



### Food Insecurity Coping Strategies in Conflict-Affected Libya

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## Food Insecurity Coping Strategies in Conflict-Affected Libya

**Abstract:** We explored if there were lessons to be learned for food security assessment and interventions by studying household food insecurity ‘coping strategies’ in conflict contexts. Data were collected using 55 in-depth interviews during 2016-2017 from three regions in Libya – a country affected by protracted conflicts since 2011. Thematic analyses of the data revealed eight major categories of coping strategies, some of which resembled those reported in the global literature. However, some strategies, both negative and positive, were ‘unique’ to the conflict context. Implications of the findings for food security assessment and interventions in areas of protracted conflicts are discussed.

**Keywords:** Coping Strategy; Food Security; Conflict; Libya

## 1. Introduction

In this paper we aim to explore if there are lessons to be learned for food security assessment and interventions by studying the coping strategies that household adopt in response to food insecurities caused by protracted conflicts. Global food insecurity continues to remain as one of the key developmental challenges in the current era (FAO, IFAD, and WFP 2017). Food insecurity is a complex problem that may arise from a plethora of factors, including demographic change, poverty, failure in institutions and governance, and climate change and natural disasters. However, in recent times, conflict has been identified by pertinent UN institutions as a key driver, accounting for the increase in global food insecurity from 777 million in 2015 to 815 million in 2016 (FAO, IFAD, and WFP 2017; WFP 2017). This conclusion is well-founded. Some of the countries plagued by conflict in the recent decades are characterized by widespread hunger and chronic undernutrition (Breisinger, Ecker, and Tan 2015). More recent evidence found armed conflict as a significant predictor of food insecurity in West Africa (Ujunwa et al. 2019). Conflicts destroy infrastructure, affect agricultural production, and disrupt access to markets which increase food prices (Breisinger, Ecker, and Tan 2015; Deininger and Castagnini 2006). They also detract investors and tourists, create refugees, leading to economic declines and food insecurity (Breisinger, Ecker, and Tan 2015).

Food insecurity, in turn, may foment and perpetuate armed conflicts (Brinkman and Hendrix 2011; Pinstруп-Andersen and Shimokawa 2008; WFP 2017). This can be due to food price increase and volatility, grievances from hunger, the availability of valuable commodities for rebel funding, weak governance performance, ill-defined political regimes, a disproportionately higher young people in the population, slow or stunted economic growth, and high inequality among groups (Brinkman and Hendrix 2011;

