June 2026

Climate, Peace and Security Fact Sheet

Lake Chad*

Photo: Shutterstock

The ongoing insecurity in the Lake Chad region—which intersects Cameroon, Chad, Niger and Nigeria—cannot be understood in isolation from climate and environmental change. Climate change-related stressors—such as increasingly variable precipitation and drought—contribute to existing tension and conflict between different communities by exacerbating scarcity of natural resources, including land, water and food. Such pressures amplify the tensions between local community members, refugees and internally displaced people (IDPs), and between livelihood groups such as arable farmers, fishers and pastoralists. Through its destabilizing impacts on livelihoods, climate change can further increase vulnerability to recruitment by violent extremist organizations, such as Boko Haram and Islamic State–West Africa Province (ISWAP) and other unidentified armed groups and bandit networks, which operate throughout the region.

- The Lake Chad region is highly vulnerable to accelerating climate change, which increases risks of erratic weather events and less predictable seasonal weather patterns. This, in turn, has negative impacts on livelihoods that depend on natural resources and rains. A large share of the population of the Lake Chad region relies on livelihoods that are dependent on natural resources such as rain-fed agriculture, fisheries and pastures.
- Displacement in the Lake Chad region is driven by multiple, and often interconnected, conflict-related and climate-related hazards, including flooding and drought. Climate-related risks in turn increase the likelihood of tension between IDPs, refugees and host communities, as well as livelihood groups such as arable farmers, fishers and pastoralists.
- The natural resource economy in the Lake Chad region—both legal and illegal—is closely tied into the economics of violence and persistent local inter-community tensions. Extremist groups are materially sustained in part by their deep entrenchment in the region's natural resource economy.
- The region is characterized by a security–adaptation imbalance, where stabilization efforts have outpaced climate-security risk reduction. Livelihood-support initiatives and climate change adaptation remain critical gaps in translating stabilization gains into durable peace.

RECOMMENDED ACTIONS:

- **The United Nations and its member states should prioritize continued investment in climate-resilient and gender-sensitive livelihood initiatives particularly in displacement-affected communities. Conflict-sensitive natural resource management should be integrated into stabilization planning through investment in local dispute mechanisms, natural resource management and value chain systems. Government agencies should implement targeted youth-empowerment programmes focused on vocational skills in partnership with donors.**
- **Funding mechanisms such as the LCBC Nexus Funding Facility, the UN Development Programme's Regional Stabilization Fund and the World Bank's PROLAC require sustained funding from international partners to maintain and expand climate adaptation and environmental peacebuilding programming.**
- **Bodies such as the LCBC, the Economic Community of West African States (ECOWAS), the Economic Community of Central African States (ECCAS) and other relevant regional bodies should collaborate in developing and scaling up regional early-warning systems for climate-related insecurity, displacement and mobility. A framework for inspiration may be the forecasting and preventive stabilization initiatives of the Intergovernmental Authority on Development (IGAD) Climate Prediction and Applications Centre (ICPAC). The UN and its member states should ensure support for regional bodies in strengthening their expertise on climate, peace and security by appointing and retaining specialized advisors.**
- **Beyond humanitarian needs, the region's national governments should adopt conflict-sensitive National Development Plans, National Adaptation Plans (NAPs) and Nationally Determined Contributions (NDCs) that cohere with existing efforts such as the Great Green Wall Initiative, the Common African Position on Climate Change, Peace and Security (currently being assessed), and the Bamako Declaration on Climate Security.**

Figure 1. Key statistics

Climate change

Mean annual surface temperatures — **23–28°C**
Lake Chad Basin region

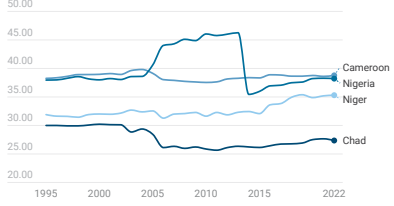
Predicted increase of mean annual surface temperatures (2081-2100)
1.8°C (low), **2.7°C** (intermediate), **4.4°C** (very high)

Population

Total population	45–50 million (2025)
Internally displaced population	3.25 million (2026)
Population in moderate or severe food insecurity	7.4 million (2025)

ND-GAIN Country Index

The ND-GAIN Country Index captures a country's vulnerability to climate change and other global challenges, and its readiness to improve resilience. It is a score out of 100; the higher the score, the less vulnerable and more ready the country.



