



AI *for* COMMUNITY RESILIENCE

OVERVIEW

Is artificial intelligence the long-awaited tool for Building Resilient Communities?

More than ever before, our world is increasingly shaped by complex cascading risks from climate shocks, health crises, displacement, and socioeconomic inequalities, as well as political instabilities and communal conflicts. As a result, local communities, especially those at the forefront in the Global South, face growing pressure to adapt and survive. At the same time, artificial intelligence (AI) is rapidly transforming how decisions are made, resources are allocated, and information flows. While there is a growing debate on the use of AI for sustainable development, realistically, on the ground, these technological shifts often overlook the very communities that stand to benefit most. Not to mention the lack of representation of these communities in rooms where AI policies are designed and in mechanisms of deployment and regulations



Can AI be used to advance community resilience efforts?

If used ethically and inclusively with context-specific approaches, AI holds powerful potential to strengthen community resilience. It can enhance early warning systems and anticipatory actions, help in the optimization of disaster responses, enable better service delivery, and amplify local knowledge. From rural villages to informal urban settlements, AI can empower people to anticipate risks, adapt to change, and shape their own futures.

Key Benefits of AI

AI can empower local actors to anticipate, adapt, and thrive in the face of growing challenges, but this requires inclusive innovation, where communities are not just beneficiaries but active co-creators of these technologies. Here are some key opportunity areas



Predicting & preparing for climate shocks



Supporting smallholder farmers with precision agriculture



Monitoring and protecting natural resources

There are also Risks we can't afford to not watch

Despite its potential, AI can also introduce risks that can deepen existing inequalities if not addressed intentionally. For example

1

Limited Digital Infrastructure

In the Global South, digital infrastructure is still limited. Only about 36% of the population in Sub-Saharan Africa had internet access as of 2022 (World Bank). This means vast segments of rural populations are excluded from accessing AI-driven services like early warning apps or learning materials.

2

Data Extraction with a Colonial-like Approach

Much of the data in local communities across the global south (from agricultural patterns to cultural expressions) is collected by third parties without local ownership or informed consent. This fuels a form of "data colonialism," where AI development benefits foreign companies or governments more than the communities being studied.

3

Threats to Local Livelihoods and Knowledge Systems

AI technologies, especially in creative, agricultural, and manufacturing sectors, can undermine traditional livelihoods by automating tasks, imitating cultural products, or reshaping labor markets without protections for vulnerable workers. In many local communities, livelihoods are not just economic, they are tied to culture, identity, and generational knowledge. When AI is introduced without safeguards, it can disrupt entire local economies and devalue centuries-old practices.



Predicting & Preparing for Climate Shocks

AI-powered systems can analyse massive datasets ranging from satellite imagery to local weather reports in order to provide early warnings for floods, droughts, and extreme weather events.

Supporting Smallholder Farmers with Precision Agriculture

AI can guide planting decisions, detect crop diseases, and recommend climate-smart farming practices using local data.

Monitoring and Protecting Natural Resources

AI can monitor forests, rivers, and biodiversity using satellite imagery and machine learning thereby helping communities protect the ecosystems they depend on. For example, in a place like the Congo Basin, conservationists and Indigenous leaders can use AI-based forest monitoring platforms to detect illegal logging and land encroachment. These tools can strengthen environmental governance and support land rights advocacy

