World Vision

THE HOLLOWED EARTH

How the prolonged conflict in Sudan is affecting children and their families

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In Feina, a remote region in eastern Jebel Marra region in South Darfur, approximately 40,000 new arrivals from El Fasher and the ZamZam IDP camp in North Darfur have settled at the newly established Dar Omo IDP camp – strategically located between mountains of volcanic rock. However, the treacherous, rocky terrain leaves residents feeling isolated and cut off from humanitarian assistance. Conditions in the camp are also dire – most residents have experienced violence on the route and now lack food, water, and shelter ahead of the upcoming rainy season.

World Vision is a Christian relief, development, and advocacy organisation dedicated to helping the most vulnerable children, families, and communities overcome poverty and injustice. We work with the world's most vulnerable people from all backgrounds, even in the most dangerous places, and serve all people, regardless of religion, race, ethnicity, or gender.

Acronyms

CAR	Central African Republic
CFS	Child-Friendly Spaces
EiE	education in emergencies
FAO	Food and Agriculture Organization
GAM	global acute malnutrition
GDP	gross domestic product
IDP	internally displaced person
IFPRI	International Food Policy Research Institute
IOM	International Organization for Migration
IPC	Integrated Food Security Phase Classification
kg	kilogramme
km²	square kilometre
L	litre
m	metre
MT	metric tonne
NDVI	Normalised Difference Vegetation Index
NGO	non-governmental organisation
UN	United Nations
WHO	World Health Organization
WFP	World Food Programme

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Executive summary:
Sudan – A country of potential in collapse

What was once a country with the capacity to feed millions is now facing the world's largest displacement disaster and a catastrophic hunger crisis **(see Figure 1)**.

Sudan is often narrowly defined by drought and crisis, yet this is only part of the story and masks a more profound and tragic reality – especially for children. Today, over 26 million children live in Sudan,[1] a country that possesses the natural potential to be a global agricultural powerhouse, capable not only of feeding its own people but securing food for the entire region.[2] And yet this generation of children is now at the centre of one of the most devastating humanitarian collapses in the world.

Sudan should be a place of abundance.[3] It is blessed with vast fertile plains, major river systems, and a deep history of cultivation. International investors, particularly from Gulf countries seeking to anchor their own food security in Sudan's soil, have long recognised the country's promise,[4] particularly in large-scale farming systems such as the Gezira Scheme[a5] – one of the world's largest irrigation networks – alongside the highly productive rain-fed regions across Darfur, Kordofan, and eastern Sudan.[6] But for children, this promise has unravelled.

At the foundation of this collapse lies a fragile system, weakened over decades by underinvestment[7] in roads, storage, irrigation, and markets and compounded by climate pressures and governance challenges. Since the onset of conflict in April 2023, that fragility has given way to systemic breakdown. What we are witnessing is not only a political or economic crisis, but the dismantling of the systems children and their families depend on to survive.[8]

"Al-Jazīrah is the site of one of the largest irrigation projects in the world. Begun by the British in 1925, the Jazīrah (Gezira) scheme distributes the waters of the Blue Nile through a 2,700-mile (4,300-kilometre) network of canals and ditches to irrigate fields growing cotton and other cash crops. This scheme has made Al-Jazīrah the most productive agricultural area of Sudan. Water for the scheme is supplied from the Sennar and Al-Ruṣayriṣ dams upstream on the Blue Nile."

- **The refugee crisis has exploded across borders:** The number of Sudanese forced to cross international borders as refugees and asylum seekers has more than quadrupled since the conflict began,[9] pushing fragile neighbouring states to their breaking points. Half of these refugees – approximately 1.8 million – are children left to face an uncertain future in exile.[10]

- **Internal displacement has reached staggering depths:** Within Sudan's borders, millions have been trapped in the world's largest internal displacement crisis, with many forced to flee multiple times.[11] This includes an estimated 3.7 million internally displaced girls and boys[12] who are currently uprooted across the country's states.[13]

- **Agricultural depression is turning one of Africa's potential breadbaskets into a landscape of ruins:** Our satellite analysis revealed a catastrophic loss of nearly 40,000 square kilometres (km^2) of agricultural land wiped out of production since the conflict erupted.

- **Targeted violence has crippled vital irrigation networks and agricultural facilities, effectively paralysing the country's most productive farming schemes:** Our assessment of satellite imagery identified the Gezira Scheme as one of the two largest geographic extents of agricultural loss in Sudan, tracking a 14.22% total agricultural area loss within Sennar state alone.

- **The conflict has broken the trade routes and destroyed the systems that connect food to families:** With up to 75% of Sudanese households completely reliant on local markets to buy their food, millions of people cannot access basic staples.[14]

- **Massive, life-threatening hunger is consuming the population:** Today, an estimated 41% of all people in Sudan are trapped in acute hunger. This includes 5.5 million individuals living under "famine-like" emergency and catastrophic conditions and on the brink of starvation. These numbers are projected to increase as the country enters the devastating June–September lean season, putting[14] separate areas at immediate risk of full-scale famine.[15]

- **Malnutrition amongst children has reached lethal thresholds:** According to the latest scientific assessments, 4.2 million children and pregnant or breastfeeding mothers are acutely malnourished – marking a brutal 12% spike in just one year.[16] Tragically, one out of every five of those struggling with malnutrition – an estimated 825,000 girls and boys – is expected to suffer from its most deadly form – severe acute malnutrition – this year while only 30% of health facilities are functioning.[17]

This destruction is not only driving immediate humanitarian needs – it is eroding the very systems required for survival, recovery, and rebuilding. For millions of children, this means more than hunger today – it represents the theft of the stable, secure foundations they need to survive and rebuild tomorrow.

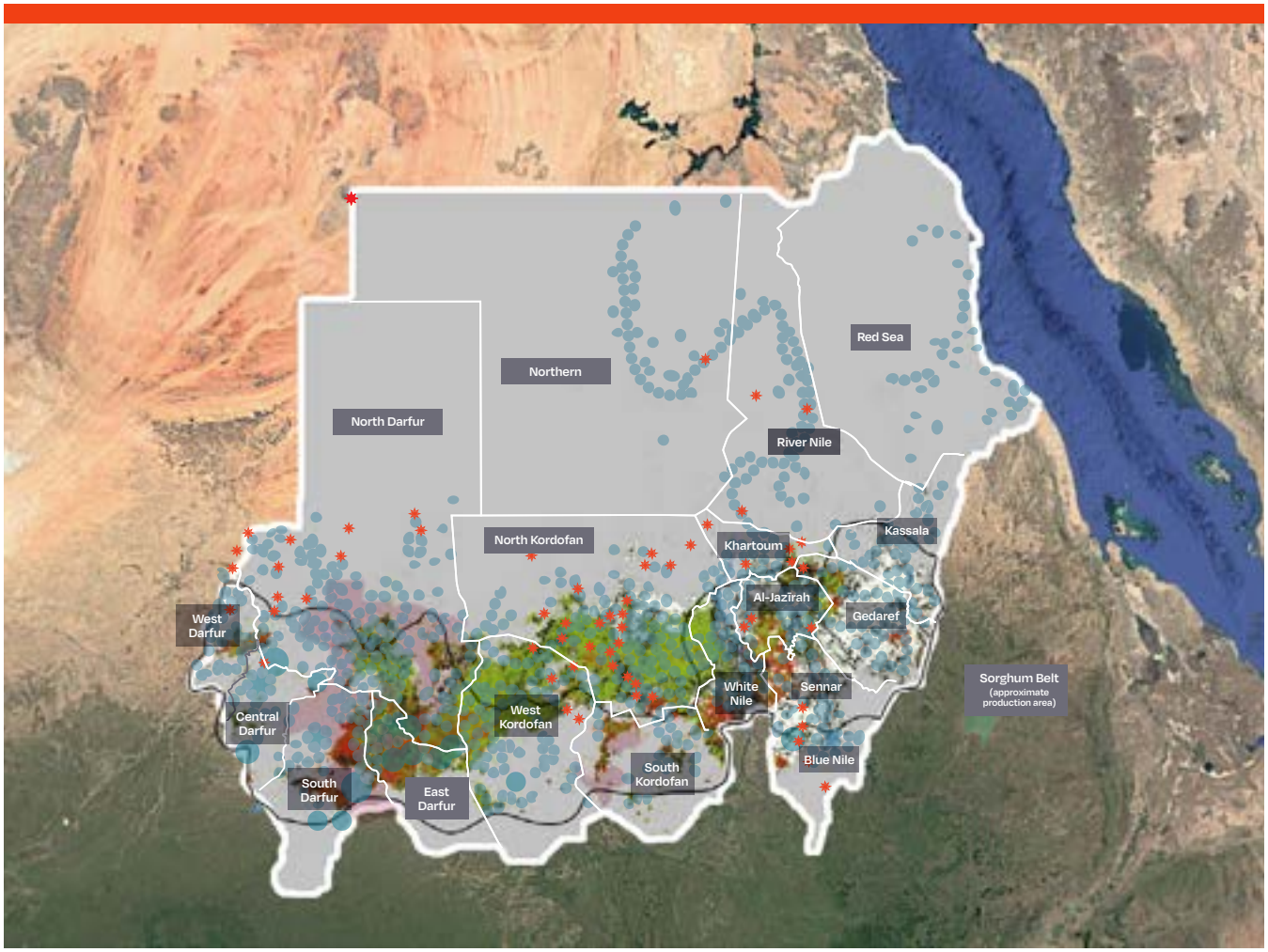

Figure 1. Risk map: Correlation of conflict, displacement, and food insecurity in Sudan[18]

Introduction

MAPPING THE ERASURE OF SURVIVAL

In response to the world's largest displacement disaster and a rapidly deepening hunger crisis, World Vision commissioned a national-scale geospatial assessment to expose the systemic collapse of Sudan's agricultural foundations. To understand the scale of the crisis, we compared high-resolution satellite "health checks" of Sudan's land from the start of the conflict in 2023 to the reality on the ground in 2025, enabling us to scientifically map the erasure of survival.

