



Socio-economic analysis of the Lake Chad Basin Region, with focus on regional environmental factors, armed conflict, gender and food security issues.

Lake Chad Basin

DESK REVIEW

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Executive Summary

Over the past half century, Lake Chad has receded drastically due to various environmental pressures, from climate-induced desertification to human-led stream-flow modification. Exemplifying the disproportionate effects of global climate change, the lake's recession increases water stress within a region battling drought and experiencing intense competition for multi-usage of the hydro-system. The degradation of natural resources, in turn, impacts the largely subsistence-based livelihoods of people living in the Basin, degrading regional food security and quality of life. Now reduced to a fraction of its original surface area, the “disappearing lake” faces serious preservation issues as land revealed by the receding shores is being claimed as farmland or new settlements to accommodate rapidly expanding demographic growth in one of the poorest regions of the world.

Adding to the complex social-ecological nexus of development crises in the Lake Chad Basin, the incidence of violence from extremist Islamic insurgency groups, namely Boko Haram in North-Eastern Nigeria, has further disrupted regional stability since 2013. As a result, people and their livelihoods in the Basin, already facing outstanding environmental challenges, severe inequality, and political instability for decades, are currently exposed to extraordinary vulnerability during the protracted regional state of emergency. Employing religious radicalism and terrorism to mobilize resources in remote areas, Boko Haram's tactics have targeted female youth education, reflecting fundamentalist ideology aiming to suppress co-education and gender-equality. Orchestrating suicide attacks, they have increasingly used women and girls as instruments of violence. Specifically, the high incidence of sex and gender-based violence within the context of regional armed conflict ruthlessly perpetuates gender inequality. Hence, the situation warrants an understanding of regional gender-based vulnerabilities and gaps, which have been exacerbated within the Basin area's extended emergency situation.

At the regional level, violence and security threats block productive and trading activities, thereby hurting the Basin's ability to meet growing food security needs. Simultaneously, the displacement of millions of people within and across national borders has shifted regional demographic pressures, increasing food insecurity and intensifying the precarious nutrition situations in many parts of the Basin. The combination of these upsets to regional livelihoods and

networks have limited the constricted coping strategies of individuals, households, and communities who were already under significant pressure to meet food needs due to historic systemic development problems in the region.

Given that the Basin area's human development indicators are far lower than corresponding national averages, which themselves are low relative to international standards, the lack of central public services, specifically for health and education, is underlined as a primary source of vulnerabilities and chronic development problems. Outlining multidimensional socio-economic deprivations, due to poor national health and education systems, along with environmental factors shrinking livelihoods opportunities, the current regional humanitarian crisis is framed within a larger socioeconomic context to identify the nature of vulnerabilities.

In addition to considering sustainable resource management as a development priority and an integral part of conflict resolution within the context of the humanitarian crisis, the case of Spirulina production is explored as a potential development strategy and opportunity to empower women economically and develop local value chains. By way of conclusion, the importance of spotlighting investments in basic social services as well as effective management of natural resources is discussed within the context of addressing the immediate needs and targeting vulnerabilities geographically, within the evolving humanitarian crisis, as well as future opportunities. Hence, advocacy to national governments to mobilize overdue investments in education and health systems as well as regional environmental stewardship for improved management of shared natural resources are identified as key comprehensive rural development approaches to be pursued at national and regional levels in the Lake Chad Basin. Furthermore, recommendations for WFP programming in the context of the current humanitarian crisis are made to support sustainable resource management, integrate gender analysis, and advocate for strategic national human development objectives in relation to key underlying vulnerabilities within the region.

Key ideas

- Ecological catastrophe from environmental injustice related to desertification, global climate change, corruption, and mismanagement of the hydro-system present ongoing development challenges to people living in the Lake Chad Basin who depend on the system for income, employment, and food security.
- The great mobility of people and plurality of economic activities throughout the basin represent dynamic livelihood strategies, yet resilience to climate change and development crises is compromised by increasingly unfavorable environmental situation, political violence, and poor human development opportunities, which undermine social cohesion and opportunities for sustainable development.
- Deep anger and alienation from institutional corruption and political neglect to provide basic social services, which is only compounded by competition for limited natural resources, leading to social unrest and conflict.
- Boko Haram emerges from a removed context of geographic isolation, a broken political system, characterized by rent seeking, urban-bias, and instability. The Kleptocratic Nigerian government is complicit in fueling armed conflict but takes no responsibility. Systemic violence is alimented by impunity of the corrupt officials, as failed states seek oil rents or other private interests.
- Prior to armed conflict in the region, environmental challenges and fragmented ecosystem management, as well as low human development, posed major challenges to food security and nutrition. Hence, pre-existing regional food insecurity and nutrition problems are significantly exacerbated but not caused by the incidence recent civil, armed conflict and related security threats. Due to the entrenched nature of regional vulnerabilities, the humanitarian response demands a new approach to and targeting vulnerabilities.



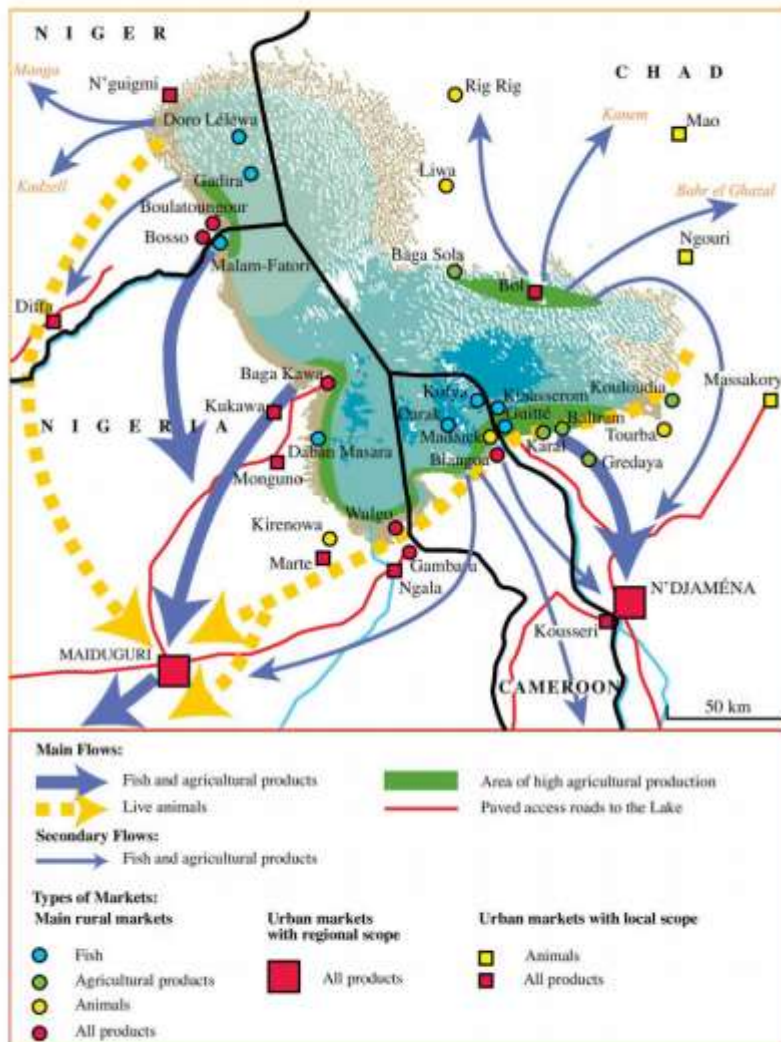
Adjacent: Two children walk around the charred remains of Baga after Boko Haram razed the town and killed up to 2,000 residents (source: Daily Kos, January 31, 2015)

Introduction: The current Lake Chad Basin humanitarian crisis and chronic, multidimensional vulnerabilities

The Lake Chad Basin, a semi-arid hydrological system in West Central Africa comprising significant parts of Niger, Chad, Cameroon, and Nigeria, is one of the poorest and drought-prone

regions of the world. Described by the World Bank as “a productive yet poor and vulnerable socio-ecosystem,” Lake Chad Basin is a dynamic region, which is home to some 50 million inhabitants. The lake’s waters, banks, and islands serve as major sources of livelihoods for fishing, farming, and livestock rearing. Hence the Basin is a major food-exporting hub (see Figure 2, adjacent), which typically accounts for the food security of about 13 million people in the hinterland of the Basin¹. However, the ability for the Lake and its productive systems to satisfy regional food security needs has been increasingly compromised by environmental challenges, as well as the recent onset of crisis erupting at the interface context of systemic development problems and unmanaged environmental disaster, which compounded over time to cumulate social unrest and violence, eventually spreading civil conflict and insecurity throughout the region.

FIGURE 2: LAKE CHAD'S CONTRIBUTION TO FOOD SECURITY IN THE REGION



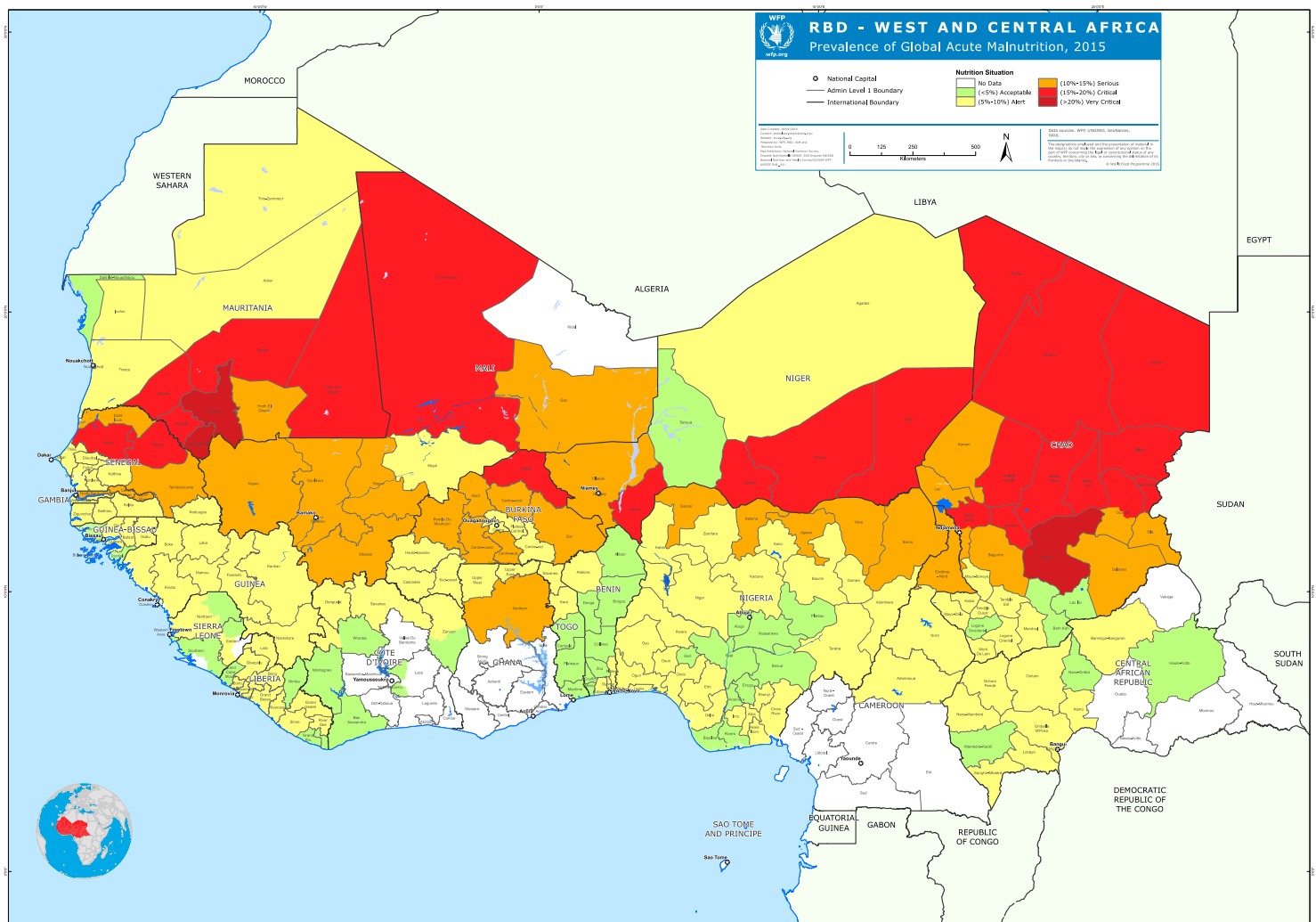
Source: Magrin, Lemoalle, Pourtier, 2015. Atlas du lac Tchad.

¹ Mekonnen, Dawit Tadesse. 2016. The Lake Chad development and climate resilience action plan: Summary. Washington, D.C. : World Bank Group.

