

Ce qu'on sait et ce qu'on ne sait pas sur les effets environnementaux de la numérisation

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Bibliographie complète :

Information Society Forum (1996). *Networks for People and their Communities: Making the Most of the Information Society in the European Union*. Available at: <http://aei.pitt.edu/33532/>

Pathak, M., Slade, S., Shukla, P.R., Skea, J., Pichs-Madruga, R., Ürge-Vorsatz, D. (2022). 'Technical Summary', in Shukla, P.R., Skea, J., Slade, R., Al Khourdajie, A., van Diemen, R., McCollum, D., Pathak, M., Some, S., Vyas, P., Fradera, R., Belkacemi, M., Hasija, A., Lisboa, G., Luz, S. and Malley, J., (eds) *Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*, Cambridge University Press, Cambridge, UK and New York, NY, USA.

Andrae AS, Edler T: On global electricity usage of communication technology: trends to 2030. *Challenges* 2015, 6:117-157.

Andrae AS: New perspectives on Internet electricity use in 2030. *Eng Appl Sci Lett* 2020, 3:19-31.

Malmodin J, Lunden D: The energy and carbon footprint of the global ICT and E&M sectors 2010–2015. *Sustainability* 2018, 10:3027

Belkhir L, Elmeligi A: Assessing ICT global emissions footprint: trends to 2040 & recommendations. *J Clean Prod* 2018, 177:448-463.

Freitag C, Berners-Lee M, Widdicks K, Knowles B, Blair GS, Friday A: The real climate and transformative impact of ICT: a critique of estimates, trends, and regulations. *Patterns* 2021, 2:100340.

Malmodin J, Lunden D: The Electricity Consumption and Operational Carbon Emissions of ICT Network Operators 2010–2015; 2018.

Coroama V: Investigating the inconsistencies among energy and energy intensity estimates of the Internet. *Metrics and Harmonising Values*. Bern, Switzerland, Tech. Rep.; 2021.

Pirson T, Bol D: Assessing the embodied carbon footprint of IoT edge devices with a bottom-up life-cycle approach. *J Clean Prod* 2021, 322:128966.

Pirson T, Delhay T, Pip A, Le Brun G, Raskin J-PR, Bol D: The environmental footprint of IC production: meta-analysis and historical trends. In *Proceedings of the IEEE ESSDERC 2022*; 2022.

Hilty LM, Aebischer B: ICT for sustainability: an emerging research field. *ICT Innov Sustain* 2015, 310:3-36.

Hilty, L. M., Arnfalk, P., Erdmann, L., Goodman, J., Lehmann, M., & Wäger, P. A. (2006). The relevance of information and communication technologies for environmental sustainability—a prospective simulation study. *Environmental Modelling & Software*, 21(11), 1618-1629.

Horner NC, Shehabi A, Azevedo IL: Known unknowns: indirect energy effects of information and communication technology. *Environ Res Lett* 2016, 11:103001.

GeSI: SMARTer2030 — ICT Solutions for 21st Century Challenges; 2015

GSMA: The Enablement Effect; 2019.

Malmodin, J., Bergmark, P., Lövehagen, N., Ercan, M., & Bondesson, A. (2014). Considerations for macro-level studies of ICT's enabling potential. In *proceedings of the 2nd International Conference on ICT for Sustainability (ICT4S 2014)*, August 24-27, 2014, Stockholm, Sweden.

Malmodin, J., & Coroama, V. (2016, September). Assessing ICT's enabling effect through case study extrapolation—The example of smart metering. In *2016 Electronics Goes Green 2016+(EGG)* (pp. 1-9). IEEE.

Bieser, J. C., & Hilty, L. M. (2018). Assessing indirect environmental effects of information and communication technology (ICT): A systematic literature review. *Sustainability*, 10(8), 2662.

Rasoldier, A., Combaz, J., Girault, A., Marquet, K., & Quinton, S. (2022, June). How realistic are claims about the benefits of using digital technologies for GHG emissions mitigation?. In *LIMITS 2022-Eighth Workshop on Computing within Limits*.

Bieser, J. C., Hintemann, R., Hilty, L. M., & Beucker, S. (2023). A review of assessments of the greenhouse gas footprint and abatement potential of information and communication technology. *Environmental Impact Assessment Review*, 99,

107033.

Bergmark, P., Coroamă, V. C., Höjer, M., & Donovan, C. (2020, June). A methodology for assessing the environmental effects induced by ict services: Part ii: Multiple services and companies. In Proceedings of the 7th International Conference on ICT for Sustainability (pp. 46-55).

Coroamă, V. C., Bergmark, P., Höjer, M., & Malmudin, J. (2020, June). A methodology for assessing the environmental effects induced by ict services: Part i: Single services. In Proceedings of the 7th International Conference on ICT for Sustainability (pp. 36-45).

Caldarola, B., & Sorrell, S. (2022). Do teleworkers travel less? Evidence from the English National travel survey. *Transportation Research Part A: Policy and Practice*, 159, 282-303.

Sovacool, B. K., & Del Rio, D. D. F. (2020). Smart home technologies in Europe: A critical review of concepts, benefits, risks and policies. *Renewable and sustainable energy reviews*, 120, 109663.

Belaïd, F., Youssef, A. B., & Lazaric, N. (2020). Scrutinizing the direct rebound effect for French households using quantile regression and data from an original survey. *Ecological Economics*, 176, 106755.