A MODIFIED EMERGENCY MARKET MAPPING ANALYSIS (EMMA) AND PROTECTION ANALYSIS

Smoked fish and dried red pepper income market systems
Diffa Region, Eastern Niger

Full report, December 2016

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AUTHORS AND ACKNOWLEDGEMENTS

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LIST OF ACRONYMS

GAM Global Acute Manutrition
IDP Internally displaced person
IPC Integrated Food Security Phase Classification
EMMA Emergency Market Mapping and Analysis
AEC Alternatives Espaces Citoyens
EFSVL Emergency Food Security and Vulnerable Livelihoods
FCFA (XOF) Franc Communauté Financière Africaine
GBV Gender based violence
PRODEBALT Programme de Développement Durable du Lac Tchad
SGBV Sexual gender based violence
WASH Water, sanitation and hygiene promotion

Front cover picture: Internally displaced woman, N’Goui Koura village, Diffa Region. Photo: Corrie Sissons/Oxfam
# A Modified Emergency Market Mapping Analysis (EMMA) and Protection Analysis

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SECTION 1: CONTEXT

Almost seven years of violent conflict involving Boko Haram and military operations to counter them has led to a devastating humanitarian crisis in the Lake Chad Basin Region of West Africa. Originating in North East Nigeria, the conflict has now spread across borders into Niger, Chad and Cameroon. Since the conflict began, over 20,000 people have been killed, Boko Haram has kidnapped ten thousand boys in the past years,\(^1\) and an estimated 2000 women and girls have been abducted. Large numbers of men and boys have also been arrested and detained by security forces. There have been alarming levels of sexual violence, human rights abuses committed by all sides, and forced recruitment, even of young children. The people in the Lake Chad Basin region are some of the poorest in the world and, even under normal circumstances, suffer from high levels of hunger and malnutrition. The spreading of the conflict into neighbouring countries over the last two years has led to mass forced displacements and population movements, uprooting people from their homes, and cutting people off from their livelihoods and sources of income, exacerbating an already dire situation. Across the region the Boko Haram conflict and the military operations to counter them have forced more than 2.6 million people to flee their homes and abandon farms and farmland. In some conflict-affected areas in the region, particularly Borno in Nigeria, this is the third year without a harvest and food prices are soaring in the markets. Insecurity is also preventing people from engaging in key livelihood activities and has disrupted cross-border trade.

MAP 1 LAKE CHAD BASIN REGION, NOVEMBER 2016

In the Diffa region, in the easternmost corner of Niger, bordering Nigeria and Chad, an estimated 250,000\(^2\) people are living in vast spontaneous settlements and some small camps, many having fled their homes and abandoned everything, including their farmland. Given that the normal population in the Diffa region is around 489,531 people (2011 census),\(^3\) the arrival of IDPs and refugees is causing an enormous strain on already scarce resources. The region is currently at Integrated Food Security Phase Classification (IPC) phase 3 (crisis), projected until at least January 2017, adding to chronic seasonal food insecurity with malnutrition levels which regularly exceed the 15 percent Global Acute Malnutrition (GAM) emergency threshold.
The Diffa region is characterized by five separate livelihood zones (see Map 2), including an agro-pastoralist belt; transhumant and nomad pastoralism; Lake Chad flood retreat cultivation and fishing; Koumadougou irrigated peppers; and rain-fed millet and sorghum. People tend to make a livelihood from a mixture of sources, with most people keeping some small animals and farming some small plots of land – the wealthier in each livelihood zone having more land and small animals than the poorest. Those depending on the Koumadougou pepper and Lake Chad fishing zones are some of the poorest. They are dependent on small pepper farming, daily labour from pepper production and fishing in Lake Chad and the Koumadougou River, mostly accessing foods via markets rather than their own production.

Livelihoods in the Diffa region have been affected in the past two years by erratic rains leading to low harvests and pastures, plus poor availability of water as well as seasonal flooding and crop diseases. However this has been exacerbated by the Boko Haram conflict and military operations to counter them in neighbouring Nigeria, and decreased safe access to productive areas. In response to the Boko Haram conflict, the Government of Niger has declared a state of emergency in the region, leading to restrictions and limitations on specific activities based on the perception that they are directly or indirectly supporting Boko Haram. The vast majority of the economy in the Diffa region has been historically reliant on trade with Nigeria, as for decades the closest large town to Diffa town has been Maiduguri in Borno state, rather than the Nigerien capital Niamey 1300km away. Some of the main exports have been smoked fish from Lake Chad and dried red pepper, most of which end up in Nigerian markets, while the majority of food in Diffa’s markets comes from across the border in Borno state. The fact that the state of emergency measures include restrictions on cross-border trade and limitations on these markets in particular is of serious concern for the survival and livelihoods of conflict-affected populations.

In addition, Boko Haram has caused widespread distress and fear among the population, with Oxfam assessments revealing 18 percent of those interviewed reported having been directly affected by the Boko Haram violence, with the vast majority continuing to fear reprisals. Ongoing displacements and the continuing state of emergency have further led to many other protection concerns for the affected population in the Diffa region. Livelihoods disruption, combined with a chronic lack of opportunity in the informal settlements that the majority of displaced populations live in, are fuelling and perpetuating risky coping strategies among the most vulnerable. People previously involved in key livelihood activities in the region, such as fishing or harvesting cash crops like were fearful that continuing to engage in these would expose them to increased risks. More than half of those interviewed cited further engaging in new, riskier coping strategies to earn money such as firewood collection or sex in exchange for food or money.
SECTION 2. METHODOLOGY

The EMMA (Emergency Market Mapping Analysis) methodology is an approach used by humanitarian practitioners to assess market systems in emergency contexts. It seeks to map and analyse key market systems to help agencies to design and implement emergency responses based on an understanding and use of local market systems in disaster affected areas. EMMA is an iterative process of ten steps, from preliminary analysis to communication of results, including key analytical steps: market mapping, gap analysis, market analysis and response analysis. It is underpinned by the ‘do no harm’ principle and therefore the EMMA process can assist agencies to meet humanitarian needs in a way which does not undermine or damage existing market systems and hinder economic recovery. The EMMA tool has been used in a variety of post and pre-crisis emergency contexts to address survival needs, livelihoods protection concerns and the transition to economic recovery.

2.1 Objectives of the study

As part of its emergency response in Niger’s Diffa region, Oxfam in Niger was interested in analysing the effect of the Boko Haram conflict and military operations to counter them on critical livelihood activities of affected populations in particular. Oxfam teams were also keen to understand the new livelihood strategies people were engaging in, and how the ability to earn income may have put men, women, girls and boys at new or increased risk as a result of the ongoing conflict in the region. Undertaking an EMMA analysis would allow teams to analyse the past and current functionality of critical markets in the Diffa region for providing income to affected communities, and a protection assessment could help outline the new threats, risks and vulnerabilities the current, ongoing crisis situation is creating, for those who previously or continue to engage in such critical markets.

Therefore it was decided to use the EMMA methodology and combine elements of a protection risk analysis within the different steps in order to simultaneously capture aspects of the situation in Diffa and offer a view of how vulnerable populations accessed/are accessing income and the associated risks. The broad aim of modifying the EMMA approach to include aspects of protection risk analysis was to offer clear integrated, evidence-based response options and recommendations for Oxfam and other agencies, as well as the Nigerien government. These recommendations should inform and advocate for direct programming (such as in-kind/cash/voucher assistance), indirect market support activities (such as grants to traders) and advocacy/policy recommendations in the Diffa response. They should foster positive and safe livelihoods and alternatives to any practices which may be putting already vulnerable communities at increased risk. In addition, they should also offer recommendation on how to reduce protection risks linked to current livelihood strategies of affected populations.

The specific objectives of this study were as follows:

1. To identify, through a market mapping exercise including protection elements, responses to meet emergency and early livelihood recovery needs in a safe manner and enhance protection in the Diffa region.

2. To test an integrated Emergency Food Security and Vulnerable Livelihoods (EFSVL) and Protection approach to analysing market disruption and its impact on livelihoods in protection of the affected population.

3. To provide an evidence base to feed into Oxfam’s broader Lake Chad Basin response strategy including EFSVL, protection, WASH (Water, Sanitation and Hygiene), gender and policy/advocacy elements.

4. To strengthen the market analysis capacity of Oxfam Niger national staff and reinforce protection integration in all sectors.
2.2. Modifying the EMMA to include protection elements

The standard EMMA process comprises 10 steps. This EMMA was modified in the following way at each step to include elements of protection risk analysis:

<table>
<thead>
<tr>
<th>Step</th>
<th>Standard EMMA Methodology</th>
<th>Modified EMMA to include protection elements</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Essential preparation</td>
<td>Do background research and in-country briefings; consult on the agency mandate, terms of reference and practicalities; identify target population and their priority needs.</td>
<td>Includes background research on the protection risks related to livelihood disruption.</td>
</tr>
<tr>
<td>2. Select markets</td>
<td>Select the most critical market systems for EMMA to study, using various specific criteria; then identify the key analytical questions that will guide the investigation of each system.</td>
<td>Focuses on markets which are of concern from a protection perspective, including key analytical questions which look at key risks and vulnerabilities.</td>
</tr>
<tr>
<td>3. Preliminary analysis</td>
<td>Draft initial provisional household profiles, seasonal calendars, baseline and emergency-affected maps of the market system; and identify key informants and useful leads for fieldwork.</td>
<td>Includes initial power and protection risk analysis, including a mapping of risks and vulnerabilities.</td>
</tr>
<tr>
<td>4. Fieldwork preparation</td>
<td>Agree and set the fieldwork agenda; devise the questionnaires, interview plans and information-recording formats needed for EMMA interviews and other fieldwork.</td>
<td>Ensures questionnaires include questions pertaining to protection risks and vulnerabilities pre- and post-crisis.</td>
</tr>
<tr>
<td>5. Fieldwork activities</td>
<td>Conduct fieldwork activities: interviews and other information gathering; this section includes guidance on interview methods and tips relating to different categories of informant.</td>
<td>Includes a focus on protection.</td>
</tr>
<tr>
<td>6. Mapping the market</td>
<td>Produce final versions of baseline and emergency market maps, as well as seasonal calendars and household profiles that describe the situation, and will inform the three analytical steps that follow.</td>
<td>Identification of key protection risks/threats to target populations on each market map. Final version of risk analysis included.</td>
</tr>
<tr>
<td>7. Gap analysis</td>
<td>Finalize the gap analysis strand: use household profiles, information on priority needs, shortfalls and access constraints in order to finally estimate the total gap which needs to be addressed.</td>
<td>Ensure exposure to risks and vulnerabilities are taken into consideration at this stage.</td>
</tr>
<tr>
<td>8. Market analysis</td>
<td>Complete the market analysis strand: use market maps and data to analyse availability, conduct, performance and thus estimate the capacity of the market system to meet the gap.</td>
<td>Includes analysis of the specific risks and vulnerabilities in the current market system for target populations and risk reduction approach.</td>
</tr>
<tr>
<td>9. Response analysis</td>
<td>Finish the response analysis strand: make reasoned recommendations, based on the market system logic, feasibility, timing and risks of different options, including cash, in-kind relief or other market support.</td>
<td>Adds a dimension of protection analysis for each response option, and considers protection targeted actions/risk reduction measures, in order to ensure recommendations that do not harm and reduce risks to affected populations.</td>
</tr>
<tr>
<td>10. Communicate results</td>
<td>Consult with colleagues, and communicate EMMA’s results to wider audiences (donors, agencies) using concise briefings and eye-catching, map-based presentations and reports.</td>
<td>No change.</td>
</tr>
</tbody>
</table>
Oxfam in Niger facilitated a three-day EMMA and protection training in Niamey, led by the EFSVL and Protection Advisors for Oxfam’s Diffa response. The training finished with teams working on Steps 2, 3 and 4 of the EMMA process, namely finalizing the selection of critical markets, doing initial market mapping and analysis of the markets, power and protection risks, as well as field preparation.