Regional violence and insecurity aggravating food insecurity and malnutrition

Hitting international radars in 2013, the current humanitarian crisis of the Lake Chad Basin region is characterized by massive displacements, food insecurity, and incidents of civil conflict. Violence continues to displace people within Cameroon, Chad, Niger, and Nigeria. In communities hosting IDPs, refugees, and returnees, the presence of additional families is straining local resources and exacerbating food, relief commodity, shelter, livelihood, and protection needs, among others (USAID, 2015).

Productive activities, including agriculture, fishing, livestock rearing, and the trade of the respective products, have been interrupted by episodes of Boko Haram's insurgency and systemic violence. Furthermore, community assets and food reserves have been destroyed, which contributes to an already severe problems of food security and prevalence of Global Acute Malnutrition (GAM) (please refer to Figure 1, below, for a regional mapping of the recent nutrition



situation).

Figure 1: Map of GAM prevalence in West & Central Africa (WFP, 2015)

Within a previously heightened nutrition situation due largely to outstanding food shortages from environmental challenges affecting production, the incidence of conflict and regional insecurity beyond pre-existing disasters of drought and desertification, which steadily damage natural capital, appear as overlaying causes and effects of regional crisis. Hence, the protracted conflict-induced humanitarian situation appears as prolonged shock to a regional system already dealing with a prevalence of local food and nutrition insecurity for decades. Therefore, interruptions to daily life and routine coping strategies employed within areas of poor economic and low human development have generated compound impacts, drastically affecting people throughout the region in one way or another and reducing their already constricted strategies for coping in a harsh environment. In many cases uprooting them from their homes, thereby losing social and physical capital, and in other cases, drastically altering their networks, activities, and previous sources of income, which may undermine financial and human capital.

Displacements augmenting pressures

Official data differs in tracking ongoing migrations and displacements, with reports estimating some 4.7 million people displaced, mostly women and children, having fled their homes since May 2013. Still, such numbers, mere approximations of forced migration, are unable to qualify the chaos of daily life within the Basin, which has lost many types of security. Capturing the sporadic threats within Lake Chad Basin, OCHA reports² the following on the situation as of March 30th, 2016:

“Insecurity continues to prevail in the Lac region, where the state of emergency ended on 22 March 2016. Several incidents have been reported in the recent weeks. On 7 March, an armed attack on Bikaram island killed two civilians and wounded three. On 2 March, some 60 civilians were reportedly abducted by armed groups who crossed the Nigerian border, according to security sources. They were probably internally displaced Chadians living in Baga - Sola who attempted to return to their native islands to fish, despite the official ban and several other attempts to return recently stopped by local authorities (50 youth arrested in Fourkouloum on 10 February). The same day, some 200 cattle were stolen on the Chad/Niger border [...].”

Beyond those taking refuge outside of their home countries, the number of internally displaced people has surged. In August 2015, IOM reported 2.15 million internally displaced

² OCHA (2016, March 30). Chad: situation in the Lake region and the impact of the Nigerian crisis – Situation Report n° 12 (30/03/2016).

persons (IDPs) in Nigeria. OCHA cited 66,400 IDPs in Niger and 81, 700 IDPs in Cameroon, and 60,000 IDPs in Chad in October 2015. The impacts of armed conflict, including the subsequent humanitarian crisis and hunger situation in the region, poses immediate security threats that aggravate pre-existing vulnerabilities due to serious structural development challenges.

With the onset of armed conflict, related displacements have amounted to over 4.7 million people across the region. As people flee escalating violence, individuals and families leave behind their productive assets, which disrupts agricultural production. As a result of this unprecedented regional displacement of people within and across countries of the basin, displaced peoples are being sheltered by host communities that count among the world's most vulnerable, residing in areas long-lacking investment in basic services. Without access to fundamental social protection, such as basic health and education services, environmental degradation (a contributing factor to livelihood challenges, vulnerability, and indirect cause of crisis), is not prioritized amid the crisis.

Misinformation neglects sources of the crisis

Ongoing information gaps and climate uncertainties continue to be significant sources of confusion and obstacles to effective management of the regional socio-ecosystem (World Bank, 2016). While the security threats are undeniable aspects of the crisis, recent media and reports on the alarming regional emergency situation attributing the crisis to Boko Haram activities, risk grossly oversimplifying the complicated interrelated socio-ecological issues at hand leading up to insurgency with the Basin region. Unfortunately, such reporting strategies marking terrorism as the sole source of the humanitarian crisis breed terror and opposition, rather than tracing the complex, causal relationships that must be understood for informed, effective humanitarian response and policy action.

Zooming out of current impacts to evaluate sources of the protracted crisis

The current Lake Chad Basin regional humanitarian crisis appears as an eruption of cumulative interconnected national and regional socioeconomic development crises, from corrupt federal governments and institutions, to the incidence of climate change and environmental degradation, and lack of infrastructure and social services, which inhibit human development. Human development indicators in Lake Chad areas are stuck below national averages, which themselves are low relative to international standards (Lemoalle and Magrin, 2014; Magrin et al.,

2015). These measurements denote the general privation of basic social services and infrastructure such as education, health, water, roads, and electricity limit, which thereby limits the development prospects of individuals, communities, and, ultimately, the sustainable functionality of the entire Basin. Hence, such persistent development challenges set the stage for more devastating impacts of civil conflict, which currently present physical barriers to local livelihoods, regional networks, and systems of food security.

Looking past emergency relief efforts, WFP aims to cultivate an all-inclusive view of the humanitarian and development crises to formulate long-term integrative strategies to address the roots causes of regional instability. Beyond the current socio-political context and imminent threats of armed conflict, the current regional humanitarian situation can be traced to systemic, fragmentary development crises. Thus, framing the current humanitarian crisis from the longstanding development crisis is crucial for understanding the complex regional dynamics and identifying long-term solutions to problems faced by people in the Lake Chad Basin region.

As combined effects of growing insecurity, rising pressures from population growth, and extreme vulnerability from impacts of climate change, environmental degradation, multidimensional poverty and under-investment in social services continue to expose people to further vulnerability, emergency relief is not a sustainable solution. Instead, understanding the enabling factors of the conflict and the degree to which it has affected livelihoods, traditional trade links, supply chains and movements of livestock can inform the relationship between different environmental factors, economic phenomena, and social activities that sustain local and regional development problems and current humanitarian crisis.

Terms of Reference

The primary objective of this study is to gain a more in-depth and holistic understanding of the different populations living in the Lake Chad Basin of Nigeria, Cameroun, Chad, and Niger and the vulnerabilities they face to food and nutrition security, which have been accentuated by the current protracted crisis. Through analysis of secondary data, various vulnerabilities and opportunities of these groups will be examined to develop inclusive food security strategies and empower people to increase self-reliance. Furthermore, this study is commissioned to highlight essential elements for a comprehensive targeting strategy, which can enable WFP to identify underlying vulnerability to food and nutrition insecurity within the region and at the household level in all four countries.

As part of its recent response to the ongoing humanitarian situation, WFP has supported the Nigerian Government and its partners in starting a cash assistance programme with mobile-phone delivery for over 4,000 displaced people, with a goal of reaching 70,000 people in the next months, focusing in the areas where hunger has reached an explosive level (WFP, 2016). Responding to people's immediate needs with food distributions, WFP is also challenged to encourage resilience and promote options for displaced persons and for local communities that are hosting them, aiming for prospective regional stability.

Examining intricacies of various immediate and longstanding regional challenges, this review aims to identify strategies to support resilience and self-sufficiency in developing sustainable solutions amid overlapping humanitarian and development crises. Hence, complex livelihood strategies, coping strategies of the Basin's rural communities, and networks of socioeconomic and institutional relationships are examined in order to understand how to more effectively deliver relief while promoting human development for a transition to self-reliance.

This study seeks to outline key barriers to human development and food security prior to the current armed civil conflict in the Lake Chad Basin in order to determine how conflict persists among other factors reinforcing vulnerability in the region. To do this, socioeconomic issues contributing to the current humanitarian crisis are analyzed to identify the nature of vulnerabilities. Pushing beyond emergency narratives, this study attempts to trace the evolution of development problems to the current humanitarian crisis in order to identify opportunities to deliver effective relief that might support enduring food sovereignty and stability at the interface of environmental disaster and conflict.

Central Questions

- Prior to the crisis, what were the key social, political, environmental and economic factors affecting livelihoods and people's ability to meet their food security and nutrition needs?
- How has the crisis influenced factors and trends? What has been the impact on livelihoods and food security and nutrition of populations?
- What are the key opportunities and challenges for supporting livelihoods and food security and nutrition of populations?
- How has gender or ethnicity factored into the effects of the crisis?
- What are the long-term problems and solutions associated with the regional food crisis? How can underlying vulnerabilities be effectively addressed by WFP programming in the LCB?

NOTE: This study discusses secondary data regarding the Lake Chad Basin, however the remote desk review is intrinsically limited by a general lack of up-to-date socioeconomic data, due largely to the onset

of civil conflict in the region. Furthermore, based on the analysis of published data, this review is challenged to follow a practical-orientation, grounded on discussions with WFP staff in the region.

The Basin's macro-level vulnerabilities prior to the current humanitarian crisis: Structural problems undermining human development and food security

During the colonial period, the Lake Chad Basin region was divided into separate countries, Niger, Cameroon, Nigeria, Chad, notwithstanding the area's shared environmental and cultural heritage or intricate economic networks, by European forces. Hence, the area's environmental and political history outline an "inherent complexity,"³ as resources within the semi-arid hydro-system continue to be utilized predominantly by these four nation states straddling the Lake.

As one of the largest bodies of water in Africa, Lake Chad is a crucial ecosystem and vital water resource between the Sahel and Sahara deserts. The Lake's natural resources long served as a sort of oasis within neighboring arid landscapes. In the Middle Ages, Lake Chad attracted Arab geographers. Later in the 1800s, it brought European interests and colonial conquests. Today, continuing to retreat as it has done drastically over the past 40 years, the shrinking lake reveals new land for cultivation, but less and less water to irrigate growing agricultural areas.

Even outside the confines of the Basin, particularly in Niger, Chad and Cameroon, millions of people depend on the lake's resources, for example as a springboard for agricultural production and other commodities (Odada et al., 2006). Hence, the ecosystem services are invaluable to the subsistence livelihoods of people throughout the region. Meanwhile increasing pressure on the soil and diminishing water sources have increasingly threatened the sustainability of these vital economic activities as the Basin's natural capital has been degraded.

Geo-political issues set the stage for poor natural resource management

Colonial legacies, leaving the region carved into four political states forced to negotiate shared natural resources, inevitably set the stage for complicated public administration of

³ Lemoalle, J. and Magrin, G. (2014). Le developpement du lac Tchad: Situation actuelle et futurs possibles.

territories surrounding Lake Chad. In addition to local political divisions, the geographic location exposes the basin to unique environmental pressures and international political influences. The northern area of the Basin pertains to the Sahara desert, which houses networks and transactions linking sub-Saharan with Arab North Africa. The eastern part of Lake Chad opens to the Middle Eastern Arab States through Sudan. This proximity exposes the Basin region to the religious ambitions and interests of Arab North African countries like Libya.⁴

Overwhelmingly neglected by international policymakers throughout centuries of environmental, regime and economic changes, it was not until after September 11, 2001 that the Lake Chad area became strategically important. With the onset of the American-led war on terror, the Lake Chad Basin, the region housing the largest Muslim population in Africa, attracted increasing international political interest.

Despite the regional nature of the Basin's environmental issues, the status of conservation and development in the basin region depends on the practices and policies of Member States rather than on shared human and natural resources (Odada et al., 2006). Lake Chad is a dynamic body of water, constantly changing size, shape and depth, in response to even slight fluctuations in annual precipitation. Linked to three main drainage systems,⁵ the Lake's water sources have been modified under increasing competition. Expanding desertification contributes to sources of social conflict, adding to obstacles to the livelihoods of local populations and their ability to ensure food security for their families.

Lack of public evidential data, linguistic and cultural barriers, and poor institutional on hydrological issues of the Lake and impacts of climate change have generated widespread confusion and obstacles to communication regarding impacts on ecosystem health and natural resource management. The resulting blurred images of the underlying crises situation were reflected by ineffective public policy for environmental regulation and regional development planning. Despite dramatic drops in lake levels, collaborative political action was prohibited by lack of comprehensive information in the region. Rather than addressing water usage, the issue of lake water recession and scarcity in the Basin is treated with engineering solutions such as the Ubangi basin project, proposed in 1980 with the aim to control the hydrological systems by transferring water from the Ubangi river to "save" Lake Chad⁶.

⁴ Gilbert L. Taguem Fah. (2007). The War On Terror, the Chad–Cameroon Pipeline, and the New Identity of the Lake Chad Basin.

