AI-Enhanced Climate-Smart Agriculture for Central Darfur

Location: Rural Communities, Central Darfur, Sudan

Background / Problem Statement:

Over 54% of Darfur's population faces acute food insecurity due to conflict, land degradation, and unpredictable rainfall. AI-assisted climate modeling and crop monitoring can increase yields, reduce losses, and enhance food security.

Objectives:

1. Train 500 farmers in AI-assisted climate-smart agriculture.
2. Provide drought-resistant seeds and improved tools to 500 households.
3. Build 3 community-based grain storage facilities.

Key Activities:

Conduct farmer workshops on AI-informed irrigation and crop rotation.

Distribute seeds, fertilizers, and farming tools.

Build storage facilities and implement AI-assisted monitoring for inventory.

Send AI-driven weather and crop advisory alerts via SMS.

Expected Outcomes / Results:

30% increase in crop yields.

25% reduction in post-harvest losses.

Food security improvement for 3,000 residents.

Potential Risks / Challenges:

Climate variability affecting crop performance.

Limited funding sustainability.

Restricted access to conflict-affected areas.

Budget Estimate:

$70,000 – training, seed distribution, storage facilities, and AI tools.