Each critical market had a team of three people mapping and analysing it, led by a team leader and supported by Niamey-based advisors. Oxfam’s country EFSVL Coordinator supported as a focal point for both markets. It should be noted that due to security restrictions in the Diffa region, this modified EMMA ended up being more ‘rapid’ than initially planned and was remotely managed by the EFSVL and Protection Advisors from Niamey, who were only able to make one three-day visit during the six-day data collection period due to security and travel limitations. Teams were unable to physically travel to some locations such as N’Guigmi and Bosso due to distances and insecurity, and made use of telephone interviews when they could not physically meet people. Furthermore, the need to travel in convoy outside of Diffa town meant fewer geographical sites were covered than was originally planned. However, teams still managed to undertake 63 interviews across 11 locations (See Map 3), speaking with a variety of market actors and key informants across both market chains.

Data from this modified EMMA has been triangulated with a wealth of secondary data available (see Annex 1) as well as Oxfam’s own ongoing multi-sectoral (EFSVL, WASH, protection and pender) and market assessments in the Diffa region. This includes a household survey, market survey and associated focus groups and key informant interviews, which covered 415 households, 118 traders and 16 village level focus groups with male and female participants who took part in either fishing or pepper production before February 2015.

Dried red pepper in sacks in Diffa central market. Photo: Corrie Sissons/Oxfam
SECTION 3. SCOPE OF THE ASSESSMENT

3.1. Baseline and crisis scenarios

Baseline
Due to the ongoing nature of the Boko Haram conflict, coupled with numerous other seasonal and economic shocks, there were multiple points that could have been used as a ‘baseline’ to measure how the chosen markets behaved in ‘normal times’. Given that the focus of this study is the effect of the Boko Haram conflict and military operations to counter them on income markets in the Diffa region, a reference situation was chosen of February 2015 for both markets in question. This was considered to be the last time the markets were close to ‘normal’, just before the declaration of the state of emergency in the Diffa region on 11 February 2015 and the spike in Boko Haram attacks and displacements which followed. Only a few hundred Nigerians were considered to be refugees at this time,7 with figures of internally displaced persons (IDPs) minimal. Yet, since February 2015 more than 116 security incidents have been recorded in the Diffa region, leading to the displacement of upwards of 250,000 people by October 2016.8

Crisis
This study takes into consideration that there are presently a myriad of factors and ongoing recurrent shocks which continue to affect the population in the Diffa region. These include the devaluation of the Nigerian naira and seasonal food insecurity and flooding. However, the Boko Haram conflict, military operations to counter them and recent population movements were deemed the most critical factors at present in terms of income market disruption and protection issues. The Government of Niger declared a state of emergency on 11 February for the entire Diffa region in what it stated was a response to counter Boko Haram. This and its subsequent reinstatement in October has led to an increase in military presence, arrests and detention of men as well as restrictions on movement and trade within the region, access to farmland and restrictions across borders for trade. Many market centres to the east of Diffa have been closed and limitations imposed on certain livelihood activities and the necessary tools and inputs – in particular for fishing on the shores of Lake Chad and for cultivating crops and vegetables in productive zones irrigated by the Koumadougou River, close to the Nigeria border. Oxfam assessments revealed that more than 80 percent of communities were safely accessing markets in the physical sense; however, such restrictions are undoubtedly affecting people’s ability to generate income and thus household purchasing power and financial access. This means households are relying on coping strategies which increase women’s and young girls’ exposure to abuse, extortion and violence including sexual gender based violence (SGBV), and men and boys to violence and extortion from Boko Haram and criminals, as well as arrest and detention by the military. As mentioned above, the Diffa region is characterized by five main livelihood zones. However, the advance of Boko Haram into the south of Diffa along the border with Nigeria and along the shores of Lake Chad as well as the relocation by the military has increasingly disrupted access to two zones in particular: for fishing and for the production of irrigated red peppers. Due to the disruption of income markets as well as the lack of livelihood opportunities and vision for the future, the vulnerable population is now left to choose between a range of risky coping strategies to survive such as clandestine fishing, wood collection in displacement zones, or sex for food/money.
3.2. Geographical scope
The EMMA teams focused on the two livelihood zones of the Koumadougou River area (dried red pepper) and areas bordering Lake Chad (fishing) as well as the market town of Diffa. Due to access constraints, teams were not able to travel as far as N’Guigmi or Bosso but conducted telephone interviews in these instances. The below map shows the geographical scope of interviews conducted for this study.

MAP 2 CONFLICT AFFECTED/LIVELIHOOD ZONE IN DIFFA REGION

MAP 3 GEOGRAPHICAL COVERAGE OF THE MODIFIED EMMA
3.3. Target population: characteristics

### TABLE 1 CHARACTERISTICS OF THE TARGET GROUPS

<table>
<thead>
<tr>
<th>Target group</th>
<th>Number</th>
<th>Locations</th>
<th>Characteristics</th>
</tr>
</thead>
</table>
| IDPs/refugees and host households – small pepper farmers and fishermen | Approx. 65,000 small pepper farmers / sharecroppers (métayers) and 35,000 fishermen | Diffa Region | Small pepper farmers / métayers  
  • Located along Koumadougou River valley  
  • Poor smallholder farmers and sharecroppers  
  • No land / 0.5–3 hectares maximum  
  • More than 50 percent of income comes from pepper  
  • Mostly Kanouri and Boudouma (small farmers) and Kanouri, Boudouma and Peuhl (métayers)  

  | Fishermen |  
  • Located mostly in very south-easternmost tip of Niger and Lake Chad (N’Guigmi / Bosso area) and around the Koumadougou River  
  • Mostly Kanouri and Boudouma (Niger) and Hausa (Nigeria)  
  • Average household size of seven  
  • Poor households tend to be fishermen and sell to better-off households |

N.B. The above figures are based on DREC statistics from October 2016 and income data from populations collected by Oxfam. Official government statistics say around 5000–6000 small pepper farmers (excluding métayers/sharecroppers) and 15,000 fishermen – however HEA data show 306,746 people in these livelihood zones in 2011 and the statistics are deemed to be much lower than the reality.

It should be noted that even though this study specifically analyses the critical markets from the perspective of the most vulnerable, all socio-economic groups have a stake in each market at some stage. The poorest however, based on household economy approach (HEA) data for Niger have the least diverse sources of income so tend to be hardest hit when shocks affect some market systems more than others. Poorer households tended to engage with fishing as opposed to buying/selling in markets and are therefore more vulnerable to shocks for the fishing market, while the HEA baseline reveals 76 percent to be poor and very poor in the Koumadougou irrigated red pepper livelihood zone, highlighting the vulnerability of those whose livelihoods depended on peppers pre-shock.

### FIGURE 1 PERCENT OF POPULATION WHO GAINED INCOME FROM FISH AND PEPPER MARKETS, FEBRUARY 2015

![Figure 1: Percent of population who gained income from fish and pepper markets, February 2015](image-url)
Figure 1 shows data collected from Oxfam assessments in October 2016 among conflict affected populations in the Diffa region. Out of 415 households interviewed, 14 percent had got some income from selling fish before the crisis and 26 percent from the sale of red pepper. HEA Sahel figures from 2014 show that poor and very poor households gained more than 50 percent of their income from the sale of dried red pepper. The Diffa population is chronically poor in normal years, with the average approximate monthly income before the crisis across all conflict-affected households interviewed by Oxfam at 53,000 XOF/92 USD. The average monthly income available to small pepper farmers and fishermen before February 2015 is outlined in Table 2 below. This shows that, split across 12 months the fishing season would provide an average of $331 per month in revenue to fishermen and the pepper harvest $249 for small pepper farmers, so in relation to the general population, the fish and pepper markets provided more than the average amount of income in normal years.

### Table 2 Income for Target Groups before February 2015

<table>
<thead>
<tr>
<th></th>
<th>XOF</th>
<th>USD</th>
<th></th>
<th>XOF</th>
<th>USD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor Fishing Households</td>
<td>135833</td>
<td>233</td>
<td>Poor Pepper Farmers</td>
<td>143750</td>
<td>249</td>
</tr>
<tr>
<td>Average per month</td>
<td></td>
<td></td>
<td>Average per month</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Figure 2 Income Sources in Koumadougou Livelihood Zone, 2014

Figure 2 shows data from HEA Sahel pertaining to revenue sources of households in the Koumadougou livelihood zone before February 2015.
3.4. Seasonal calendar for Diffa Region (normal year)

<table>
<thead>
<tr>
<th>Weather patterns</th>
<th>J</th>
<th>F</th>
<th>M</th>
<th>A</th>
<th>M</th>
<th>J</th>
<th>A</th>
<th>S</th>
<th>O</th>
<th>N</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rainy season</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Light rains, Heavy rains</td>
</tr>
<tr>
<td>Dry season</td>
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<td></td>
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<td></td>
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<td></td>
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<tr>
<td>Lean Season</td>
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<td></td>
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<td></td>
</tr>
</tbody>
</table>

**Cropping: Rain-fed**  
- Millet: Preparation, Planting, Harvest, Sale  
- Sorghum: Preparation, Planting, Harvest, Sale  
- Cowpeas: Preparation, Planting, Harvest, Sale  
- Peanut: Harvest, Sale

**Cropping - Irrigated**  
- Rice: Preparation, planting & upkeep, Sale  
- Peppers: Harvest, Preparation, Weeding and upkeep, Harvest  
- Onions: Weeding and upkeep, Harvest, Preparation  

**Livestock**  
- Animal migration period  
- Normal sale of animals  
- Animal diseases  

**Labour**  
- Daily labour-agricultural  
- Daily labour-irrigated crops  
- Brick making  
- Small trade  
- Craft making  

**Other**  
- Peak fishing  
- Collecting wood  
- Religious festivals

The above seasonal calendar shows the key times of the year for each of the main livelihood activities. This study was conducted in October, peak harvest season for cereals in the region (sorghum and millet) and cowpeas, just before the rice harvest and when animal sales are highest annually. The lean season in this region is normally from July–October.
SECTION 4. MARKET SYSTEMS

4.1. Critical market systems
The purpose of this modified EMMA was to analyse income markets which are critical for supporting the basic needs and livelihoods protection/recovery of vulnerable conflict-affected populations in the Diffa region. The aim was to cover two income market systems through the course of the study. Prior to the start of the study, consultations with members of the relevant clusters and different NGOs in both Diffa and Niamey helped to produce a short list of market systems:

- Smoked fish market
- Dried red peppers
- Rice production (for sale)
- Agricultural inputs (seeds or tools)
- Sale of firewood/charcoal
- Moto taxi trade

During the EMMA training in Niamey, the final decision on which critical markets to analyse was made using a scoring matrix during a participatory session. This decision was based on recommendations from all other humanitarian actors consulted, who said that the smoked fish and dried red pepper markets were those which had been most affected by the ongoing crisis. Smoked fish and red peppers were decided upon because they were feasible to analyse, relevant for the needs of the target population, and within Oxfam’s mandate. In addition, few actors had already intervened in these markets.

4.2. Analytical scope
For both the smoked fish and dried red pepper markets, the key analytical questions chosen were:

1. How have the ongoing Boko Haram conflict and the military operations to counter them affected the market system and exposed the actors involved to protection risks?
2. What strategies are people who relied on these income markets now adopting and what are the associated protection risks?
3. What could be the appropriate and safe response options to support the livelihoods and reduce protection risks of poor households who have lost revenue through the shock to the market system?

NB Both the smoked fish and dried red pepper market operates in the Nigerian naira; however, due to the significant depreciation of the naira between the reference period and current crisis period, the more stable West African CFA franc (FCFA – represented as XOF) has been used to better demonstrate price variations. Exchange rates used for calculations are as follows:

<table>
<thead>
<tr>
<th>Date</th>
<th>Naira – XOF</th>
<th>XOF – Naira</th>
</tr>
</thead>
<tbody>
<tr>
<td>February 2015</td>
<td>3.045784</td>
<td>0.328323</td>
</tr>
<tr>
<td>October 2015</td>
<td>1.877657</td>
<td>0.532652</td>
</tr>
</tbody>
</table>

All prices are also shown in USD at past and present exchange rates.
SECTION 5. THE SMOKED FISH MARKET SYSTEM

Surrounded by fertile inland waterways on its border with Nigeria and Chad, the region of Diffa is one of the Niger’s most fertile fishing areas. Due to stocking and preservation issues in the Sahelian climate, most of the fish that is caught is immediately smoked rather than sold fresh. The smoked fish market plays a major role as a source of income for the Diffa population, especially in the departments of Bosso and N’Guigmi bordering Lake Chad. The consumption rate of productive households is relatively low, meaning that fish is mainly sold for income by fishing households.