⁵ These systems include: the Chari-Logone River subsystem (Central African Republic); the Konadugu-Yobe river subsystem (Nigeria); and the Yedsaram/Ngadda River Subsystem (Cameroon).

⁶ Lemoalle, J. and Magrin, G. (2014). Le developpement du lac Tchad: Situation actuelle et futurs possibles.

Today, with greater data availability and understanding of the impacts of climate change, the regional challenge remains to mobilize stakeholder capacities for strategic action planning. Natural rainfall variability, unsustainable water use, and climate change continue contributing to the drying of the lake, which catalyzes the shrinking of water. Hence, people of the Lake Chad Basin are denied sustainable access to vital water and protein resources despite having almost no responsibility for the activities contributing to human-induced climate change. This is a true story of global environmental injustice. The remote inland location and arid climate make the Lake Chad Basin a difficult living environment where information deficit and neglect from policy makers complicate the poor economic situation.

Given threats of climatic changes and desertification, unsustainable water management of Lake Chad can be seen as product of classic environmental economics phenomena of tragedy of the commons. Scientific literature is abundant on ecological disasters in the Basin, such as drought and desertification, dating from the 1970s, however water exploitation has intensified due to greater demographic pressures and competition from increased water scarcity, as well as from regional policy failures. As the size of the lake diminishes, so to does the size, number, and variety of its fish. By 1980, two key species had already disappeared: *Lates nilotias* (Nile perch) and *Labeo*.⁷ Biodiversity loss has continued despite national fishery conservation projects. These environmental challenges stresses are further obstacles to human development and food security. With the onset of humanitarian crisis, especially, ecosystem health is not prioritized before human survival. On the contrary, the crisis puts extra pressure on limited resources in the face of severe scarcity and chaos from the onset of regional conflict. Hence, environmental degradation appears both self-perpetuating and inevitable.

⁷ Van der Meeren, A. (1980). Improvement of fish processing and transport on Lake Chad project, Nigeria. A socio-anthropological analysis of the fisheries of Lake Chad.

Many reports⁸ link environmental change, vulnerability and insecurity in the Lake Chad Basin, as competition and conflicts over the use of resources have increased in accordance with degradation within the Lake

Demographic note for geographic targeting of vulnerability and supporting sustainable livelihoods: the largest population of resource-users inhabits the southern part of the Basin (GIWA, 2004). So examining the resource-base of communities within the South of the Basin may be emphasized. Still, environmental degradation has likely been augmented by displacements from the onset of the crisis, such that vulnerability analysis and sustainable resource management should be developed throughout the Basin, in relation to real-time community needs.

area. Especially in the southern part of the Basin with highest population density of resource-users, water shortages, the loss of livelihoods, and unemployment have led to the rise of violent jihadist militant groups and drug trafficking (Ifbayi, 2013).

Multidimensional vulnerabilities amounting to conflict in the Basin

Underlying regional vulnerabilities stem largely from unmanaged environmental degradation, multidimensional poverty, subsistence economic systems, and political injustice, which persist as long-standing problems, systematically undermining development. These, among other complex social, environmental, economic, and political issues, can be considered enabling factors for the current civil conflict, which, in turn, have engendered the overall emergency-situation of the current humanitarian crisis in the Lake Chad Basin.

Since the 1970s, armed conflicts and rebel activity have escalated on the Lake's islands. Beyond clashes over natural resources and the Lake's decline, the mounting conflict is historically rooted in a series of civil wars in Chad as well as the migration of Nigerian fishermen to the Southeast Basin. For example, following record peak fishing yields, rebel activity was especially prevalent on the Lake in 1979 with over 15 cases reported of fishermen being held for days at a time, their nets and catches stolen. A year later, Kindjes Island, which provided a crucial observation point over the lake, was completely ransacked (van der Meeren, 1980). In response to the unrest on the Lake, a "joint multinational patrol" which was established to prevent violence, calm political instability, and supervise activities on the Lake.

Decades later, contributing to the challenges to ongoing political stability, unequal oil rents have tempted corrupt activities among riparian state authorities. In 2003, the controversial Chad-

⁸ See: (Okpara et al., 2015) *Conflicts about water in Lake Chad: are environmental, vulnerability and security issues linked?* <http://eprints.whiterose.ac.uk/91926/2/repository3.pdf>

Cameroon oil pipeline World Bank project was completed to develop capacity of oilfields near Doba in southern Chad and transport oil to a floating offloading and storage vessel off the coast of Kribi, Cameroon. Funds allotted for the pipeline ended up being spent by Chadian and Cameroonian governments to buy arms to subdue resistance in neglected areas (Gilbert, 2007). With ventures like the pipeline, oil companies and governments prioritized their cash economies over significant social and environmental impacts. Rather than investing in infrastructure and social services such as the provision of quality health care or education programs, government expenditures have been increasingly dedicated to national militaries, in order to subdue oppositions and prepare for armed conflict.

Frustrated by these and other irrefutable injustices, rising Islamic classes in the Lake Chad Basin sought knowledge and education from foreign Muslims. Through relations with the international Arab world, a “reactionary Islam” has been ever intensively cultivated in the Basin area⁹. Hence, religious extremism has evolved as a tool to harness people's frustration and desperation within the context of inequitable distribution of natural resources. Out of the confusion of failed states, social inequality, and lack of education, Boko Haram¹⁰ lashes out and captures discontent.

In response, Boko Haram's terrorism has been met with indiscriminate state security forces, which have been proven insufficient in either gaining support of or protecting affected communities. Failing to address the factors behind social unrest and radicalization, regional governments have festered grievances following decades of political corruption (Guéhenno, 2016). Given poor access to basic social services, people have grown deeply angry and alienated from national ruling parties and their failed public systems. Compounding the insurgency and reciprocal political violence, ever-intensifying demographic growth and environmental degradation have driven social tension and migrations.

Within such complexity, it is critical to clarify the cause and effects of central development issues within the Lake Chad Basin region in order to understand the nature of the current humanitarian crisis, respond effectively, and identify long-term solutions. Enabling factors for

⁹ Gilbert L. Taguém Fah. (2007). The War On Terror, the Chad–Cameroon Pipeline, and the New Identity of the Lake Chad Basin

¹⁰ Boko Haram is an Islamist terrorist group that has been active in Nigeria since 2002. Translated from Hausa to English, ‘Boko Haram’ means “Western Education is Sinful,” which reflects the group's two main aims of opposing ‘secular westernization,’ especially co-educational learning and democratic elections; and the creation of an Islamic state in Nigeria, or at least in the country's majority Muslim northern states (Zenn & Pearson, 2014).

Boko Haram's violent insurgency, largely parallel the long-term development problems and underlying vulnerabilities to food and nutrition insecurity within the region. While met by national military responses, factors underlying violence and social unrest have not been addressed. These more systemic development issues have evolved for many years, perpetuating inequalities while undermining the self-sufficiency of national governments, communities, and individuals.

Boko Haram's resource monopoly

Amid intense competition for limited natural resources and poor access to information, the Muslim insurgency group, Boko Haram, has cultivated a fierce rejection of the kleptocratic state powers and the weak systems neglected by these political bodies in rural areas, which they attribute to Western models of life. Calling for the creation of an Islamic state, Boko Haram is not solely

WFP narrative to frame and respond to LCB crisis: Rather than attributing the explosive hunger situation solely to eruptions of violence in the poorest parts of West Africa and treating symptoms with emergency assistance, WFP might frame the crisis within systemic deprivations and chronic food insecurity, which have also triggered the current humanitarian crisis. Clarifying the current crisis at the interface of civil conflict with environmental degradation as symptoms of chronic development problems solicits far-reaching vulnerability analysis for a comprehensive humanitarian response to address health, education, and natural resource management, as root causes of multidimensional deprivations and vulnerability to food insecurity.

ideology-focused¹¹, but instead is interest-and strategy-based as it capitalizes on people's frustration to mobilize resources. Despite its basis on extreme religious values, Boko Haram's attacks are usually strategic and in retaliation to state-impositions, disrupting traditional networking and trade systems. For example, in attempts to gain regional control, Boko Haram blocked Chad's oil pipeline going through Cameroon, thereby earning attention by disrupting regional market systems. Focused on its resource-base, Boko Haram uses religion as a tool to mobilize deprived people for larger causes of exploiting local trade routes and gaining control in the absence of social protection and capable state rule of law.

Problems of entrenched development issues and long-term sources of vulnerability,

¹¹ Focused on the alienation of traditional values as a societal problem, Boko Haram leaders cultivate resentment against the Western model of development and education, Western culture, imposed through colonizing forces, is equated with elitism, greed, individualism where Boko Haram's anti-education is misinterpreted.

poverty and joblessness expose people to desperate needs, providing an ample pool of willing recruits as Boko Haram's recruitment strategy often relies on financial incentives, rather than the extremist ideology or recruit-kidnapping for which the group is better known (Obe, 2015). Given the government's poor capacity for providing physical safety, food security, or basic social services, people rely on cross-border trade in order to access basic resources that are not available within own countries. Trafficking everything from arms and cattle to cigarettes, people, and food, Boko Haram exploits local knowledge, representing long traditions of cross border trading activities, within a regional context that has long been contested. Their use of violence can be understood as a provocation to national and foreign government failures to manage and provide for the growing needs of the region.

Within the context of systemic regional development challenges, Boko Haram becomes a substitute for a functioning government. Attempting to impose Sharia Law, the insurgency group rests the ruling system of the failed state. Instead, they advocate for a different type of resiliency and offer structure to people's lives in a context where there is no rule of law. The failed states of Lake Chad Basin's riparian governments generate comparative access to cross-border markets.

Local development issues: Historical sub-regional socioeconomic contexts

Since achieving independence from their respective French and English colonies in the 1960s, the countries of the Lake Chad Basin have been plagued by complex political instability. As a result, national and international conflicts have continued. While levels of economic development vary between riparian nation states, the area making up the Lake Chad Basin tends to represent the poorest; most marginalized and neglected part of each respective country, notably with poor provisions of basic infrastructures and social services. Examining country level socioeconomic contexts reveals the situational vulnerabilities within the Lake Chad Basin in relation to traditional livelihood strategies, allowing conceptualization of how can these be supported to build self-reliance in the future.

Nigeria, which has been headed by 11 different regimes since independence in 1960, has suffered successive coup d'états and civil wars (LCBC, 2016). With the fastest growing economy in Africa, Nigeria's oil and other natural resources have attracted wealth, which has not trickled down to support national needs, particularly in removed rural areas.

Chad, on the other hand, has experienced a seemingly continuous crisis of ongoing war. As an enclave country, Chad is exposed to Northern threats from weapons and human trafficking in Libya. Furthermore, as part of the route migrants take to reach Europe, the Chadian desert also

supports the migrations of young people fleeing their situations of origin. Relying on the export of livestock to neighboring countries, Chad risks losing 41% of the GDP associated with the trade of animals, which has been thwarted by the crisis¹². According to Chad's minister of foreign affairs, it currently hosts the 7th largest refugee population in the world, some 3,500 people from Darfur and the Central African Republic.

Ranking lowest in the world on the Human Development Index, which scores countries based on national averages for a long and healthy life, access to knowledge, and a decent standard of living, **Niger** suffers from continuous structural calamity. The ongoing structural crisis in Niger is perpetuated by a lack of effective solutions to its underlying structural elements, as well as weak sectorial policies and low levels of investments and development aid (WFP, 2005). Fleeing Boko Haram's violence and related conflicts, many refugees from Mali and Nigeria have settled in Niger. Niger's Diffa region, representing the most destitute section of the poorest country, has accommodated IDPs who have been forced out of their homes.

Meanwhile, **Cameroon's** relative political stability can serve as a sort of model for regional governance. However, over recent decades, Cameroon has taken on the burden of refugees from many neighboring states. From 1967 to 1970 Cameroon received millions of refugees from Nigeria. Since then, some 400,000 people have arrived from Equatorial Guinea, Chad, and the Central African Republic. Certainly Northern Cameroon is also challenged to accommodate the increasing influx of refugees who been fleeing Nigeria over the past several years.

Besides sharing the Lake's natural resources, all four countries also experience steep population growth, particularly in the Basin's rural areas, which puts increasing pressure on environmental health and poor social protection systems. Forecasting demographic growth from current rates, the Lake Chad Basin's population is expected to double over the next 30 years. According to a 2004 UNEP report¹³, climate change, further water development projects, increased demographic pressure, oil development, and rising use of agro-chemicals are among the pressing regional concerns impeding sustainable development.

¹² OCHA. (2015, 25 Sep) The Lake Chad Basin at a cross-road: addressing urgent humanitarian needs in an overlooked crisis. [Video] UN Web TV.

¹³ UNEP (March 2004). Lake Chad Basin – Global International Waters Assessment: 43.

