

Environmental Impact of AI

UNEP Digital Day

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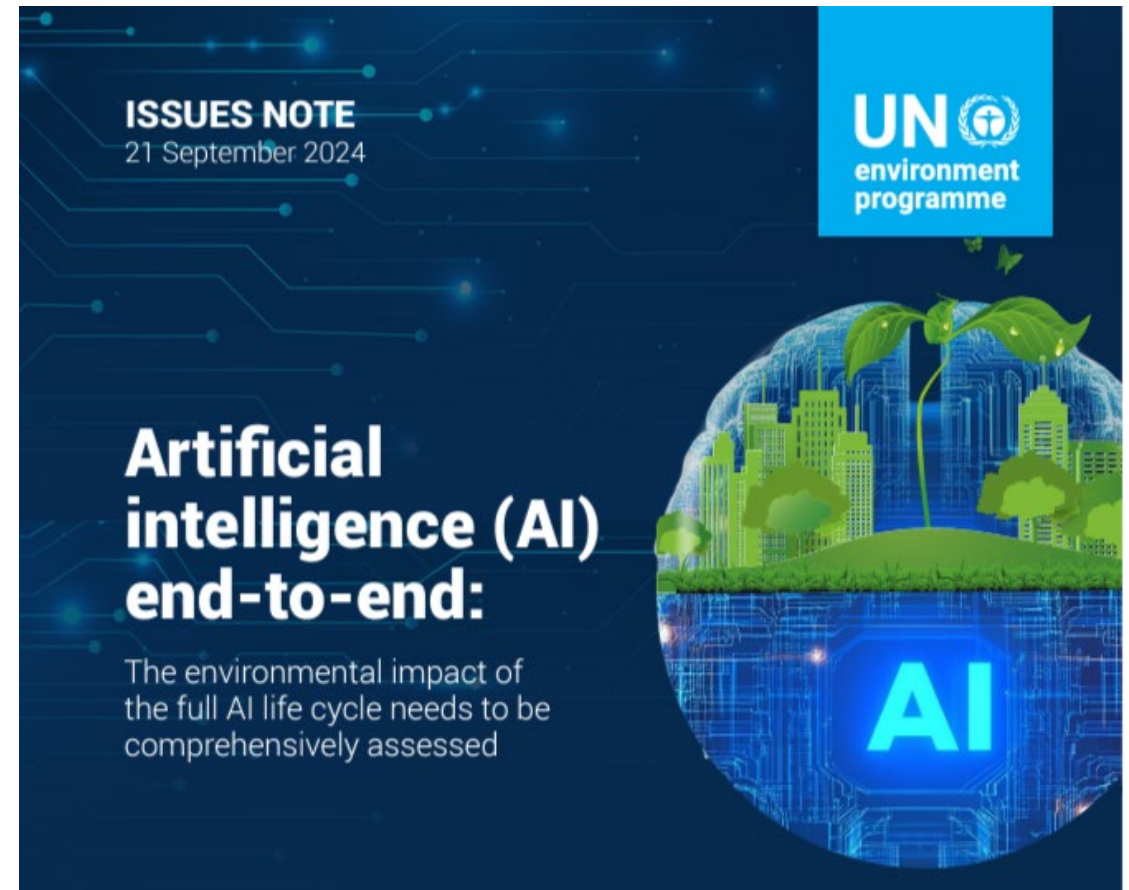
AI's Environmental Impact: Key Considerations

Issues Note

- Environmental impacts of AI go beyond energy consumption.
- Limited attention on AI's resource use, such as water and minerals.
- Insufficient data to support informed decision-making.
- Goal: **Highlight the need for comprehensive life cycle assessments of AI's environmental footprint. Elevate this need within the research community.**

Issues Note launched at UNGA, September 21

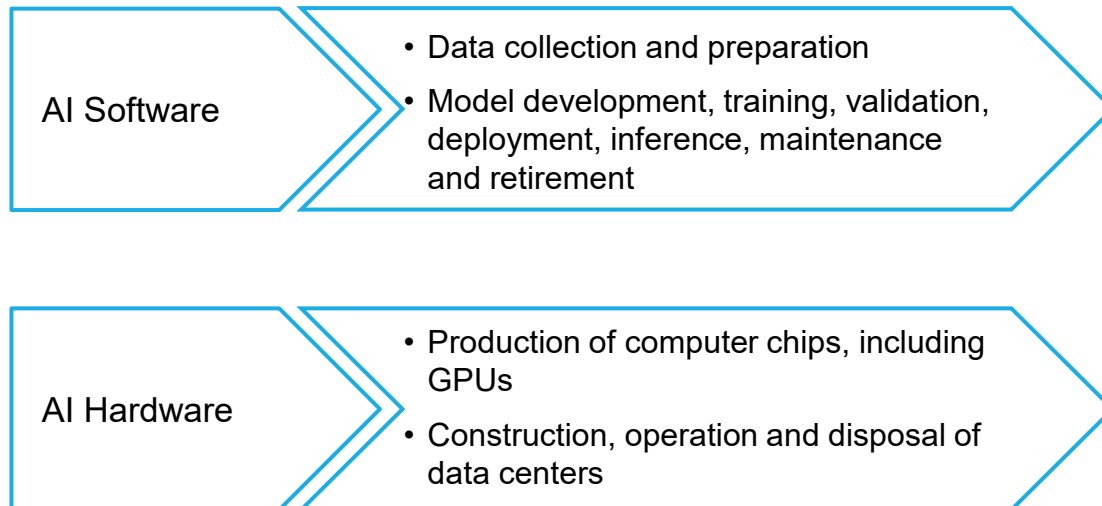
- **3,670 downloads**
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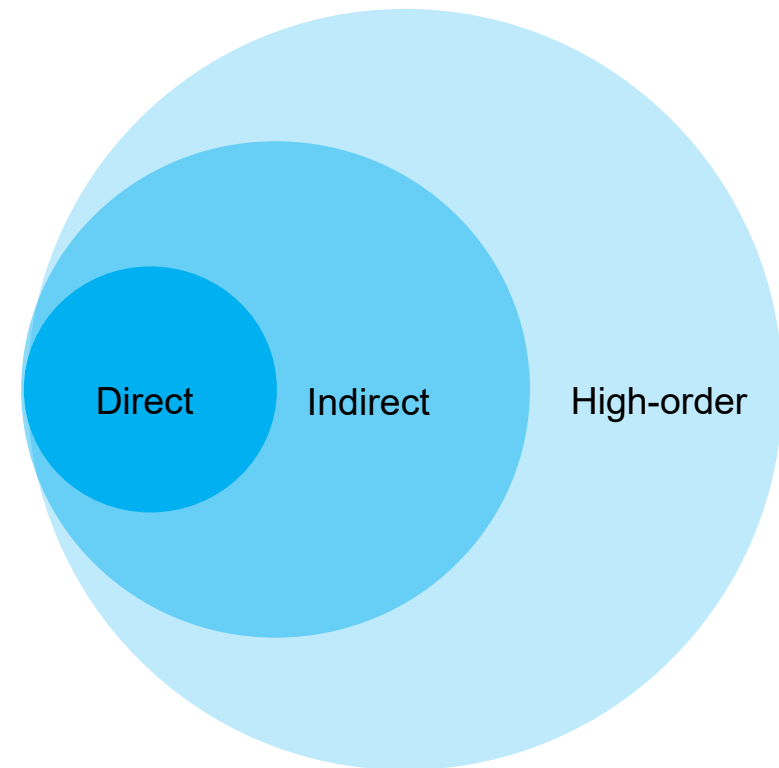
Issues Note: Key Messages