While fishing mostly involves poor households, the fish market also benefits other strata of society, including middle-income and better-off households, through large fishing enterprises, smoking, collection, transportation, stocking and selling. All the fishermen interviewed reported earning more than 60 percent of their total average income through fishing and half reported it to be their sole means of income generation. According to different sources, before February 2015, around 15,000 fishermen were involved in this market. However, Oxfam data suggests it could be more, at around 14 percent of the population. In addition, many more seasonal workers from the Diffa region, but also from neighbouring countries, migrate to participate in the fishing trade at various stages of the market chain, thus making it a major income market in the region, with many households relying either directly or indirectly on the fish market for income and food. Men and youths are mostly involved in the fishing, transport and sales to Nigeria, while women and children are mostly engaging with the smoking process and small trading.

The key analytical questions for the smoked fish market system were designed as follows:

1. How has the Boko Haram crisis affected the ability of the smoked fish market in the Diffa region to provide income to the population and has this put the affected population at increased risk?
2. What coping strategies are affected populations involved in this market engaging in now?
3. What are the response options for improving the lives and the protection of the most vulnerable in the smoked fish market?

5.1. Reference market situation

Until February 2015, the smoked fish market in the Diffa region was relatively unaffected by the Boko Haram conflict in neighbouring Nigeria and the military operations to counter them. Boko Haram had control over many areas in Borno State in Nigeria where fish was exported to, thus reducing accessibility and increasing danger for transporters.

However, the ability of populations to earn income through this market had not significantly diminished as a result. According to the fishermen interviewed most of them were forced to pay taxes to Boko Haram on the lake shore but violence against the populations in Niger and displacements had not spread all over the area yet and most of the smoked fish production was still exported to Nigeria (around 80 percent to 90 percent of the Nigerien production). According to the Regional Environmental Directorate in Diffa, 22,612 tonnes of fish were produced in 2014, worth 20 billion XOF ($34.5m), and fish exports contributed to 70 percent of the customs money in Diffa region around this time.
Market chain

The smoked fish market chain started with some small- and large-scale fishermen along the Koumadougou River bank but mostly on the shores of Lake Chad and its numerous islands. Due to the high income-dependency of all the fishing households on this income source, all are considered in this study as the target population. Large-scale fishermen could generate around 80–100 50kg cartons of smoked fish per month, while small-scale ones on average generated around 10–20. Fish was primarily sold once smoked, due to the relative isolation of fishing areas and inability to transport and preserve fish to markets across the hot terrain. Fishermen’s families were involved in the smoking process (children and women) and some fishermen employed daily workers for this one-day process. The sale price for a 50kg carton of smoked fish varied according to the season. The high season, when fish is readily available, is between March and June, while December is considered as the low season (when prices are highest). The type of fish sold also influences the price, as well as the quality of the smoking process. *Clarias* and *bragus bayate* are the most expensive varieties of fish, and according to the data can sell for up to 120,000 XOF ($205) per 50kg box. Low-quality fish, such as ones used for sauce and condiments, on average sold for around 30,000 XOF ($52).

Interviews revealed that on average the sale price of a 50kg carton of fish was worth 47,000 XOF ($82) at this time. Fishermen’s input costs were estimated at approximately at 17 percent of this (including daily labour and taxes), so take-home income was approximately 33,000 XOF ($58) per 50kg box, or 83 percent of the sale price. It is important to note that fishermen also had to pay many informal variable taxes in order to continue their activities without being exposed to hindrances – from traditional authorities to other local groups. These taxes further reduced average take-home income. If we consider that the approximate average number of 50kg boxes sold by a small fishing household in a high month is approximately 14 cartons, the average annual income for a small-scale fishermen is around 1,630,000 XOF ($2,800).
Trade between fishermen and retailers or Nigerien/Nigerian wholesalers happened in two ways: either buyers went directly to the fishermen’s villages/camps in the islands and Lake area, or the fishermen sold their catch through intermediaries at the weekly fish markets (the biggest ones being Doro Léléwa and Libèria in N’Guigmi, and Kiri-Kiri in Bosso). The fishermen used market intermediaries to help them set the sale price according to market fluctuations, who were paid by the fishermen mostly in cash. The wholesalers bought from the fishermen at the village/camp level through intermediaries or collectors. The collectors did not purchase the smoked fish, rather they bought it on behalf of wholesalers. Most wholesalers interviewed reported paying cash or through provision of inputs. Wholesalers stocked the fish in the main fish markets before selling onwards via transporters to traders in Nigeria. All the wholesalers interviewed reported that when selling a smoked fish carton bought for 90,000 XOF ($155) the sale price was on average 140,000 XOF ($240) – already a sale price increase of 64 percent. On average wholesalers bought the equivalent of two loads of 60 cartons each month, which would then be transported mostly to Nigeria.

The small amount of fish sold on the Niger market was either directly sold to the consumer by the fishermen themselves, or through retailers in local markets such as Diffa, Bosso, N’Guigmi and others. There were approximately 3,000 retailers across the region. Fishermen used to use networks of retailers who would come to pick up the fish directly from the village. There was heavy reliance on social capital and networks, with one fisherman interviewed explaining that for more than 10 years he used to work directly with the same retailers.

### Market environment

Fishing in the Diffa region has been based almost solely on natural resources, with very low technical inputs. The presence of fish depends largely on the seasonal flooding of the Koumadougou Valley and Lake Chad basin. Until February 2015, the smoked fish market was functioning quite normally. At that time in Niger, Boko Haram was present but not very active. It levied taxes on fishermen (most of the time perceived as only one of the many informal taxes that fishermen were charged) but did not inhibit cross-border trade or reduce volumes of fish traded, as shown by 2014 figures. Nigerien military were already present along the Koumadougou River and in the Lake area, but no actors interviewed cited them as a main challenge at this time, other than in terms of them also levying occasional taxes.

The fish market was organized by the Ministry for Fisheries in the Government Department for Agriculture. This department was mandated to enforce the law regulating and controlling fishing activities and fish trade in the whole country. According to this law, fishermen needed to buy an annual fishing permit of 10,000 XOF ($17). Much of the functionality of the smoked fish market was informal in nature, e.g. all market actors (fishermen, wholesalers, transporters, etc.) were exposed to high informal and arbitrary taxation by institutional, state and traditional authorities as well as armed actors. Moreover, the market was not highly organized (very few fishing cooperatives, free selling prices etc.). In 2011 a programme from the Lake Chad Basin Commission called Lake Chad Sustainable Development Support Programme (PROSEBALT) was developed. One of their principal activities was with fishing communities; creating new infrastructures, developing fishing cooperatives, providing fishing inputs and giving technical training for fishermen. However, the range of the project was rather limited and it stopped in February 2015. Finally, this market (as mentioned above), functioned in the Nigerian naira.

### Key infrastructure

Each fishing community used specific techniques adapted to the biology of the species sought, and the water environment. The key inputs were hooks, nets and transport mechanisms. The nets and hooks were usually changed every year. To smoke the fish, fishermen and their families used oil, metal sheets and wire fences. However, purchasing such inputs required credit, loans or the borrowing of equipment. Fishermen would then reimburse in kind with cartons of smoked fish during the fishing months. Credits were usually given by wholesalers at a high interest rate, thus ensuring their stocks for the next season. Warehousing was critical as the fish were stocked at village level for up to one month, before being transported to Nigeria or local markets. In addition, the transport network between the Lake and the trading centres in Nigeria was a key component of the entire smoked fish market. At this time, for security reasons transporters were mainly using the road between Diffa and Maiduguri (Nigeria) that passed through

### Table 3: Sale price per 50kg carton, in XOF, February 2015

<table>
<thead>
<tr>
<th>Fishermen</th>
<th>Wholesaler (Nigeria market)</th>
<th>Retailer (local market)</th>
</tr>
</thead>
<tbody>
<tr>
<td>47 000 XOF (82 USD)</td>
<td>140 000 XOF (240 USD)</td>
<td>110 000 XOF (190 USD)</td>
</tr>
<tr>
<td>90 000 XOF (155 USD)</td>
<td>140 000 XOF (240 USD)</td>
<td>110 000 XOF (190 USD)</td>
</tr>
</tbody>
</table>
Borno State, which was about 125km long. Exporting to Nigeria had been mostly by roads through two main routes: from Bosso straight to Baga via the shores, and from Diffa to Maiduguri; however, since 2014 one of the two main export roads to Nigeria (Bosso–Baga) was not used much anymore due to the high presence of Boko Haram in the area (see Map 5). Most of the fish was being moved from Diffa to Maiduguri, thus increasing the journey length but also benefiting the Diffa market, which was now on the verge of becoming a key fish market location. It is worth noting that fish exports did not reduce in 2014. Finally, the smoked fish market relied heavily on the use of daily labour at many different stages of the chain.
Protection risks and vulnerabilities
Before the start of Boko Haram attacks on Nigerien territory in February 2015, the actors involved in the smoked fish market reported feeling less at risk. However they were not trading and working in a risk-free environment. The major issues reported by fishermen, wholesalers and transporters are linked to extortion by diverse actors. More than 70 percent of the fishermen interviewed cited traditional authorities, water and forest agents coming to the fishing villages and asking for extra money. More marginally, they cited Boko Haram and Nigerian security forces. They usually felt obliged to pay due to tradition, fear of violence, arrest or seizing. These practices were in part accepted by the fishing communities. Transporters also mentioned informal taxes and the necessity of adapting to the increased presence and control of Boko Haram over Borno State. This included the need to avoid some routes (e.g. Bosso–Baga–Maiduguri) due to fear of extortion, looting and violence from Boko Haram members and robbers on the road. A minority of small retailers (only reported by women) reported that accessing smoked fish via fishermen and markets along the Koumadougou River and around the Lake was exposing them to risks, including sexual and gender-based violence (SGBV) during the journey through the bush. They used coping strategies to reduce risks such as travelling as groups and using motorbikes.

5.2. The emergency-affected situation
Since February 2015, the smoked fish market in the Diffa region has been significantly affected by the Boko Haram conflict and military operations to counter them. Boko Haram launched several significant attacks in Niger (Diffa and Bosso) around this time, leading to massive population displacements from fishing areas. The group became more active in the region and started to attack the population around the lake more systematically. Subsequently the Nigerien government, as part of its stated aim of responding to Boko Haram, declared the State of Emergency across the entire region on 11 February 2015. This largely affected freedom of movement around the fishing areas, which were evacuated and where controls and military presence became stronger. The Nigeria border was closed and cross-border trade was diverted, extending transport times. However, by far the most critical factor impacting the smoked fish market in Diffa has been the ban on fishing and fish selling. The government declared this ban in the entire region of Diffa, as part of the emergency measures. The government justified this ban because a large part of Boko Haram’s income supposedly came from the fish trade in Nigeria, and especially in the towns and villages under its control. The ban on fishing and selling fish has heavily impacted the fish market, because all related activities are now illegal and expose market actors across the entire chain to very high protection risks. Many have dropped out of the market altogether; however, the most vulnerable continue to fish and put themselves at increased risk, in order to survive.
Market chain

The scale of the market, as well as the structure of the chain, has been considerably affected by the ongoing crisis. Most notably, the majority of actors from fishermen to traders have disappeared completely from the chain. The actors continuing in the small-scale smoked fish trade have been forced to go ‘underground’, and the level of income made by the actors has dropped dramatically. It now represents only a small source of income.

Such is the reduction in volumes that some fishermen are actually not counting in boxes anymore, but in mugs (the measurement only used previously by small retailers). Fishermen who are still active only fish at night on the Koumadougou River side, without boats. The village collection system is not working anymore; fishermen directly transport small quantities of smoked fish to buyers. As fish production is illegal and thus volumes have dramatically dropped, there is no more exportation. Collectors and wholesalers are no longer involved in the fish chain.

Transporters have been affected all along the chain. Few of them are taking the risk to transport fish to Nigeria; the amount transported is very marginal. Most of the small-catch still fished in the region is sold locally to small retailers for local household consumption. According to the fishermen and retailers interviewed, a mug that previously sold for 9,000 XOF ($15.50) from the fisherman to the retailer is now sold for 11,000 XOF ($19) on the local markets. This means a price increase of 22 percent, for a carton that previously sold for 90,000 XOF ($155) and now sells for 110,000 XOF ($190). However as the quantities sold are extremely limited, any actors still involved have seen their income from fish drastically reduced.

