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Public Consultation on the BEREC Draft Report on Sustainability: Assessing BEREC's contribution to limiting the impact of the digital sector on the environment

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Body of European Regulators
for Electronic Communications
BEREC

During its 50th plenary meeting (10 March 2022), the BEREC Board of Regulators has approved the Draft BEREC Report on Sustainability: Assessing BEREC's contribution to limiting the impact of the digital sector on the environment for public consultation.

This Draft Report on Sustainability provides an overview of the results of BEREC's groundwork on ICT sustainability to assess and better understand the impact of the digital sector, including electronic communications networks and services, on the environment. It sets out an outline of BEREC's approach to environmental sustainability of the sector.

This Draft report constitutes the first step: BEREC will continue to build up its knowledge on the important topic of sustainability to be able to contribute with its expertise in shaping the green and digital twin transition. Collaboration with relevant stakeholders will be of importance in this process, notably to share analysis and experiences related to ICT sustainability.

For structured responses to this consultation, BEREC kindly asks you to submit your comments/remarks per each chapter of the draft report in the following questions below. You will have also the opportunity to upload a supporting document at the end of the survey (file size limit: 1 MB).

Responses should not be submitted later than **14 April 2022 (17:00 CET)**.

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Feedback on each chapter of the Draft Report

1) Please enter your comments on Chapter 1 (Introduction) here:

The introduction of the draft report characterizes BEREC's approach to sustainability, especially in Sub-section 1.3. According to the well-known triple-bottom line of sustainability, there are three interrelated perspectives of sustainability including social, economic and environmental sustainability. The current draft report focuses on the environmental sustainability of the ICT sector. It would be useful to also understand how BEREC addresses the bigger topic of sustainability, for which one internationally agreed framework is the UN SDG framework, and how BEREC considers the bigger sustainability topic within the ICT sector in tackling major sustainability challenges. In the draft report, the term "sustainability" is often used when specifically talking about the environmental sustainability, especially in Sub-section 1.3.

Terminology used in the draft report varies and differs from many other forums dealing with the sustainability of the ICT sector. Although there is a glossary in annex, different terms are used interchangeably without specifying them in the text. There is a need to define a common terminology to characterize the environmental sustainability of the ICT sector, starting from its environmental impact. BEREC could have a role in this.

2) Please enter your comments on Chapter 2 (Case studies) here:

Case studies include three member countries' approaches to environmental sustainability of the ICT sector, which is very important and relevant information. These case studies summarize the state of the art of environmental sustainability in the member countries' activities. From the case studies, it is clear that only a few member countries have started to address environmental sustainability of ICT sector, which highlights the need for European level collaboration on this acute topic. Products and services in the ICT sector are rarely restricted to a single country, which is why their environmental impact should not involve highly distinct methods by the different countries.

Case studies do not include examples from the actual ICT sector's own stakeholder including, e.g., mobile network operators or network vendors' initiatives on environmental sustainability. A summary of these case studies in parallel with regulators' approaches would be important input to the process.

The beginning of Chapter 2 highlights the newness of the topic of environmental sustainability to regulators at both European and national levels. While it might be a new topic in regulation, academia and industry have addressed the environmental sustainability of ICT already for decade(s). This expertise exists to help the regulators in the introduction of sustainability principles into the regulation of electronic communications and services, when the relevant stakeholders are properly invited to contribute to the process.

3) Please enter your comments on Chapter 3 (Outcomes on BEREC's previous work on sustainability) here:

Prior work on sustainability shows that there is no proper linkage established to the on-going standardization work on the environmental sustainability of the ICT sector. Establishing this link is important to create a common understanding of the complex topic and a pre-requisite for any assessment of the environmental sustainability and the development of solutions.

4) Please enter your comments on Chapter 4 (Inputs from stakeholders) here:

Inputs from stakeholders to the process do not include academic stakeholders that bring unbiased research findings to the table. Academic stakeholders play an important role in the sustainability topic, not only in the ICT sector, balancing the self-interests of stakeholders towards the common good. There is a need to develop mechanisms that allow the voices from the academic stakeholders to be heard in the process. For example, EU-funded and national-level funded research projects address sustainability topics and can significantly contribute to regulatory activities, when there are mechanisms in place for the information exchange.

In addition to the academic domain, significant efforts on the environmental sustainability of the ICT sector take place in standardization bodies, which are mentioned in the draft report. The expertise within these standardization bodies is directly relevant to the topics of the draft report and a mechanism is needed to share that knowhow in the future work of BEREC on sustainability.

Some stakeholder comments stated in the draft report addressed the need to consider social and economic dimensions of sustainability, which is very relevant and should be considered in the future work of BEREC.

5) Please enter your comments on Chapter 5 (Key findings of the external study) here:

The external study conducted for BEREC on the environmental impact of electronic communications networks interviewed a number of operators, but they represent only one stakeholder group within the complex ICT sector. The process should not be left only in the hands of operators, which corresponds to self-evaluation. Inputs from all relevant stakeholders need to be included.

