

Localizing Artificial Intelligence for the United Nations Sustainable Development Goals

Author: Dr. Nasim Motalebi*

*Artificial Intelligence Lead, World Food Programme

The integration of Artificial Intelligence (AI) into humanitarian-development operations signifies a transformative initiative with vast scope and potential for accelerating the 2030 United Nations Localization Agenda for sustainable development and humanitarian action.^[1] Mindful of the risks and challenges posed by the fast-paced advancements in AI technologies, AI tools can be utilized to address data inequalities and enhance data access for locally led interventions and data-driven decision-making. Setting the stage for responsible and ethical adoption of AI, World Food Programme (WFP) is exploring the opportunities for AI governance and policy interventions for a localized approach to AI development and use to accelerate its fight against hunger (SDG 2).^[2] In this regard, WFP encourages the International Telecommunication Union (ITU) and the whole of the United Nations network to engage the local humanitarian actors and communities to advance AI governance and development especially in Low-and Middle-Income Countries (LMIC) and in situations of crises.^[3]

Current State of AI in WFP

WFP has demonstrated technological leadership through the deployment of AI across various operational domains, including supply chain management, disaster management, and nutrition, to mention a few. These initiatives, supported by an evolving AI-driven operational model, aim at enhancing workforce efficiency and delivering better outcomes for beneficiaries through data-driven insights, precision targeting, improved coordination, and automation. Programs such as DEEP, Optimus, ETC Chatbots already showcase the value of AI for food security and emergency response.^[20]

Nevertheless, WFP acknowledges the risks and challenges associated with AI. Biases, hallucination, toxicity, security breaches, and the "black box" problem of AI systems combined with organizational challenges such as fragmented AI culture, data inequality, incompatible data and technology foundations, and uneven distribution of digital assets among others hinder effective AI adoption across the organization. At the core of these risks and challenges is limited data quality and the need to enhance data diversity and access. WFP proposes recommendation to enhance the localization of data processes and AI governance to ensure an even and equitable use of AI in the humanitarian sector and across its value chain.

Challenges of Data and AI Localization

Localization can be described as the process of defining, implementing, and monitoring strategies at the local level for enhancing the effectiveness of humanitarian action and achieving global, national, and subnational SDGs.^[4] It also refers to the equitable representation of local actors and crises affected populations in SDG data to identify and address the root causes of inequalities and ensure adherence to the core principles of Leave-No-One-Behind.^[5] Equitable and high quality data are fundamental to trustworthy, safe, and secure AI practices. However, a large corpus of research point to the challenges of data inequalities, data disaggregation, knowledge management, data processing, and data wrangling for monitoring the localization of SDGs in LMIC.^{[6],[7],[8],[9],[10],[11]} These shortcomings result in limited capacities for local data processes which is critical to an equitable and even use of AI across the humanitarian network and country contexts.

WFP's Global Data Strategy (2024-2026)^[12] addresses these challenges by incorporating a new modern data estate for advancing an even adoption of AI across the organization. This includes promoting the responsible and ethical adoption of AI tools that could address the risks and challenges of localizing humanitarian action^[13] and sustainable development in LMIC.^[14] Nevertheless, to benefit from the vast amounts of data in the UN and in the humanitarian sector at large, it is imperative to establish comprehensive governance strategies that will ensure the adoption of AI meets local data requirements and is resilient towards the adverse risks of AI.

Opportunities for AI Localization

AI can enhance data processes and strengthen local data management capacities, both of which lead to enhanced representation and data equality. A significant benefit of AI lies in its ability to enhance data analytics and workforce efficiency through different AI systems such as expert AI, automation tools, and general-purpose tools.^[15]

For example, AI can enhance the value and use of qualitative data in human development metrics, providing deeper insights for humanitarian aid and sustainable development strategies.^[16] It can also strengthen local data management capacities and enhance accessibility of open data and analyses without requiring advanced coding skills, thus amplifying local voices and insights. By automating tasks like data cleaning, labeling, debugging, and improving data quality through error correction and metadata generation, AI is invaluable in analyzing unstructured data and enhancing AI models with diversified training data. And lastly, by generating synthetic data, Generative AI tools can support filling data gaps such as meta data, augment tabular data sets, or develop labeled data for enhanced quality control and anticipatory analytics.^[17]

These qualities should be further explored to promote more inclusive, accurate, and impactful engagement with local humanitarian actors in global initiatives, with the goal of enhancing data diversity and advancement of inclusive AI models.^[18] This is especially critical in the context of food security in LMIC that are most susceptible to social inequalities imposed by digital technologies.^[19] Nevertheless, these explorations require strong governing frameworks, oversight, and management to ensure that AI activities are purpose-driven and provide value to the global food system.

Recommendations for AI Governance

The UN 2.0 reflects on the critical role of cutting-edge skills and AI technologies in turbocharging the support of the UN family for the people and planet. The expansion of the reach and use of AI across all areas of activity and geographies will require engagement with the regional and country-level policies and regulations.^{[21],[22],[23]} On an inter-governmental level, the UN Advisory Body on AI is established to oversee AI governance and its alignment with principles of humanity and do-no-harm.^[25] Nevertheless, the localization of AI across all country offices requires global cooperation and collaboration to ensure all actors are equipped with the tools and knowledge to govern local data for effective AI development.^[26]

In response to this need, WFP encourages the UN family and the humanitarian sector at large to collaboratively address mechanisms for cross-country data flow, data sovereignty, and the development of ethical and reliable AI models for the localization of AI and the sustainable development goals.^[24] In support of the global humanitarian-development community, WFP defines core principles of AI governance as guidance to AI localization practices for an equitable and responsible AI adoption. The core principles of AI include Trustworthy and Ethical AI, Strong Data and Technology Foundations, Streamlining and Scaling AI Development, Strengthening AI Culture and Literacy, and Collaborative Partnerships.

In adherence to these principles, future AI policies and governing mechanisms should foster global collaboration, strengthen local investments in AI and digital capacities, and establish robust regulatory frameworks that create alignment with context-specific challenges. By doing so, we will ensure that AI serves as a catalyst for equitable solutions across all the Sustainable Development Goals.

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