The crisis has therefore significantly hindered the capacity of the smoked fish market to provide income for anyone previously involved in the chain. The most affected are those who had no other source of revenue or alternative skills, and those without savings.
Market environment

The Boko Haram conflict has hugely impacted the fish market environment in the Diffa region, drastically limiting production. An immediate effect of the attacks in Niger was an increased military presence in the fishing areas. National and international security forces now patrol in the area, which is considered a military zone. Boko Haram also increased its presence on the Niger side of the Lake and the Koumadougou River, hindering fishermen’s access to fishing zones. Most of the population in this livelihood zone were either evacuated by the military or fled Boko Haram, and are now concentrated around the National 1 (Kabelewa, Ngagam and N’Guigmi) far from the fishing areas. All these obstacles have been reported by all the fishermen interviewed.25 In addition, some fishermen mentioned the increase of petty theft in insecure places as another critical issue. Vehicles and pirogues are not allowed anymore around Lake Chad. In particular, there is a ban on two-wheeled vehicles (motorbikes) previously used around the Koumadougou River under the Emergency Law. A region-wide curfew is also in place.

The total ban on fishing, however, is the key limiting factor in the new crisis market environment. Former and now-clandestine fishermen find themselves far away from the fishing areas and face many security obstacles if they try to access to this livelihood. While external support to fishermen was limited in the past, it is now non-existent. Furthermore, since February 2015 the naira has devalued significantly, to a rate of 0.5327 to the West African Franc in October 2016. This means for example that 1,000 naira, worth 3,046 XOF or $5 in February 2015, is now worth 1,878 XOF or $3 in October 2016. This has decreased purchasing power for poor households, since they are dependent on a market that operates in naira.

Key infrastructure

As the smoked fish market no longer engages daily labourers, these workers are forced to find other ways to generate income. Given the economic downturn, opportunities for work are very limited. Oxfam data shows an increase in people gaining income from daily labour (from eight percent in February 2015 to 17 percent currently). Key inputs needed for fishing are not produced or exported anymore, as fishing and boats are forbidden. So the few fishermen fishing in secret are using their old inputs, which they must repair instead of replace. In any case, these fishermen no longer have enough money to afford new key materials, due to the reduction in their incomes. In addition, access to credit and loans from wholesalers has stopped, as creditors from Nigeria no longer engage in the market, and those in Niger have limited liquidity due to the drop in revenue. Most of the wholesalers interviewed mentioned that they now work as small traders.

Protection risk and vulnerability analysis

The protection situation drastically changed for the population in the Diffa region from February 2015, when Boko Haram extended its reach to Niger and civilians became targets. Civilians now find themselves more exposed to threats. In relation to the protection risks affecting the population previously engaged into the smoked fish market, it is important to distinguish between:

• The protection risks faced by those still involved in the smoked fish market.
• The protection risks faced by those who dropped out of the chain, in engaging with new livelihood and coping strategies.

Fishing households: Fishermen still involved in fishing have all reported that they are now exposed to major new protection risks while engaging in fishing. All explained that since the conflict crossed the border into Niger, they are afraid of Boko Haram attacks on fishing sites. The fear of Boko Haram is high; many people have been victims of attacks on their villages and exposed to indiscriminate violence. Boko Haram are now more systematically using violence against the population of Lake Chad and the Koumadougou River, when they cannot provide them with goods and money.26 All fishermen feared getting caught by the military on their way to the fishing zones, as they could be arrested and detained on terrorism charges for accessing militarized zones for illegal livelihood activities. However, their primary fear is being killed by the military, who could confuse them with Boko Haram. Under the fishing ban, to avoid the military, fishermen now mostly fish at night and avoid military camps. This increases their risk of encountering Boko Haram.
Most fishermen have now stopped fishing due to the high protection risks of this activity. Many former fishermen’s families reported relying on insufficient humanitarian assistance. More than 23 percent of former fishing households interviewed through Oxfam’s multi-sectoral assessment reported now being involved in either illegal or risky activities. The most-cited coping mechanisms exposing households to new protection risks are firewood and straw collection, and the sale and small trade of food. According to the interviewees, firewood and straw collection are increasing tensions between displaced populations and host communities who want to protect their environment against over-exploitation. So to avoid being exposed to violence and conflict with local communities and from controls and potential arrest from forest agents, interviewees reported that they tend to go further into unpopulated zones, exposing themselves to further risks of harassment, violence (including GBV) and extortion from Boko Haram, criminals and the military. Nowadays, girls from former fishermen’s families are engaging in small trade (such as selling doughnuts) to earn a little money. Several fishermen cited this activity as exposing them to SGBV. One group also mentioned that in their community, some girls had resorted to sex work to earn money for the family. Twenty percent of the fishing households interviewed for Oxfam reported resorting to marrying their daughters earlier than they wanted, to reduce pressure over resources. In addition, 15 percent reported that they had to split their families between different locations in order to benefit from more humanitarian assistance, or in order to find work.

Small retailers: Although fish selling has been banned, it seems that retailers in the region are less exposed to repercussions. Indeed, this activity seems tolerated by the authorities. In many marketplaces, fish is still sold in small quantities for local consumption. Retailers mostly expressed being exposed to protection risks while trying to access the zones to meet with the fishermen.

Transporters: All former fish transporters interviewed explained that military checkpoints are now more common in the Diffa region. If fish are found in their vehicles, they risk being arrested and detained on suspicion of involvement with Boko Haram, and their vehicles burned. From June 2015 last year, the authorities seized fish freight, burned cargo and vehicles, and arrested illegal transporters. In April 2016, the regional authorities destroyed 2.7 tonnes of smoked fish. To avoid being exposed to these risks, most of them no longer transport fish and have started new transportation activities. One interviewee also explained that the normalization of violence and poverty, and a lack of opportunity and trust in the future are all potentially fuelling recruitments for Boko Haram and increasing criminality.

5.3 Gap analysis

The main challenge for this market is undoubtedly the huge fall in the number of market actors due to the fishing ban. It is therefore important to note that the following data on gaps only refers to actors currently still engaging in fishing, which is a very small number.

Drop in number of people earning an income from the fish market

According to Oxfam’s multisectoral assessment in five different sites, 93 percent of interviewees who mentioned fishing as a source of income before the crisis have now stopped this activity completely.
### DROP IN PRODUCTION

From an average of 10 fish cartons per month, the fishermen interviewed who continued fishing currently produce on average less than one carton per month. This represents a production loss of 94 percent.

![Figure 5: Drop in Fish Production](image)

### DROP IN FISHING INCOME

The majority of fishermen have completely stopped all fishing activities. The fishermen interviewed used to get an average of 89 percent of their total income from fishing. The few remaining fishermen have seen their income from fishing drop drastically, due to the small quantities that they can now fish. On average, fishermen who were making $1,515 a year before the crisis are now making $420 a year, which represents a 72 percent drop in their yearly revenue. The few last remaining retailers have also seen their income from selling fish drop dramatically. On average, retailers making around $228 per month before the crisis are currently making around $26 per month – a drop of 88 percent in their income from fish.

![Figure 6: Gap in Income](image)

As the fish market has almost entirely stopped, the 2014 value of the market (20bn XOF or $34.5m) has been all but lost to the regional economy. The amount of money being made in this market is now very small and very few people are profiting from it (including the regional institutions). This has huge implications, not only for household revenue and ability to feed and support families, but for the local economy as a whole and the many households who rely directly or indirectly on the smoked fish market.
This drop in income has also affected people’s spending patterns, as revealed by Oxfam assessment data. People now spend much less on education and ‘luxury’ food like meat, and more on healthcare and rent.

**FIGURE 7 EXPENDITURE OF CONFLICT AFFECTED HOUSEHOLDS IN DIFFA BEFORE/AFTER THE CRISIS**

(Oxfam interviewed a sample of 415 households and asked them what their top five expenditures before February 2015 and now were)

<table>
<thead>
<tr>
<th>Expenditure</th>
<th>February 2015</th>
<th>October 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Others</td>
<td>5.4</td>
<td>23.9</td>
</tr>
<tr>
<td>Repaying Debts</td>
<td>18.5</td>
<td>61.2</td>
</tr>
<tr>
<td>Taxes</td>
<td>4.2</td>
<td>1.8</td>
</tr>
<tr>
<td>Social Ceremonies</td>
<td>57.9</td>
<td>30.7</td>
</tr>
<tr>
<td>Transport</td>
<td>24.8</td>
<td>20.3</td>
</tr>
<tr>
<td>Rent</td>
<td>6.3</td>
<td>17.6</td>
</tr>
<tr>
<td>Education</td>
<td>19.4</td>
<td>12.8</td>
</tr>
<tr>
<td>Healthcare</td>
<td>61.5</td>
<td>74.3</td>
</tr>
<tr>
<td>Hygiene</td>
<td>26.0</td>
<td>31.9</td>
</tr>
<tr>
<td>Vegetables</td>
<td>17.0</td>
<td>14.3</td>
</tr>
<tr>
<td>Oil</td>
<td>69.3</td>
<td>17.6</td>
</tr>
<tr>
<td>Dairy Products</td>
<td>27.8</td>
<td>8.7</td>
</tr>
<tr>
<td>Fish/Meat</td>
<td>63.3</td>
<td>21.8</td>
</tr>
<tr>
<td>Staple Foods (Rice, Millet, Maize)</td>
<td>98.8</td>
<td>98.2</td>
</tr>
</tbody>
</table>

Caught fish, shores of Lake Chad. Photo: Maxime Foissy/Oxfam
## 5.4 Recommendations

<table>
<thead>
<tr>
<th>Response activities or combinations of activities</th>
<th>Key risks and assumptions</th>
<th>Likely effect on market system and target groups</th>
<th>Timing</th>
<th>Implementation</th>
<th>Protection aspect</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Direct response options</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Support new alternative income-generation activities or temporary employment opportunities for poor fishing households in the interim, while emergency measures are in place.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
- Assumes people are willing to start new livelihood activities  
- Assumes willingness of local employers to take on more workers |  
- May give people new income sources vital to livelihoods  
- New skills may make people resilient in case of future displacement  
- Likely to reduce the use of risky coping strategies | To start as soon as possible | - Use focus groups to identify potential opportunities for new livelihood development/employment opportunities  
- Hold discussions with local employers willing to take on new daily labourers  
- Coordinate with relevant clusters in Diffa, government and other humanitarian actors | - Ensure new livelihoods do not put people at risk, in particular women and girls  
- Reduce illegal fishing |
| **Indirect response options**                     |                          |                                               |        |                |                  |
| Re-evaluate measures brought in under the state of emergency that are impacting people’s livelihoods related to fish production and marketing, and are increasing their exposure to threats, including:  
  - In discussion with communities, look at how people can have gradual and safe access to parts of the lake to renew fishing.  
  - End the ban on fishing and sale of smoked fish in markets.  
  - Review measures that restrict people’s freedom of movement and ability to trade (e.g. curfew and motorbike bans). |  
- Assumes open dialogue with government  
- Assumes people feel safe with continued military presence in the zone |  
- May support survival of fishing communities and restoration of key livelihoods if fishing (in a limited capacity) is permissible  
- Means price of fish might become cheaper for consumers  
- Poor fishing households would have access to valuable source of protein again  
- Smoked fish market would be supported/partially restored | Critical issue for market – as soon as possible | - Coordinate with government and security forces  
- Use support from other NGOs, UN and clusters in the Lake Chad Basin region  
- Clarify scope of how fishing in a limited capacity could function  
- Set up monitoring system to track easing measures for fish market | - Minimize risks taken by fishermen to fish.  
- Make sure that the measures do not put people at further risk while carrying out their activities |
| Reinforce security force and civilian government personnel training on their obligations and people’s rights under human rights/humanitarian law standards, and strengthen accountability mechanisms. |  
- Assumes open dialogue with government  
- Assumes government allows and supports such activity |  
- Poor fishing households would have improved access to fishing zones | As soon as possible | - Discuss openly through government-humanitarian platforms about issues and priorities  
- Advocate coordination with humanitarian actors  
- Coordinate with local government and military authorities to organize training  
- Identify lead agency or NGO for the training activity | - Open dialogue  
- May minimize protection threats related to military actions |
Support fishermen to organize themselves into fishing cooperatives to facilitate sharing of knowledge and skills and community-based protection, and strengthen buying/selling power.