Sources: Lieberknecht, L., Rucevska, I., Skripnova, S. and G.N. Slotsvik, 'Environmental Dimensions of Conflict in the Lake Chad Region', eds. de Coning, C. and T.O. Iversen (GRID-Arendal, XCEPT, UK International Development and NUPI, 2026); Climate & Development Knowledge Network and African Climate and Development Initiative, 'The IPCC's Sixth Assessment Report – Impacts, Adaptation Options and Investment Areas for a Climate-Resilient Central Africa' (2022); Nuhu, M., 'Call to action: Stabilizing the Lake Chad Basin region through regional approach-local ownership', UN Development Programme (UNDP), 21 Jan. 2023; International Organization for Migration (IOM), 'Lake Chad Basin Crisis Monthly Dashboard', 30 Apr. 2026; and United Nations Office for the Coordination of Humanitarian Affairs (OCHA), 'Lake Chad Basin – Humanitarian Overview', 29 April 2026.; and Notre Dame Global Adaptation Initiative (ND-GAIN), 'ND-GAIN Index country rankings 2023', accessed 15 June 2026.

In response to the conflict in the Lake Chad region, Cameroon, Chad, Niger and Nigeria have developed the Regional Strategy for the Stabilization, Recovery and Resilience of the Boko Haram-affected Areas of the Lake Chad Basin Region (RS-SRR) in partnership with the African Union (AU), the Lake Chad Basin Commission (LCBC) and other international organizations. The RS-SRR is driven by subnational and multidimensional humanitarian, development and peace initiatives that aim to address the root causes of conflict. The significance of climate change as an amplifier of existing conflicts and instability is likely to increase, unless climate-sensitive adaptation and conflict-mitigation strategies are implemented.

Climate exposure: Trends and projections

The Lake Chad region lies in the Sahel, a climatic transition zone where the southern edge of the Sahara transitions into tropical savannah.[1] Mean annual temperatures range from about 23°C to about 28°C in the region. Average monthly temperatures reach their annual peak in April, May or June, just before the rainiest part of the wet season. They reach their lowest in January, except in the southern part of the region, where lowest monthly temperatures occur in August, at the peak of the wet season. Rainfall is highly seasonal and characterized by interannual variability. This makes floods and drought periods an inherent part of normal rainfall patterns.[2]

The average temperature of the Lake Chad region has undergone a significant increase (of around 1°C) since the 1960s. Climate models predict a severe temperature increase (of up to 4.4°C depending on emissions scenario) by the end of this century.[3] This has led to an increase in interannual variability in rainfall, including more short-term fluctuations between wet and dry years.[4] Trends are indicating increasing climate variability, with less seasonal and interannual predictability. The Intergovernmental Panel on Climate Change (IPCC) scenarios for the Lake Chad region predict worsening climatic instability, variability and extreme weather, including increased severity of flooding events.[5]

Socioecological vulnerabilities

Lake Chad is a vital and life-sustaining ecosystem and water reservoir for 45–50 million people in a region affected by a combination of climate change, high population growth, poverty, food insecurity and security risks.[6] Interviews with local communities indicate that rising temperatures, erratic rainfall, desertification and flooding are significant climate stressors across the region.[7] Arable farming, fishing and herding are three closely integrated activities in the lake area, closely intertwined with a complex land- and waterscape that is being deeply affected by accelerating climate change.[8] The latest humanitarian statistics indicate that 7.4 million people in the region are acutely food insecure and in need of food aid.[9]