To start, we measured the "greenness" of Sudan using NDVI (Normalised Difference Vegetation Index – a standard indicator for plant health and vegetation density), analysing satellite data during the peak growing season (July–September). This allowed us to see exactly where the land was once thriving and where agricultural productivity has now vanished, while accounting for different planting cycles and weather.

By layering this environmental data with information on displacement and malnutrition, we can show a direct, lethal link between agricultural loss and the human tragedy of forced displacement and malnutrition unfolding in Sudan.

By translating the technical outputs, World Vision aims to provide a definitive look at the "triple threat" – conflict, agricultural erasure, and climate compounding – that now defines the stolen future of Sudan's children.

THE HOLLOWING OF SUDAN: YEARS OF EROSION

This hunger crisis is born of a broken earth. This means that, for the millions of malnourished women and children, the traditional breadbasket that once fed them is now a landscape of ruins.

Our research shows that the destruction and disruption of agricultural lands and infrastructure, due to years of conflict, have left once-productive areas in Sudan's breadbasket struggling with hunger **(see Figure 1)**. Significant losses are exhibited across the "Sorghum Belt" – the horizontal corridor through southern Sudan that traditionally feeds the nation – paralleling a shift in these areas to "hotspots of hunger".

What began as a political emergency in April 2023 has led to the hollowing out of the nation of Sudan. Fierce fighting, that ignited in the capital, Khartoum, expanded into a scorched-earth conflict, resulting in high civilian casualties, extensive damage to critical infrastructure and facilities, and the world's largest displacement disaster.[19] Over the past three years, more than 15 million people[20] – one-third of the population – have been forced to flee – some multiple times.

Yusuf*, only 11, remembers the terror of his journey after his family home was shelled. "The sky was black with smoke, and I saw people covered in blood," Yusuf recalls. "We ran until we could not breathe. I thought we would be safe here, but there is nothing but dust. I used to have books and a bed. Now we sleep on the ground in a makeshift shelter, and I wait for food that never comes."

*Name changed to protect the identity of the child.

Read the original story

A GENERATIONAL HUNGER TRAP

Some families poured into other already fragile situations, putting even more stress on already crisis-stricken countries. Others sought refuge in neighbouring communities. As of May 2026, 6.7 million people – more than half of whom are children[21] – remain displaced in states across Sudan.[22] Of the more than 4.9 million who originally fled across the border,[23] around 3.6 million Sudanese remain in Chad, South Sudan, Libya, Uganda, Ethiopia, and the Central African Republic (CAR) as refugees or asylum seekers.[24]

The face of Sudan's hunger crisis

The scale of the crisis is evident in the daily lives of those surviving the conflict. In South Darfur, 9-year-old Omer represents the physical toll of a nation gripped by famine. Suffering stunted growth, he lacks the energy to play and survives on just one bowl of plain porridge a day or goes without food. "My legs feel heavy, and my stomach always hurts. I am just so tired. I don't want to play; I just want the hunger to stop."

However, even before 2023, Sudan was already on the brink. This conflict has just accelerated what was an emergency food crisis to catastrophic levels. Five years ago, the Food and Agriculture Organization (FAO) and the World Food Programme (WFP) warned of "high numbers of people [in the Sudan] in critical food insecurity coupled with worsening drivers."[25] In 2021, a projected 13% of the population faced crisis levels of hunger, including an additional 500,000 people whose situations had worsened since 2020 and who were being pushed closer to the verge of starvation.[26] At the same time, an estimated 2.6 million children under age 5 were experiencing wasting or severe wasting in 2021.[27]

Despite these warnings, an estimated 41% of girls, boys, women, and men in Sudan are living with hunger today – 5.5 million are experiencing "famine-like" conditions – and are at immediate risk of starvation.[28]

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"This is the only food that I have to feed my children today," shares Tayab (above), a displaced mother of 10 whose family is surviving on a single daily meal of basic porridge. She has received no support in the six months since fleeing El Fasher, and this immediate physical threat of starvation is compounded by a devastating long-term toll on her children's futures, as survival now forces them into gruelling child labour. "[My] children bring firewood to the market to sell... and then at the end of the day, they buy the sorghum." By pulling children out of safe environments to scavenge for fuel just to survive the night on the bare ground, this immediate hunger crisis cements a lifelong trap that permanently steals their development and education.

b The Integrated Food Security Phase Classification's (IPC) is a system allowing governments, United Nations (UN) agencies, non-governmental organisations (NGOs), civil society, and other relevant actors to work together to determine the severity and magnitude of acute and chronic food insecurity, and acute malnutrition situations in a country, according to internationally-recognised scientific standards.

This emergency does not impact everyone equally though – children are at a much higher risk of suffering from the impacts of hunger in the short and long term.

The IPC's[b] February assessment suggests as many as 4.2 million children are acutely malnourished– a 12% jump from last year.[29] Tragically, one out of five of these children – an estimated 825,000 girls and boys – are expected to suffer from severe acute malnutrition this year – a 25% surge from pre-conflict levels.[30] Most of these children are in the Darfur and Kordofan regions[31] **(see Figure 2)** and are at risk of dying if they do not receive food within days.

Food insecurity, undernutrition, and micronutrient deficiencies place girls at extreme risk, not only of physical hunger, but of deep-seated discrimination and violence, as hunger actively amplifies existing gender inequalities. For girls, the nightmare is even darker as protection systems disappear. Girls living in these extreme conditions are uniquely vulnerable to sexual abuse and forced early marriage; historical data from conflicts in Sudan and Yemen have shown a devastating 20% rise in child marriage rates as families deploy desperate survival mechanisms.[32]

Before the war, 13-year-old Hana's* life in El Fasher was simple: "It was beautiful. I was reading and going to school with my siblings." That reality vanished in a flash of artillery shelling and air attacks. Separated from her parents in the chaos, she found her younger brother running for his life, only for a sudden strike to kill him instantly. "My mother went one direction, and my father went another... My brother passed away, so I needed to leave him behind. It was too much."

Terrified and entirely alone, Hana (right) began a gruelling six-day journey on foot, a trajectory that exposes the acute vulnerabilities young girls face in conflict zones. "I was running barefoot... thirsty, hungry, and afraid." On her second day in the wilderness, she was intercepted and brutally raped by five armed men. "After that, I couldn't walk," she remembers.

Though she eventually tracked down her aunt and grandmother at a displacement site, the nightmare has mutated from physical terror into a systemic erasure of her childhood. "The school nearby has been opened, and I want to learn... I want to continue my education." Stripped of resources, she cannot afford food or clean water, much less basic school supplies. Yet, amidst the profound trauma of her assault and the ongoing grief for her missing family, her desire to reclaim her future remains unbroken.

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Ultimately, this "generational hunger trap" does more than steal children's childhoods, it can lead to the permanent loss of human capital. Vitamins, minerals, and nutrients are essential for proper growth and development. This deficiency arises from both inadequate quantity and quality of food, as well as insufficient access to essential nutrition care.[33] Childhood malnutrition can lead to neuro-underdevelopment, poor academic achievement, cognition issues, and behavioural problems.[34] Child stunting can ultimately impact Sudan's future gross domestic product (GDP) by limiting the cognitive potential of an entire cohort of children.[35]

If children do survive, then the rainy season, typically from June to September,[36] will bring with it malnutrition's deadly bedfellows – cholera, typhoid, watery diarrhoea, and mosquito-borne malaria and dengue fever. With 70% of health facilities non-functional,[37] these children are being left without a safety net. In this context, families are not just facing food shortages – they are witnessing the total collapse of systems required for children to survive, including the loss of clean water and sanitation systems. In this situation, a malnourished child is not just hungry; they are biologically defenceless.

*Name changed to protect the identity of the child.

The anatomy of a child's hunger

Malnutrition is not a simple food shortage – it is a catastrophic, multi-layered assault on a child's body. It remains the number one underlying cause of child mortality, claiming nearly half of all deaths of children under the age of 5 globally.[38]

In a humanitarian crisis like Sudan's, hunger attacks through a lethal combination of physical failures:[39]

- **Undernutrition** includes wasting (low weight-for-height) and nutritional oedema, stunting (low height-for-age), and underweight (low weight-for-age)
  - **Wasting**, also known as acute malnutrition, is the failure of a child's body to develop to a healthy height and weight as the body begins consuming its own muscle tissue to survive, leaving a child frail and skeletal. It is the most extreme and visible form of undernutrition and the most dangerous aspect of hunger.
  - **Nutritional oedema** is characterised by the visible bloating and swelling the child's feet, face, and limbs.
  - **Common side effects** for a child suffering from undernutrition include common and treatable ailments, like diarrhoea or a respiratory infection, which can become a death sentence because their bodies no longer have the reserves to fight back.

© World Vision / Grace Mavhezha

Therapeutic feeding is the difference between life and death. A baby (above) receives specialised nutritional treatment at a World Vision-run primary health-care unit in El Daein, East Darfur.

- **Micronutrient malnutrition** is caused by the deficiency of micronutrients
  - **Micronutrient deficiency** is the lack of vital vitamins and minerals which are critical to a child's survival and development and can stall a child's basic cognitive and physical growth.