The protracted regional nutrition situation prior to crisis

A 2011 UNICEF report entitled: *Lake Chad's receding water level heightens risks of malnutrition and disease*¹⁴ attributed the then severe malnutrition situation in the Lake Chad Basin to environmental degradation due to climate-change and natural resource depletion. Describing the rise of malnutrition in the region as accounting for one third of the deaths among children under five, water shortages were identified as the source of related hunger and nutrition problems in the Basin pre-conflict. Looking farther back, at the case of Niger, a WFP report¹⁵ discusses the country's "permanent emergency," attributed to the weakening of agro-pastoral systems and structural nutrition crisis, noting Niger stands among the highest acute malnutrition and infant mortality in the world.

Considering the persistent nutritional situation of median Global Acute Malnutrition (GAM), which has been exacerbated in the face of the crisis, it is noteworthy to consider Nigeria's Northeastern states where neglect has clearly blocked human development opportunities. It is in this Nigerian-owned corner of the Basin that Boko Haram's insurgency originated, where GAM has prevailed over the past 5 years. Monitoring the nutritional impacts of the crisis, WFP's *March 2016 Lake Chad Basin Crisis (LCBC) Bi-Weekly Food Security & Market Watch* reported acute malnutrition prevalence levels in Northeastern Nigerian states approaching critical threshold, noting however an overall stability in the 5-year trends, fluctuating between 10 and 15 percent (WFP, 2016). These and other trends mark the incidence of alarming malnutrition as preceding the eruption of violence and ensuing conflict. Hence, it is important to identify other sources of the nutrition problems in the area.

Neglecting the cultural continuum across borders and the complexity of root environmental challenges, national food security projects such as food storage reserves have not sustainably addressed food security and nutrition issues (FAO, 2011). Cooperative, integrative regional responses are needed, beyond country-specific food assistance strategies, to address the complex, integrated nature of vulnerabilities to food insecurity, which stem largely from poor environmental management, hindering the capacity for actors within the Basin to fulfill their productive capacity.

¹⁴ Bloeman, S. (2007, February 9). http://www.unicef.org/mdg/chad_57642.html

¹⁵ WFP (2005). Evaluation of WFP's Response to Crisis in Niger in 2005.

Lake Chad, along with its islands and flood plains, is a central for regional food security, yet environmental risk and degradation in the Basin constrains the capacity to meet food security needs. The **protracted nutrition situation** speaks to the need to find sustainable solutions to the systemic issues of malnutrition, including access to potable water, sanitation, and nutrient-rich food. Given the shared natural resources between states, food security interventions must be approached regionally to manage shared natural resources, rather than via national strategies which risk sacrificing environmental health in the long term in order to achieve short term productivity gains. To facilitate an integrated regional response, WFP, together with the Lake Chad Basin Commission's regional civil society networks, can facilitate inter-country stakeholder engagement to support regional ecosystem management in order to improve food security in each state within the Basin.

Low regional human development indicators reflect poor social protection

Quality health and education systems are imperative to enable human development and food security. However, poor infrastructure and social protection in the Lake Chad Basin reflects a lack of investment in rural development, which, in turn, undermines livelihoods and food security of people of those who depend on the Basin system. High rates of HIV/AIDS, low school enrollment and adult literacy have spillover effects other aspects of wellbeing such as nutritional status, which perpetuates inequalities and further infringes upon food security.

Indicative of poor national education systems, widespread illiteracy, due to low school enrollment, is a major hindrance to development in the Lake Chad region; furthermore, there are sharp disparities between education of girls and boys (Odada, 2006). Considering the case of Nigeria, while gender gaps and educational attainment are not wide in most of the country, Nigeria's Northeast region is marked by significant differences by gender as 56 percent of young women ages 15-24 were literate compared to 70 percent for young men of the same age group (WFP & IFPRI, 2013). While the 2013 Nigeria CFSVA noted a rise in national education levels from previous years, the Northeast region, which pertains to the Lake Chad Basin, continues to hold the lowest literacy and school attendance rates for heads of households (WFP, 2013). Among primary factors discouraging school enrollment are the long distances students must travel to reach schools and the low quality of education they obtain upon arrival (Odada, 2006). Furthermore, the low probability of being hired in modern sectors upon graduation discourages students from following the poor education system.

High correlations between educational level and nutritional status indicate the fundamental role that education plays in determining health, making investment in education fundamental to supporting human development in other areas, such as sanitation, reproductive health, and environmental management (WFP, 2013). Strong evidential links between mother's education and the nutritional status of dependent children (Frost, Forste, and Haas 2005; Wamani et al. 2004) demand political support to ensure that women are sufficiently educated regarding their nutrition and health, as well as those of their children (WFP, 2013). Besides the fundamental importance of education for human development and food security, particularly for nutritional status, health services generally indicate elemental investments for development. Especially in rural areas, poor health and education detract from integrative approaches to address regional challenges. Please refer to the **table of Regional socioeconomic profiles & crisis impact in LCB riparian countries** (page 22), which outlines data on the current status of child nutrition and displacements from the current crisis; socioeconomic data for education (average level and literacy rates by gender), demographic health indicators (total fertility and infant mortality rates), and predominant ethnic groups and local languages, and the Multidimensional Poverty Index (MPI)¹⁶.

¹⁶ The MPI identifies deprivations across health, education, and standards of living (dimensions of the Human Development Index) and indicates the number of people who are multi-dimensionally poor (suffering deprivations in 33% or more of weighted indicators). While poverty cannot be equated with vulnerability to food insecurity or shocks, it is a proxy for these, making the MPI effective in targeting of those with the greatest intensity of poverty for resource mobilization.

Regional socioeconomic profiles & crisis impact in LCB Riparian Countries

Country (pertaining to LCB region)	Child Nutrition Crisis	Literacy & Average Education level (Male/Female) (years expected schooling)	Total Fertility & Infant Mortality (births per woman) (#deaths/1000 births)	Refugees, IDPs & Returnees	Tribal & Ethnic groups	Local Languages	Human Development & Multidimensional Poverty Index
CHAD (Western region: Lac, Hadjer Lamis, Kanem)	176,900 children under 5 with Severe Acute Malnutrition (SAM)	Adult literacy: 52% 34% 7.4 years	6.4 TFR 85 IMR	60,131 IDPs 90,240 from CAR	Kanembu, Buduma, Yedina, Maba, Hausa, Kotoko, Fula (or Fulani), Haddad	Kanuri, Chadian, Arabic, Hausa, Fula	0.392 HDI (Rank 185) 0.545 MPI (86.9% pop MP)
NIGER (South-Eastern region: Diffa, Zinder)	14,338 children in Diffa region; (Lean Season: GAM from 13.2% in Diffa to 19.1% in N'Guigmi)	Youth literacy: 36.4% 17.2% 27.3% 11.1% 5.4 years	7.6 TFR 57 IMR	91,360 Nigerian children out of 166,110 Nigerian refugees & returnees, IDPs	Hausa (53%), Peuls (10.4%), Fula, Shiwa, Arabs, Kanuri	Kanuri, Fula, Hausa	0.348 HDI (Rank 188) 0.584 MPI (89.8% pop MP)
NIGERIA (NE region: Borno, Adamawa, Yobe, Gombe) 14.8 million affected	383,000 MAM children & 136,783 expected SAM cases	Adult literacy: 73% 49% 9 years	6 TFR 69 IMR	2,152,000 IDPs (57% children); 152,148 children out of 262,324 returnees	Kanuri, Buduma, Hausa, Kotoko, Fula, Haddad, Shiwa, Arabs	Kanuri, Tiv, Hausa, Fula, Adamawa-Ubangi	0.514 HDI (Rank 152) 0.279 MPI (50.9% pop MP)
CAMEROON (Extreme North: Maroua region)	61,262 children in SAM 133,255 (11.7%) with Moderate Acute Malnutrition (MAM)	Adult literacy: 82% 69% 10.4 years expected schooling	4.9 TFR 57 IMR	169,970 IDPs; 267,148 CAR 72,062 Nigerian refugees	Bantu, Kanuri, Buduma, Hausa, Kotoko, Fula, Shiwa, Arabs	Kanuri, Tiv, Hausa, Fula, Adamawa-Ubangi	0.512 HDI Rank 153 0.26 MPI (48.2% pop MP)
CAR	-	7.4 years expected schooling	92 IMR	421,000 IDPs 466,000 Refugees in Chad, Cameroon, DRC & Congo	Bantu	-	0.35 HDI (Rank 187) 0.42 MPI (76.3% pop MP)

Data compiled from: UNICEF Humanitarian Situation Reports, 2016; LCBC: cbt.org; hdr.undp.org/en/countries, 2015

Regarding health issues, as some of the poorest countries in the world, the Lake Chad Basin nation states hold some of the highest fertility and infant mortality in the world (see Table: page 22). Further to the problems of reproductive health, outbreaks of cholera, linked to poor sanitation and lack of potable water, were reported in the Lake Chad Basin by IRIN with 58,000 regional cases resulting in 2,300 deaths in 2010. Tracking the rise of cholera in August 2011, a report¹⁷ announced 38,000 new cases throughout the region that year, explaining how the Basin's social and commercial activities promote high population movements through low-sanitation and infection-prone areas.

Generally, poor hygiene and sanitation practices within the region are exacerbated under climatic and extraordinary migratory pressures due to mass displacements. Now, with the onset of the crisis, cases of cholera and measles were concentrated in several refugee camps, such as in Maidiguri, following the rainy seasons. The incidence of these diseases, while triggered by outside events, represent poor health services due to a lack of vaccinations, as well as infrastructural deficiencies leading to water-borne contamination and the rapid spread of diseases. Inevitably as people fall ill to disease, livelihoods and productivity are sacrificed.

Of the Basin's riparian countries, Chad, Niger and CAR have the lowest health standards. Generally, the health of rural populations is inferior to that of urban populations and it is often the case that these areas of the country are located in the Lake Chad Basin. For example in Niger, child malnutrition continues to be most severe in the regions of Diffa and Zinder contained in the Lake Chad Basin as well as Maradi (Government of Niger, 2002). High child mortality rates within Basin countries are mostly attributed to malaria, diarrhea, measles, tetanus, yellow fever, acute respiratory infections, chicken pox, and diphtheria, where low vaccination coverage is a contributing factor to the high incidence of such diseases (Odada, 2006). Hence, underserved populations are systematically limited by the poor provision of basic health and limited access to quality education services in their countries of origin.

Notwithstanding ongoing crises, national policies have failed to address systemic problems of access to public services. Although there are no short run gains, education system reform is also important for economic development in the long run, as it affects other sectors. Clearly, investments in human development remain primary criteria for addressing issues of sustainable development in the long run.

¹⁷ IRIN (2011, August 11). Health: Cholera soars in Lake Chad Basin countries.
<http://reliefweb.int/report/cameroon/health-cholera-soars-lake-chad-basin-countries>

People, livelihoods and resilience within the Basin

Today, the Lake Chad Basin is a virtual melting pot with little forms of real authority. In the basin, people are governed by relationships rather than rights or obligations, which typically determine social control in home villages (van der Meeren, 1980). Even prior to the current insecurity from civil conflict and related migrations, the Lake Chad Basin has long been a plural region of mixed identities, population movements, and cross-border trade.

Characterized by plurality, the Lake Chad Basin's cosmopolitan population, which reflects a diversity of local languages, dialects, ethnicities, tribes, and indigenous groups, often practices sophisticated techniques for adapting to environmental variability¹⁸. Various groups engage in different livelihood strategies from fishing, livestock rearing and pastoralism, and agricultural activities, which have formed synergetic, cooperative relationships, but can also face competition for increasingly limited resources.

A contributing paper¹⁹ to the 2011 FAO/Lake Chad Basin Commission Workshop on climate change implications for fishing communities explains that more than 70 ethnic groups in the Lake Chad Basin, utilizing natural resources through different activities. In the 1970s, the conventional Lake Chad Basin was mostly dominated by Kanuri, Fulber, Kanembu and 'Arab' tribal groups, with smaller tribes such as Kotokov (Logone Bank) and Boudoumas (Northeast shores) being more locally predominant²⁰. Mainly acting as herdsmen, the Kanuris and Shuwas have lived in the region for centuries. Today, however, ethnic groups are no longer attributed solely to their original tribal areas.

Changing activities of the Basin's diverse tribal and ethnic groups

Despite international borders, people of the Basin have maintained cultural ties of kinship, language, trade, and religious interaction. However, the activities of groups indigenous to the area have shifted over time. Exemplary of the impact of such shifting roles, Kanuri history, culture,

¹⁸ Lemoalle, J. and Magrin, G. (2014). Le developpement du lac Tchad: Situation actuelle et futurs possibles.