Gender relations play a role in mediating the outcomes of climate change for peace and security. Women bear a disproportionate responsibility for adapting to climate change, spending more time sourcing water, food and fuel under increasingly difficult conditions.[10] Women's coping strategies—such as food sharing, informal childcare arrangements and mutual support—help prevent social breakdown despite environmental stress. For instance, women in north-east Nigeria have formed local cooperatives for mutual support and agricultural development.[11]

Climate-related peace and security risks

Climate change is rarely the main driver of conflict, but it can undermine development gains, exacerbate the dynamics of ongoing violence, amplify existing tensions and disrupt fragile peace processes. Violent conflict and political instability can also weaken community resilience to the effects of climate change. This fact sheet uses four interrelated pathways to navigate the relationship between climate change, peace and security: (*a*) livelihood impacts, (*b*) migration and mobility, (*c*) armed actors and security, and (*d*) political and economic grievances.

Livelihood impacts

Livelihood disruption acts as a primary pathway linking climate change to peace and security risks.[12] Erratic rainfall, desertification, drought and flooding undermine arable farming, fishing, herding and petty trading. Interviewees consistently associate these pressures with rising tensions, disputes and criminal activity.[13] Livelihood pressures further heighten the vulnerability of a limited proportion of youth to crime or recruitment into armed groups.[14] Households often operate diversified livelihoods, engaging in small-scale farming as well as fishing depending on the season.[15] The households that lack secure access to land, water, markets and income face persistent risk of livelihood collapse, which also increases the likelihood of inter-community conflict over land, water and food.

Arable farming is affected by climate change both directly and indirectly. It is a vital livelihood for communities that is predominantly carried out at small scale as part of subsistence livelihoods.[16] Cultivation mainly uses traditional farming practices that are highly dependent on water availability from rainfall and the fluctuating water levels of the lake.[17] Fluctuations in water availability thus pose major threats to agriculture.[18]

The fisheries of Lake Chad are an important source of livelihood for the surrounding communities.[19] Combined population growth and shrinking of the lake between the 1960s and the 2000s had a devastating impact on fisheries. Not only did the shrinking lake provide less suitable habitat for fish, but physical access to fisheries became more restricted. Around 5 million households surrounding the lake continue to rely on fishing as a key source of income and nutrition, but fisheries are not productive enough to sustain needs.[20] In areas where insurgents gain control, arable farmers, fishermen and pastoralists who refuse to pay fees are often forced out of communities. Recent research indicates that fishery stocks are recovering due to insecurity-related lack of access to fisheries.[21]

The area around the lake also provides pasture for grazing livestock and supports more specific industries, such as the production of algae and natron.[22] Interviewees highlighted declining agricultural productivity and related livelihood stress as the main pathways linking climate change to insecurity.[23] The irregular rainfall and changes in seasonal patterns affect agricultural productivity, increasing