- Assumes government allows limited fishing activities
- Assumes people would want to be organized in such a way and would have option to opt out

- Would mean collective buying and purchasing power of target community is increased
- Would facilitate better communication with government and local authorities – collective voice
- Poorer households would rely less on negative coping strategies because they could borrow from within

Pilot in small numbers to begin with, and scale up in high season

Coordinate with local leaders and government
- Hold focus groups with fishermen to understand functionality and organization of groups
- Establish group rules and mandate
- Monitor progress

- Opportunity for community based protection at same time
- How to protect those uninterested in joining?
- Ensure that such actions do not exclude women or marginalized communities

Ensure people have access to new fishing inputs (such as hooks, nets etc.) by providing cash/goods in kind/vouchers that they can exchange with local traders.

- Assumes government allows limited fishing activities
- People might not use cash to buy desired inputs
- Giving in-kind could disrupt markets

People would have means to generate their own income again
- New inputs could mean higher yields and enable people to replace old or looted assets

As soon as possible, if limited fishing is allowed

- Do market assessment for fishing inputs
- Coordinate with NFI/Shelter cluster

- Ensure good programming to avoid community tensions due to targeting, extortion or theft

Facilitate access to credit (either cash or goods given on credit) for poor fishing households to restart fishing.

- Assumes government allows limited fishing activities
- People may be unable to repay loans
- Assumes credit suppliers available

- Would allow fishermen to choose how they restart livelihoods
- Would connect poor fishing households to future credit supplier/lines

As soon as possible, if limited fishing is allowed

- Do risk analysis of the activities
- Identify local vendors or actors willing to offer credit
- Establish repayment protocol
- Support fishermen with repayment plans where necessary
- Monitor progress

- Ensure good programming to avoid community tensions due to targeting, extortion or theft

Support fishing communities to develop their own risk analysis and protection measures, potentially including a protection alert mechanism (e.g. via fishing cooperatives) to monitor protection cases and to respond to them in an appropriate and timely manner.

- Assumes government allows limited fishing activities
- Assumes fishing communities will feel the need for the mechanism

- Would allow case management and development of appropriate protection response for poor fishing families

As soon as possible, if limited fishing is allowed

- Do risk analysis of the activities and consultations with the communities
- Coordinate with local authorities
- Identify lead agency or NGO for the activities
- Define a community-based system with the affected population
- Community training

- Appropriate data management system should be developed
- Better monitoring of protection cases
Peppers irrigated by the Koumadougou River, known locally as ‘red gold’ because of their high market value, are one of the key cash crops in the Diffa region. They are grown and harvested around the Koumadougou River, which flows for almost 100km along Niger’s border with Nigeria into Lake Chad. The Koumadougou zone is characterized by high levels of poverty (76 percent were classed as either ‘poor’ or ‘very poor’ in a 2014 HEA study33), yet the red pepper market brings in revenue across a range of wealth groups. In fact, even though the Diffa region is one of the most deprived areas of Niger in terms of agriculture, it has been considered a ‘flagship’ area regionally, thanks to its normally high pepper production.34 Whether involved in picking, harvesting, drying, stocking, transporting or selling peppers, the poor, middle income and wealthy in the region have historically all benefited from the ability of the fertile river land to produce bountiful pepper harvests. Officially, there are between 5,000–6000 pepper producers in the region, although it is widely accepted that many more people rely on this market for income. (Approximately two-thirds of people in the Diffa region rely on agriculture as their main source of income, with irrigated crops – primarily pepper – engaging the most people.35) Oxfam assessments revealed an average of 80 percent of rural households – 100 percent in some villages – who have historically engaged directly or indirectly in some red pepper production. The food security of the Diffa region can therefore be said to be directly related to the ability of the population to engage in the cultivation of red peppers, and their sale in dried form.36

The key analytical questions for the dried red pepper market system were designed as follows:

1. How has the Boko Haram crisis affected the ability of the dried red pepper market in the Diffa region to provide income for the population, and has this put the affected population at increased risks?

2. What coping strategies are affected populations who are involved in this market engaging in now?

3. What response options are there for improving the lives of the most vulnerable people involved in the dried red pepper market?

6.1. Reference market situation

In February 2015 the market for dried red pepper in the Diffa region was still relatively unaffected by the Boko Haram conflict in neighbouring Nigeria. Cross-border trade continued, meaning that the availability of cash crops such as dried red pepper in the area was satisfactory, based on good harvests in 2014. The vast majority of dried pepper was exported for sale in Nigeria. According to estimates by the Local Chamber of Agriculture, 10,000 tonnes of pepper were being produced annually before the crisis,37 making it the principal cash crop in the region at the time and worth between seven to 8bn XOF s ($13m). Cross-border trade was crucial in this market as approximately 80 percent of production was absorbed by markets across the border in Nigeria (Damasak, Maiduguri etc).
Figure 8 shows the market system in February 2015.

Market chain
Before the crisis, the market chain began with small or large pepper producers in the Kourmadougou River basin area. Small producers at the beginning of the chain can be further categorized as those who own their own land, or those called métayers (sharecroppers), who work and live on the land of large farmers. For the purposes of this study, these two groups are our target population, as the most vulnerable in the market chain who depend on pepper market revenue for their income. They are referred to together as ‘small pepper producers/farmers’. In bad years, some sharecroppers (men and women) migrate to Nigeria to find work. At this time, small producers could generate 50–100 sacks of dried pepper per month during harvest (one to two months per year), with large producers cultivating up to 1,000 sacks during a three-month harvest period. 90 percent of farmers interviewed said pepper constituted their main source of income in February 2015. Data suggests an average sale price of 23,000 XOF/$40 per sack in February 2015. Inputs for small producers were estimated at 22 percent of sale price, so take-home income was approximately 17,000 XOF/$30 per sack (78 percent profit). Many small producers borrowed money in order to cultivate peppers, and cited only a one-month harvest period of December 2014 at this time. (Larger producers with more land can cultivate more peppers and across January and February also, meaning larger yields). However, low estimates would mean a smallholder farmer in the reference period could make 1,150,000–2,300,000 XOF during the pepper harvest ($1,990–3,975, at February 2015 exchange rates).
Both large and small producers harvest and dry the pepper themselves and put it into bags, which weigh about 17kg. Packaging is normally done at the village level and organized through local intermediaries or *Dil Lalis*, who represent local traders and negotiate prices between them and farmers. Collectors, either from Niger or sent by Nigerian wholesalers to purchase peppers and represent traders, also work at the village level. Neither the *Dil Lalis* nor the collectors purchase the peppers themselves, but buy on behalf of large wholesalers who entrust money to them. Bags are therefore the property of wholesalers when they leave the villages. At this time, many collectors representing Nigerian wholesalers were operating in villages along the Koumadougou. Most wholesalers and intermediaries cited giving advance payment or credit to poorer households at this time. Nigerien wholesalers amassed the peppers from the Diffa market before selling onwards, via transporters and market intermediaries, to markets in Niger (Zinder, Maradi, and Niamey) and Nigeria (Damasak, Maiduguri, Kano). Some of the wealthier wholesalers owned their own trucks, and some sold direct to large traders or traded themselves in markets, thus avoiding transport and intermediary fees. The Diffa market yielded an estimated 6,000–7000 sacks of pepper in February 2015, and wholesaler prices at this time were approximately 42,000 XOF/$72 per sack – an increase of 183 percent from the producer level. This includes fees paid to *Dil Lalis*, collectors, and transporters as well as warehousing fees.

Wholesalers’ clients were Nigerian traders, who would purchase approximately 50 sacks a week, as well as small and large traders in Niger markets. Market-level traders then either paid a small fee to artisans (often women) to mill the pepper into a powder, or sold the peppers whole. The sale price per sack at this stage was cited as approximately 48,000 XOF/$83 in February 2015, or 114 percent of the wholesale price. However, in powdered form it sold to local consumers for approximately 150 XOF/$0.25 per 30g; so each 17kg sack could yield 10kg of powdered pepper or 50,000 XOF/$86. Consumers in local markets in the Diffa region (or indeed in markets in Nigeria) would eventually buy the dried red pepper, most often in powdered form, for making sauces and to season meat, rice and doughnuts.

### Market environment

The dried red pepper market had already been affected to some degree by external factors in February 2015. Seasonal flooding in recent years (2012/13/14) had meant thousands of hectares worth of crops had been flooded, and some households had been forced to move from their homes. Furthermore, irregular rains and cyclical pepper diseases and pests were causing greater challenges to farmers than in previous years. Pepper farmers were paying approximately 100 XOF/$0.20 in standard taxes to the local mayor’s office per sack of dried red peppers, as well as giving two to three sacks to the village chief as an informal local tax. It is important to note the informal nature of many aspects of the pepper market, in order to understand its past and present functionality. Even the price of dried red pepper in the local markets was essentially set on an ad hoc basis by money lenders at market level. They would set the weekly prices on the evening of the Diffa market (normally, 5pm on a Tuesday), based on information from other regional markets.

Both larger- and small-scale pepper farmers in general enjoyed access to their land, which was on average 0.5 hectares per poor smallholder farmer and three hectares for richer, larger-scale farmers. Smallholder farmers relied on credit or loans, largely informal, to support their business. A local system saw large farmers loan land to the poorest small-scale farmers who owned no land of their own, and keep a percentage of the pepper crop to sell on themselves. This sharecropping system seems to have been fairly widespread before the crisis. The exchange rate between the naira and West African CFA franc (XOF) was only marginally lower than previous years, so the use of the Nigerian currency for this market system was not a critical factor. Boko Haram had already secured border towns in Nigeria in February 2015 (Damasak in November 2014, for example). But this had not negatively impacted on cross-border trade; simply who levied taxes on it. Nigerien military were already present in the area, but no actors interviewed cited them as a challenge at this time. Furthermore, some pepper farmers grouped themselves into associations or cooperatives in order to cultivate, buy agricultural inputs and sell together. The local government department for agricultural development predominantly worked with such farmers’ cooperatives and offered support in terms of training, access to inputs and monitoring of yields. However, the majority of farmers farmed individually. Yields were generally good, with an average of 100 – 150 sacks of dried pepper per hectare.

### Table 5: Sale price per sack, in XOF, February 2015

|          | Producer Wholesaler Trader |
|----------|--------------------------|------------------|
| XOF/USD  | 22,974 XOF/40 USD 41,880 XOF/72 USD 47,717 XOF/82 USD |
Key infrastructure
The key infrastructure for the dried red pepper market in February 2015 comprised jute sacks for bagging the pepper at village level. The jute sacks were imported from Nigeria or Ghana and then double bagged with a plastic bag outside to preserve the contents. They hold 17kg of peppers on average. Wholesalers tended to rely on warehouses in Diffa to stock their pepper with some at the village level too, and kept hundreds of bags for years at a time. Warehouses in the market centres of Diffa, Maradi and Zinder can stock in excess of 1,000 sacks. The transport network in the Diffa region was also key to the stability of the market, with dried red pepper leaving local villages via the N1 to Diffa and then being further transported to Zinder, Maradi and even Niamey via the same highway. At this time the key selling market in Nigeria for dried red pepper was Maiduguri, in Nigeria’s Borno State. The road between Diffa and Damasak was a key trade route, as well as roads as far as Kano in Nigeria. Trucks were able to cross the Koumadougou River via a bridge near Diffa and reach Maiduguri after a journey of about 125km (one way). Smaller road systems in the Koumadougou River zone were also utilized to serve markets along the Nigerian border, with small producers using pirogues to move sacks across the banks of the river to meet Nigerian collectors and their trucks. Key inputs for the production and transport of dried red pepper consist of fertilizer, fuel (for motorized pumps) and lubricant for cleaning the pumps. Some small farmers rented motorized pumps from large farmers or other small farmers. Fertilizers (Urea, Campa, 15–15 and 20–10–10) and fuel were mostly sourced from Nigeria, with farmers often crossing the Koumadougou in small pirogues to purchase them. No inputs are needed for drying the pepper, which is done by laying fresh peppers in the sun for 15–25 days. As the bulk of the dried red pepper purchased by consumers is in powder form, the ability to transform the dried red pepper via local mills is also important in terms of infrastructure. Large and small traders in local markets give the peppers to local millers (usually women) who mill the pepper for a small fee. Finally, the operation of the dried red pepper market in February 2015 relied heavily on the use of daily labour to cultivate the crop. Almost all farmers interviewed cited using manual labour at some point during the production cycle, for planting, weeding, irrigation, picking, drying and bagging. Daily labourers tended to be women and children who were paid on average six cups of pepper per day.