¹⁹ Ovie, S. and Emma, B. (2011) Identification and Reduction of Climate Change Vulnerability in the fisheries of the Lake Chad Basin.

²⁰ Lake Chad Basin Commission (1974). FAO Survey of Water Resources of Lake Chad Basin for Development Purposes.

folklore, and economy has been centered around Lake Chad, which is an integral part of the way of life for peoples who lived by and on the Lake²¹. Today the Kanuri peoples, who have relied on trading activities, now struggle to survive in the face of increased pressure on dwindling natural resources, the huge decline in fish production, and the reduction in livestock. Adding to their livelihood challenges, border closures and other security measures enacted in response to the Boko Haram insurgency, have badly affected trade, and with it, opportunities for legitimate employment throughout the region (Obe, 2015).

Over the past several decades, the Hausa from Kebbi and Sokoto States of North-West Nigeria have inhabited fishing villages. Other ethnic groups include the Saras, the Brigmis, the Lokotos, Tubus, Bandas and Shuwas of Chad. In Cameroon, the Fulanis, Marghis, Mandaras, and Matakan. Meanwhile, in Niger, the Zabermas. Furthermore, the Mobbers, Buduma, Kanembu, Kotoko, Haddad, Kouri and Manga tribes have been represented in the region (FAO, 2004). The Lake's Western shore, home to the majority of the Basin's population, falls under the jurisdiction of Borno (one of the 36 Nigerian states) and is dominated by the Kanuri ethnic group. Like the Kanuri, the Hausa specialize in trading, especially across borders²².

Increased mobility and decreased group identity: a challenge for geographic targeting or opportunity for resilience?

The dynamism of the Lake Chad Basin region is accentuated by high mobility of people moving and responding to changing natural resources. As people move around, employing various strategies to earn a living, the Basin region's multi-functionality is omnipresent as groups enjoy successive use of the same space, depending on the rhythm of seasons and annual episodes of floods and recessions.

Different ethnic groups have long, pre-colonial traditions of migrating across borders throughout the basin. Today, both the ECOWAS Treaty and the Lake Chad Basin Commission statute facilitate such inter-state migration. Mobility appears to be a key coping strategy among many groups within the region, as people are somewhat habituated to moving seasonally, as well as coping with the incidence of displacement, often adapting to environmental variability. Hence, a relatively high capacity for resettlement seems to have developed among Basin populations.

²¹ Obe, Ayo. (2015). Environmental Degradation, Climate Change and Conflict: The Lake Chad Basin Area.

²² UNEP (March 2004). Lake Chad Basin – GIWA Regional assessment 43.

Through migrations, herder mobility, and trans-border trading activities, interactions between different tribes and their cultures, religions have increased. This has led to a mixing of races and a blurring of tribal roles. Due to the regional culture of high-mobility and livelihood diversification of tribal groups, linguistic adaptations are an important survival strategy amongst the pluralism of the Basin. Since official languages (English and French) reflect colonialism, most people in the Lake Chad Basin speak several local dialects besides the official language. Major local languages, reflecting pre-colonial politics, factor into regional identities. For example, Kanuri is spoken mainly in Niger and Nigeria; Fulfude in Niger, Nigeria and Cameroon, and Chadian Arabic in Chad. Furthermore, identity politics differ, as collective and individual identities are represented through religious and ethnic group membership, linguistic and political ties (Okpanachi, 2012).

With an already high mobility of population groups, the current crisis-level security threats have increasingly dispersed established networks, making it difficult to know who is who within the Lake Chad Basin. Most displaced people do not live in refugee camps, which have surpassed capacity, but instead reside with host families, relying on the generosity of already vulnerable host-country communities. Thus, the plight of displaced people, therefore, represents a collective challenge as scarcity, uncertainty, homelessness, pain, and fear permeate throughout the Basin (OCHA, 2015).

Livelihoods and sustainability

Households throughout the Lake Chad Basin rely largely on subsistence activities from fishing, herding and farming. Livestock rearing was most well developed in the northern section of the Basin (FAO, 1983). Groundwater chemical compositions were declared unsuitable for irrigation, except in North of the Basin²³. In 1983, farming activities were traced mostly on the edges of Lake Chad and in the South of Basin. Extensive country-specific livelihood zoning and profiling, conducted in recent years by FEWS NET²⁴, is available for Chad, Niger, and Nigeria. These reports detail economic activities including seasonal calendars, wealth groupings, sources

²³ FAO, UNDP, and Lake Chad Basin Commission (1983). Well Drilling for Groundwater Exploitation Purposes in the Conventional Lake Chad Basin.

²⁴ Please refer to full reports: FEWS NET (2011, August). RAPID LIVELIHOOD ZONE PROFILES: Chad; FEWS NET (2011, August). LIVELIHOODS ZONING “PLUS” ACTIVITY IN NIGER; FEWS NET (2014, November). NIGERIA Livelihood Zone Summaries.

of food, according to geographic trends and opportunities for livelihoods in the Basin's riparian countries (please refer to **Annexes 1 & 2 for country-specific livelihood maps**). Today, however, land-use patterns have likely shifted in the wake of the protracted insecurity of regional conflict. Furthermore, with increasing environmental challenges, multi-activity has become common as individuals engage in several livelihood activities from fishing, livestock rearing, agricultural, trading, and handicraft making in order to secure revenues (Mekonnen, 2016).

For many decades, local water tenure systems have played a key role in livelihood strategy distinctions. For instance, in Northern Cameroon, the Yaéré floodplain population comprises different wealth groups, where poorest often rely largely on fishing. Fisherman and their families sometimes experience food deficits and insecurity. Meanwhile, the better-off in Yaéré tend to engage in farming activities.²⁵ Agricultural and fishing activities provide different returns to labour, reflecting the divergent roles of activities in the community economic system. While access to bodies of water and fishing activities is not restricted, agricultural land, on the other hand, tends to be privately owned, usually by family farmers.

Agricultural activities

Despite severe local environmental pressures²⁶, agricultural production is the main economic activity. As of 2006, about 60% of the Basin population was estimated to engage in farming activities. Subsistence farming can support local food requirements, but conditions do not always allow surplus production to allow for commercial activities. Typically drainage basin rain-fed, crops (mainly: cotton, groundnuts, sorghum, cassava, millet, rice and onions) are grown without fertilizers or other chemicals and are harvested by hand (Odada, 2002). With mounting water scarcity, farmers are hard-pressed to access water to irrigate their crops, which leads to decreased respect for natural resources as streamflow modification is used to divert water out of lakes and rivers into cultivation plots.

Along the Komadugou River and areas along the borders of Nigeria with Chad and Niger, maize, cowpea, wheat, chilli pepper, and rice production have developed, in conjunction with fishing activities. Nigerian's from central Borno often move towards the more lush Basin areas

²⁵ Bené, C, et al. 2001. Evaluating Livelihood Strategies and the Role of Inland Fisheries in Rural Development and Poverty Alleviation: The Case of the Yaéré Floodplain in North Cameroon.

²⁶ Such pressures range from negative impacts from climate change, for example desertification, to and human-induced degradation such as biodiversity loss, increased water stress and natural resource depletion, contributing to the Lake's recession.

and along the Komadougou in order to sell their labour for agricultural work or to pursue their own cultivation activities in a more favorable environment (FEWS NET, 2007).

Fishing

A FAO socioeconomic field study²⁷ with survey data collected from October 1999 to July 2000 in Lake Chad Basin areas examined the contribution of inland fisheries to rural livelihoods.

Fishing activities, whether in seasonal or permanent ponds, rivers and their tributaries are affected by irrigation channels, grazing and agricultural areas and seasonal calendars of the rain, river-flood cycles and associated activities nearby village inhabitants. The same study noted



fishing as both a key element in wealth differentiation, often determined by wealth, but also an activity representing complex and sometimes ambiguous contributions to household livelihoods (Bené et al., 2004). It can represent a vital activity of the poorest and most deprived, as taking up fishing has become a strategy of last resort in many cases. However, it is an oversimplification to assume that fishing implies greater poverty. The Western shores of the Lake tend to be better off, where some fishermen use income to buy farming inputs from fertilizers, seeds or even hire farming labor. Rather, it is important to examine cases specifically to understand complexities and identify strategies for supporting rural economic and human development. Complicating matters, declining annual fish catches (which have decreased from 141,000 tonnes in the early 1970s to 70,000 tonnes in 2002 (Living Waters, 2003)), small-scale open water fishers have had to switch

²⁷ FAO: Béné C., & Neiland A.E.(2004). Contribution of Inland Fisheries to rural livelihoods in Africa: An Overview from the Lake Chad Basin areas.

to swamp and floodplain fisheries, which requires specialized fishing gear (e.g. gill nets, cane traps and hooks). Due to reduced fishing areas, large-scale fishers have been forced to invest in bigger and safer boats to enable them to migrate longer distances to access open waters of the Lake to catch species of higher value (Okpara et al., 2015). Hence, the wealthiest fishing households are able to make these adjustments (Ovie and Emma, 2011). As a result of competing interests, the depletion of fish stocks from overfishing and reduction of trees from deforestation, as wood is cut and burnt for smoking fish.

Livestock rearing

Promoting sustainable livelihoods to reduce vulnerability in the Basin: Fishing is an indispensable and growing livelihood activity in the Basin, despite increasing water stress. Fishing is viable beyond its importance for local incomes, as it also offers an affordable source of protein to support regional diets. However Lake Chad's increasingly depleted fish stocks threaten fishermen's livelihood, compromising their income and regional food and nutrition security, alike. Updated seasonal calendars and capacity building for conservation training can promote sustainable fishing practices (e.g. exclusively of reproductive age fish to replenish stocks). Corresponding regulation of fish catches will then ensure replenishment of stocks. Hence, WFP might target fishermen along the banks and islands of Lake Chad for interventions including environmental stewardship to replenish fish stocks. Beyond geographic targeting and capacity building, support of fishermen could be developed through local procurement.

There are considerable challenges to zoning ²⁸of livestock production. Livestock ownership is heavily skewed towards the better-off 10% (FEWS NET, 2011). In the rural areas of Northern Nigeria, few localities have a predominant type of livestock, as the keeping of cattle, small ruminants, poultry, and equines is relatively common. However one ethnic group, the Fulani (or Fula), effectively constitutes a pseudo-livelihood zone in all four riparian Basin countries, as

they have specialized in keeping cattle (USAID & FEWS NET, 2007). Settled mostly in villages alongside Hausa or other majority ethnic groups or surrounding larger villages, the Fulani make up 15% of the population in Nigeria. Only a minority of Fulani is nomadic and they own 80% of their cattle.

Both settled herders and migratory pastoralists from different countries use land seasonally for livestock grazing. Centuries-old agreements between farmers and neighboring herders have

²⁸ For specific livelihood zoning, please refer to FEWS NET country-specific special reports: (February 2007) *Preliminary Livelihood Zones in Northern Nigeria*; (2011) *Rapid Livelihoods Zone Profile for Chad*; (2011) *Livelihoods Zoning "PLUS" Activity in Niger*. (See Annex 1 & 2 for respective livelihood maps).

allowed cattle to eat farmers' crop residues in return for manure dropped on cropping fields. However pastoral households are vulnerable to the encroachment of cultivation on pasturelands as well as rapid urbanization, which increasingly strains limited water resources. Together with Arabic-speaking pastoralists and agro-pastoralists migrating through North-Eastern Nigeria from Niger and Chad, the Fulani supply main markets, such as those in Maidugri, with livestock for southward transport to meet high demands in densely populated Southern Nigeria. At the beginning of the rainy season, herders face problems as they move north, as they lack agreed-upon livestock routes, or established passageways. Such factors constricting pastoralists result in reduced milk production, which undermines nutritional opportunities for children in the region.

In the densely populated semi-desert Bol Region of Chad, on the edge and islands of Lake Chad, the dry season offers valuable grazing land, but the animals return home during the rains to avoid tsetse and horseflies.

Regional trade, connectedness of markets and trade flows

Traditional trade routes are lifelines sustaining the Lake Chad Basin's expansive and arid environment. Demand typically exceeds supply and buyers represent a wide range of tribes. Taxes on transport and export of goods, such as smoked fish differ for each country, thereby contributing to cross border conservation problems of the Lake as fishermen travel to other countries for their catch, seeking to avoid higher taxation for fishing and trading.

Many markets and trading structures reflect traditional authority systems, which are characterized by the prestige of men in community. For example in Nigeria, the sale of smoked and dried fish, middlemen, or "belbela" engage with specific traders, on behalf of fishermen. Typically, local experts on fish prices, or "Fatoma," assist buyers by assessing belbelas for trustworthiness in trading. About 15-20% fresh fish is sold without middlemen, except traders from Lagos using large refrigeration units for transportation (van der Meeren, 1980).