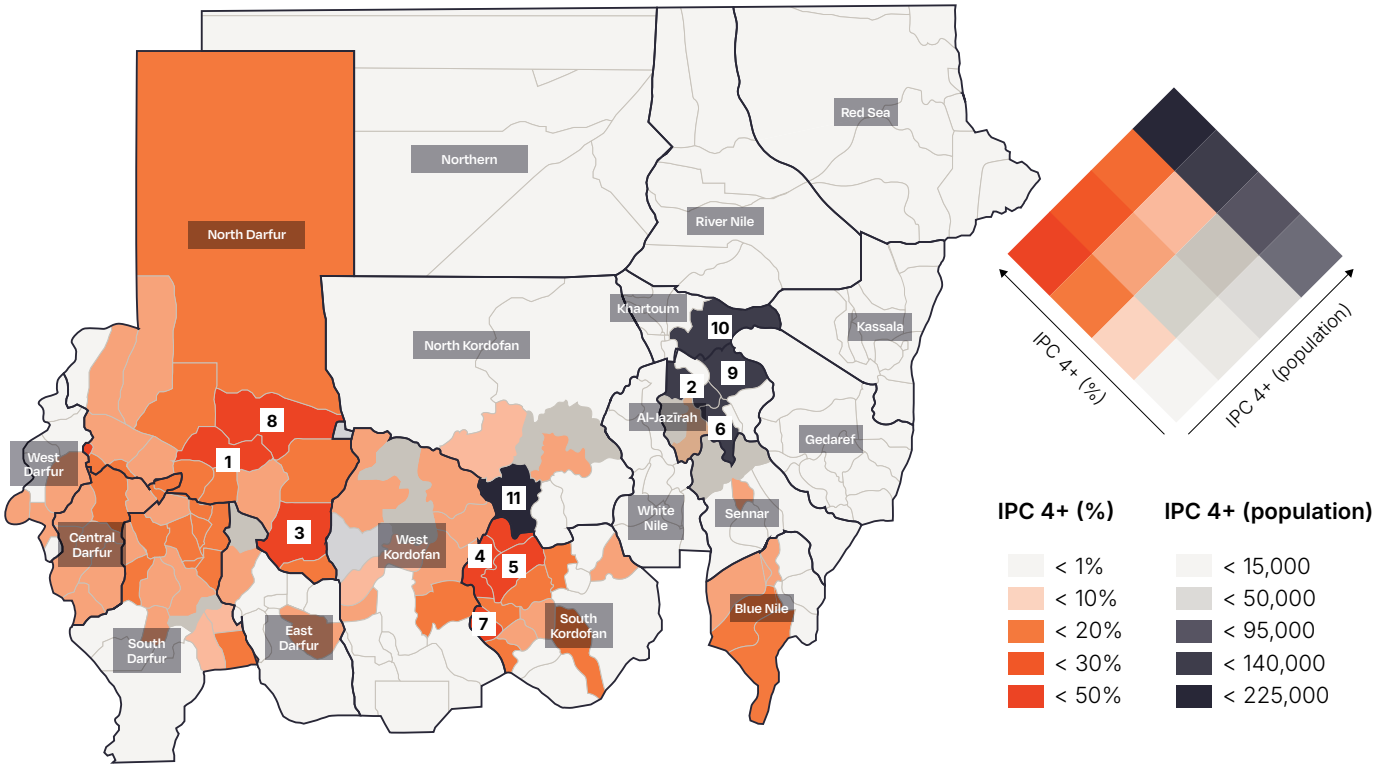


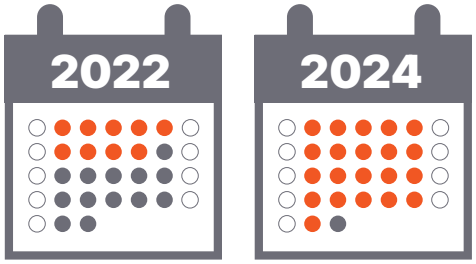
Figure 2. Malnutrition risk zones by population (size and %)[40]

	Locality	State	IPC 4+ population	IPC 4+ population (%)	Agriculture loss (km²)	Agriculture loss (%)	Locality size (km²)
8	Melit	North Darfur	85,762	45%	9.95	0.06%	16,117
1	El Fasher	North Darfur	36,524	40%	187.79	2.21%	8,502
3	At Tawisha	**North Darfur**	**51,929**	**40%**	**609.36**	**5.61%**	10,867
4	Dilling	South Kordofan	30,321	50%	36.26	0.98%	3,705
5	Habila	**South Kordofan**	**17,249**	**50%**	**739.94**	**12.14%**	6,096
7	Kadugli	South Kordofan	11,867	40%	105.63	4.88%	2,166
10	Sharg An Neel	Khartoum	140,834	15%	2.92	0.03%	9,471
9	Sharg Al-Jazīrah	Al-Jazīrah	126,823	20%	301.17	4.62%	6,519
2	Al Hasahisa	Al-Jazīrah	141,297	15%	1.47	0.04%	4,163
6	Janub Al-Jazīrah	Al-Jazīrah	125,841	15%	104.5	3.21%	3,251
11	Sheikan	**North Kordofan**	**225,417**	**25%**	**607.73**	**7.23%**	8,408

Figure 2 key (Table 1): IPC statistics by Sudanese locality

AN ECONOMIC STRANGULATION

Sudan's economic foundation effectively vanished following the COVID-19 pandemic, locking families into a desperate spiral of survival. Inflation skyrocketed by 379% between May 2020 and May 2021[41], with food prices jumping 17%.[42] Food bills jumped another 143% the following year – with a basic food basket[c] costing families the equivalent of nine days of work. By 2024, the structural toll of this collapse became starkly visible at the household level: a Sudanese family had to work for 21 days just to purchase a single, basic food basket – a devastating 42% increase in labour cost in a single year – the equivalent of six days more work.[43]



(9 days of labour) (21 days of labour)

The economic toll of the conflict is measured not just in falling national indicators, but in the total, physical asset stripping of displaced families. After surviving horrific violence in El Geneina, Fatna (right) was forced to flee West Darfur on foot, carrying only her 9-month-old son. Whatever remaining financial cushion she possessed was systemically extracted from her by armed actors along the escape routes. "On the road when I was coming, I had some money, and it was all taken away from me," she recalls. "All the small things that we carried with us; they have all been stolen. Right now, this scarf is the only thing I have."

This complete erasure of household purchasing power leaves displaced mothers totally defenceless against an inflated, fractured marketplace. Arriving in Feina, South Darfur with zero money, Fatna's capacity to build shelter or secure food is entirely dictated by a paralysed local labour market. In an economy where supply shocks have driven commodity prices out of reach, informal day labour yields virtually nothing.

c The items included in the basket represent the foundation of a basic, healthy diet: 1 kilogramme (kg) sweet bananas, 1 kg rice, 1 kg wheat flour, 1 kg raw sugar, 1 kg maize corn, a dozen eggs, 1 litre (L) cooking oil, 1 raw chicken, 1 kg tomatoes and 1 L fresh milk.

"When the day of market arrives, I will work as a tea maker to get some money to support myself each week," Fatna explains. Yet, the returns of this labour cannot keep pace with the hyperinflated cost of living: "I only make 500 Sudanese pounds [approximately US$0.83] per day, and I only work one day a week. It is not enough. I will struggle until the end of the week."

With her daily earnings amounting to a fraction of what is required to buy basic staples or plastic sheeting before the impending rains, the macroeconomic strangulation translates directly into systemic hunger. "Sometimes you go to the market to buy food... but if you don't find anything, you will go to bed hungry.""

This immediate erosion of household purchasing power is actively compounding a much larger, long-term macroeconomic catastrophe. According to International Food Policy Research Institute (IFPRI) modelling, the systemic failure to adapt to more frequent extreme weather events is projected to cumulatively drain a staggering US$105.5 billion from Sudan's GDP by 2050.[44] For a nation where 65% of people rely on agriculture for their primary lifeline[45] these long-term climate projections are not distant structural warnings – they represent the erasure of rural livelihoods today.

THE BLOCKED HORIZON

Sudan's children are trapped between a failing earth and a blocked horizon. While extreme weather and economic collapse have long thinned the margins of survival, the current conflict is actively erasing the land's ability to yield crops and degrading livestock herds' mobility. This destruction has moved beyond a temporary operational pause to a permanent landscape of ruins. Our nationwide satellite mapping exposed an unprecedented 38,918 km^2 (approximately 9,616,847 acres) collapse in cloud-free agricultural land since the outbreak of fighting – a figure that the analysts predict is significantly higher due to heavy cloud cover masking rain-fed zones **(see Figure 3)**.

Furthermore, recovery is severely constrained by a widespread, compounding contraction of arable land and pastures, collapsing water access, conflict-related damage to public and private infrastructure, and the systematic disappearance of public services and basic safety nets. This structural paralysis is hitting Sudan's core agricultural engines the hardest. The geospatial modelling also revealed that 30% to 40% of the entire agricultural sector in South and East Darfur has been completely knocked out of production over the last three years, while South Kordofan has suffered a staggering 28% land loss. Even the historic Gezira Scheme, long celebrated as the nation's traditional breadbasket, has seen its production systems shattered, with Al-Jazīrah and Sennar states losing a combined 4,954 km^2 of cultivation area **(see Figure 5)**.

The shrinkage of viable pasture – as physically tracked via satellite imagery across the vital Southern Sorghum Belt and Savannah corridors **(see Figure 4)** – will inevitably intensify resource competition between pastoralists and farmers. As climate volatility shrinks natural assets, this competition could trigger a lethal cycle of localised conflict, leading to displacement and further land abandonment.[46] Under current conditions, macroeconomic modelling warns that the permanent irrigated supply of wheat is projected to contract to 286,910 tonnes or less,[47] while crucial commodities like sugar are dropping down to 624,904 tonnes,[48] crippling Sudan's domestic market capacity. If we continue in this direction, the devastating intersection of rising heat stress and collapsing water systems will potentially trigger large increases in food insecurity, forcing a total, unsustainable reliance on international food imports to keep millions of children alive.[49]

The breaking of a breadbasket

WAR ON SOIL

Ground truth: What the satellites reveal – and families confirm

Sudan's ongoing conflict is not only killing people; it is destroying the land that sustains the next generation. While headlines focus on bullets, the satellite data reveals an "environmental strangulation" caused by the conflict-driven degradation of the Gezira Scheme and other breadbasket infrastructure **(see Figure 3)**. The geospatial analysis also exposes an unparalleled degradation of at least 38,918 km^2 of arable land,[d] with significant productivity loss across vital regions **(see Table 2)**. This can be observed in real time as reports indicate that the conflict continues to restrict access to land, water, and livestock movements and to displace people. Further complicating these dynamics is the conflict in the Middle East that has led to a global decline in fuel and fertiliser supplies and increasing transport costs, which are compounding the decline of Sudan's crop production and yield and "driving high and volatile prices, even in the post-harvest period".[50]