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3 Bohstedt 2014; Hendrix and Haggard 2015; Pinstруп-Andersen and Shimokawa 2008;  
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5 Walton and Seddon 1994; World Bank 2010).  
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10 Despite such well-documented links between conflicts and food insecurity, very little is  
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12 known about the measures people adopt in response to food insecurity caused by armed  
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14 or violent conflicts. Based on a review of available evidence Justino (2012, 15) concludes,  
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16 “...in general, we have very limited knowledge about what people do in areas of violent  
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18 conflict, and how their choices and behaviour may affect their wellbeing and livelihoods  
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20 (including food security)....”. This paper makes a contribution by further developing  
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22 these considerations in the context of ongoing and emerging conflicts in the Middle East  
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24 and North African (MENA) region.  
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30 Behavioural responses to food insecurity, defined in the academic literature as ‘coping  
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32 strategies’, have long been of interest to development researchers (e.g. Corbett, 1988) and  
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34 have been studied in a variety of non-conflict contexts, e.g. environmental stress in the  
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36 Malian Sahel, Drought in pastoral communities in Kenya, and post-Tsunami situations in  
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38 Sri Lanka (Davies, 1996; Maxwell and Caldwell, 2008).  
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44 Identification of food insecurity coping strategies has also influenced development  
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46 practices on the ground, e.g. in food security assessments, monitoring, and planning. An  
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48 example is the Coping Strategies Index (CSI), which is used as a proxy measure of  
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50 household food insecurity by international institutions like the World Food Program,  
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52 USAID and CARE International (Maxwell and Caldwell, 2008). Originally developed  
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54 based on research in Kenya, Ghana, and Uganda (Maxwell and Caldwell, 2008), the CSI  
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56 is constructed based on four categories of coping behaviours, including: dietary change  
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3 (e.g. relying on less preferred or less expensive foods), increasing short-term household  
4 food availability (e.g. borrowing food, purchasing food on credit), decreasing the number  
5 of household food consumers (e.g. sending children to eat with neighbours), and rationing  
6 (e.g. limiting portion size, restricting consumption by adults to feed children). Different  
7 weights are assigned to these strategies according to their severity, e.g. eating less  
8 preferred food is considered as less severe compared to restricting the consumption of  
9 adults to feed children. Index scores for each household are then calculated based on the  
10 sum of the frequencies multiplied by the weights of the corresponding strategies adopted  
11 by the household over a seven day recall period (Maxwell and Caldwell, 2008). Another  
12 similar example is the Household Food Insecurity Access Scale (HFIAS) (Coates,  
13 Swindale, and Bilinsky 2007), which is also based on several coping mechanisms, such  
14 as compromising food quality and variety, reducing food quantities, skipping meals, and  
15 going hungry.  
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35 Coping-based, self-reported measures like the CSI and HFIASs are currently widely used  
36 in assessing the prevalence of food insecurity within a population, deciding about the type  
37 of food security interventions required in a given context, evaluating the appropriateness  
38 and impacts of food aid programs, and developing early warning systems to predict an  
39 impending food crisis (Maxwell and Caldwell, 2008). Yet, coping-based measures have  
40 been criticised for their lack of generalisability across cultures, focus on consumption-  
41 related strategies only, the difficulty of identifying and interpreting a pattern of coping  
42 strategies that reflect food insecurity only, and as a cop out (Davies, 1993, 1996; Haysom  
43 and Tawodzera, 2018; Jones et al., 2013).  
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3 Against the above background, in this paper we raise the question – what complementary  
4 and/or additional insights, if any, can coping strategies in areas of protracted conflicts  
5 provide us about food security assessment and interventions? We explore this question in  
6 the context of Libya – one of the MENA countries facing prolonged conflicts since 2011  
7 (Lagi 2011; World Bank 2011; Coates et al. 2006; Breisinger et al. 2014; WFP 2016),  
8 with severe consequences on food security (WFP 2016; WFP 2018).  
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19 The rest of the paper is structured as follows. In section 2, a brief account of the Libyan  
20 conflict is provided. In section 3, the research methods are described. Section 4 contains  
21 the results of this investigation. The research findings are discussed and key conclusions  
22 drawn in section 5.  
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## 32 **2. The Libyan Conflict**

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36 The onset of the ongoing Libyan conflict could be traced back to the anti-Gaddafi protests  
37 which started on 17 February 2011, arguably, inspired by the uprising called *Arab Spring*  
38 in neighbouring countries, such as Tunisia and Egypt (Salih 2013; Paoletti 2011). The  
39 protesters demanded Colonel Muammar Gaddafi to give up power and leave the country.  
40 The protests turned into armed conflict when Colonel Gaddafi used armed forces to break  
41 up the revolution, leading successively to the intervention by the UN Security Council  
42 and the NATO forces attacking Qaddafi forces (Gaub, 2013; Kuperman, 2013). The war  
43 led to the death of Gaddafi in October 2011 and of thousands of other people (Kristensen  
44 et al. 2013).  
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3 An election was held in 2012, with the General National Congress (GNC) based in  
4 Tripoli, taking over power (Sawani, 2012; St John, 2012). Following internal disputes  
5 and political fragmentation within the GNC as well as discontents among various  
6 opponents of the GNC, another election was held in 2014 that brought the House of  
7 Representatives (HoR) government, known also as the “Tobruk Parliament”, to power  
8 (Pargeter, 2014; Fitzgerald 2016). Then, an interim government was formed from the  
9 parliament of Tobruk in the Al-Bayda city located in eastern Libya (al-Bayda is the seat  
10 of the former Libyan king Idris). This, however, did not resolve the conflicts, with both  
11 factions – including the Tobruk government which is strongest in the East of Libya and  
12 the Tripoli government strongest in the West of Libya – began fighting each other to gain  
13 control over territory and Libyan oil reserves. The collapse of the political processes and  
14 the conflicts that ensued since 2014 are reported by the WFP (2019, p.3) as follows.

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33 *“The Government under Muammar Gaddafi was ousted in early 2011 and the*  
34 *ensuing transitional political process collapsed in July 2014, with a renewed*  
35 *outbreak of armed conflict dividing Libya into competing factions. Since 2014,*  
36 *fighting has continued in populated areas across Libya, causing civilian*  
37 *casualties, displacement of people and destruction of key infrastructure. On 17*  
38 *December 2015, the United Nations facilitated the signing of the Libyan*  
39 *Political Agreement to end the hostilities and bring unity to national*  
40 *institutions. It established a nine-member all-male Presidency Council of the*  
41 *Government of National Accord in Tripoli, but rivalries and parallel*  
42 *institutions continue to impair the agreement’s effectiveness. Libya is ranked*  
43 *108th on the 2018 Human Development Index and is listed by the World Bank*  
44 *as a fragile state.”*

### 3. Methodology

A qualitative method was used in this research. The fieldwork was conducted during November 2016 to January 2017 in three different areas: Alzintan in West Libya, Tobruk in the East, and Sabha in the South (Figure 1).