Protection risk and vulnerability analysis
Before the crisis started in February 2015, most of the actors in the dried pepper market chain reported marginal and low-level risks related to thefts of produce and extortion through informal taxes. Boko Haram was present on the other side of the Koumadougou River and regularly crossing to Niger, but no major attacks or thefts were reported. Military personnel were also present, but in smaller numbers, and did not interfere much in the market chain.

6.2. The emergency-affected situation
Since February 2015, the value and volume of the dried red pepper market in the Diffa region has reduced significantly. When the state of emergency was declared in February 2015, the dried red pepper market was put on standby, with no sales or transport allowed, due to fears it could support Boko Haram. This continued for months, until finally in June 2015 the measures were relaxed to allow the sale of dried red pepper, but only within Niger. The Government of Niger even noted at this time that small producers were suffering the worst, as the sale of pepper was their mode of survival. Some were bartering pepper for rice in these months, while reportedly larger traders in Zinder and Maradi started selling their stocks of pepper. Links to markets in Nigeria were still closed however, a situation that has not improved drastically by October 2016. Traders who wish to sell their goods in Nigeria have to use new, longer routes at considerable extra cost and risk to themselves and their cargo, both in terms of insecurity and a potential lack of buyers. As Map (2) shows, the Koumadougou River basin is also the main geographic area affected by the ongoing Boko Haram conflict and military operations to counter them since February 2015, and has seen huge influxes of refugees and IDPs in 2015 and 2016. Indeed many pepper farmers themselves, small and large, have become displaced within the Diffa region and separated from their productive land.
Figure 9 shows the effect of the shock on the market system.

**Market chain**

The structure of the market chain itself has been relatively unaffected by the ongoing crisis, in that most of the same actors play a key role. However, the level of income each actor makes, in sales of dried red pepper, has dropped dramatically.

Small farmers, who before February 2015 said that the majority of their income came from dried red pepper sales, are now citing between 20–30 percent of their income coming from dried red pepper. From an average of 50–100 sacks per season, small producers cited harvesting around 10–50 sacks during the December 2015–January 2016 harvest season. For large farmers, some were still able to solely rely on pepper sales, but also at decreased volumes. Some of them cited drops of almost 90 percent, from around 1,000 sacks in the 2014/2015 season to 100 in 2015/2016. Average sale prices for pepper farmers are currently 17,085 XOF/$28 per sack at present; 78 percent of what they were in February 2015. The cost of agricultural inputs has increased; because cheaper Nigerian imports are no longer readily available and small farmers are no longer able to cross the river to purchase small amounts, they have to buy in large, more expensive amounts from Diffa. Now, farmers spend on average 37 percent of their take-home income on inputs, leaving around 11,000 XOF/$18 (65 percent) profit. Based on these figures, a small farmer would have made between 110,000 and 550,000 XOF over the last harvest season ($185–$925 at October 2016 rates). The crisis has therefore significantly decreased the potential of the dried red pepper market to act as a source of income for producers in the Koumadougou area. Large producers reported having to lay off daily labourers and having reduced ability to offer sharecropping opportunities to the very poor, as the amount of land they can access is smaller.
TABLE 6 SALE PRICE PER SACK, IN XOF, OCTOBER 2016

<table>
<thead>
<tr>
<th></th>
<th>Producer</th>
<th>Wholesaler</th>
<th>Trader</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sale price per sac in XOF/USD, Oct 2016</td>
<td>17,085 XOF/28 USD</td>
<td>21,000 XOF/35 USD</td>
<td>23,000/38 USD</td>
</tr>
</tbody>
</table>

The village collection system seemed to be functioning with the same dynamic of collectors/Dil Lalis working to negotiate prices and act as market intermediaries, but at a reduced number and only in villages, rather than across the river on the Nigeria side. This is because the river can no longer be crossed, either to buy or sell, so wholesalers in Nigeria can no longer send their collectors to purchase peppers due to restrictions on Nigerian vehicles in Niger and border crossings in this area. There is also an increased level of risk and uncertainty around travelling such long distances for unknown buying prices (especially with the naira worth so little against the West African CFA franc), and decreased production capacities.

Transporters have been affected all along the chain, due to access restrictions, fuel shortages and the prohibition of cross-border trade. In addition to this, two wheeled vehicles (motorbikes) as well as vehicles from Nigeria have been banned, meaning the main form of transport used by small farmers and poor households involved in the market has been prohibited. This is causing them difficulties in purchasing agricultural tools, travelling to markets and generally circulating within the area. Transporters estimated an average 50 percent drop in the volumes they were transporting and income they were receiving. Whereas some had been making around 700,000 XOF/$1200 per week beforehand, they were now making around 300,000 XOF/$500. Whereas large transporters used to move 500–600 sacks a week, they now had to wait two to three weeks to move 300–400. With the Nigeria market almost entirely cut off, wholesalers are increasingly selling stocks of old dried red peppers, which fetch lower prices, in order to bulk up new, fresher stock. They are making significantly less profit now, with average sale prices of 21,000 XOF/$35 per sack compared to 42,000 XOF/$72 in February 2015. Some cited their revenue at around one-fifth of what it was. The number of wholesalers in the market also seems to have decreased, but figures are unclear. All traders (big and small) interviewed in markets cited at least a 50 percent reduction in sales, with some small traders saying that they were going out of business due to the poor prices and availability of dried red pepper.41 Client numbers remained fairly stable (10–20 per day for smaller traders and more than 200 for larger ones), although, while some used to pay for their dried red pepper in cash, they were now asking wholesalers to give them sacks on credit.

Market environment

The ongoing state-of-emergency restrictions seem to be the most limiting factor for the pepper market environment at present. Under the current law, small and large pepper producers are required to have authorizations for purchasing agricultural inputs, in particular fertilizer from Nigeria (especially urea-based) and fuel. Producers now need express authorization from the governor in Diffa to receive a set quota of fertilizer, which seems to vary for no apparent reason between producers. This is based on the potential for fertilizer to be used by Boko Haram to create explosives/IEDs. For example, some farmers were allocated five sacks of fertilizer when before they had purchased 30. But these authorizations undoubtedly reduce producers’ access to fertilizer across the board, which means that producers are unable to fertilize the same space of land as before. Furthermore, fuel can only be purchased now at authorized fuel stations and pumped directly into vehicles, or by applying to the government to be on a permitted list to purchase otherwise, with a further authorization. These permits are reportedly much harder to get from the government. There have been reports of people purchasing extra fertilizer and fuel on the black market in order to access higher quantities, either within Niger, or by crossing the border into Nigeria.

All small producers interviewed cited this as a key challenge in the ongoing crisis. The state of emergency has meant an increased militarization of the entire Diffa region, including pepper cultivation areas. There are national and international security force patrols, who have set up ad hoc camps in the productive areas close to the border. This means some farmers cannot access their fields, either out of fear or due to military restrictions. In fact, the state of emergency has led to access restrictions throughout the zone, with the majority of pepper farmers interviewed citing lack of access to land as a key challenge in the current situation. Small producers and sharecroppers in some areas said they were only able to access approximately one-fifth of the land they previously owned or worked on. Furthermore, as production capacity has been limited along the chain, informal credit seems to have dried up, with both credit suppliers (large traders, large producers and wholesalers) citing lack of capital to lend, and small producers and sharecroppers citing lack of capacity to repay previous loans. Furthermore, since February 2015 the naira has devalued significantly, to a rate of 0.5327 to the XOF in October 2016. This means that 1,000 naira, worth 3,046 XOF/$5 in February 2015, is now worth...
1,878 XOF/$3 in October 2016. This has decreased purchasing power for poor households dependant on a market that operates in naira. This has had knock-on effects for household food security, as reduced purchasing power and decreased production means households are struggling to cover their basic food needs (HEA survival threshold). Boko Haram have gained ground in Northern Nigeria and are now a defining factor in the border area that the Koumadougou River runs along. Frequent, violent attacks on communities in or close to productive areas such as Diffa town, Bosso, Gueskerou and Ngagam have taken place. Villages by the banks of the river have emptied for fear of further attacks. Therefore, many pepper farmers now find themselves either displaced from their productive land, or unable to access their land, due to restrictions under the state of emergency or fear of Boko Haram attacks. There are difficulties in cultivating the land they do have access to, due to a lack of fertilizer and fuel for motorized pumps and transport.

**Key infrastructure**

With the decrease in revenue from the dried red pepper market, large and small producers who used to rely on daily labourers increasingly have to lay them off. Many wholesalers also noted no longer using daily labour, or as much of it, as they cannot afford all the associated costs. Therefore daily labour still continues in this market, but at a much reduced rate. This reduction is a critical issue for the poorest households in the region, who indirectly benefit from the demand for unskilled labour that the pepper market creates, especially in the harvest season of December and January. Roads are still key, but now traders are relying on the road to the west of Diffa, towards Maine Soroa and Zinder. Traders cited either using the road from Maine to Geidam in Nigeria and on to Maiduguri (~30km one way) or the road to Zinder–Matameye–Kano–Maiduguri (~1,283km one way). As mentioned above, as a result of emergency measures, there are now markedly fewer agricultural inputs in use in this market, and some farmers are displaced, meaning large distances to travel to land they cultivated in the past.
Protection risk and vulnerability analysis
From February 2015, when Boko Haram started to extend its reach to Niger, the protection situation drastically changed for the population in the Diffa region and especially around the Koumadougou River, the natural border with Nigeria. Currently, to continue farming in this zone, pepper farmers have to cultivate in extremely militarized areas where night attacks and looting from Boko Haram are regularly reported.

All the farmers interviewed mentioned new protection risks in their daily lives. All of them mentioned fear of Boko Haram attacks, looting and extortion in fields, on the road and in their villages, especially at night. As the population has already been exposed to Boko Haram’s extreme violence and cruelty in the past, this fear is fresh and present. Interviewees also reported fearing theft and looting from petty criminals profiting from the general insecurity.

Due to the high military presence, some farmers (mostly women) no longer feel safe accessing their productive land. National and Chadian forces make patrols and have set up ad hoc camps in productive areas close to the border. Farmers who participated in Oxfam focus group discussions reported that when travelling in this zone, military checkpoints are common. People not owning an identity card come under close scrutiny, and searches by security authorities (which constitute a particular issue for women) are common, as are levying ‘taxes’ to continue their journey. For example, to enter Diffa, all individuals not owning an ID card have to pay more than 3,000 XOF to the military.

In addition, as fertilizer is now very much controlled (via permits), some pepper farmers are undertaking illegal and highly dangerous strategies to get hold of fertilizer. Some are crossing the river to Nigeria to buy fertilizer and fuel, or taking part in illegal trade. Both potentially lead to arrest and detention. These restrictions are part of the government strategy to counter Boko Haram. In general, whether procured legally or illegally, farmers are scared to travel to their fields with fuel and fertilizer, as they do not want to be suspected of supporting Boko Haram.

Due to issues surrounding land access and dwindling income from dried red pepper, some small pepper farmers’ households are having to develop new, riskier, coping strategies to support themselves. Some are engaging in the underground fuel market, thus risking arrest and detention as well as in wood and straw collection. Some groups also mentioned that women are making money as daily field labourers in communities they are not familiar with, thus increasing the risks of sexual harassment. Fifteen percent of pepper farming households interviewed in Oxfam’s multisectoral assessment reported marrying their daughters earlier than planned, to reduce the pressure on the family resources. And 41 percent of pepper farming households reported having to split up their families in order to access more humanitarian assistance, or to find work.

More than 90 percent of all the other actors in the dried pepper market interviewed by Oxfam reported being at greater risk while carrying out their activities, since the beginning of the crisis. Wholesalers as well as traders mentioned the fear of Boko Haram looting their stocks, and of deadly attacks if they did not have anything to give them. Transporters cited increased risks of criminality from travelling greater distances and through insecure areas of Borno State. Some wholesalers revealed that they do not stay in their villages at night, as a strategy to reduce the risk of physical violence.