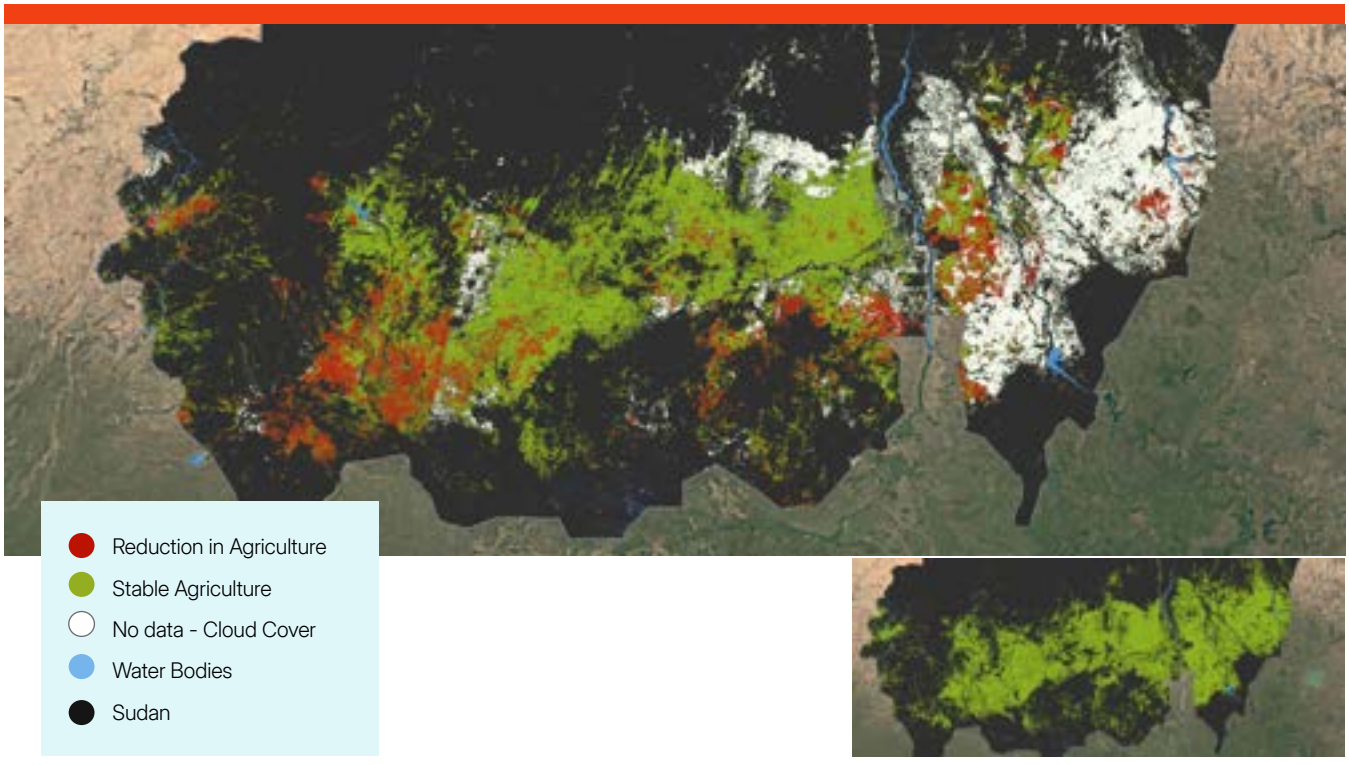


Figure 3. Agricultural degradation map: Shrinkage of viable pasture between 2023 and 2025 (above) versus Sudan's historical agricultural land coverage (below)[51]

d This nearly 40,000 km^2 loss represents only the areas where the sky was clear enough for satellite analysis. Because 41% of the country was obscured by cloud cover during the study, the report predicts the true scale of agricultural erasure is significantly higher.

	Sudan	Total agriculture class	Reduced agriculture	Stable agriculture	Cloud cover
Total area (km²)	1,886,068	305,142	38,918	139,755	126,309
Proportion of the agriculture class (%)	16.18	100	12.75	45.85	41.40

Figure 3 key (Table 2): Agriculture land cover class summary statistics

After the first year of the conflict recorded a significant 46% year-over-year drop in cereal (i.e. sorghum, millet, and wheat) production to 4.1 million tonnes[52] in 2023 – comparable to an economic loss of up to US$1.7 billion and a production loss of a year's worth of food for 18 million people[53] – Sudan's national production has been slow to recover. This is, in part, due to rainy season performances, shifting access to rangeland and agricultural land, localised conflicts over resources,[54] and fluctuating regional conflicts upsetting fuel supplies and prices. In 2024, the country saw a 62% jump in cereal production,[55] to an estimated 6.6–6.7 million tonnes,[56] thanks to very favourable weather conditions and well-distributed rains.[57] Unfortunately, farmers lost 22% of that initial gain to produce just 5.2 million tonnes of cereal.[58] Due to the ongoing degradation of agricultural land; productivity losses caused by displacement and rising costs for agricultural products, such as seeds, fertiliser, fuel, and labour; as well as other compounding threats, such as climate shocks, Sudan's national cereal production[59] forecast remain below the pre-war five-year average of roughly 6.2 million tonnes.[60]

This conflict-driven reconfiguration of agriculture has significantly reduced growing areas, driven farmers and pastoralists off their lands, and forced those still growing crops to try to increase productivity. This shaking of production is also compounded by a long-term southward shift of the desert[61] **(see Figure 4)**. This is supported by recent qualitative research[62] which also reported a significant decrease in land being cultivated.[63] Yet that earth continues to be systematically degraded as the ongoing conflict is pushing already fragile environmental systems beyond breaking point – creating a terrifying "triple threat" compounding the effects of the conflict, displacement, and climate shocks.[64]

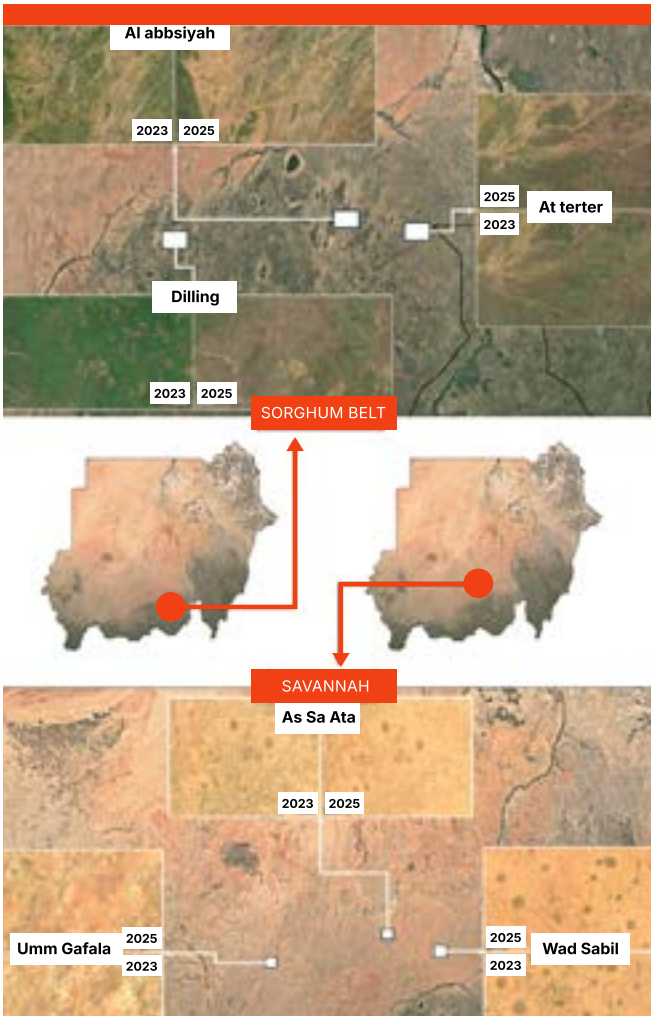


Figure 4. Agricultural degradation map reflecting the southward shift of the desert into the savannah[65]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Abdulrahman (above), a father of 10, is from South Darfur. Because of the war, he had to abandon his farm (about 4,200 square metres of land (approximately 1 acre) outside of Nyala) where he grew ground nuts, sorghum, sesame, and millet. Worried that Nyala might be hit by a bomb or his family could be shot in the market, he took his children and fled to El Fasher, the capital of North Darfur, about six months after the conflict started.

When they first arrived in October 2023, Abdulrahman remembers being in a terrible situation, but at least there was no fighting. Unfortunately, after just six months, in April 2024, an 18-month siege began in El Fasher, cutting off civilians, like Abdulrahman and his family, from food, water, medical supplies, health care, and humanitarian assistance. Atrocities followed, including unlawful searches, arbitrary detentions, enforced disappearances, executions, and sexual violence, in the town and surrounding camps.[66] Abdulrahman recalls the horrors they witnessed: "If we went to the market, you might be hit by a bombardment or shot. It was unsafe, and we had to get out of there."

He and his family members were amongst the 600,000+ people able to escape from El Fasher and surrounding camps during its siege.[67] He describes the harassment his family experienced during their long journey to El Nakheel. "Whatever we carried, even if it was a jerry can, it was taken. We were beaten because we did not have any money on us. They thought we were hiding it when we really had nothing. Whatever you can imagine, it happened to us. They told us to lie down, and they walked on us. My family was safe, but I saw others being raped. Psychologically I collapsed."

Abdulrahman, his wife, and three of his children are now settled in El Nakheel Camp in East Darfur where he is a community leader. However, he worries about the safety of his other children and family members who fled to Chad or returned to Nyala, but he cannot afford to pay for their transport to join him.

Upon arrival, income-less and wholly dependent on humanitarian aid, his family initially received some support from NGOs, but they were only given enough food to last them two days.

Mercifully, his father-in-law lived nearby and was able to gift them a horse and goats, which has helped sustain them during this upheaval.

Even though his land stands empty back home in South Darfur, Abdulrahman doesn't think they can return. "Nyala is still unsafe – there are thieves that will come and loot from you. Our houses are being burned or bombed, or things have been stolen after we left."