[1] Sahara and Sahel Observatory (OSS), *Sahel and West Africa: Atlas of Land Cover Maps* (OSS: Tunis, Jan. 2019).
[2] Lieberknecht, L. et al., *Environmental Dimensions of Conflict in the Lake Chad Region* (GRID-Arendal, XCEPT, UK International Development and NUPI: Mar. 2026).
[3] Climate and Development Knowledge Network (CDKN) and African Climate and Development Initiative (ACDI), 'The IPCC's sixth assessment report: Impacts, adaptation options and investment areas for a climate-resilient Central Africa', 2022.
[4] Gangneron, F. et al., 'Persistence and success of the Sahel desertification narrative', *Regional Environmental Change*, vol. 22 (2022).
[5] Intergovernmental Panel on Climate Change (IPCC), *Climate Change 2023: Synthesis Report* (IPCC: Geneva, 2023).
[6] Nuhu, M., 'Call to action: Stabilizing the Lake Chad Basin region through regional approach-local ownership', UN Development Programme (UNDP), 21 Jan. 2023.
[7] Fieldwork interview reports from Cameroon, Chad, Niger and Nigeria, 2025.
[8] Béné, C. et al., 'Inland fisheries, poverty, and rural livelihoods in the Lake Chad Basin', *Journal of Asian and African Studies*, vol. 38, no. 1 (Feb. 2003).
[9] Office for the Coordination of Humanitarian Affairs (OCHA), 'Lake Chad Basin: Humanitarian overview', Apr. 2026.
[10] de Coning, C. et al., *Responding to Climate Change-related Insecurity in the Lake Chad Region* (XCEPT, UK International Development and NUPI: Mar. 2026).
[11] Fieldwork interview reports from Nigeria, 2025.
[12] de Coning et al. (note 10).
[13] Fieldwork interview reports from Cameroon, Chad, Niger and Nigeria, 2025.
[14] de Coning et al. (note 10).
[15] Béné et al. (note 8); and Eriegha et al., 'Shrinking Lake Chad: Initialization of culture-based fisheries for improved livelihood in Nigeria', *International Journal of Fisheries and Aquatic Studies*, vol. 7, no. 3 (May–June 2019).
[16] Food and Agriculture Organization of the UN (FAO), *Lake Chad Basin Crisis: Response Strategy (2017–2019)* (FAO: Rome, 2017).
[17] Alhassan et al., 'Decline in agricultural activity around Lake Chad: Any prospect for restoration? A review', *Arid Zone Journal of Engineering, Technology and Environment*, vol. 17, no. 2 (June 2021).
[18] Amali, A. A., Sani Bala, M. and Adeyemi, F. A., 'Dying Lake Chad: Adaptive strategies to climate change and water scarcity of the Lake Chad Basin', 2nd World Irrigation Forum, 2016.
[19] Béné et al. (note 8); and Lemoalle, J. and Magrin, G., *Le développement du lac Tchad: Situation actuelle et futurs possibles* [Development of Lake Chad: Current situation and possible futures] (IRD Éditions: Marseille, 2017).
[20] Okeke-Ogbuafor, N. et al., 'Proposed solutions to the problems of the Lake Chad fisheries: Resilience lessons for Africa?' *Fishes*, vol. 8, no. 2 (Feb. 2023).
[21] de Coning et al. (note 10).
[22] Lieberknecht et al. (note 2).
[23] Field interview summaries from Cameroon, Chad and Niger, Dec. 2025.
[24] de Coning et al. (note 10); and Lieberknecht et al. (note 2).

vulnerability for communities that depend on flood irrigation and rain-fed livelihoods.[24] Furthermore, desertification and sand dune encroachment are burying farmland, blocking irrigation channels and access routes, and forcing livelihood adaptation.

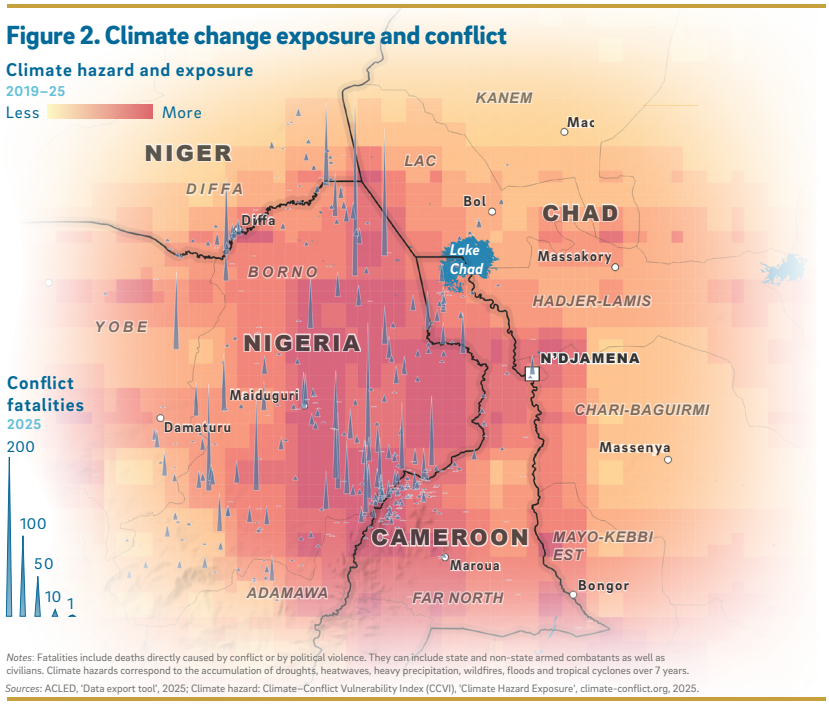
Regional and international partners that aim to build peace, stability and resilience in the region should prioritize interventions to support (natural resource-based) livelihoods that are being disrupted by climate change.[25]

