

TECHNOLOGY FACT SHEET

SUSTAINABLE BROADCASTING

Like all industries, the broadcasting sector has a responsibility to improve its environmental performance. Many have shied away from tackling the topic due to a lack of expertise and resources but being more sustainable often leads to lower costs; and by sharing knowledge with others, we can all benefit. This area is important to EBU Members' audiences and to their staff, hence the creation of the EBU group on Sustainable Technology in Broadcasting.

BACKGROUND

Many governments and organizations are shining the spotlight on the environmental impact of various industry sectors. This is the case with the power generation, automotive and consumer electronics sectors, to name just three. Telecommunications and broadcasting are no different with various initiatives in progress across Europe.

The main environmental impacts of the broadcasting industry are greenhouse gas emissions (GHG), energy use; raw material consumption and electronic waste. Studies¹ suggest that 1.4% of global GHG emissions result from Information and Communication Technology (ICT) (~730 Mt CO₂e). VOD streaming for 30 mins² is responsible for 0.028-0.057kg CO₂e.

The industry itself is also vulnerable because of environmental issues – rising energy costs, energy security, and resource scarcity – all affect the sector. Additionally, climate change may cause infrastructure in some countries to become vulnerable to flooding etc. In the last few years, it has become common place to see disruptions to the global supply chain because of weather events. These all increase costs for broadcasters. We need to consider how to make the industry more resilient to these changes.

Photo: Unsplash



¹ <https://www.ericsson.com/en/reports-and-papers/research-papers/the-future-carbon-footprint-of-the-ict-and-em-sectors>

² <https://www.carbonbrief.org/factcheck-what-is-the-carbon-footprint-of-streaming-video-on-netflix>

THE CHALLENGE FOR PUBLIC SERVICE MEDIA

Broadcasting is undergoing a period of unprecedented change: migration from analogue to digital broadcasting, producing and distributing UHD TV, pressure on terrestrial frequencies from the mobile telecommunications sector, and addressing the consumers' demands for more immersive services. Public Service Media organizations have particular responsibilities to ensure universal coverage for their services, sometimes at odds with minimising the environmental impact of these services. Thus, a balance needs to be struck.

While digital television distribution is more efficient than analogue, there are extended periods of simulcasting in most territories and there is a need to roll out dense transmission networks to meet the coverage objectives demanded by public service charters. Now mobile telecommunications networks become more effective at delivering media content, and so, authorities seek to compare the environmental impact of each distribution mechanism.

Larger domestic screen sizes and more powerful TV sets are increasing the environmental impact of consumption. Do we understand how new technologies affect the overall environmental impact? For example, how does UHD compare to HD and SD, and is it necessary? Are there ways to efficiently enhance mainstream broadcasting services with over-the-top hybrid TV?

As public service broadcasters, EBU Members have constraints based around universal service and coverage obligations. Such obligations have been brought to the forefront as migration to digital distribution from analogue is completed. Extending broadcast coverage to upwards of 99% of the population – and the additional transmitters that entails – could result in a significant additional environmental impact.

WHAT IS THE EBU DOING?

Sustainability touches many areas of broadcasting from production to transmission to IT. Not everyone working in these areas has sustainability knowledge and no sustainability expert can know about all these areas. The EBU has an interdisciplinary group of experts from different members, and other broadcast organizations, already engaged in working on environmental sustainability issues. The Sustainable Technology in Broadcasting (STiB) has several strands to its work:

- 1) To produce guidelines on best practice in sustainable production and develop a common methodology for measuring the carbon footprint of production. This builds on work already carried out by Members but will have a wider scope.
- 2) To help Members understand how to use sustainability measurement and metrics to deliver business transformation thus aiding informed decision making. This could be supported by the use of case studies and will take advantage of work done in other related industries like the ICT sector. This is expected to focus on programme production, apparatus rooms, data centres, contribution and distribution.
- 3) With the support of the Technical Committee, to establish strong working relationship with or a sustainability facet within all EBU technology projects and working groups.
- 4) To act as a collective voice when liaising with other groups who seek to engage with the broadcasting industry on sustainability and environmental issues, e.g. the ITU. This will include reaching out to other stakeholders like the mobile telecommunications sector.

FIND OUT MORE

EBU Sustainable Technology in Broadcasting Group tech.ebu.ch/green This group welcomes non-EBU member broadcasters who are actively working on becoming more sustainable.