Unsure what is next for him and his family, he knows what has happened to them has happened to everyone. Although he would like to start again in East Darfur, he doesn't have any provisions, like his horse cart, to do what he knows best, farming. Even if he did have the resources, he explains: "The land around here is not fertile – there is not enough water. [Plus,] I don't have a single bit of land … it won't be free – the rent of the land here is high. [Also,] the cost of cultivation [like the cost of labour and price of seeds] is very high, and there is no security here [to keep away] pastoralists who might come and steal my crops just before I harvest. [Besides,] the price of the produce when it is sold is not enough to cover the costs, [and] I don't have anywhere to store what is harvested, so I would have to sell it immediately. [When] the farmers cannot store [what they reap], they have to sell to dealers who can store it and sell it for a much higher price."

e This area includes the rain-fed livelihood zones across central and southern Sudan (specifically Kassala and North Kordofan states), where the majority of the nation's staple food is produced.

Cereal collapse

Sudan's food supply has historically existed on a razor's edge; even a minor 10% drop in seasonal rainfall has previously slashed national harvests by 5%.[68] Today, that fragile ecological balance is breaking under the dual weight of warfare and climate failure. Satellite tracking confirms a severe decline in crop presence of both the highly productive Gezira Scheme and the vital rain-fed "Sorghum Belt"[e] **(see Figure 5)** – the horizontal geographic corridor that traditionally provides 80% of the entire country's cereal.[69]

This physical degradation mirrors what climate scientists project will happen during the period 2031 to 2060, in the climate zone where sorghum is currently grown.[70] Climate scientists have warned that under a high-emissions trajectory, this specific agricultural belt would face an average daily maximum temperature surge of 2.8°C, pushing average temperatures to a blistering 38.8°C. Temperature increases at key parts of the production cycle – at the beginning when germination and initial growth is occurring – and during peak periods of the rainy season would likely reduce crop yields for both cash and cereal crops.[71]

When forced onto this failing environmental baseline, the destruction of the active conflict acts as a lethal accelerant. The combination of heat stress, broken infrastructure, and siege-driven supply shocks has triggered a structural emergency, pushing local market metrics to unprecedented extremes. Other research also pinpoints the connection between extreme inflation and conflict hotspots, particularly around the untethering of Sudan's grain prices from historic norms.[72] Sorghum prices have skyrocketed by an astronomical 1,000% in Kadugli, South Kordofan from prewar levels, while flour prices jumped roughly 43% in besieged parts of the Blue Nile in January 2026.[73] What was once an integrated national breadbasket is now in danger of collapsing under the dual pressures of extreme climate exposure and severe conflict-driven supply disruptions.

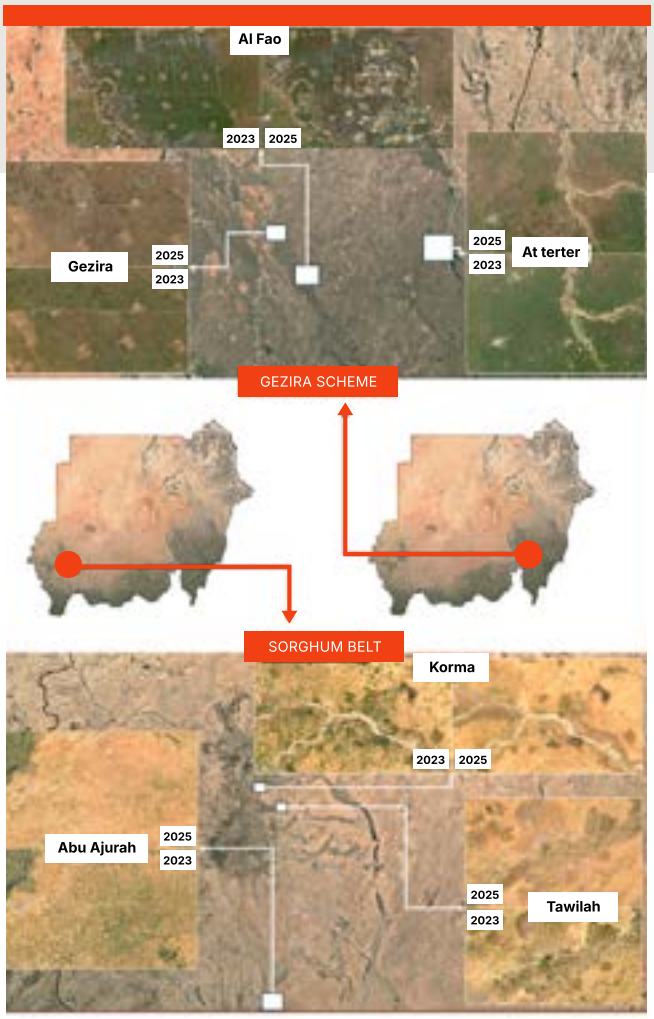

Figure 5. Sentinel 2 imagery of agricultural change in the western region of the Sorghum Belt and the Gezira Scheme between 2023 and 2025[74]

Infrastructure incapacitation

This catastrophe is further sharpened by administrative hurdles and damaged transit routes that keep life-saving aid trucks stationary while needs skyrocket. The reported conflict-driven damage of irrigation systems, agricultural storage facilities, and transit routes, as well as movement restrictions, have stripped away the country's only defence against environmental volatility as significant portions of sorghum and nearly all wheat production rely on irrigation schemes.[75] Without the necessary infrastructure to efficiently manage water during the critical October–November water window, Sudan could experience up to 40% crop losses for staples like cotton.[76] With storage facilities and transit routes damaged, even successful harvests cannot reach markets – leaving fragmented trade systems paralysed by the ongoing conflict. Farmers are not only unable to store or sell their goods in a timely manner but 60–75% of households reliant on purchasing food are left with no way to access staples.[77]

Sudan faces being trapped in a permanent cycle of emergency aid, unable to take steps toward economic recovery until its local market infrastructure is rebuilt. Without functioning marketplaces and trade routes, the country is being forced into a state of ongoing dependency as its own internal engines of survival remain broken.

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Samira, mother of 7 (above), explains that when she was with her family in Zamzam IDP camp there was no one to help or give them food: "There was nothing to eat. When we go to the market, there is no market... people died because of hunger."

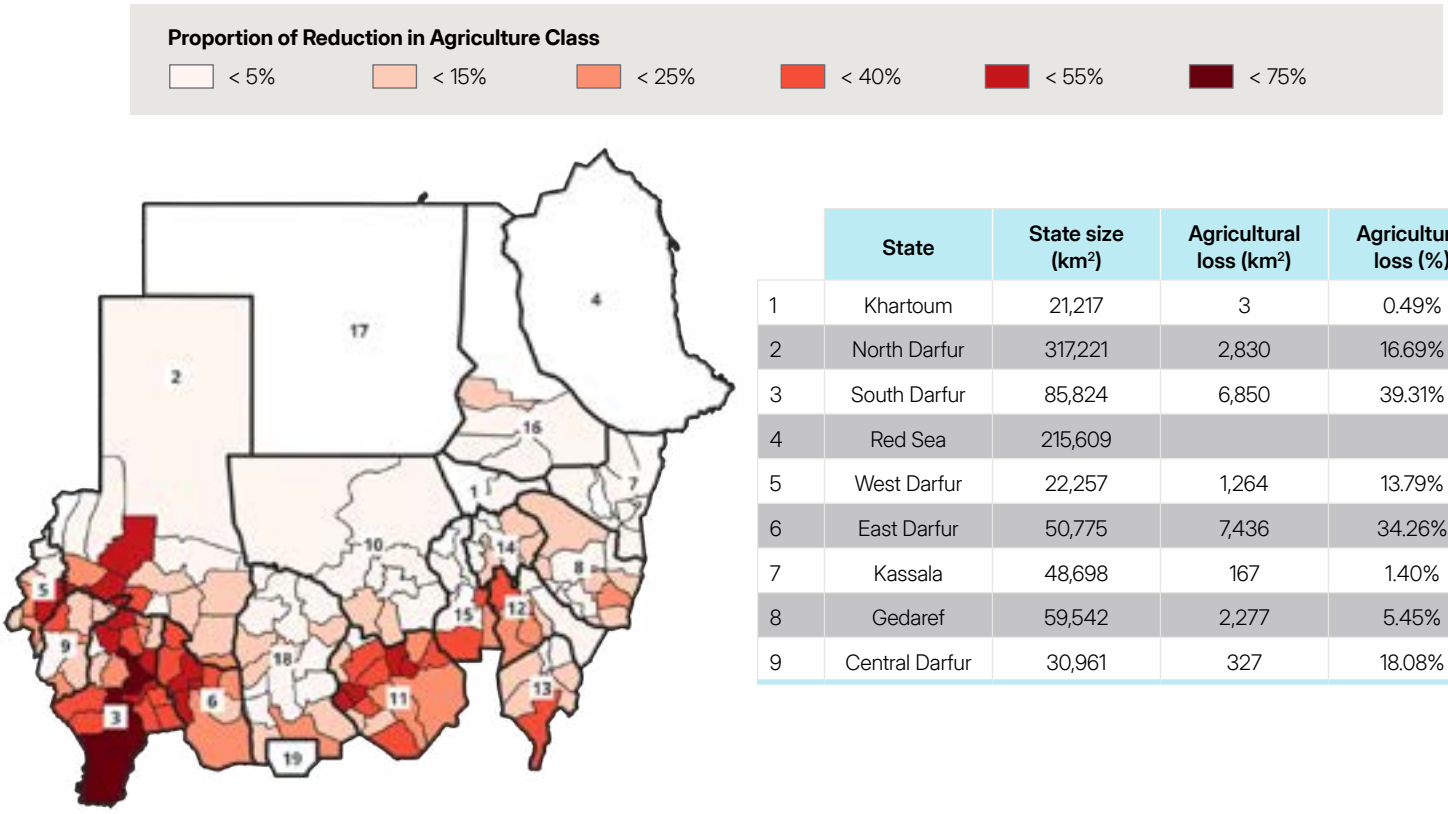
Climate compounding

Sudan's agricultural engine – the source of about a quarter of the nation's GDP[78] – is being dismantled. Even before the current conflict, summer rainfall had dropped by 15–20%,[79] while rising temperatures[f] increased evaporation,[80] effectively cancelling out any beneficial rain and leaving the soil parched. Fires during the dry season (November to May) are also intensifying because of high temperatures and strong winds. In March 2026, dozens of homes were destroyed, property damaged, children killed, and people were further displaced in Darfur.[81]

By simply following these climate trends, a worrying trajectory is revealed. Sudan's supply of sorghum – the nation's primary food staple – is projected to plummet from 3.4 million tonnes to just 1.2 million tonnes. This 64% collapse would end Sudan's ability to feed itself, forcing a total, permanent reliance on international food imports.[82]

Upon review of the satellite imagery, we can see signs of the ecological degradation across Sudan's agricultural landscape between 2023 and 2025, which has led to some significant losses in agricultural area **(see Figure 6)**. These can at least partially be attributed to the combination of climate change impacts, including erratic rains, recurrent and prolonged droughts, frequent flooding, as well as inefficient/damaged irrigation infrastructure and conflict-induced migration.

f "The country is warming at a rate equivalent to twice the global average, with average temperatures projected to increase by between 1.5°C and 3.1°C during August by 2060." (Middle East Council on Global Affairs (4 April 2024).)