An important note for food safety and supply, fish trading comprises several sources of infestation and thus food wastage at every stage, from sanitary conditions of marketplaces, to handling procedures, and delays in transportation (van der Meeren, 1980).

For livestock trade, higher population density and average wealth in Nigeria generate a crucial market for animals coming from Niger and distant Sahelian areas. In exchange, grain from northern Nigeria goes into Niger, especially when there are production problems in the Sahel (FEWS NET, 2007). Some grain and pulses also flow back into Nigeria, in response to the huge demand of Nigerian markets when there are local production problems. Limited numbers of Nigerian-based livestock move onto the pastures of central and eastern Niger during the rainy season. Furthermore, the relative strength of the naira and the CFA franc in a given season influences the directions of cross-border trade.

Opportunity to improve food safety and support value chain development:

To reduce food safety concerns associated with fish processing, transportation, and trading activities, regional market system analysis and capacity building could be developed along with local procurement activities to identify and eliminate sources of risk. This strategy could also be applied to market centers where trading of livestock and meat products, as well as agricultural crops and products will also be processed.

Shifting livelihood strategies under increasing pressure

As a result of exchanges between ethnic and livelihood groups, environmental pressures, and social crisis, people's livelihood strategies have expanded and interchanged between groups. Herders have become farmer-herders and farmer-fishermen. Farmers have diversified their diets and, in turn, expanded their activities to become traders (FAO, 2004).

Impact of Climate Change on Livelihoods

Relying on ecosystem health, subsistence farmers, fisher folk, and pastoralists suffer from accentuated unpredictability and relative decline in rainfall levels. In this dry region, even a one-degree global temperature rise contributes significantly the decline of the lake, which equates to destruction of people's vital resources and livelihoods. Accordingly, drastic consequences of international climate change fall on those whose activities have contributed least emissions.

With desertification erasing some fishing areas over time, shrinking the Lake to reveal more land for cultivation, combined with the reduction of fish stocks from overfishing and resulting from the Lake's recession, many fisherman have given up fishing to begin farming. Additionally, the activities of livestock herders and pastoralists have been limited. Hence, groups have switched livelihood strategies as the demand for water has increased, so too has its depletion under the augmented water stress. These chain reactions have often heightened competition between farmers and other livelihoods.

Impacts on income, food and nutrition security, labor generation and poverty alleviation are clear as climate-related water stress and shortages exacerbate community vulnerabilities. Relying on increasingly exhaustive coping strategies and social networks to meet food security needs, people have moved around the Basin and diversified livelihood activities in adopting more drastic behaviors. As a result, the resilience of the socio-ecological system²⁹ of the region is threatened as resources become more intensely used and depleted.

Reduced rainfall and stream flow modification reduce fishing grounds and modify habitats, which translates to declining fish catch and trade, lowered income, unemployment and increased poverty, and ultimately, food and nutrition insecurity. In the LCB, reduced water levels have not only led to decreased fish catch but also increased the productive capital of fishers especially for hitherto near-shore fishers. Changes in fish distributions and productivity not only increase productive capital considerably, but also inflate the cost of fish. In the same vein, the Lake's fishing communities have had to move in response to declining fishing ground caused by a gradual but steady decline in water area (Ovie and Emma, 2011).

Livelihood patterns have shifted in large part due to growing water shortages in the Basin. For example, decreased grazing land for animals has led herders to shift from rearing grazing animals (cattle and camel) to browsing animals (sheep and goat) (Onuoha, 2008), which has led to increasing removal of vegetation cover (US Geological Survey, 2014). According to FAO, *kreb*, a mixture of grains from a dozen or more wild grass species, was previously an important cereal source for pastoralists in the Basin. Traditionally protecting grasslands to ensure seed production, harvest the grains, and then allow their animals to graze, pastoralists combined livestock rearing and agriculture in productive systems that were well adapted to the dry ecosystems. However, the potential of *kreb* has recently been neglected as

²⁹ Ovie and Emma refer to the Basin's socio-ecological system, using the term as "a system that includes societal (human) and ecological (biophysical) subsystems in mutual interactions." See: Ovie, S. and Emma, B. (2011) Identification and Reduction of Climate Change Vulnerability in the fisheries of the Lake Chad Basin.

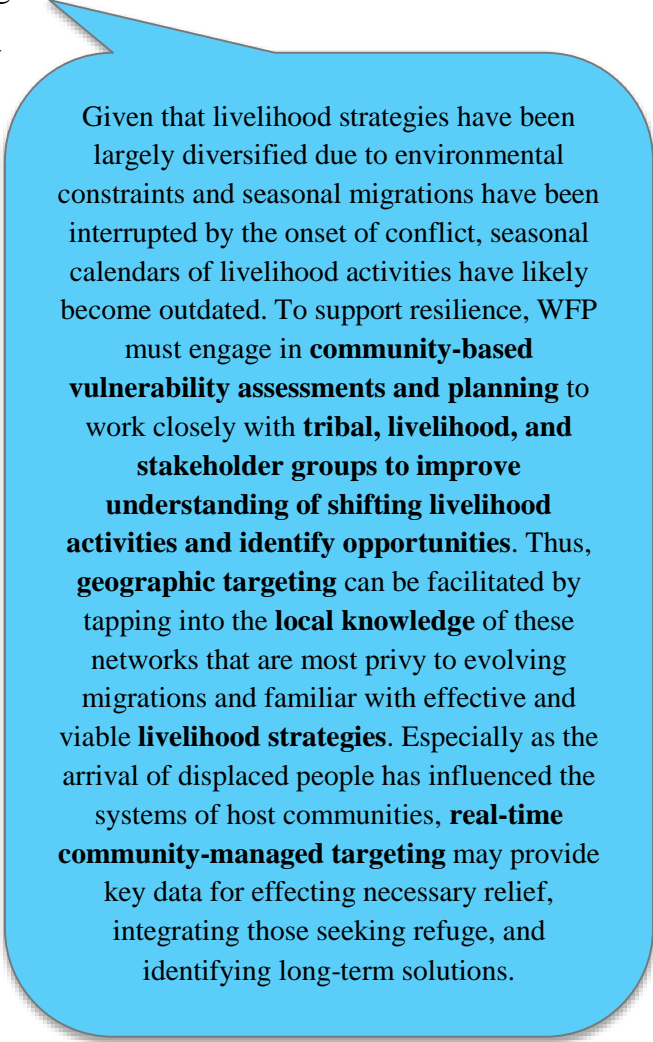
a consequence of the diffusion of specialized agricultural and pastoral production, even in marginal lands.

As droughts and expansion of the Sahel continue, southward migration has increased as people move south to seek fundamental resources for their own survival and that of their livestock. This southward migratory trend, however, has not curbed natural resource degradation due to overexploitation (UNEP GIWA, 2004). The basin's drainage systems have offered central refuge while also being victimized by degradation.

Conflict-affected resilience and social cohesion

Resilience, or the capacity to employ coping strategies to deal with shocks, is typically developed via family and community ties throughout the Basin. Traditionally common amongst members of same ethnic and village groups, social cohesion can also be developed through livelihood activities. Field studies from the 1980s describe temporary fishing camps as unifying amorphous groups of highly mobile fishermen of different ethnicities and levels of experience in the basin. They engage in no group activities, but stick to small fishing groups of up to 8 or 10 cooperating friends (van der Meeren, 1980). Another source of resilience building can be from civil society organizing, and sharing of local knowledge. Intense regional demographic changes, arising largely from rising population growth and increased rural migration, have led to diminishing viability and breakdown of social cohesion.

Urban migration, however, and episodes of political and conflict-related displacement draw people away from their original networks of resilience. Whether dealing with young people moving to bigger towns and cities, or refugees being physically displaced, migrations often mean people miss out on local-level networking, opportunities for entrepreneurship, or other fundamental survival



Given that livelihood strategies have been largely diversified due to environmental constraints and seasonal migrations have been interrupted by the onset of conflict, seasonal calendars of livelihood activities have likely become outdated. To support resilience, WFP must engage in **community-based vulnerability assessments and planning** to work closely with **tribal, livelihood, and stakeholder groups to improve understanding of shifting livelihood activities and identify opportunities**. Thus, **geographic targeting** can be facilitated by tapping into the **local knowledge** of these networks that are most privy to evolving migrations and familiar with effective and viable **livelihood strategies**. Especially as the arrival of displaced people has influenced the systems of host communities, **real-time community-managed targeting** may provide key data for effecting necessary relief, integrating those seeking refuge, and identifying long-term solutions.

strategies. At the same time, mobility is characteristic of many groups within the Basin's population. Interestingly, UNHCR and OCHA report a notably low incidence of conflicts between refugees/IDPs and their host communities. This may reflect resilience from relatively strong regional culture of adaptation to environmental crisis, hence social cohesion, which has developed under previous shocks, has been fomented amidst the threat of violence.

Within the crisis due to the onset of civil conflict, traditional leaders have been displaced. State authorities are either completely removed from their duties of providing social order or appear as predatory. Migration and border conflicts such as those between displaced Nigerians and Cameroonians in Darak, mark some of the injustices exacerbating the already dire food security and human development situation.

Regional gender issues: gender-based vulnerabilities and coping strategies prior to conflict

Gender-based vulnerabilities, such as gaps in access to resources and services, often define power relationships between men and women throughout West and Central Africa. According to the 2015 High Level Panel of Experts' report *Water for Food Security and Nutrition* problems of water scarcity tend to disproportionately affect poor and marginalized women, men and children, due to existing power imbalances, skewed access to resources, structural discrimination and gender inequalities. Furthermore, "[g]ender and other markers of identities continue to mould water allocation and access among users" (HLPE, 2015). Hence, the Lake Chad Basin's development crises, related to mismanagement of the Lake and its resources, exacerbate inequalities and issues of access associated with pre-existing gender-based vulnerabilities.

Looking at community-level gender issues, it is important to note the significant gender gaps between literacy of women and men, reflecting discrepancies in school enrollment for girls and boys at national and regional levels. As a result, young girls are disadvantaged from lower access to education, making them more likely to be involved in early marriages and pregnancies. These trends are reflected by the region's highest fertility in the world³⁰. Per customary practices of many tribal and ethnic groups, especially in rural areas, dowries or bride prices must be paid in order to marry. Given extreme poverty, notably in remote villages, young men can be pushed to criminal activities to obtain money required for marriage.

³⁰ Niger's total fertility rate is the highest in the world, with an average of 7.57 children born per woman (World Bank, 2012).

With the obligation and objective to sustain family units, which are people's typical source of resilience to environmental variability and other natural shocks throughout the Sahel region, women can become complicit in or victims of crime out of survival needs. Conversely, many men and women leave rural areas, which are usually deprived of basic health and education services, in the hopes of finding job opportunities in nearby towns and cities. Despite significant costs to migrate, many young people look for employment in urban centers in order to send money back to family, whether legally or illegally.

Another drastic coping strategy employed especially for young, uneducated, and poor mothers who are unable to feed their dependents, is to send children away to Koranic schools. Entrusting their child into the protective care of the religious education system, it is the mother's hope to offer a chance of survival at the cost of family separation.

Gender-specific impacts of the civil conflict

Within the current humanitarian crisis' interface of conflict and environmental disasters from drought and desertification, women are disproportionately more vulnerable than men. Experience shows that women, particularly female-heads of household, are often most vulnerable when an emergency occurs, due to disproportionately lower social and economic status, among other factors (WFP & FAO, 2005). In addition to ongoing power imbalances between women and men throughout the region, the onset of civil conflict and displacements has widened regional gender gaps. In particular, it has exposed women and girls of the Lake Chad Basin, especially those who are refugees, to all forms of Sexual and Gender-Based Violence (SGBV) including rape or other forms of physical abuse, child marriage, survival sex, sexual exploitation and HIV transmission (UNHCR, 2015).

Considering food security impacts, it has been shown that SGBV, of which discrimination is a primary form, impacts women and girls by preventing them from engaging in their own right to adequate food and from acting on behalf of their families and communities to the full extent of their capabilities (FIAN, 2013). Furthermore, according to UNFPA, one in five women of childbearing age is likely to be pregnant in crisis situations. Without access to reproductive health services, these women face an increased risk of life-threatening complications. Many women also lose access to family planning, exposing them to unwanted pregnancies in perilous conditions³¹.

³¹ Refer to UNFPA Humanitarian emergencies brief available at:
<http://www.unfpa.org/emergencies#sthash.0WrncxGQ.dpuf>

Beyond the physical repercussions of gender-based violence, psychosocial effects persist and extend beyond those victimized.

A prominence of female-headed households is often linked to civil and armed conflicts where there are often high male mortality and out-migration rates (WFP & FAO, 2005). As a result of the stigmas associated with sexual violence and due to their changing roles within communities, female-heads of households, particularly war widows and single moms are often outcast from their social units. Particularly in rural areas, they can become stigmatized as many husbands and families do not welcome them back into their communities. Rejected by family and communities alike, victimized women and girls are even further exposed to vulnerability when forced to cope individually.