**PLEASE INSERT FIGURE 1 APPROXIMATELY HERE.**

The three selected areas are different in terms of geography, demography, socio-economic status, and agro-ecological conditions (Table 1). All of these regions have been affected by the recent conflicts according to UN reports (UN 2018) and news agencies (LNN 2017).

**PLEASE INSERT TABLE 1 APPROXIMATELY HERE.**

The sampling technique used in this research was purposive and convenient, since the purpose was in-depth study of a limited number of sample and to identify conceptual categories, rather than statistical generalization. Samples from both rural and urban areas in the three regions were chosen. The key attributes of the households, as relevant to food security, are provided in Table 2.

**PLEASE INSERT TABLE 2 APPROXIMATELY HERE.**

Data were collected through 55 in-depth interviews. Of this, 44 were household interviews. For 38 of those households the interviewees were family heads – the persons responsible for family income, maintenance, and key decisions. All of these interviewees



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3 were males. For the rest six households, in which the heads were unavailable, the  
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5 interviewees were the adult sons (of the heads) who had knowledge of household matters.  
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7 Interviews were also held with 11 food-related officials, including the mayors of Al-  
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9 Zintan, Sabha, and Tobruk; the food officials in Libya (Municipal Guards); and visiting  
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11 local charities, food aid and relief centres in the study sites. An interview guide was used  
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13 in data collection. Most of the interviews were conducted face-to-face at the interviewees'  
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15 houses or premises. However, some interviews were conducted over telephone in  
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17 circumstances whether it was difficult and/or risky to travel to the interviewees' premises.  
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19 The interviews were complemented with informal conversations with people in the streets  
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21 and markets as well as observations during data collection.  
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28 All interviews were conducted by the first author who is a Libyan national and fluent in  
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30 the Arabic language. The research was a part of the author's doctoral studies in the UK.  
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32 Before conducting the research an ethical approval was obtained from the author's  
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34 affiliated university. Data were then collected with strict adherence to those ethical  
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36 guidelines. Informed consent was achieved, participation was entirely voluntary, and all  
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38 interviews have been anonymized.  
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44 All interviews were digitally recorded, transcribed, translated from Arabic to English, and  
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46 analysed using the qualitative software package NVivo 11. The data were coded into  
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48 themes or nodes and similar nodes were then grouped into corresponding categories.  
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50 Additionally, documents and reports on the Libyan conflicts were collected through web  
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52 search and analysed for complementary information.  
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## 4. Results

### 3.1 Conflicts and household food insecurity in Libya

The interviews revealed that, since the conflict began in 2011, most of the households were subjected to shocks and stresses. In addition to the destruction of houses and assets, one of the common shocks was death of and injuries to household members. As an interviewee mentioned:

*“We have experienced so much suffering and we are still suffering from the effects of the conflict and we just ask God's goodness; houses bombed and damaged as well as we lost two members of our family since 2011 war.”* (interview 8-Z<sup>1</sup>, 27 Dec 2016)

Loss of jobs and income was another commonly identified shock, as one household said:

*“In 2011, my salary was stopped because of the conflict, and my salary sometimes stops now because there is no flow of money in the banks”* (interview 13-T, 12 Dec 2016).

According to the interviewees, at the beginning of the conflict in 2011, there were some difficulties in accessing foods because most markets were closed (see Figure 2). Some types of foods disappeared from the markets, especially baby milk, dairy products, vegetables, and fruits. Moreover, in 2011, the conflict and protests across Libya increased food and fuel prices.

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<sup>1</sup> The interview transcripts have been coded as Z for Al Zintan, T for Tobruk, and S for Sabha.

