Emmit DeHart

World Food Programme (WFP)

Topic 2: AI Resource Consumption

YUNMUN XXXVII

Artificial intelligence (AI) is one of the fastest-growing technologies in the world, but its continued growth requires a substantial physical footprint. Large data centers, the facilities that store the servers and data necessary to power AI, require large amounts of land, water, and power. Large quantities of water are needed to cool massive servers, so demand is rising quickly. The International Energy Agency projects that global data center electricity consumption could nearly double by 2030.[1]

Many of the new data centers, particularly in the United States, are being constructed in rural areas, where land is cheaper, and power is easier to access. Many of these regions' farming and water supplies are already under pressure from drought and climate change.[2] As data centers continue to grow at a rapid pace, companies are beginning to compete with local farmers and communities for water and land.

At the same time, AI could also help fight global hunger. AI tools can forecast crop yields, detect pests and plant disease, guide precision irrigation, and help farmers use water and fertilizer more efficiently. The United Nations University Institute for Water, Environment and Health (UNUINWEH), in its 2026 report, noted, “AI-powered systems can improve management of water, food, and energy, and support the global transition to a low-carbon economy. But this influence also brings risks. Acknowledging the challenges is not a rejection of progress—it is a precondition for wise decision-making.”

The Center for Strategic and International Studies (CSIS) held a roundtable discussion in July 2026 examining how AI has been and could be applied across the food system, from farming and supply chain logistics to better assist humanitarian aid. Recently, the WFP has developed and begun to implement a tool called SCOUT that helps time food purchases

[1] https://www.iea.org/reports/energy-and-ai/energy-demand-from-ai
[2] https://www.wri.org/insights/us-data-center-growth-imactbes

efficiently and choose storage locations in Africa, saving about $6.2 million over 18 months, according to the WFP. However, CSIS also notes that AI tools built for one setting are often hard to adapt elsewhere, that humanitarian organizations may struggle to maintain them once initial funding ends, and that data-sharing raises concerns about privacy and ownership.[3] AI has the potential to benefit the World Food Programme's mission to combat global hunger, but it could also cause its own set of challenges and setbacks without regulation.

Guiding questions for research:

1. How can we both support AI development while also ensuring protection of natural resources essential for crop production?
2. How could WFP benefit from AI?
3. What steps would WFP take to take advantage of AI while also protecting natural resources?
4. If AI could help end food shortages but requires more farmland and water, is the trade-off worth it?
5. Is AI a realistic solution to hunger, or does it distract from proven methods like direct food aid?

As always, please remember to include proper citations, and remember that all position papers will be submitted through Turnitin; the use of Generative AI is prohibited. Please don't hesitate to reach out to me at edehart@mail.yu.edu with any questions or concerns you may have. I'm looking forward to reading your position papers and meeting you all in February at the conference!

Sincerely,

Emmit DeHart

Chair, United Nations World Food Programme

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[3] https://www.csis.org/analysis/ai-and-global-food-security-focus-food-systems

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