THE OVERLOOKED CLIMATE RISKS OF ARTIFICIAL INTELLIGENCE

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Give me an overview!

Artificial Intelligence (AI) is often promoted as a tool to tackle climate change, encouraging its expansion. 🌏 Meanwhile, concerns on AI's climate impacts are limited to the energy consumption of data centres. ⚡

To fully understand AI's climate impact, we map out the direct, indirect, and systemic ways AI can interact with the energy transition pathways beyond the energy use of data centres.

What was the method?

We started with MIT's Taxonomy of AI Risks on the left side of the map. On the right side, we identified the main building blocks of zero-emission energy pathways. 🤖➡️🌍

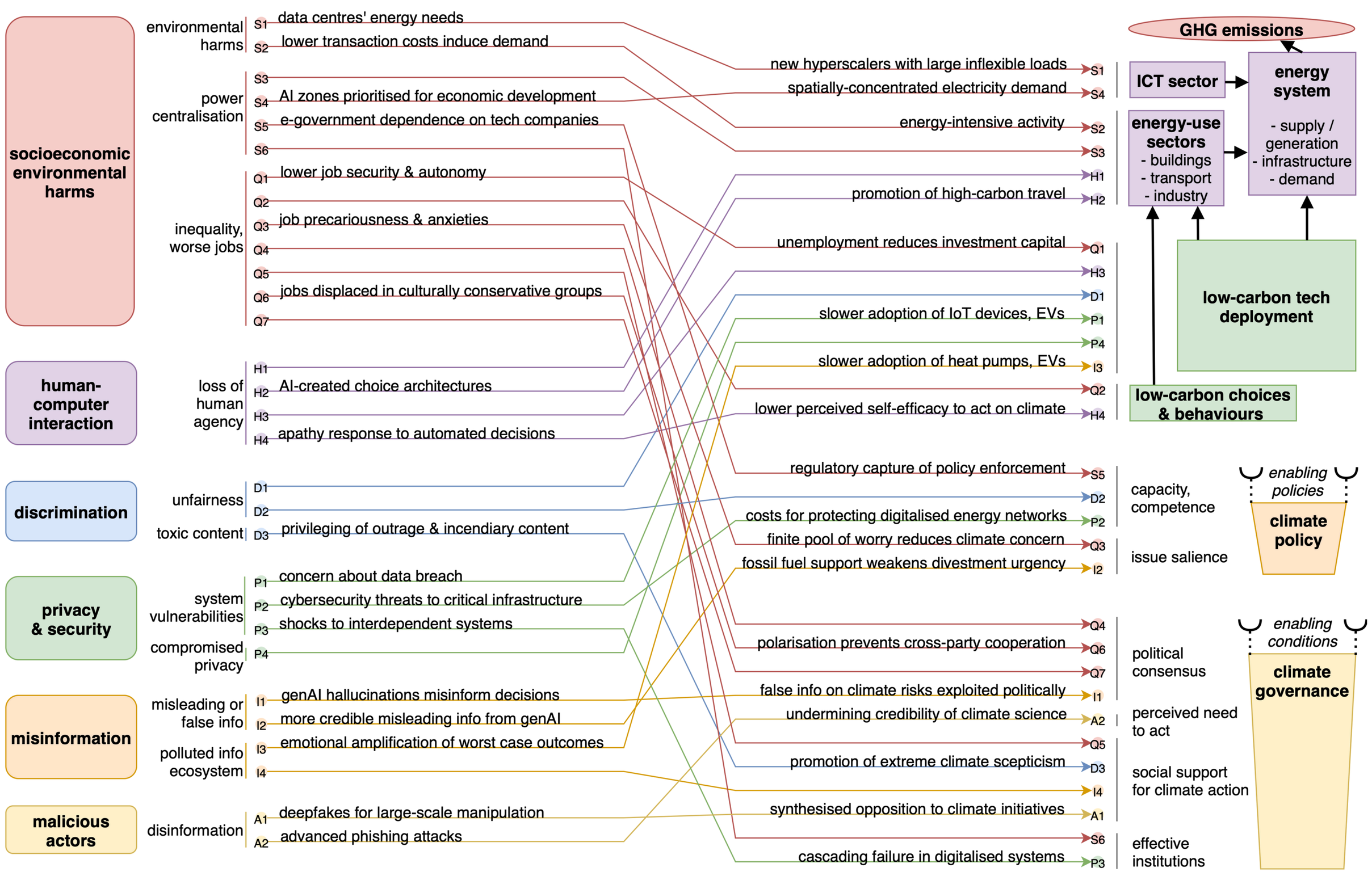
We conducted a scoping review of scientific literature, media reports, and grey literature (n=68) to identify links from AI risk domains to building blocks of zero-emission energy pathways. 🔎📄

Why does this matter?

AI's risks to climate is complex, dense, and diffuse. AI exacerbates many existing threats to the energy transition. The indirect and systemic risks can be more consequential than the direct energy consumption of data centres. 💡

We will need upstream (i.e. AI model development) and downstream (i.e., use of AI) policy and governance to align AI with our climate goals. ⚖️

Results (selected examples)



iDODDLE
The Impacts of Digitalised Daily Life on Climate Change
erc European Research Council
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The iDODDLE project:

Full map and report:

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