6.3. Gap analysis
Drop in the number of people earning an income from the pepper market
According to Oxfam’s multisectoral assessment in four different sites, 96 percent of interviewees who mentioned red pepper production as a source of income before the crisis have now stopped this activity completely. Oxfam assessment data show a current rise in pepper farming households engaging in other activities to gain income, but as the average amount of income is still much lower than in February 2015, there are still significant livelihood threshold gaps for poor and vulnerable households.
Drop in production
From an average of 50–100 sacks per month, small red pepper farmers currently produce on average 10–50 sacks per month during the harvest: a fall of at least 50 percent.

Drop in income from red pepper production
The table below shows revenue gained from the pepper market for the poorest in the chain, in February 2015 and in October 2016. The range of total take-home profit from the pepper market in February 2015 was 1,150,000–2,300,000 XOF ($1,990–$3,975) for the 2014/15 season, and 110,000–550,000 XOF ($185–$925) for the 2015/16 season. The average income gap that small pepper farmers are experiencing is 1,395,000 XOF ($2,427). This could be, at worst, an 81 percent drop in income from pepper production.

This will have a significant effect on households that are already food insecure, given that this amount normally forms the bulk of household income across a whole 12-month period between harvests and covering a three-month lean season. For those earning the lower amounts, an income loss of 75 percent since the shock will be devastating, and increase reliance on humanitarian aid. Oxfam’s basic food basket covering the SPHERE standard costs approximately 72,000 XOF/$120. This is for a family of seven for one month, based on current market prices, so it is easy to see how the poorest will struggle to feed families if they can only make $1,000 from one year’s pepper harvest. This is corroborated by Oxfam data which show a staggering 91 percent average drop in income across all households interviewed – who were, on average, only bringing in 4,500 XOF/$7.50 currently.
Based on the 2014 value of the market – 8 million XOF/$13m – an average drop of 50 percent in pepper production and, at worst, 81 percent in income means that a large chunk of the value of this market has been lost to the local, regional and national economy.

Figure 11: Gap in income

Powdered red pepper on sale, Diffa central market. Photo: Corrie Sissons/Oxfam
## 6.4 Recommendations

### Response Recommendations Framework – Red Pepper Market System

<table>
<thead>
<tr>
<th>Response activities or combinations of activities</th>
<th>Key risks and assumptions</th>
<th>Likely effect on market system and target groups</th>
<th>Timing</th>
<th>Implementation</th>
<th>Protection aspect</th>
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<tr>
<td>Direct response options</td>
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<tr>
<td><strong>Provide market-appropriate support (restricted cash, in-kind or vouchers) for poor pepper producers/sharecroppers</strong> to meet livelihood needs.</td>
<td>- inflation - Antisocial use of cash - Assumes people can access livelihood inputs in local markets - Assumes markets are functioning - Assumes a medium/long term exit strategy beyond cash support</td>
<td>- May facilitate access to inputs for vulnerable pepper farmers - Would increase purchasing power of pepper farmers - Choice of inputs/voucher system could support local traders in agricultural tools, for example</td>
<td>Immediate, with focus on displaced small pepper farmers</td>
<td>- Assess needs and community-level vulnerabilities - Select key items to allow access to, via restricted cash/vouchers - Do market assessment to ensure cash/vouchers are viable</td>
<td>- Ensure that the activities do not increase the risk of thefts, community tensions and Boko Haram attacks</td>
</tr>
<tr>
<td><strong>Support small pepper farmers with improved irrigation and agricultural techniques for productive land</strong> (e.g. boreholes, micro-irrigation systems) and improved agricultural techniques (better seed varieties, diversifying crops, composting, etc.).</td>
<td>- Managing the system could reinforce local power dynamics - Assumes soil capable of supporting techniques - Assumes small pepper farmers have safe access to land - Assumes areas have sufficient water to support this - Assumes people would be willing to share using the system - Assumes sharecroppers and small farmers with land would be able to access the system via large producers - May be no market for new produce</td>
<td>- May help small farmers to better irrigate land and produce higher yields - Means small amounts of land could produce more pepper, or across more months, and so could increase amount of pepper in market. - Small farmers could cultivate other crops such as maize, onion and cabbage alongside pepper, to diversify their income and allow them access to new, more stable markets. - Small farmers could increase yield of peppers on current land</td>
<td>Pilot in some communities and scale up before planting season if successful</td>
<td>- Do joint assessments with Water and Sanitation engineers for feasibility and design - Assess context appropriate options, and conduct market feasibility survey for produce - Coordinate with local leaders and communities - Coordinate with CRA and local food security cluster - Put management systems in place - Lead farmer training sessions at community level; potentially put farmers into groups - Monitor progress</td>
<td>- May reduce community tensions - May reduce the need to access unsafe fertile lands - Ensure management system to allow safe access for the most vulnerable - May reduce distance women have to travel for water</td>
</tr>
<tr>
<td><strong>Support small pepper farmers with access to credit (either cash credit or goods given on credit).</strong></td>
<td>- Assumes equal access to credit for métayers and small farmers - Assumes market functionality for cash credits - Assumes traders willing to offer inputs on credit - Traders may not be able to offer credit due to state of emergency restrictions</td>
<td>- Small farmers who lack capital could use credit to improve production - Small farmers could also use credit to diversify income sources by starting small trading, for example</td>
<td>2–6 months</td>
<td>- Assess credit needs on case-by-case basis - Assess feasibility of cash/in-kind via market assessment - Support small farmers with repayment plans - Monitor progress</td>
<td>- Risks with cash: ensure good programming to avoid community tensions due to targeting, extortion or theft</td>
</tr>
</tbody>
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*Note: A Modified Emergency Market Mapping Analysis (EMMA) and Protection Analysis*
Support pepper farmers to organize themselves into cooperatives to facilitate sharing of knowledge and skills and community-based protection, and strengthen buying/selling power.

| Immediate | 2–5 months and ongoing | Pilot in some communities and scale up before planting season if successful | - Assess feasibility at village level  
- Coordinate with local authorities so cooperatives can access inputs as a collective  
- Ensure management structure and sharing of resources is in place  
- Monitor progress |
|---|---|---|---|
| - Assumes people would want to work in such a way  
- Could reinforce local elites or exclude women and vulnerable groups  
- Assumes métayers and small farmers with land would be able to participate in the system via large producers’ land  
- Could give small farmers collective bargaining power vis-à-vis local authorities  
- Métayers may benefit from supporting small farmers farm their land  
- Could increase purchasing power of group as a whole  
- Could foster social cohesion between different ethnic groups, IBPs and host communities, etc. |
| - Pepper farmers would no longer rely on intermediaries or wholesalers for market prices, so improve their negotiation power  
- Could open up further markets to local pepper farmers (especially if organized into cooperatives)  
- Would improve small pepper farmers’ choice of when to sell and who to sell to |
| - Peppers could be a way for cooperatives to access inputs |

**Indirect response options**

**Facilitate market information sharing for pepper farmers (e.g. by providing telephones, credit and contacts).**

| - Assumes willingness of other market actors to share price information and participate  
- Local phone networks may not function  
- May exclude women or those who do not speak Hausa/French  
- May exclude those who cannot use mobile telephones  
- Assumes people will use market information to make informed decisions |
| - Pepper farmers would no longer rely on intermediaries or wholesalers for market prices, so improve their negotiation power  
- Could open up further markets to local pepper farmers (especially if organized into cooperatives)  
- Would improve small pepper farmers’ choice of when to sell and who to sell to |
| - Peppers could be a way for cooperatives to access inputs |

**Re-evaluate measures brought in under the state of emergency that are impacting people’s livelihoods related to pepper production, and increasing their exposure to threats.**

*E.g.:  
- Improving people’s access to fuel and fertilizer.  
- Reviewing measures that restrict people’s freedom of movement and ability to trade (e.g. curfew and motorbike bans).*  

**Monitor and evaluate progress after six months to see if access to information has improved**

- Establish system of communication from regional to local level  
- Distribute basic telephones and credit to small farmers to set up  
- Monitor and evaluate progress after six months to see if access to information has improved  
- People could also use phones to warn of Boko Haram attacks

**Establish system of communication from regional to local level**

- Coordinate with local government around potential ways to allow pepper farmers sufficient inputs  
- Work to potentially organize pepper farmers into cooperatives to access more inputs  
- Outline and communicate the quantities of inputs required and how government can monitor inputs to ensure safe usage  
- Minimize risks taken by pepper farmers  
- Make sure that the measures do not put people at further risk while carrying out their activities

**Immediate**

- Coordinates government’s access to fuel and fertilizer  
- Assumes government would be willing to increase supply of fuel and fertilizer (with a focus on cooperatives)  
- Government could revoke the improved access unless it is formalized somehow  
- Government may not allow this under state of emergency  
- If more farmers organize into cooperatives, this could be a way for them to access the required amount of inputs  
- If people have sufficient inputs to farm their land, they can increase pepper yields  
- An increase in pepper production could lead to more daily labour opportunities for the most vulnerable

**2–5 months and ongoing**

- Establish key contacts at regional markets for information sharing  
- Establish system of communication from regional to local level  
- Distribute basic telephones and credit to small farmers to set up  
- Monitor and evaluate progress after six months to see if access to information has improved  
- People could also use phones to warn of Boko Haram attacks

**Opportunity for community-based protection work**

- Should be accompanied by community power analysis to ensure most vulnerable can participate

**End**

**Establish system of communication from regional to local level**

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- Assumes government would be willing to increase supply of fuel and fertilizer (with a focus on cooperatives)  
- Government could revoke the improved access unless it is formalized somehow  
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- People could also use phones to warn of Boko Haram attacks

**Opportunity for community-based protection work**

- Should be accompanied by community power analysis to ensure most vulnerable can participate
<table>
<thead>
<tr>
<th>Reinforce security force and civilian government personnel training on their obligations and people’s rights under human rights/humanitarian law standards, and strengthen accountability mechanisms.44</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Assumes government allows and supports such activity</td>
</tr>
<tr>
<td>- Increase open dialogue</td>
</tr>
<tr>
<td>- Would reduce threats</td>
</tr>
<tr>
<td>- Coordinate with local government and military authorities to organize training</td>
</tr>
<tr>
<td>- Identify lead agency or NGO for activities</td>
</tr>
<tr>
<td>- Open dialogue</td>
</tr>
<tr>
<td>- May minimize protection threats related to military actions</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Support farmer communities to develop their own risk analysis and protection measures, potentially including a protection alert mechanism (e.g. via cooperatives) to monitor protection cases and to respond to them in an appropriate and timely manner.</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Would enable better monitoring of protection cases</td>
</tr>
<tr>
<td>- Would allow case management and development of appropriate response</td>
</tr>
<tr>
<td>- Service mapping could empower communities to take care of their own protection</td>
</tr>
<tr>
<td>- Do risk analysis of the activities and consultations with the communities</td>
</tr>
<tr>
<td>- Identify lead agency or NGO for the activities</td>
</tr>
<tr>
<td>- Community training</td>
</tr>
<tr>
<td>- Define a community-based system with the affected population</td>
</tr>
<tr>
<td>- Appropriate data management system should be developed</td>
</tr>
</tbody>
</table>
7. CONCLUSIONS

The expansion and intensification of the Boko Haram conflict and the military operations to counter them have had a devastating impact on the Lake Chad Basin and the population in Niger’s Diffa region in recent years. However, as the conflict becomes increasingly protracted, it is important to explore opportunities for communities to earn income themselves, increase their own resilience and protection capacities, and reduce their reliance on humanitarian assistance. The markets for smoked fish and dried red pepper are two of the most crucial markets in the Diffa region, which offer wide opportunity to engage all strata of society either directly or indirectly in income generation. Historically, they have also played a significant role in the local, regional and national economy. Actors at every stage of both market chains have diminished, and those remaining have lost stock, clients and income as a result of the ongoing emergency situation. Support to these markets would not only benefit poor pepper farmers or fishing households. It would also have potential knock-on multiplier effects for other vulnerable, conflict-affected communities in the Diffa region and the local economies they rely on.

Even though Boko Haram violence is a key deterrent for many wishing to restart their livelihoods, the overwhelming prohibitive factor for both of these markets in the current context is the state of emergency across the Diffa region. Poor fishing households who continue to fish have suffered a 94 percent decrease in their catches, from an average of 10 fish cartons per month to less than one. With this has followed a 70 percent reduction in revenue. Yet the numbers of fishing households who even dare to continue to fish is minimal, due to the bans on fishing and the sale of fish. Similarly, small pepper farmers on average can only earn 64 percent of the revenue they used to earn before the onset of the Boko Haram conflict. Their production has fallen from 50–100 sacks per pepper harvest to 10–50. Whereas respondents in Oxfam’s assessment said that prior to February 2016 they made money from fishing (14 percent) and pepper production (26 percent), these groups now stand at less than one percent each. 93 percent of those who mentioned fishing as a source of income before the crisis have now stopped this activity completely. The destruction of livelihoods and means to generate income from both the smoked fish and dried red pepper markets is devastatingly apparent.