Migration and mobility

Displacement in the Lake Chad region is driven by multiple conflict-related and environmental factors and is characterized by significant transboundary movements. As of April 2026 the four countries—Chad, Cameroon, Niger and Nigeria—hosted 6.5 million affected individuals, encompassing IDPs, returnees and refugees.[26]

The main reason for displacement is insurgent violence, with a much smaller proportion of people displaced for environmental reasons such as floods. Borno state in Nigeria is the most affected, with much displacement being conflict-driven, while Yobe state has the highest percentage of displacement driven by climate.[27] The cycle of displacement places immense strain on local community resources, including arable land, water systems, food supplies and infrastructure.[28]

Figure 2. Climate change exposure and conflict



Notes: Fatalities include deaths directly caused by conflict or by political violence. They can include state and non-state armed combatants as well as civilians. Climate hazards correspond to the accumulation of droughts, heatwaves, heavy precipitation, wildfires, floods and tropical cyclones over 7 years.

Sources: ACLED, 'Data export tool', 2025; Climate hazard: Climate–Conflict Vulnerability Index (CCVI), 'Climate Hazard Exposure', climate-conflict.org, 2025.

Displaced people are typically accommodated in large camps, in or around existing settlements or seek refuge in unaffected areas by clearing natural habitats. Climate-related environmental pressure increases the risk of tension between IDPs and host communities.[29] Deforestation is, for instance, a common consequence of displacement. Research in N'Guigmi and Diffa in Niger indicates that forests and the bush in certain areas have been significantly affected by deforestation, partly due to repeated displacement, accelerating soil erosion and eroding ecosystems.[30] In the affected areas of the North East zone of Nigeria and the Far North region of Cameroon, the felling of trees is a major problem for host communities, IDPs and local government, which are trying to enforce policies designed to reverse deforestation.[31]

Population growth and growth in livestock numbers, in combination with increasingly unpredictable patterns of rainfall, have created conditions that lead to increased conflict between pastoralists and arable farmers.[32] Furthermore, the southward movement of pastoralists has concentrated natural resource exploitation in drought- and flood-affected zones, fuelling conflicts, the arming of herders and the emergence of self-defence groups. In Logone-and-Chari department in northern Cameroon, the dense concentration of arable farmers, fishers and herders in the floodplains sparked violent clashes in 2021 between the Kotoko and Musgum communities. This displaced 100 000 individuals, who sought refuge in Chad or relocated within Cameroon.[33] Climate change amplifies similar conflicts by increasing unpredictability of rainfall patterns and exacerbating temporary water scarcity, with resulting pressures on remaining areas of pasture and crop land.[34]

Due to the regional nature of climate-related security risks, regional bodies—such as the LCBC, ECOWAS, ECCAS, the Liptako-Gourma Authority, the Niger Basin Authority, the Permanent Interstate Committee for Drought Control in the Sahel and the Climate Commission for the Sahel Region—should collaborate in developing and scaling up regional early-warning systems for climate-related insecurity, displacement and mobility patterns.