Understanding the full environmental impact of AI requires a comprehensive lifecycle approach

AI LIFECYCLE

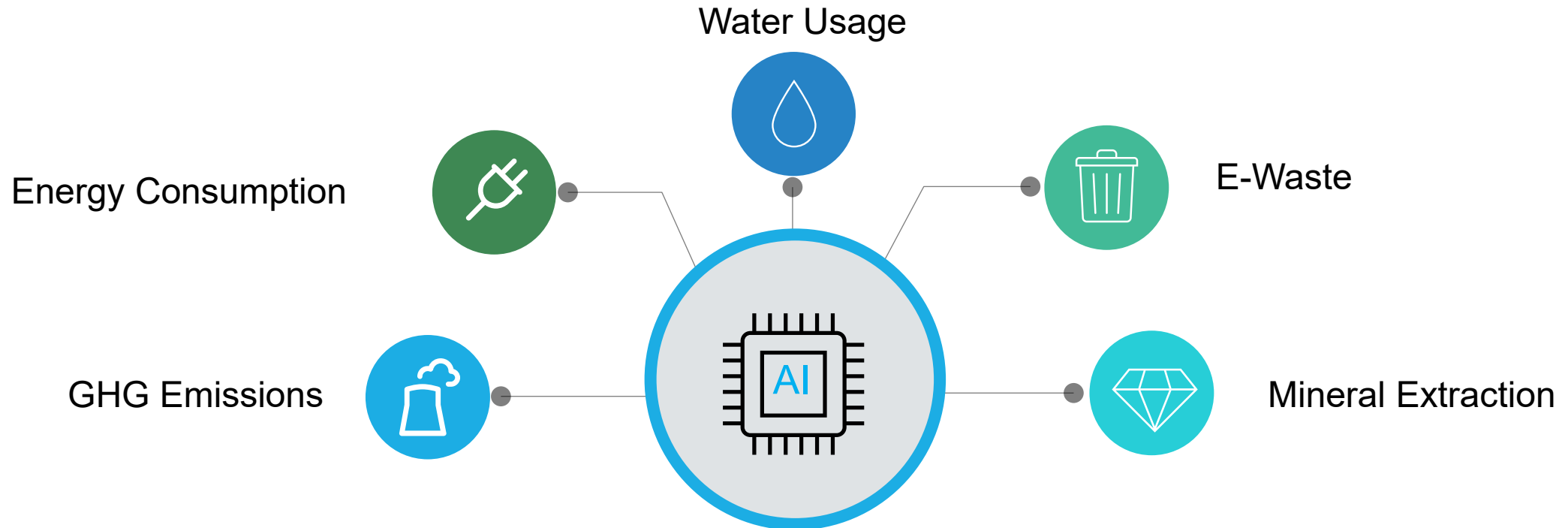


LEVELS OF ENVIRONMENTAL IMPACT



Direct Environmental Impacts of AI

5 areas



There is an urgent need for agreed-upon global methods to measure and track AI's environmental footprint, enabling consistent assessment of its direct impacts and supporting informed decision-making.

UNEP Recommendations & Next Steps

Advancing sustainable AI

- **Reporting:** Establish mandatory reporting on AI's environmental impacts.
- **Transparency:** Make impact data accessible to guide sustainable choices.
- **Energy Efficiency:** Optimize AI algorithms for energy savings.
- **Green Infrastructure:** Promote green data centers and renewable energy.
- **Sustainable Policies:** Integrate sustainability into AI strategies.
- **Expand Research:** Investigate AI's wider environmental impacts, including potential overconsumption.

Get Involved:

- What role do you envision for UNEP?
- How would you like to contribute and participate?



ISSUES NOTE

UN 
environment
programme



Artificial intelligence (AI) end-to-end:

The environmental impact of
the full AI lifecycle needs to be
comprehensively assessed



Thank you

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