

Beyond Carbon

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New draft: abstract

The global internet is comprised of vast interconnected networks spanning nearly every surface of planet and sky that, together with user devices, consumes energy and emits greenhouse gases. The true scale and proposed mitigations of the carbon footprint of the internet are the subject of important research. The internet also requires the depletion of other natural resources beyond carbon, namely land, water, electromagnetic spectrum and minerals. Electronic waste contributes in particularly acute ways to environmental pollution. This document surveys the impacts of the internet on the environment and includes, but goes beyond, energy use and carbon footprint to look at the consumption of natural resources and environmental waste.

Considerations beyond carbon

Land: Finite space / limit of use for other humans, Animals and other ecosystems, too [Vesna] Disruption of the sea bed

Water: For cooling, For mineral extraction, Limits use for other humans but animals and other ecosystems, too [Vesna]

Electromagnetic spectrum: Finite resource allocated to large companies and developed countries despite ITU pledge to allocate otherwise.

Minerals: Extractive of finite resources which minerals, Use of water, Effects of scarring and degrading earth crust, Destroying habitats, Poisonous at the time of extraction, Limited use for other things.

Waste: In the air -- pollution from fossil fuels, burning e-waste On earth -- sanitation, landfills, polluting soil, limiting use of space, ecosystem disruption In the sea -- undersea cables, mineral extraction byproducts, e-waste shipping, pollution In space -- debris, crowding the sky, limit of use

Where this work is happening

<https://github.com/mallory/draft-beyond-carbon>