Sub-section 5.1 defines a three-phase approach to networks' life cycle. There are many ways to life cycle assessment and this approach ignores the R&D phase, which has a significant impact on the systems' emissions due to the decisions made in the development stage. The role of new technology development needs to be properly addressed in addition to characterizing the impact of today's solutions.

As a concrete topic, the study mentions "different content distribution methods, technologies and network deployment methods have clear differences in term of GHG emissions but it is not possible to quantify these effects precisely". This is an important topic for future work.

From the possible activities for regulators to address the environmental sustainability of the ICT sector, all mentioned approaches of building awareness, developing codes of conduct, supporting eco-design and recycling programmes, encouraging research, and incentivizing sustainability solutions are needed and even more. They need to be closely linked to other on-going initiatives in standardization bodies, academic research and ICT sector's own initiatives to develop a common understanding of the sustainability problem and requirements to build common assessment methodologies with the same agreed indicators in order to develop sustainable solutions.

Self-assessment of own operations and reporting on emissions and actions to achieving environmental targets is an important starting point. Detailed data and actions on energy efficiency and energy consumption among other environmental sustainability-related metrics should be made available to the research community to allow researchers to develop new methods to assess and reduce resource efficiently and consumption based on real data, which today is a true bottleneck.

6) Please enter your comments on Chapter 6 (Conclusions and outline for BEREC's future work on sustainability) here:

Stakeholder engagement is key to success and the inclusion of relevant stakeholders in addition to the mobile network operators is needed including the academic domain and standards bodies. Currently, the research domain is omitted in 6.1.

The life-cycle approach adopted in the draft report ignores the prior steps of R&D, which in fact include a number of decisions that lock the emissions of the future systems. Future work should also consider the development of new technology in addition to considering existing networks. Also, the service provisioning and usage aspects in the context of electronic communications networks and services need further work.

7) Please enter any other comments you may have:

The draft report brings together a collection of activities around the environmental sustainability of the ICT sector in a comprehensive manner, highlighting the complexity of the topic and its newness to regulators. The triple bottom line of sustainability brings together social, economic and environmental perspectives of sustainability while the current draft report only addresses environmental sustainability. The interplay of environmental, social and economic sustainability and link to the UN SDG framework would be important topics to consider in the future work.

Environmental sustainability of the ICT sector deserves a careful consideration and the terminology currently used throughout the draft report varies a great deal. Although Annex I includes a glossary of terms, the concepts are often used interchangeably in the text. For example, "environmental sustainability", "environmental footprint", "environmental impact", "environmental effect" or simply "sustainability" are used without specifying what they mean and what their differences are.

Similarly, the context is described with different terms including "digital sector", "digital technologies, "ICT sector, "ICTs", "electronic communications", "electronic communications networks (ECN)", "electronic communications networks and services (ECS)" without a clear distinction in the text. There is a need to define a common ground to develop a shared understanding about the environmental sustainability of the ICT sector. This is a pre-requisite before going into the assessments phase. In fact, there are considerable standardization and research activities on-going on the environmental sustainability in the ICT sector especially on the technical aspects developing assessment methods and indicators. A thorough link to this work needs to be established and BEREC could play a key role in this.

Annex II Sub-section 2.2 on IEA work makes an important point which should be addressed more thoroughly in the main body of the draft BEREC report: "rapid changes in technologies (and how they are used) combined with a lock of up-to-date data make it difficult to accurately estimate the current and future energy impact of digital technologies, particularly for emerging technologies such as 5G." This is a major challenge that must be addressed in the future work.

In Forewords (p. 3), second sentence introduces "Social Development Goals", which should be sustainable development goals.

While the draft report makes attempts to consider the whole life cycle of electronic communications networks, it does not consider future technology development much. The R&D of the next generation of mobile communications networks is well underway and the introduction of sustainability principles is a key design criteria in that work.

Finally, many national and EU level research initiatives address the sustainability of ICT and especially the environmental sustainability perspective. There is a need to bring the expert community of researchers and other experts to the table. A linkage between national-level and EU funded research projects needs to be established by creating mechanisms for information sharing, requirements collection and joint development of best practices. BEREC should invite the research community to provide unbiased research results and encourage the industry and operators to share their data and methodologies with the research community, to tackle the environmental sustainability of the ICT sector as a joint effort.

Please upload here any supporting document that you deem relevant:

In accordance with the BEREC policy on public consultations, BEREC will publish all contributions and a summary of the contributions, respecting confidentiality requests. Any such requests should clearly indicate which information is considered confidential.

Confidential contribution:
☐ Yes
☑ No

If yes, please specify the information which should be treated as confidential:

Background Documents

Draft BEREC Report on Sustainability

Contact

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