	State	State size (km²)	Agricultural loss (km²)	Agricultural loss (%)
1	Khartoum	21,217	3	0.49%
2	North Darfur	317,221	2,830	16.69%
3	South Darfur	85,824	6,850	39.31%
4	Red Sea	215,609		
5	West Darfur	22,257	1,264	13.79%
6	East Darfur	50,775	7,436	34.26%
7	Kassala	48,698	167	1.40%
8	Gedaref	59,542	2,277	5.45%
9	Central Darfur	30,961	327	18.08%

	State	State size (km²)	Agricultural loss (km²)	Agricultural loss (%)
10	North Kordofan	186,149	1,646	3.36%
11	South Kordofan	79,331	4,669	27.90%
12	Sennar	39,257	4,217	14.22%
13	Blue Nile	38,165	767	8.57%
14	Al-Jazīrah	27,154	737	4.83%
15	White Nile	37,994	2,746	12.47%
16	River Nile	130,405	5	2.92%
17	Northern	364,120		
18	West Kordofan	106,309	2,968	6.95%
19	Abyei PCA	10,537		

Figure 6. Agricultural losses of arable land in each state (%) and area (km²)

THE EROSION OF SURVIVAL

The war on the soil is becoming a war on children's survival.

- One in five children worldwide (520 million) live in or are fleeing conflict zones,[83] – including more than 26 million girls and boys 18 or younger across Sudan[84]
- 1 in every 7 people in need of global humanitarian assistance in 2026 lives in Sudan[85]
- Sudan has the most people in need (33.7 million) out of the 50 countries globally requiring assistance – 60% of whom are children[86]
- 2 out of 3 Sudanese (33.7 million) will require humanitarian assistance in 2026[87]
- 50% of Sudan's total population – nearly 25 million girls, boys, women, and men – are expected to be in dire need of food assistance in 2026[88]
- 1 of every 4 people in Sudan who are living with hunger – 5.5 millionf – are at risk of starvation[89]
- 4.2 million children and pregnant or breastfeeding women in Sudan will suffer from acute malnutrition in 2026[90]

With the collapse of employment and livelihood systems – approximately 80% of Sudan's labour force is dependent on agriculture (i.e. livestock, cropping, and forestry)[91] to some extent – the situation in Sudan has remained precarious with the number of people in need of assistance growing every year since 2018. Five years ago, a reported 13.4 million people needed humanitarian assistance – today this number has more than doubled with 2.5 times as many people (33.7 million) at risk.[92] Three out of every five people in need (60%) are children.[93]

g Nearly 5.5 million of the 19.5 million people (28%) experiencing hunger (IPC 3+) in Sudan are one step away from starvation – 5.3 million people are in "emergency" (IPC 4) and 135,000 are experiencing "catastrophe" (IPC 5) conditions.

Displacement into fragility, not recovery

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Samira sits with her family and other IDPs (above) in East Jebel Marra in the Jebel Marra mountains. It has been more than six months since she was driven out of her home due to the conflict. However, she has been in the Feina camp in South Darfur just a few weeks since being forced to flee her temporary refuge of Zamzam IDP camp in El Fasher, North Darfur.

She cries as she recounts the people she lost while fleeing the offensive that took place there in late 2025.[94] "We lost a lot of people in El Fasher [and] even more people throughout the journey . . . friends, family members, grandfathers, grandmas, fathers, and mothers, sisters, and girls. *Alhamdulillah* (praise be to God) we have arrived in a safe place without insecurity, but we don't have water and food. We don't have anything; we are suffering a lot. We need peace and security."

Many displaced households are effectively trapped within a wider zone of crisis, rather than relocating to stable or productive areas. The data suggests that displacement is not leading populations towards more viable agricultural environments, but rather into areas that are themselves fragile, degraded, or already under pressure. Darfur, in particular, has been heavily affected, exhibiting a lethal "triple clustering" **(see Figure 6)**, including the highest proportions of IPC 4+ food insecurity, the highest numbers of internally displaced persons (IDPs), and the greatest reduction in agricultural productivity **(see Figure 7)**.

Over the past year of the conflict, localities across greater Darfur have reported malnutrition rates far above the World Health Organization's (WHO) emergency threshold[h] and high enough for the IPC to classify the situation as "critical" (IPC 4):[i]

h WHO's threshold for declaring a blanket "emergency" is GAM >15% (see: WHO (2000) The management of nutrition in major emergencies p76.).

i When assessing the level of seriousness of a hunger situation, IPC requires a GAM rate of 15-29.9% to declare the situation as "critical" or Phase 4 (see: IPC (n.d.) Guidelines for communicating the IPC's Acute Malnutrition (AMN) scale p3.).

At the beginning of the 2025 lean season, appalling levels of global acute malnutrition (GAM)[j] were already being reported in Yasein locality in East Darfur (28%)[95] and Um Duhkun in Central Darfur (23%).[96]

During the 2025 rainy season, the GAM rate of children assessed in Tulus locality in South Darfur was 28%.[97]

By the end of 2025 – during peak harvest season – children in North Darfur were particularly suffering – Um Baru locality reported an exorbitant GAM rate of 53% with 1 in 6 children suffering from severe acute malnutrition[98] and Kornoi and At Tina had GAM rates of 34% and 20%, respectively.[99]

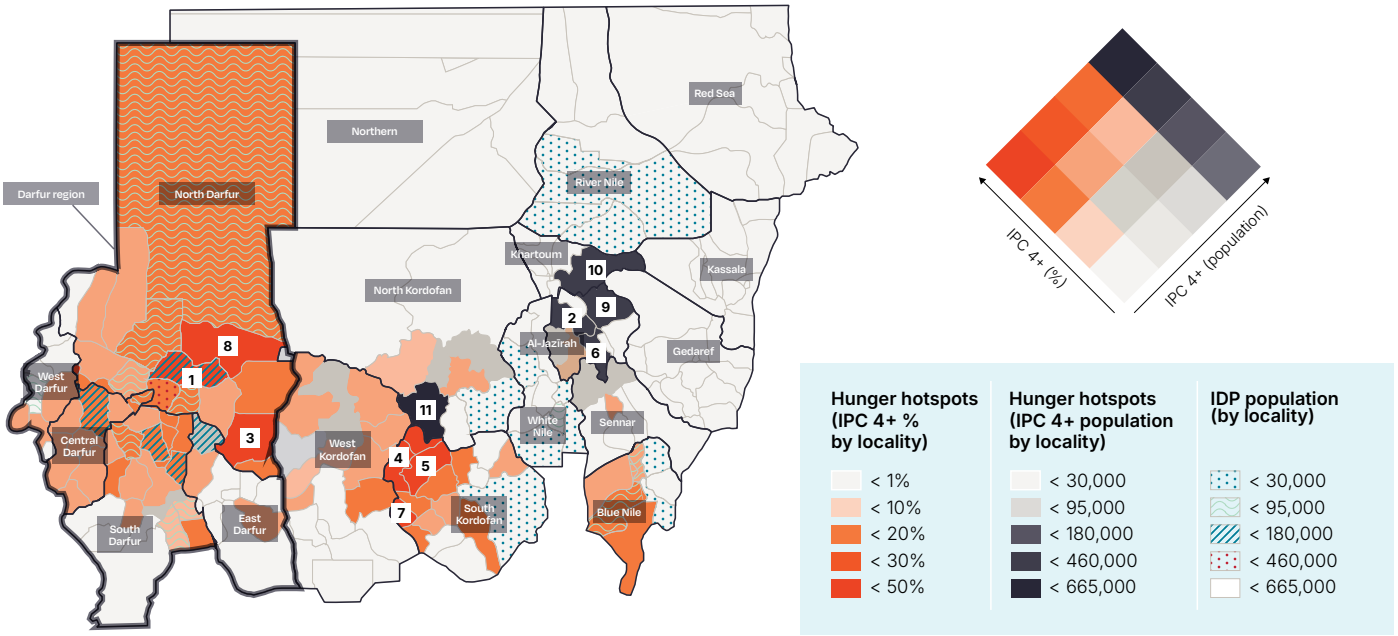

Figure 7. Correlation between displaced population locations and malnutrition risk zones across Darfur

j The GAM rate consists of cases of both severe and moderate acute malnutrition.

Beyond playing host to the majority of IDPs displaced from other locations across Sudan, the majority of displaced Darfurians remained displaced either within their own state or the broader Darfur region.[100] Meanwhile, between 30 to 40% of East and South Darfur's total agriculture has also been impacted during the last three years **(see Figure 6)**, and both states are a popular destination for people fleeing violence from other parts of Darfur – who are arriving with nothing into areas experiencing severe food insecurity[101] **(see Figure 7)**.

- Nearly two-thirds of IDPs are concentrated across the five Darfur states[102]
- 84% of IDPs originating from South Darfur remain within South Darfur[103]
- 78% of IDPs from North Darfur remain within North Darfur[104]
- 50% of IDPs are hosted in South, North, or Central Darfur[105]

Hawa and her family (above) are amongst the thousands trying to survive one day at a time in the Kalma IDP camp in South Darfur. For months, she struggled with meagre earnings from irregular chores, and her children often went to bed hungry. "Before the food assistance arrived, we were barely surviving," Hawa recalls.

