open meeting with stakeholders and at the CWG Meeting itself, where we hope we may also be able to benefit

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[1] The Information Technology and Innovation Foundation 2020 'Beyond the Energy Techlash: The Real Climate Impacts of Information Technology'
https://itif.org/publications/2020/07/06/beyond-energy-techlash-real-climate-impacts-information-technology

from the knowledge and contribution of invited experts.

2. Experiences of the Covid-19 pandemic have demonstrated the extraordinary value the Internet can bring, across a range of sectors and fields. Amid unprecedented social distancing restrictions, the Internet has enabled citizens to continue to work, trade, shop, communicate and learn. On April 1 2020, nearly 1.5 billion children in 173 countries were affected by school closures and, in January 2021, 55% of the UK workforce were working from home. International meetings, such as the Council Working Group itself, conferences and social events have rapidly migrated to the virtual world. In these circumstances, the Internet has proved itself to be a crucial alternative to in-person interactions. Though many benefits of physical interactions cannot be replicated online, it is highly likely that the experience of virtual communications will inspire organisations and individuals to continue to use the Internet as an alternative to international and domestic travel after the pandemic, thus reducing our carbon footprint.

3. In addition to providing an alternative to high-emission travel, the Internet also continues to be a vital tool for directly monitoring and responding to climate change. Applications range from optimising energy use in homes, to forecasting extreme weather events and facilitating research on sustainable energy sources. These are just some examples of many - and, thanks to cutting-edge research, the breath and sophistication of applications continues to expand. At COP26, hosted in Glasgow in November, countries began work on a roadmap for using artificial intelligence to fight climate change and, even the meeting itself, was facilitated via its own global online platform.

4. Given that two-thirds of the world's population are expected to live in urban areas by 2050, cities in particular are under great pressure to find ways to improve their sustainability. The UN Commission on Science and Technology for Development has recently issued a draft paper on the theme of urban sustainability which features many innovative projects harnessing science, technology and innovation to accelerate progress on environmental issues. The Internet is fundamental to much of this work: for example, journey planner applications and bike sharing systems have helped cities tackle congestion while online food sharing networks and waste management tools have contributed to decreasing plastic pollution. Recently, at COP26, the UK together with over thirty other national governments, signed a commitment to ensuring all new cars and vans are zero emission by 2040.

5. The International Telecommunication Union (ITU) is doing excellent work in this field. For instance, ITU-T Study Group 5 on "environment, climate change and the circular economy" is working tirelessly to support the ICT sector to reach net-zero emissions while the ITU Global Portal on Environment and Smart Sustainable Cities provides valuable resources to support progress in the community. The Portal's resources range from case studies on smart cities to technology frameworks and policy roadmaps.

6. However, despite the Internet's positive contribution to environmental issues, it must not be forgotten that the Internet itself is a significant contributor to greenhouse gas emissions. According to a 2020 publication by The Information Technology and Innovation Foundation, ICTs account for about 4 percent of global electricity consumption, and 1.4 percent of global carbon emissions.[2] Furthermore, the situation is becoming increasingly serious: a 2018 report indicated that the IT industry's greenhouse gas emissions are predicted to reach 14% of global emissions by 2040.[3]

7. E-waste, also known as waste electrical and electronic equipment, is also a major issue. According to the Global E-waste Monitor 2020, a joint initiative between the ITU and the Sustainable Cycles (SCYCLE) Programme, E-waste is one of the fastest growing waste streams in the world. The rapid growth of digital technologies and services has contributed to this surge which, unless properly addressed, poses serious risks to both humans and the environment due to the toxic substances contained in electronics. The United Nations E-waste Coalition is spearheading excellent work to support effective E-waste management, via advocacy, knowledge sharing and intervention.

8. Through the exchange of knowledge and experiences such as these, an open consultation is an important opportunity for stakeholders to come together to build knowledge and develop strategies for how to improve the Internet's impact on the environment going forward. We are pleased to participate in this *Open Consultation* and very much look forward to the upcoming discussions.

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[2] The Information Technology and Innovation Foundation 2020, 'Beyond the Energy Techlash: The Real Climate Impacts of Information Technology'
https://itif.org/publications/2020/07/06/beyond-energy-techlash-real-climate-impacts-information-technology
[3] Lotfi Belkhir, Ahmed Elmeligi 2018, 'Assessing ICT global emissions footprint: Trends to 2040 & recommendations' Journal of Cleaner Production https://www.sciencedirect.com/science/article/pii/S095965261733233X