Considering how gender has factored into the impacts of conflict Boko Haram's variety of indiscriminate violence has increasingly focused on gender issues, as their terrorist tactics have targeted school-age girls and women, sometimes making them instruments of violence against co-education systems.

How do regional gender-based vulnerabilities relate to WFP Emergency programming?

Overall, analysis of gender-based vulnerabilities, such as gaps in access to education, could present a critical entry-point for more effective and coherent programming at the interface of disaster and conflict crises. Gender analysis helps design targeted responses to address specific community needs within the humanitarian response, and beyond. For initial response, employing the WFP tool *Rapid Gender & Age Analysis in Emergencies* can help identify key vulnerabilities and specific protection needs of women, men, girls and boys.

In particular, the high incidence of gender-based violence factors into the effects of the current crisis as pre-existing vulnerabilities and gender gaps have been exacerbated. It is feasible that food assistance and other interventions, if unmanaged, could increase vulnerability to GBV post-distribution. Hence, protracted programming efforts to bolster the capacity of relevant stakeholders, especially communities, are needed to prevent, reduce and respond to the immediate humanitarian and human development issue. Thus, considering trainings for men and women related to gender equality and protection against violence could be considered in conjunction with food assistance interventions.

Moving beyond immediate relief to long-term development objectives

To improve social protection and achieve human and economic development levels necessary to address chronic regional development crises, the Lake Chad Basin states must diversify their respective rural economies in order to break out of the poverty trap of subsistence agriculture. Hence, diversifying beyond primary activities (agriculture, livestock, fishery) to introduce industrial policies and non-primary activities. As a two-fold benefit, economic diversification would also increase environmental and economic sustainability. First of all, diversification requires an investment in education and training. To achieve this, state governments would benefit from support and advocacy from WFP as well as other humanitarian and development organizations operating regionally.

Key gender-sensitive development opportunity: the case of *Spirulina* for regional food security and women's economic empowerment

Growing naturally in the wadis of the northeastern Basin, *Spirulina* (or Dihé), is a cyanobacteria or micro-algae that has extraordinary nutritional value. Gathered in Chad primarily by Kanembu Haddad or Kanembu Kadjidi women³², Dihé represents an outstanding foodstuff with great nutritional value. Recognized by FAO and WHO as a low-calorie, high-protein, mineral and vitamin food supplement, *Spirulina* has been farmed commercially for some 20 by transnational companies to meet growing international market demand, which stands around 3,000 tonnes annually for food supplements, medicinal and cosmetic uses. However *Spirulina*'s international popularity was not shared by the Basin's dihé, which has continued to be produced and consumed only within the local market of the Lake Chad Basin without any particular increase, either in quantity of production or in commercial value.

³² In *Spirulina under the microscope*, FAO describes women's work related to the harvest of Dihé: "The harvesting of dihé requires skill and expertise, and the technique, which has been passed down from mother to daughter, represents the culmination of years of experience. It is a seasonal activity, taking place at the end of the rains[...].When the rains stop, the pools and wadis that have a crop worth harvesting are identified[...].The women wade into the wadis or pools, their legs and arms bare, and stir up the muddy waters, taking care to eliminate as many impurities as possible, such as leaves, twigs, insects and sometimes animal dung, in the process."

Noteworthy for WFP's local procurement activities and nutrition units, the case of Spirulina reflects the potential of natural resources and traditional subsistence livelihoods in the Basin, which might be harnessed and managed, using proper technical support and small credits. In this case, the potential to enable Kanembu women to form co-operatives and develop regional markets for their dihé (FAO), however, is contingent on the improvement of the security situation to support local value chain development. In fact, most capacity building and livelihood programs, which work to address longer-term development issues, depend on easement of the current humanitarian crisis.

Similar to Spirulina's potential intervention for local supplementation and women's empowerment, and international value chain development, another key agricultural product within the region, Karité or Shea Nut, may present a similar human and economic development opportunity. Given its also produced and traded by women, local Shea Nut production could be an integral source of women's economic empowerment, through the expansion of value chain development to support regional and international trading systems in order to empower female producers, lifting them and their families out of poverty.

Education, gender-specific, and environmental programs for WFP to promote food security

In addition to advocacy for strategic planning and development opportunities, supporting resilience and self-sufficiency through capacity building related to environmental stewardship, represents a key issue to address regionally within WFP's mandate to save lives and support local livelihoods and coping strategies, for a return to self-sufficiency. As demonstrated also by other crises, for example in Darfur, slow onset protracted disasters such as those involving drought and desertification can deepen conflict over resources across large areas when they occur in places where people face high levels of poverty and competition over limited natural resources (UNDP, 2011). Just as in Darfur, increasing demands from steep population growth have eroded the resource-base in the Lake Chad Basin through largely unmanaged intensification of farming, grazing, and fishing. In the context of competition for resources and civil conflict in the Basin, traditional environmental management systems are lacking and cannot be ignored within relief efforts. Hence, sustainable resource management for effective environmental preservation and conservation should be included in comprehensive sustainable livelihoods strategies to support long-term food security and nutrition in Lake Chad Basin.

Environmental stewardship and conservation efforts in the Basin can focus specifically on improving water quality and quantity, which is insensible for health and sanitation, livelihoods, and food security. For effective sustainable resource management, stakeholders must be actively engaged to restore and conserve bio-resources, preserve ecosystems and their biodiversity. Approaching crisis interventions with a sustainable research management framework will help ensure that resource depletion doesn't undermine relief efforts. Further than the current humanitarian crisis, strengthening participation and building capacity of stakeholders through transparent institutional and legal frameworks for environmental stewardship represents an integral aspect of promoting food security through vital principles of sustainability.

By way of adapting existing WFP food security interventions, while addressing the dearth in access to national educational systems, School-Feeding Programs may present crucial opportunities for relief and development within the Basin region. Especially given the hundreds of thousands of Nigerian refugee children forced to drop out of school out by insurgent groups, and those who have never received any formal education to start with in Nigeria (UNHCR, 2015), focusing on stabilizing education through school-feeding programs may present key opportunities to address immediate needs while sustaining development objectives. Furthermore, this strategy might be applied more thoroughly within the Basin's vulnerable regions, focusing on refugee camps and host communities during the crisis, even following the immediate crisis, in pursuit of long term development goals for human development within neglected areas of respective countries.

Further questions to be addressed in the LCB humanitarian response and strategic planning:

- *How will WFP programming be adapted to address underlying vulnerabilities of entrenched development problems, while also focusing on emergency relief?*
- *In what ways can WFP positively affect markets within the fragmented informal trading system during the crisis and beyond?*
- *What will happen after Boko Haram, which serves as a pseudo-governing power due to absence of capable state, disperses? How will WFP operations help fill the vacuum?*
- *How do WFP operations affect systemic causes of the food and development issues in the long term?*
- *How might WFP's school-feeding programs fit within the regional context of high-mobility and insecurity within the Basin?*

Conclusions

Whether it will continue to dry up or not, the future of Lake Chad is unclear and the security situation remains unstable with the protraction of civil conflict. At the interface of environmental disaster and violence, the perpetual sense of crisis and urgency in the Basin demands clarity regarding the unique factors complicating the humanitarian situation at hand. Systemic neglect of human development as well as environmental injustice have severely catalyzed competition over the region's limited natural resources among population groups, leading to the current crisis of civil conflict within the Basin. In order to effectively address the underlying problems of the protracted humanitarian crisis in the Basin, regional stakeholders must be mobilized to break the cycle of poverty and violence, which is central to peace building and the identification of sustainable development solutions.

While crucial to treat immediate hunger and strife within the region, the Band-Aid emergency relief neglects to address development problems underpinning the protracted humanitarian crisis in the Lake Chad Basin. In addition to immediate food assistance, long-term strategies must be developed to deal with the underlying issues. Given the importance of water-resources and associated productive activities, the shrinking of Lake Chad represents a critical concern for both local and regional livelihoods, food security and survival, as well as international politics. The Lake's central role for people's livelihoods and regional food security means environmental health of the Lake must be prioritized as a strategy to support the self-sufficiency and reduce underlying vulnerabilities of people. Natural resource management issues, which stem from environmental challenges of climate change, desertification and demographic pressures, are crucial for livelihoods and regional food security. Hence, addressing environmental issues is an unavoidable. Integrating resource management into the relief effort will promote more effective response by improving resilience and increasing self-reliance.

The serious lack of central public services and infrastructures within the Lake Chad Basin reflect systemic national development problems, which limit opportunities for human development and perpetuate underlying vulnerabilities to shocks. Given the serious educational needs throughout the basin, School-Feeding Programs could present an integral WFP intervention to support long-term human development objectives in order to break the cycle of poverty while also supporting the nutrition of young children. Depending on improvements in the security situation, this intervention may also be suited to address immediate needs.

Recommendations for WFP programming in the LCB region:

1. To support effective emergency response and resilience, WFP must engage in community-based vulnerability assessments and planning to work closely with various ethnic, tribal, livelihood, and stakeholder groups to improve understanding of shifting livelihood activities and identify opportunities for sustainable resource management. Thus, geographic targeting can be facilitated by tapping into the local knowledge of these networks that are most privy to evolving migrations and familiar with effective and viable livelihood strategies.

Given that livelihood strategies have been largely diversified due to environmental constraints (greater variability and intensified degradation) and subsequently interrupted by the onset of conflict, updating livelihood profile baselines is needed in light of the protracted crisis. Especially as the arrival of displaced persons has influenced the local systems of host communities, real-time community-managed targeting may provide key data for effecting necessary relief, integrating those seeking refuge, and identifying cooperative long-term solutions at the regional level.

2. Further to updated baselines, integrating environmental management, gender-sensitive programming, and advocacy for national development priorities (namely investments in education and health) into WFP's crisis response and strategic objectives is key to support sustainable livelihoods for improved food and nutrition security.

To satisfy immediate food needs and long-term development opportunities, explore alternative food sources, such as Spirulina (locally known as *dihé*), a high protein alternative to fish production, which is widely available on the lake and offers. Through appropriate community-based participatory research, partner with FAO to research and revitalize 'kreb' food production system among pastoralists.

Given the incidence of gender-based violence within the crisis, explore regional gender issues as critical entry-point for more effective and coherent programming in the interface of crises of human development, environmental disaster, and conflict. To this end, enhance gender-analysis within vulnerability assessments, exploring regional gender issues as opportunity to design targeted responses to address community needs, especially considering the prevention of GBV and improvement of women's education and capacity for improved family nutrition.

Rather than prolonging emergency response to the protracted crisis, consider Sustainable Resource Management to improve programming for strategic priorities for sustainable food and

nutrition security. Considering the importance of cooperative regional environmental management issues as a significant source of underlying vulnerability, support the implementation of the The Lake Chad Basin Commission's recent *Lake Chad Development and Climate Resilience Action Plan* (LCDAP)³³ released November 2015. Pursue accurate understanding of regional realities to build a shared long-term vision and strategy to face the lake's sustainable development challenges.

3. Increased support to civil society organizations in Nigeria, Chad, Cameroon, Niger, and Central African Republic is needed to promote transparency, accountability, land rights and redistribution, food sovereignty, and respect for human rights in the conduct of government institutions. By systematically cultivating participatory research within vulnerability analysis and targeting methodology, WFP can help include the fishermen, pastoralists, and small farmers who are continually working to feed the region. It is by listening to their demands, which have been ignored by policymakers, and integrating their local knowledge of the current crisis that WFP can identify strategies for inclusive and effective interventions, and long-term solutions.

Together with other food-focused development organizations such as IFAD and FAO who aim to support capacity building, WFP should integrate regional stakeholders into the search for long-term solutions to food security issues, through community-based participatory research. Pursue joint programming on seasonal livelihood strategies, facilitate stakeholder discussions using for multi-sectorial planning at various provincial and municipal levels.