The incoming populace to East Darfur is living in camps, mostly near its state capital, El Daein, placing an enormous burden on the city.[106] This massive influx of IDPs has overwhelmed local services. Breakdowns in sanitation and inadequate and overcrowded living conditions have the potential to fuel outbreaks of diseases like cholera and measles and lead to a dramatic increase in humanitarian needs.[107] While once considered a refuge of safety for those fleeing intense fighting in North and South Darfur, East Darfur has recently become a target of violence with an airstrike on the El Daein Teaching Hospital killing scores of patients and staff, including 13 children.[108]

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Even places intended for healing have become targets. Adam survived the direct attack on the El Daein hospital – the same facility pictured here (above) – that left 13 children dead and dozens more seriously injured.109 "There was a big bang and the hospital fell," Adam says. "All my legs are now paralysed." His story underscores the complete collapse of safe spaces for the most vulnerable, including children.

Even families who have been able to return to their home states, arrive to largely non-functional health, education, and child protection services. The collapse of these social safety nets and essential services worsens food insecurity; acute malnutrition; protection risks, such as forced or child marriage and sexual exploitation; and education losses.[110]

The flight and displacement of millions of people around the country is not just about families being able to make ends meet, however. It has become a battle for survival as worsening conditions have begun to push people to make dangerous decisions to ensure their families can endure. Even those returning home find their properties damaged or destroyed, with no access to water, health care, or education.[111] Reports also show that "illicit economies, [such as the illegal drug trade and manufacture] are expanding rapidly to fill gaps left by collapsing formal sectors".[112] Forced and child marriages and sexual exploitation cases are also rising as economic desperation grows within the context of prolonged displacement and weakened community and family structures.[113] A review of public reports and key informant interviews also found that forced and child marriages are more prevalent. This potentially driven by hyperinflation and economic challenges where a dowry offer could help sustain the remaining family members; by the desire to protect daughters from sexual violence; or to avoid a potential violent retaliation if they reject a marriage proposal.[114] Other accounts document women engaging in survival sex for food, becoming "mistresses" to fighters to ensure their families' safety and access to food, parents skipping meals so their children can eat, people selling productive assets and possessions, children begging, or families having to choose between lifesaving medicine or buying food.[115]

Resilience in the rubble

"The children of Sudan have shown incredible resilience, but resilience has its limits. They need the world to care as much about their survival. Every hour of delay increases the risk of death for more children."

– Simon Mane, World Vision Sudan, National Director

Since the outbreak of conflict in April 2023, World Vision has operated as one of the largest humanitarian agencies in Sudan, maintaining a lifeline for communities amidst a breakdown of systems required for survival. Transitioning its headquarters to Port Sudan in August 2023 to ensure operational continuity, World Vision has reached more than 5.6 million people across the region affected by the conflict with life-saving assistance,[116] including 2.3 million girls, boys, women, and men living in Sudan.

COMBATTING HUNGER AND SUPPORTING AGRICULTURE

World Vision's response focuses on the fundamental pillars of survival: food security and livelihoods. Where destroyed infrastructure and market collapses cut families off from local food supplies, World Vision is filling the gap with direct, life-saving in-kind food assistance. The organisation has distributed more than 553,500 metric tonnes (MT) of food assistance, such as maize meal, cereals (beans or lentils), and cooking oil, to 69,274 families.[117]


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In the vast, dusty expanse of South Darfur's Kalma IDP camp, thousands of displaced families struggle to survive day by day. Amongst them is Hawa, a mother of seven whose life has been turned upside down by Sudan's devastating conflict.

Separated from her husband and forced to flee her home, Hawa arrived in Kalma seeking safety. Instead, she found a gruelling daily battle against hunger.

"Life here is very hard," Hawa shares. "There is no work, no food, and no way [for me] to care for my children."

For months, Hawa has relied on helping neighbours with odd jobs around the camp, such as washing clothes or cleaning, to support her family. The little money she earns is rarely enough, often forcing her children to go to sleep on empty stomachs. Recently, a lifeline reached the camp. The WFP collaborated with World Vision to distribute essential food items, including cereals, pulses, vegetable oil, and salt, to Kalma's most vulnerable households. For Hawa, the distribution brought a profound sense of relief after months of compounding uncertainty.

Hawa (right), pictured at the distribution centre with her neighbour (left), reflects on the relief of receiving this assistance, "The waiting process was long and difficult. But now, thanks to this support, my children will have something to eat."

Returning to her shelter with the rations, Hawa felt a rare sense of hope. For the coming days at least, hunger would not be her family's biggest worry. "It may not be enough for long," she admits, "but it gives us a chance to breathe."

For families like Hawa's, humanitarian assistance is more than a bag of food – it is a restoration of dignity, security, and hope. "I just want my children to survive. I want them to eat, to be safe, and one day to go back to school."

In regions where markets remain functional, World Vision supports with multi-purpose cash assistance. The organisation has provided over US$36.1 million in cash and vouchers to families – to support more than 839,160 girls, boys, women, and men – to restore their dignity and allow them to prioritise their most urgent needs, such as food, shelter, health services, and school supplies.[118]

Forced to flee her home in Khartoum, Fawzia and her children (above) embarked on a dangerous journey, walking for days with nothing but hope. Her life began to change when she registered for World Vision's cash assistance programme in South Darfur. With the first assistance she received, her priority was ensuring her children had enough to eat. The ongoing support has helped her restore their dignity, allowed her family to begin rebuilding their lives, and provided her children with a sense of normalcy despite their displacement.

"Before the cash assistance, we had nothing, no bed and no blankets. After I received the money, our life changed. I bought food for my children. The second time I received the money, I paid school fees and bought school supplies for my children."

To address the 4.2 million children and pregnant or breastfeeding mothers facing acute malnutrition,[119] World Vision operates 12 mobile clinics in hard-to-reach areas across Sudan, including Khartoum, East Darfur, and the Blue Nile. These units provide integrated medical consultations, life-saving nutritional supplements, reproductive health care, and medications.

Six of these clinics operate in the Blue Nile region alone, reaching women who would otherwise have zero access to health care. Fatima (above) is one of many who sought critical reproductive health services and medical consultations at these roaming units. In a country where conflict has left over 70% of health facilities non-functional, these mobile teams are a lifeline.

In areas where Sudan's agricultural breadbasket has been shattered, World Vision is providing physical inputs and assets – including certified seeds, cultivating machinery, donkey carts, and hoes – to help thousands of farmers.


© World Vision

In the heart of Sudan's Blue Nile state, hope is sprouting again for smallholder farmers who have endured years of compounding hardship. Amongst them is Alawia (above), a 48-year-old mother of six from Hilat Al Hajar village, who has long struggled against the triple threat of conflict, climate volatility, and economic collapse just to feed her family.

For two heartbreaking seasons, cultivating her small plot of land was simply too dangerous.

"It was unsafe for me to leave my children behind to search for proper seeds," Alawia recalls. "My family was starving; the situation was truly difficult."

Her reality shifted when she joined World Vision's Nexus Accelerator Project. The initiative delivers the precise agricultural inputs and foundational knowledge local communities need to protect what remains of local production: certified seeds, modern tools, and practical training.

"With the project's support, I was able to grow sorghum again," Alawia says, smiling as she walks through a field of thriving, tall stalks.

The transformation is undeniable. By switching from traditional farming methods to modern techniques, Alawia has dramatically shortened her crop's timeline. "Previously, it took more than a month for the crop to germinate," she explains. "Now it takes less than two weeks. In the past, I used local seeds and harvested only two sacks. This season, I expect a double yield."

Alawia anticipates a harvest of around four sacks of sorghum – approximately 200kgs. This bumper yield will securely feed her family, with enough surplus left over to sell at the local market. To ensure long-term self-sufficiency, she also plans to save a portion of the high-quality seeds for the next planting season.

Beyond physical assets, the project focuses on climate-smart knowledge transfer. "We learnt modern farming techniques, including how to prepare the land early," Alawia says proudly. "Before, we used to clear the fields only after the rains began. [Doing] it earlier makes a big difference."

Ultimately, stories like Alawia's represent the broader blueprint for navigating Sudan's food crisis.

Alawia's success demonstrates the core of what World Vision aims to achieve: shifting families from reliance on emergency aid to building genuine resilience. By ensuring farmers have access to certified seeds and foundational knowledge, World Vision is investing in local markets and sustainable food security for entire communities across the state.

By supporting smallholders to grow staple crops and vital vegetables, the Nexus Accelerator Project is strengthening household food security and climate resilience for 9,000 farmers across three critical localities in the Blue Nile.

Read the original story

SAFEGUARDING A STOLEN FUTURE

Recognising that Sudan is now the world's largest child displacement crisis, World Vision has placed children at the heart of its evidence-based programming.

Just 12 months into the armed conflict in Sudan, 24 million children were already at risk of a "generational catastrophe" where "their rights to life, survival, protection, education, health, and development have all been gravely violated".[120] Now, three years on, we know that nearly 6 million children living in Sudan are at risk of experiencing mental health issues due to the prolonged exposure to the extreme conflict and violence they have experienced.[k] World Vision staff continue to dedicate themselves to safeguarding children's rights by establishing secure environments and providing vital psychosocial assistance. World Vision has established 16 Child-Friendly Spaces (CFS) across Sudan that offer a haven for children fleeing violence to learn new skills, find psychosocial solace, and escape the trauma of conflict.

© World Vision / Grace Mavhezha

Children playing at one of World Vision's CFS in Lagawa IDP camp in East Darfur, Sudan

In a country where 13 million children[121] are still out of school, World Vision is ensuring crisis-affected children can access education in emergencies (EiE) by providing access to temporary learning spaces, school kits, and training for teachers and monitors, as well as piloting an innovative virtual learning system, which aims to blend safe spaces – converted schools acting as IDP camps – and transforming them back into learning areas.

k Based on estimate of 22.1% of 26,641,359 children in Sudan = 5,887,740. One in every five children in conflict zones are at risk of suffering from mental health issues. This calculation is based on the presumed prevalence in long-term conflict-affected populations per The Lancet (22.1%).