Armed actors and security

The conflicts in the Lake Chad region have become tightly interlinked with exploitation of the natural resource economy by insurgents. Extremists are sustained in part by food, taxation and trade derived from natural resources, and by financing extracted through extortion of arable farmers, fishers and pastoralists. Extremist groups have thus been able to leverage livelihoods as a vital bargaining chip.[35] Control over fisheries, for instance, drives infighting between Boko Haram and ISWAP. ISWAP has been estimated to earn more than US$191 million annually—mostly from taxes levied on fishers and livestock owners who use the islands of Lake Chad.[36]

Extremist groups also infiltrate other parts of the natural resource economy, including artisanal mining, wood and charcoal production, and trafficking of wildlife and wildlife products.[37] Insurgent groups mandate local communities to cut down trees to use wood as cooking fuel and as a cash crop, hunt wild animals for food or to sell for cash, and use open areas within the woodland for grazing cattle.[38] Gold mining also financially sustains insurgents and bandit networks in the region.[39] Exploiting weak state presence, networks of traders and smugglers move illicit commodities (e.g. arms and gold) from informal mining operations across national borders. Both Boko Haram and ISWAP have also evolved in their tactics of 'jihadi banditry', such as

[25] de Coning et al. (note 10).
[26] International Organization for Migration (IOM), 'Lake Chad Basin crisis monthly dashboard', 30 Apr. 2026.
[27] Lieberknecht et al. (note 2).
[28] Iversen, T. O. et al., *Managing Climate, Peace and Security Risks in the Borderlands of the Lake Chad Region (CPS-Lake Chad)* (XCEPT, UK International Development and NUPI: 2026).
[29] de Coning et al. (note 10).
[30] Field interview summaries from Niger, Dec. 2025.
[31] de Coning et al. (note 10).
[32] Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), 'Peaceful transhumance and development of pastoral economy in the Lake Chad region', Jan. 2025.
[33] UN High Commissioner for Refugees (UNHCR), *Cameroon and Chad Emergency: Supplementary Material* (UNHCR: New York, 2022).
[34] Lieberknecht et al. (note 2); and Olowoyeye, O. S. and Kanwar, R. S., 'Water and food sustainability in the riparian countries of Lake Chad in Africa', *Sustainability*, vol. 15, no. 13 (July 2023).
[35] International Crisis Group (ICG), *What Role for the Multinational Joint Task Force in Fighting Boko Haram?*, Africa Report no. 291 (ICG: Brussels, July 2020).
[36] Malik, S., 'When rebels rule: ISWAP's formula for winning support in Nigeria's northeast', New Humanitarian, 24 July 2025.
[37] African Security Analysis (ASA), 'Boko Haram's illicit trade in gold and other resources', 23 May 2025.
[38] Lieberknecht et al. (note 2).
[39] African Security Analysis (note 37); and UN Office on Drugs and Crime (UNODC), *Gold Trafficking in the Sahel: Transnational Organised Crime Threat Assessment—Sahel* (UNODC: New York, 2024).
[40] Oginni, O. S., *How to Stop 'Jihadi Banditry' from Becoming the New Normal in the Lake Chad Basin* (Bonn International Centre for Conflict Studies: Bonn, 2024).

hit-and-run operations, theft of valuable goods and livestock, and kidnapping for ransom.[40]

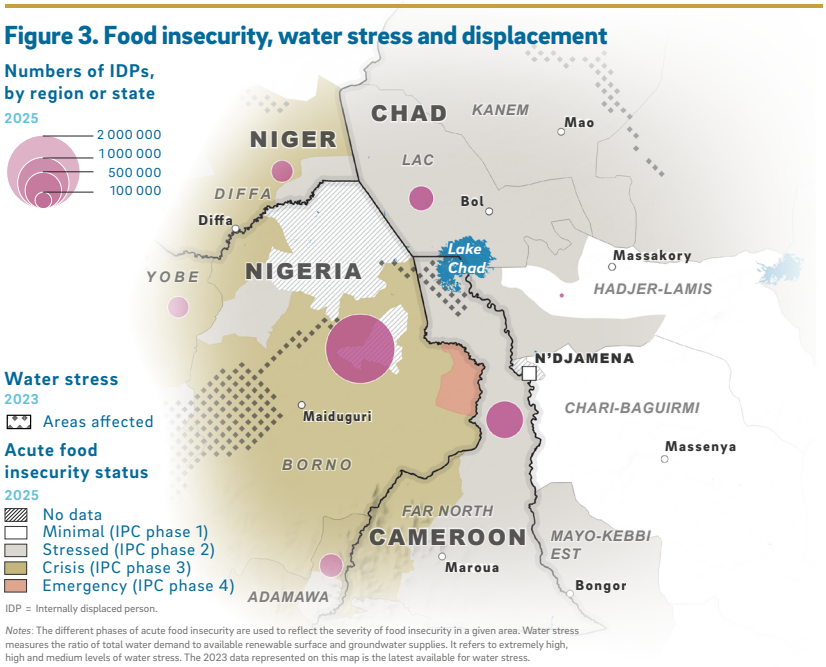
Extremist groups are materially sustained in part by their deep entrenchment in the region's natural resource economy. This highlights the need for sustained funding from international partners to maintain and expand climate-sensitive stabilization and environmental peacebuilding interventions.