Regional market assessments and vulnerability analysis should examine how tribal groups' local knowledge might be harnessed to better understand mobility and regional market systems, as well as to mobilize food security and nutrition interventions to foment longer-term solutions. Consider addressing the following questions to promote community-managed targeting throughout the affected Basin region:

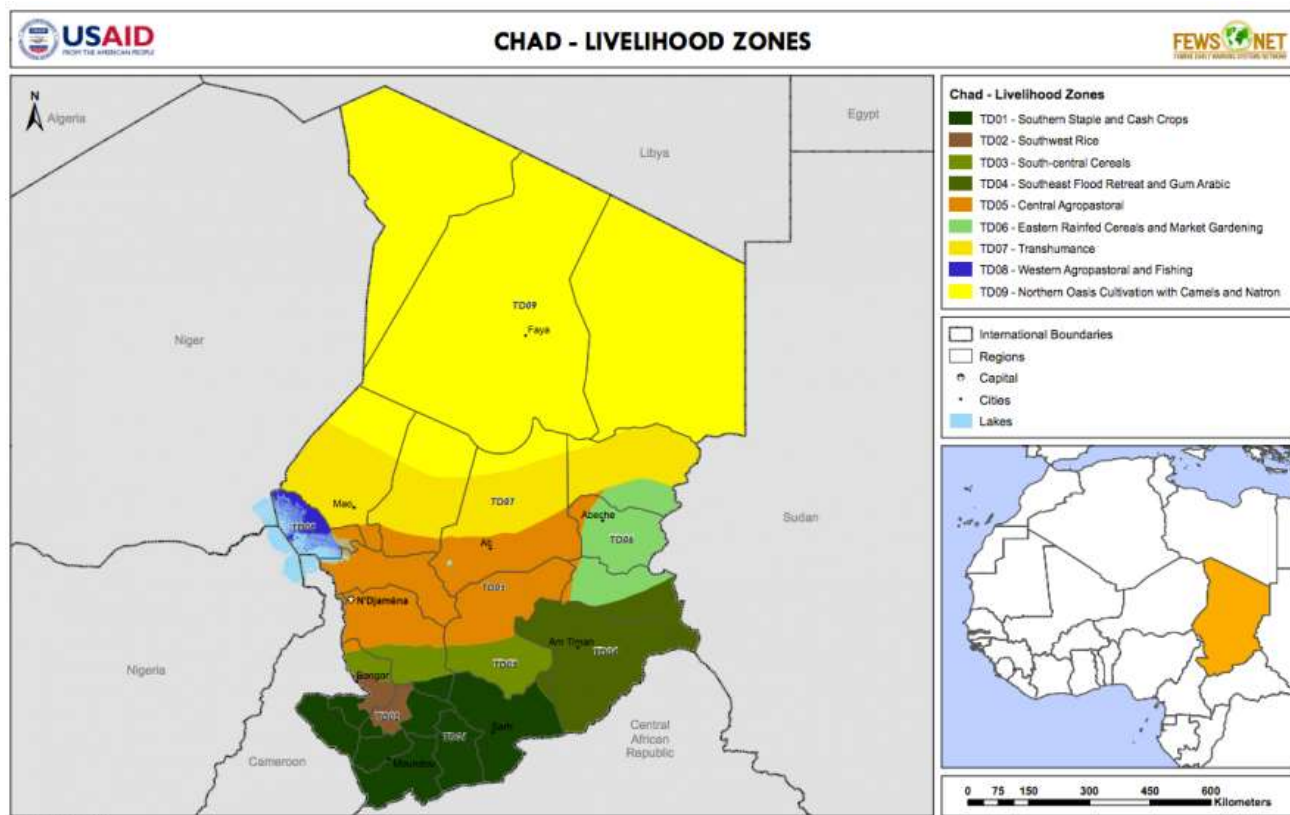
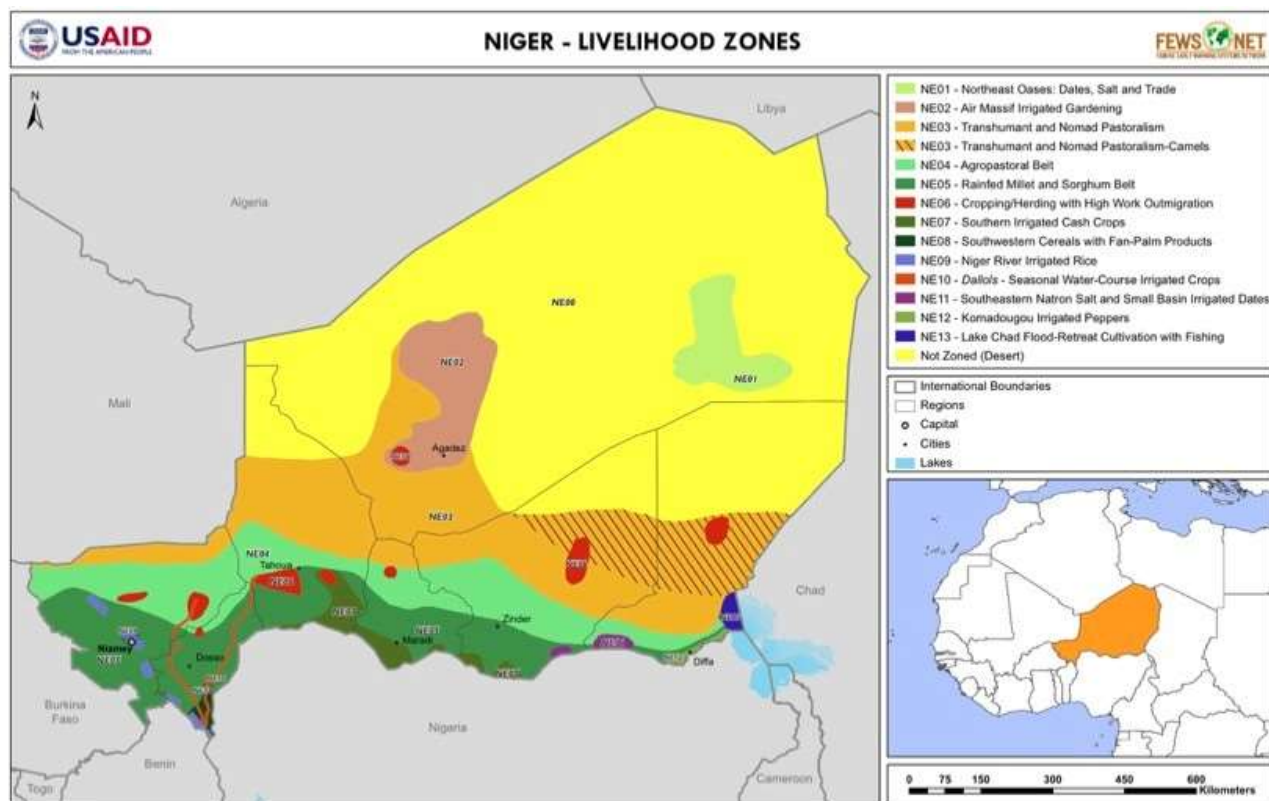
- *In what ways can WFP empower producers and consumers to positively affect markets within the fragmented informal trading system?*
- *How do WFP operations affect systemic causes of the food and development crisis following the civil conflict?*

³³ The Lake Chad Development and Climate Resilience Action Plan (LCDAP) includes 7 priority themes: Supporting producers and their value chains (13%); Securing access to natural resources and managing conflicts (8%); Improving living conditions through public investments (27%); Facilitating Transport and Trade (38%); Preserving the environmental capital of the Lake and its basin (4%); Better managing the water resources of the basin (5%); Disseminating information, improving knowledge, and monitoring of the environment (5%).

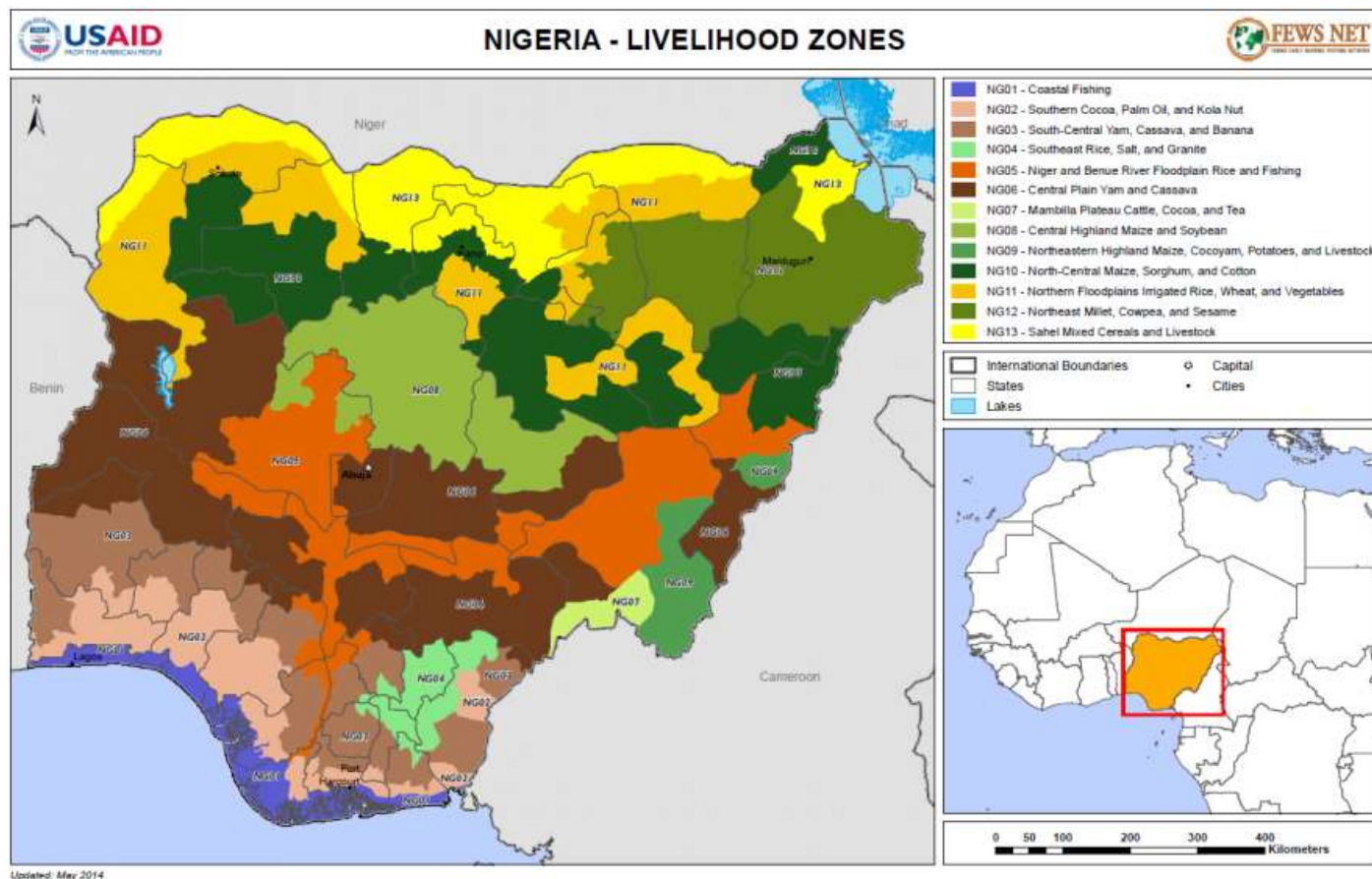
- How might WFP's school-feeding programs fit within the context of high-mobility and insecurity within the region?

4. WFP should assess the viability of scaling up School-Feeding Programs to improve short term and long-term responses in the Lake Chad Basin region. Depending on participatory vulnerability analyses and the security situation, School-Feeding Programs could provide a key intervention to boost educational, nutrition, local networks, and food security within humanitarian response, considering program's importance for regional human development within LCB region following current crisis.

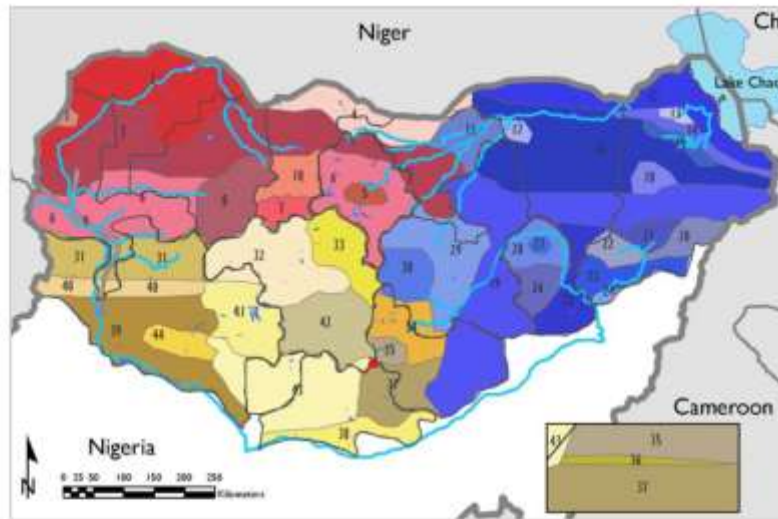
Annex 1: 2011 FEWS NET Livelihood Zones in Niger and Chad



Annex 2: 2014 FEWS NET Livelihood Zones in Nigeria



FEWS NET 2004 Preliminary Livelihoods Zoning: Northern Nigeria



PRELIMINARY LIVELIHOODS ZONING: NORTHERN NIGERIA

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