EVIDENCE-BASED ADAPTATION: CLIMATE AND RISK RESILIENCE

Research reveals a clear pathway to recovery: targeted policy investments can directly reverse Sudan's projected macroeconomic slide. By prioritising four critical interventions – flood protection, robust disaster risk reduction/preparedness/adaption, enhanced land property rights, and improved water usage efficiency, especially in irrigated agriculture – Sudan can prevent a catastrophic US$105.5 billion cumulative GDP loss by 2050.[122] Crucially, transforming these climate and resource vulnerabilities into managed assets will recapture an estimated US$64.1 billion in cumulative economic returns directly back into household budgets across the country. World Vision is adapting its traditional programming to meet the specific environmental and security challenges via several specialised interventions:

- **Treating water as a scarce resource:** In Darfur and Kordofan, where 30% of households must walk over an hour for water, World Vision is enhancing the efficient use of water, particularly in irrigated agriculture and through the construction of ***haffirs*** (traditional water reservoirs) to mitigate extreme water deprivation.

- **Disaster risk reduction and preparedness:** The organisation utilises integrated peacebuilding and conflict sensitivity training for community and faith leaders to help communities manage resource-based conflicts fuelled by land degradation.

- **Protecting against environmental shocks:** World Vision's interventions include investing in infrastructure to protect vulnerable agricultural land against the increasing threat of flooding and the "evaporation trap" caused by rising temperatures.

- **Land property rights and mapping:** World Vision supports the demarcation and mapping of livestock routes and the enhancement of land property rights for animal producers. These efforts are critical to increasing access to natural productive assets and reducing clashes between pastoralists and farmers as viable land continues to shrink.

By integrating technical satellite insights with localised humanitarian expertise, World Vision is not just providing aid; it is attempting to rebuild the shattered foundations of Sudanese self-reliance amidst the rubble of conflict.

Securing Sudan's present and future: Policy priorities for sustainable recovery

"Preventing the death of tens of thousands of Sudan's weakest, especially its children, requires a lot of things to come together, and very fast. We know the outcome if we and Sudan's armed actors fail to act."

– Simon Mane, World Vision Sudan, National Director

As escalating conflict, climate shocks, and systemic resource depletion push Sudan's agricultural heartland to a breaking point, isolated emergency responses are no longer enough. Meeting this catastrophic threat requires an immediate pivot from short-term emergency relief to a deeply coordinated response that addresses both the present hunger crisis and the root causes of agricultural collapse.

The following policy recommendations outline the critical, immediate steps needed to protect human capital and build a self-reliant foundation for Sudan's future. **We call upon the international community, domestic authorities, and global partners to implement the following strategic policy imperatives to safeguard the lives, nutrition, and future potential of Sudan's children and families.**

PROVIDE SUFFICIENT, FLEXIBLE HUMANITARIAN FUNDING TO PREVENT A GENERATIONAL CATASTROPHE

Urgently increase flexible, multisectoral funding to address the full scale of Sudan's crisis. Investments must go beyond food assistance to include nutrition, health, water and sanitation, protection, and education, with a particular focus on children. Without sustained, coordinated support, the current hunger crisis will deepen into a long-term loss of human capital and a generation of children at risk of irreversible harm.

PRIORITISE RESTORATION OF AGRICULTURAL SYSTEMS AND LOCAL MARKETS

Complement short-term relief with investment in protecting and restoring Sudan's agricultural backbone, including:

- rehabilitation of irrigation systems (e.g. Gezira Scheme and key farming zones)
- provision of seeds, and tools to smallholder farmers
- re-establishment of storage, transport, and market systems
- support to livestock mobility and rangeland access.

Without rebuilding these systems, Sudan will remain trapped in a cycle of dependency on humanitarian aid, unable to recover its capacity to feed itself.

ENSURE SAFE, SUSTAINED HUMANITARIAN ACCESS AND PROTECTION OF CIVILIANS, PARTICULARLY CHILDREN

With access constrained and violence ongoing, lifesaving assistance is delayed while needs escalate, placing millions, especially children, at risk of starvation, disease, and protection violations.

Use all diplomatic and operational mechanisms to secure unhindered humanitarian access across conflict lines, protect civilians, infrastructure, and humanitarian assets, and uphold international humanitarian law, particularly in high-risk areas such as Darfur and Kordofan.

INVEST IN CLIMATE RESILIENCE AND CONFLICT-SENSITIVE RESOURCE MANAGEMENT

Sudan's crisis is driven by a reinforcing triple threat: conflict, agricultural collapse, and climate pressure. Conflict continues to damage critical land and water infrastructure, disrupt farming systems, and weaken traditional resource governance mechanisms. At the same time, climate variability and recurrent shocks such as droughts and floods are reducing agricultural productivity, degrading pasture and water sources, and intensifying competition over increasingly scarce natural resources. The resulting agricultural decline further fuels displacement, food insecurity, livelihood loss, and communal tensions, creating a cycle of vulnerability and instability.

Addressing these interconnected challenges requires a coordinated and systems-based investment framework anchored in anticipatory action, disaster risk reduction, climate adaptation, and adaptive climate governance. Priority investments should focus on sustainable water management and irrigation efficiency, drought and flood preparedness and response, climate-smart agriculture, and integrated land and pasture management, including the formal demarcation and legal protection of livestock migration routes to reduce resource-based conflict.

Central to these efforts is meaningful community participation and locally led action. Communities must not only be beneficiaries but active partners in planning, implementation, and governance processes. Strengthening community ownership promotes sustainability, builds trust, and enables locally appropriate solutions that reflect traditional knowledge, conflict sensitivities, and ecosystem realities. A participatory approach also supports self-reliance by strengthening local capacities to manage risks, diversify livelihoods, and reduce long-term dependence on humanitarian assistance.

An ecosystem-based approach is equally essential to ensure that interventions address the interconnected nature of land, water, agriculture, and livelihoods. Restoring degraded ecosystems, protecting watersheds and grazing areas, and promoting equitable access to natural resources can help reduce tensions between farming and pastoral communities while improving resilience to climate shocks. Investments should therefore support community-based natural resource management and conflict mitigation mechanisms that bring together different user groups to negotiate access, resolve disputes peacefully, and strengthen social cohesion.

These investments are critical to stabilising livelihoods, reducing displacement, enhancing resilience, and preventing future crises driven by shrinking and contested land and water resources. Long-term peace and recovery in Sudan will depend not only on humanitarian response, but on building resilient, self-reliant communities capable of sustainably managing natural resources in an increasingly fragile climate and conflict environment.

Annexe 1. Mapping the collapse: Our methodology

By analysing the intersection of conflict and environmental degradation between 2023 and 2025, this study provides data-driven evidence of how the widespread destruction and disruption of land and infrastructure is driving humanitarian risk to catastrophic levels.

This analysis transforms technical findings into a roadmap of current and future risk by correlating:

- **High-resolution satellite imagery:** Sentinel-2 data is used to track nationwide agricultural productivity declines (using NDVI) and the physical destruction of farming infrastructure.
- **Displacement and hunger trends:** Geospatial layers are overlaid with International Organization for Migration (IOM) Displacement Tracking data and malnutrition indicators to pinpoint the intersection between the collapse of the land and displacement.
- **The humanitarian-environmental nexus:** The report identifies "hotspots" where land degradation, population movement, and food insecurity overlap, creating an untenable environment for the 65% of Sudanese who rely on the earth for survival.

This assessment analysed the difference in spectral characteristics from vegetation in images, collected from two distinct years (2023 and 2025). The difference determined the scale of change within agricultural regions across Sudan. Within each year, satellite imagery was collected over a 10-week period between July and September. This correlates to the primary vegetation growing period and the length of time accounts for the full extent of agricultural activity in a season, the variation in planting cycles and localised weathering patterns.

The NDVI is a standardised formula determining the health of vegetation which uses the Red and NIR bands from Sentinel-2 to determine how reflective vegetation is. A value between 0 and 1 represents health, with the inverted representing low vegetation. This study first performed a NDVI on all satellite images over the given time period, then merged all outputs to provide one final NDVI result. This study also analysed a direct difference in NDVI values between 2023 and 2025. The final output contains net loss values below zero and net gain values over zero.[123]

The humanitarian datasets – displacement and malnutrition – were categorised at the locality level in which information on the phases, number of people at risk, and proportion of people within a given locality were presented. These results were then correlated to agriculture land cover changes determined by the NDVI differences.

LIMITATIONS AND TECHNICAL CONSTRAINTS

To ensure the accurate interpretation of the crisis and agriculture assessment, several fundamental technical constraints had to be considered. These limitations are frequently present in time-series, country-scale geospatial modelling, and appropriate measures were fundamental for accurate representations of the results.

Atmospheric interference and cloud cover

The study period (July to mid-September) corresponded with the peak Sudanese rain season. This timing was essential for capturing maximum vegetative health but presented persistent cloud cover in the satellite image capture phase, particularly in rain-fed agricultural regions. The 10-week observation window was specifically selected to maximise the probability of capturing cloud-free imagery at every location. By aggregating data over a longer period, we were able to fill data gaps, ensuring the highest proportion of land cover is analysed.

Spectral variability and weathering patterns

Ground reflectance characteristics are highly sensitive to localised, short-term weathering events such as rainfall, dust storms or time of image capture (morning, midday, or afternoon). The 10-week temporal range again acts as a filter for such anomalies through smoothing out "noise" from isolated data capture events, ensuring the final output reflects true agriculture conditions and trends.

Spatial resolution and pixel size

A trade-off exists between image resolution and study size when dealing with geospatial modelling. With Sudan being almost 2 million km^2 in area, modelling requires significant computational power, memory, and time efforts. Sentinel-2 Red, Green, Blue, NIR bands are native at 10-metre (m) resolution; however, for this study, downscaling was critical to mitigate overloading performances. Resolution was downscaled to 30m resolution, diluting localised patterns, though was not necessary for this particular case.

Annexe 2. Endnotes

1 Half (26.6 million) of Sudan's estimated population (53,282,719) are under 18.8 years old – the country's median age in 2026. Worldometer (2026) Sudan demographics [Accessed 8 Apr 2026].

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