Political and economic grievances

The origins of the conflicts in the Lake Chad region are partially rooted in perceived social discontent with unfair distribution of and access to resources, in a context of scarcity. The history of European colonialist extraction disrupted traditional economies and institutions around natural resource management.[41] These historical contingencies have contributed to continued destabilization and injustice in the region. The situation is exacerbated by uneven state presence and governance deficits from the four national governments. This is further complicated by a long-standing history of structural development disparities affecting communities surrounding the lake.[42]

The Lake Chad region is thus characterized by a history of marginalization that constrains stabilization and climate change adaptation. Research has identified a security–adaptation imbalance in the region; stabilization efforts have outpaced climate-security risk reduction.[43] In addition, capacity constraints at subnational levels of governance raise concerns about the durability of stabilization gains. For instance, in response to climate change, communities rely on traditional leadership, collective labour, food sharing and self-organized responses to flooding, rather than institutional support. Despite frequent tension and disputes, violent conflict is largely prevented through local mediation and indigenous alternative dispute-resolution practices that hold cultural legitimacy.

Figure 3. Food insecurity, water stress and displacement



Notes: The different phases of acute food insecurity are used to reflect the severity of food insecurity in a given area. Water stress measures the ratio of total water demand to available renewable surface and groundwater supplies. It refers to extremely high, high and medium levels of water stress. The 2023 data represented on this map is the latest available for water stress.

Sources: International Organization for Migration (IOM) Displacement Tracking Matrix (DTM), 'West and Central Africa – Lake Chad Basin Crisis Dashboard 79', December 2025; Integrated Food Security Phase Classification (IPC), main dashboard map, 2025; World Resources Institute (WRI), Aqueduct 4.0.

Traditional leaders intervene in disputes, negotiate access to land, and manage tensions between arable farmers, fishers, herders and displaced populations.[44]

National governments in the region should therefore adopt and implement conflict-sensitive and peace-positive National Development Plans, National Adaptation Plans (NAPs) and Nationally Determined Contributions (NDCs) that prioritize conflict-sensitive investment in climate adaption in conflict-affected areas.

[41] Stewart, N. F., *Indigenous Climate Justice in the Lake Chad Basin* (Springer Nature: Cham, 2025).
[42] Iversen et al. (note 28).
[43] de Coning et al. (note 10).
[44] de Coning et al. (note 10).

Climate, Peace and Security Fact Sheets are a joint product by the Norwegian Institute of International Affairs (NUPI) and the Stockholm International Peace Research Institute (SIPRI), with funding from the Ministry of Foreign Affairs of Norway and the Ministry of Foreign Affairs of Denmark. The information in this fact sheet does not necessarily reflect the views of these partners.

The Climate, Peace and Security Fact Sheets aim to generate reliable, relevant, timely and actionable information and analysis on climate-related peace and security risks in selected countries and regions on the United Nations Security Council agenda.

Series editors: Dr Cedric de Coning (NUPI) and Dr Florian Krampe (SIPRI)
Contributors: Dr Thor Olav Iversen (NUPI), Katongo Seyuba (SIPRI), Dr Andrew E. Yaw Tchie (NUPI) and Ingvild Brox Brotkorb (NUPI)
Visuals: Jules Duhamel