In addition to this, the limitations and restrictions decreed under the government’s emergency measures are hindering people from making a safe living via the smoked fish and dried red pepper market. (For example, by trying to avoid the military, fishermen currently fish at night, increasing the risk of encountering Boko Haram.) Not only this, but they are pushing people towards new, riskier ways of earning income to support their families. As fishing is now illegal, some fishing households that have completely stopped fishing activities send their young girls to sell food in the displacement sites and surrounding areas, putting them at greater risk of sexual violence. This exacerbates the humanitarian situation further and pushes people to rely on humanitarian aid: the same people who were already poor, vulnerable, and experiencing high levels of food insecurity.

In addition to offering life-saving humanitarian assistance to conflict-affected populations in the Diffa region, Oxfam calls on the Government of Niger, the UN, and donor and humanitarian communities in Niger to consider supporting safe livelihood opportunities for those most affected by this crisis: either through supporting current livelihood strategies, or promoting new ones. This will include working with the government and the communities themselves to re-evaluate measures brought in under the state of emergency that are stifling and destroying livelihood and income-generating activities related to the fishing and pepper markets. Poor pepper producers and fishing households are paying too high a price for these measures. They must be able to safely resume fishing and increase pepper production, because these markets are not just a lifeline for them, but are also vital for the functioning of local and regional economies.

In the longer term, the emergency measures may also be counter-productive. Previous research has shown that people (in particular youth) who lack opportunities, futures and financial means, may be incentivized to join Boko Haram. It is extremely important to pay particular attention to the protection impact that these restrictions have on the population. Without a longer-term vision for the people of the Diffa region, we risk damaging livelihoods, prolonging people’s exposure to protection risks, and doing harm to local economies, systems and communities. This includes, but is not limited to, those who earned income via the markets for smoked fish and dried red pepper before the escalation of the conflict.
Annex 1. Bibliography


- Chambre Régionale d’Agriculture de Diffa. (Note d’information filière pêche n°1, 5 septembre 2010). *La Chambre Régionale d’Agriculture de Diffa se préoccupe de la pêche*.


- Save the Children. (September 2016). *Rapport de la mission d’évaluation rapide de la situation humanitaire dans la ville de N’guigmi suite à l’alerte des autorités départementales de l’entité*.

- UN FAO. (Décembre 2007). *Profil de la pêche par pays: Niger*.


- World Food Programme. (June 2016). *Lake Chad Basin Crisis, Regional Market Assessment*.

## ANNEX 2. LIST OF ACTORS INTERVIEWED

### Fish Market

<table>
<thead>
<tr>
<th>Role</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fishermen who lost income</td>
<td>5</td>
</tr>
<tr>
<td>Fishermen secretly fishing now</td>
<td>7</td>
</tr>
<tr>
<td>Fish wholesalers</td>
<td>9</td>
</tr>
<tr>
<td>Small fish sellers</td>
<td>3</td>
</tr>
<tr>
<td>Transporters</td>
<td>4</td>
</tr>
<tr>
<td>Drivers</td>
<td>2</td>
</tr>
</tbody>
</table>

**Key informants:**
- Secrétaire Général de la Mairie de N’Guigmi: 1
- Chef de Canton de Bosso: 1
- Chef de la Division Faune, Pêche et Aquaculture de la Direction Régionale de l’Environnement et du Développement Durable: 1
- Directeur PRODEBALT (Le Programme de Développement Durable du Lac Tchad): 1

### Pepper Market

<table>
<thead>
<tr>
<th>Role</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small and large pepper farmers/métayers</td>
<td>11</td>
</tr>
<tr>
<td>Intermediaries</td>
<td>3</td>
</tr>
<tr>
<td>Pepper wholesalers</td>
<td>6</td>
</tr>
<tr>
<td>Transporters</td>
<td>1</td>
</tr>
<tr>
<td>Traders</td>
<td>3</td>
</tr>
</tbody>
</table>

**Key informants:**
- Directeur Regional de la chambre de commerce et d’industrie, Diffa: 1
- Directeur Regional du Developpement Agricole, Diffa: 1
- Responsable chaîne de valeur, Chambre régionale d’Agriculture (CRA)/DA, Diffa: 1
- President du marché des producteurs du Poivrons, Diffa: 1
- Mutuelle Hyada, Diffa: 1

**Total**: 63

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**In addition:**

- Four focus groups with IDPs/refugees/host communities who had lost pepper livelihoods
- Four focus groups with IDPs/refugees/host communities who were still earning money from pepper.
- Eight focus groups with people who used to fish but no longer can
- Household surveys (including questions specific to the fish and pepper markets) covering **415 households** in: Sayam Forage Refugee Camp, Boudouri, Toumour, Kinjandi and Ngagam.
- General trader surveys (including questions specific to the fish and pepper markets) covering **118 traders** (large and small) in Diffa, Ngagam, Kitchandi and Toumour markets.
## ANNEX 3. OVERVIEW OF PROTECTION THREATS AND VULNERABILITIES DUE TO INCOME MARKET DISRUPTION

<table>
<thead>
<tr>
<th>Threats</th>
<th>Vulnerabilities and exposure</th>
<th>Coping strategies</th>
</tr>
</thead>
</table>
| **Restriction on movement and limited access to livelihood activities and resources.** | - Farmers and daily labourers needing to access the militarized zones along the Koumadougou River  
- Fishermen needing to access the militarized zones along the Koumadougou River and around Lake Chad | - Live in informal settlements  
- Split families to access more humanitarian assistance and find work  
- Find alternative income sources, including risky strategies |
| **Physical violence by Boko Haram, the military and criminal groups/individuals.** | - Households in villages attacked by Boko Haram  
- Men and women collecting firewood near villages  
- Women and especially young girls trading in displacement sites and markets  
- Farmers and daily labourers (men and women) accessing their farmland  
- Fishermen accessing fishing zones along the river  
- Transporters (men) on the road, especially those using the Diffa–Maiduguri road | - Go to remote areas to collect wood  
- Transporters: use the longer route through Maine Soroa |
| **GBV: SGBV, early marriage, and sex for food/money.** | - Women living in villages attacked by Boko Haram  
- Women and especially young girls from poor households trading in displacement sites and markets  
- Women collecting firewood and straw, especially in remote areas, to avoid conflict with local and forest agents  
- Women accessing remote red pepper fields in militarized zones and/or places where there is a high concentration of young men | - Women do not speak about it because of taboo and stigma |
| **Extortion by security forces, customs, and government agents.** | - Transporters on the roads (especially Diffa–Maiduguri) and at checkpoints  
- Women and men collecting non-dry firewood | Transporters: use the longer route through Maine Soroa |
| **Looting by Boko Haram or criminal groups.** | - Farmers and wholesalers in their villages at night  
- Transporters, especially those using the Diffa–Maiduguri road | - Avoid sleeping in home village  
- Transporters: use the longer route through Maine Soroa |
| **Arrest and detention by military and security forces.** | - Mostly men suspected of complicity with Boko Haram or conducting activities made illegal by state of emergency restrictions  
- Farmers with fertilizers/fuel who do not possess the appropriate permit  
- Fishermen caught in the fishing zones  
- Farmers working in the militarized zone | - Go to the fishing zones at night  
- Avoid military camps |
| **Destruction of private properties by the military and Boko Haram.** | - Households in villages attacked by Boko Haram  
- People in possession of products made illegal by state of emergency (e.g. pepper farmers with fuel and fertilizer but no appropriate permit; fishermen; fish transporters) | |
| **Enrolment with Boko Haram or criminal groups.** | - Young men with no occupation or income sources, and contacts with Boko Haram | |
NOTES

2. DREC Figures, October 2016
4. More than half of the people interviewed consider a Boko Haram attack as the most important protection risks there are exposed to on the sites. And it reaches 60% of the interviewed population in Toumour.
5. For an estimated 250,000 displaced persons, only 2 official refugee/IDP camps exist with a current capacity for 27,000 people.
6. The EMMA methodology was originally developed in response to sudden onset emergencies, however the Diffa analysis will seek to draw before/after conclusions based on the escalating Boko Haram conflict since 2015.
9. This was not limited to the two livelihood zones and covered the whole region.
10. HEA data suggests the ‘very poor’ made less, at around 189,000 XOF/327 USD annually.
11. HEA SAHEL, Profil de référence de l’économie des ménages ruraux de la zone de Cultures de poivron de la Komadougou à Diffa/Niger, 2014, p. 15
13. ‘la capture moyenne par sortie et par saison est plus importante dans la région de Diffa et de Dosso ’, Atlas UEMOA de la pêche continentale, 2012
16. Based on number of fishing permits provided
17. Evaluation des stocks de poissons, Direction régionale de Diffa de l’environnement de la salubrité urbaine et du développement durable, Smay 2015 ; La Chambre Régionale d’Agriculture de Diffa se préoccupe de la pêche, Note d’information / Filière pêche n°1, 5 septembre 2010
18. Le commerce de poisson dans la partie nigérienne du lac Tchad : une analyse de l’évolution des circuits; La Chambre Régionale d’Agriculture de Diffa se préoccupe de la pêche, Note d’information / Filière pêche n°1, 5 septembre 2010
19. La Chambre Régionale d’Agriculture de Diffa se préoccupe de la pêche, Note d’information / Filière pêche n°1, 5 septembre 2010, p2
20. The maximum storage time for dried fish is considered to be one month.
21. Loi 98.042, 7 Décembre 1998
22. Le commerce de poisson dans la partie nigérienne du lac Tchad : une analyse de l’évolution des circuits ; acte du colloque international sur la culture et le développement de la paix dans le bassin du lac Tchad organisé par l’université de Diffa Kiari Fougou H. et Lemoalle J, 2016. p.4
23. A mug is one-tenth of a carton.
24. The naira exchange rate dropped drastically, so the increase is less visible in XOF.
25. Due to the illegal nature of fishing activities, Oxfam staff had difficulties interviewing fishermen for this study. All those interviewed did so on the condition of anonymity.
26. In July 2015, around 10 fishermen who came back to the Lake shore to fish were killed by Boko Haram, at Bundaram and Fish Dam.
27. The high population density has increased pressure on scarce natural resources such as wood around the N1.
28. Wood cutting is also controlled in the Diffa region in order to protect the environment. (People can only cut dried wood)
30. The Oxfam team has not been able to interview any transporters currently exporting fish.
31. All response options for the smoked fish market are to meet livelihood needs. Actors (humanitarian, development and private sector) should coordinate to ensure urgent ‘survival threshold; needs are met before considering any livelihood intervention, in order for it to be successful.
32. The Government of Niger should prioritize the safety, protection, dignity and human rights of civilians under national laws, regional frameworks such as the Kampala Convention and the OAU Convention on Refugees, and international human rights, humanitarian law and standards.
34. WFP Market Assessment , Diffa, December 2014
35. HEA Sahel, Feb 2014 p.3
37. Chambre Régionale d’Agriculture de Diffa : le poivron rouge Feb 2010,p.3

A MODIFIED EMERGENCY MARKET MAPPING ANALYSIS (EMMA) AND PROTECTION ANALYSIS
Smoked fish and dried red pepper income market systems
Diffa Region, Eastern Niger
Pepper production has been affected predominantly by the crisis; but other factors such as erratic rains and crop diseases have also played a role.

The impacts have been already discussed above in the new riskier coping strategies developed by fishermen.

All response options for the smoked fish market are to meet livelihood needs. Actors (humanitarian, development and private sector) should coordinate to ensure urgent ‘survival threshold’ needs are met before considering any livelihood intervention, in order for it to be successful.

The Government of Niger should prioritize safety and protection of civilians, their dignity and human rights under national laws, as well as regional frameworks such as the Kampala Convention and the OAU Convention on Refugees, and international human rights and humanitarian law and standards.

Bakoura with his family outside their home in a camp for those displaced by the Boko Haram conflict, near Sayam Forage, Niger. Photo: Sam Tarling/Oxfam