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3 **PLEASE INSERT FIGURE 2 APPROXIMATELY HERE.**  
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8 The interviewees further reported that, in the years 2012 and 2013, food security had  
9 improved because the country became stable with a new government elected in 2012 (see  
10 section 2). There was a great recovery in food supply in the whole country as food were  
11 imported in large amounts from around the world. As a result, there were ample foods in  
12 the markets. In addition, the government increased salaries in 2012, which had a positive  
13 effect on household food security. One interviewee stated this situation as follows.  
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22 *"In 2012 and 2013 the situation was very good and there had been significant*  
23 *improvement in the security and living conditions of all Libyans. These were*  
24 *the years I would consider better than the Gaddafi era, for example, we had*  
25 *new types of food and commodities entering Libya which we didn't know*  
26 *before"* (interview 11-Z, 4 Dec 2016).  
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35 According to the interviewees, in 2014, food security had declined again as the country  
36 faced renewed conflicts. The Tripoli international airport was burned, all foreign  
37 embassies were closed, and foreign companies and workers from Tripoli were sent back  
38 to their home countries. This renewed conflict aggravated food security through  
39 displacement, death, and destructions of physical and natural capital. In addition, the  
40 conflict affected normal economic activities such as food production, destroyed  
41 infrastructure, and disrupted electricity and food supplies. All these, in turn, pushed food  
42 prices up in local markets. In addition, price controls were difficult because of weak  
43 government capacity and control. In 2014, many households lost their jobs due to the  
44 departure of companies operating in Libya, the departure of most foreign workers, and  
45 the suspension of most embassies and consulates from working in Libya. According to  
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3 the interviewees, the conflicts also resulted in fallen exchange rates in Libyan dinar  
4 against the USA dollar. Eight Libyan dinars were equivalent to one US dollar, down from  
5 1.30 per dinar in the pre-conflict time. The households also faced some financial barriers  
6 such as a lack of liquidity in the banks, and loss of jobs and businesses, and this, in turn,  
7 led to poor income. These problems continued due to the perpetuation of armed and  
8 political conflicts in the years 2015, 2016 and 2017. The government became divided  
9 between the governments in the West and the East of Libya. This had deteriorated the  
10 economic situation and thus severely affected Libyan households. Another important  
11 finding was that all Libyan households used to receive subsidized foods from consumer  
12 associations before 2011, which helped them to get all basic foods, such as sugar, oil,  
13 wheat, tomato, rice, and many others. However, after 2011, these associations ceased to  
14 exist. The grave food insecurity that ensued the 2014 conflicts resulted in the WFP  
15 resuming its food assistance operations.  
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35 *“Renewed violence following the 2014 parliamentary elections, however, led*  
36 *WFP to resume food distributions, which were operated remotely from*  
37 *Tunisia following the evacuation of all international United Nations staff*  
38 *from Libya in July 2014.” (WFP, 2019, p. 9).*  
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48 The interviewees also reported that household food security became slightly stable in  
49 2016 as there were no further conflicts or road closures or food supply stoppages. Many  
50 households were getting used to the situation, the majority of food issues had been  
51 resolved, but food prices were still very high, which was the biggest problem for the  
52 majority of the households.  
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3        “...in the past, we used to buy a carton of oil at the price of 3.5 Libyan Dollar  
4        (LYD); in 2013 it increased to 16 LYD; and now in 2016, I swear that it has  
5        increased to 63 LYD. I bought 1 kg of sugar at the price of 6 LYD whereas a 5  
6        kg sack was just 5 LYD before.” (interview 38S, 23 Dec 2016).  
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13 Another problem was adulterated or low-quality foods in the market.  
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18        “*These days, there are foods that are not suitable for human consumption. The*  
19        *foods are not stored well and contain preservative and the method of transport*  
20        *and storage is not good. In addition, there is a lack of quality control compared*  
21        *to the period before the conflict.*” (interview 25T, 11 Dec 2016).  
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30 The findings showed some variations between urban and rural households. Whilst, the  
31 former relied mostly on purchased foods, the latter mostly on food production, such as  
32 cereals, fruits, and meats. The conflicts and the consequent departure of migrant  
33 agricultural workers made the rural households more vulnerable. One such household  
34 said:  
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43        “*We also planted some grains and fruit on our farm..... I had some of the*  
44        *workers from the Republic for Egypt. When the conflict intensified ..... the*  
45        *workers left to Egypt*” (interview 31-S, 23 Dec 2016).  
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54 Moreover, sixteen of the 17 rural households interviewed informed that their land was  
55 attacked and crops destroyed during the 2011 conflict. They found it difficult to purchase  
56 seeds, fertilisers and farm equipment due to the high prices after the 2016 conflict.  
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3 Whilst, in both rural and urban areas, the households faced difficulty in accessing foods  
4 because of road closures, decline in food stocks, and consequent high food prices, those  
5 in rural areas faced more problems due to the faraway distance of markets and distribution  
6 centres. Rural households also had poorer infrastructure for food transportation, storage  
7 and marketing than urban households. Although most rural households had private cars,  
8 they could not travel to the market during the conflict because of fuel shortage (e.g.  
9 some fuel stations stopped service). One such household mentioned:

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21 *"To purchase food for my household I usually drive....The nearest store is about*  
22 *12 km from my house. Things have become more difficult than it was before 2011*  
23 *due to the fuel crisis in the country. I normally wait for a week or two without*  
24 *fuel, which adversely affects my ability to buy food" (interview 40-S, 27 Dec*  
25 *2016)."*  
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### 38 ***3.2 Coping strategies adopted by Libyan households***

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40 Faced with the conflicts and resultant food insecurity, as discussed above, the Libyan  
41 households adopted a range of coping strategies which could be grouped under eight  
42 categories: food compromising, asset compromising, changing employment and income  
43 generation, budgeting, borrowing and renting, relying on food aids, using location  
44 cooperation, and migration.  
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#### 52 ***Food compromising***

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59 Food compromising manifested in several ways, one being sacrificing their 'preferred'  
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3 animal proteins for other animal proteins. One such household said:  
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6 *“Before the conflict, I used to buy lamb meat approximately every day, but*  
7 *nowadays I am just able to buy once or twice a week; alternatively, we eat*  
8 *more chicken and fish”* (interview 39-S, 26 Dec 2016).  
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14 Some households completely stopped eating meats or reduced the number of days meats  
15 eaten.  
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20 *“We overcome such troubles by stopping the consumption of some kinds of*  
21 *foods, such as meat, which we would now consume at intervals during the*  
22 *week. We also started to consume some other foodstuffs less than before”*  
23 *(interview 16-T, 7 Dec 2016).*  
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31 Many households said they cut down meal size or ate meals without fruits and salads,  
32 which was very unusual in Libya. In some households, the infants were given adults' milk  
33 to drink, because of the shortages of baby milk in the market.  
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39 *“So I had to buy and give the baby normal milk which adults drink, because*  
40 *there was no alternative or choice”* (interview 11-Z, 4 Dec 2016).  
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45 Eating traditional foods more frequently than normal was another food compromising  
46 strategies that many households adopted. One such traditional food was Bazin, which is  
47 made mainly of barley grains produced from previous seasons. Traditionally, Bazin was  
48 usually eaten on Fridays during the pre-conflict period, but during the conflict period, it  
49 became a daily intake for most households along with other traditional foods such as  
50 Couscous and Ftat. In addition, some households relied on a local bread, known as  
51 ‘Tanur’ bread, instead of the regular bread bought from supermarkets.  
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3                   *“We were eating our grandparent's traditional food, which is milled at home*  
4                   *and based on wheat and barley such as Bazin, local bread and others”*  
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7                   (interview 10-Z, 4 Dec 2016).  
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11 In some households, the adults ate less than normal to feed children and in some others,  
12 the children were given priority over adults in protein, fruits, and vegetable consumption.  
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15 One food official described this sacrifice in food quality as follows.  
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18                   *“We used to eat Italian pasta of high quality that most Libyans used to buy*  
19                   *before the conflict. However, now we buy other types which are coming from*  
20                   *Egypt and Tunisia. These are cheaper in price but poorer in quality. In the*  
21                   *past, we also consumed the high-quality rice coming from America, but now*  
22                   *we are consuming the rice coming from Egypt and other countries which are*  
23                   *not so good quality as the American one”* (interview 38-S, 23 Dec 2016).  
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34 Food quality became an issue as the state was no longer able to import good quality food.  
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36 Further, many cheap and poor-quality foods were smuggled into Libyan markets.  
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38 According to the interviewees, food compromising strategies were the first steps they had  
39 adopted in order to overcome the crises situations and those were easier to adopt,  
40 compared to the other strategies, as described below.  
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#### 46 47 ***Asset compromising*** 48

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50 Selling household assets was a common coping strategy for many households. This  
51 included selling lands, livestock, jewellery and even homesteads in order to meet  
52 household expenses (including foods) or to migrate to safer areas. One household  
53 described this situation in the following way.  
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3 *"In the past, I had more sheep. I sold part of them for cash during the conflict*  
4 *period. We had agricultural land in the past but after 2011 we sold it too and*  
5 *then we migrated to Tunisia for 6 months"* (interview 2-Z, 16 Nov 2016).  
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11 Typically, this type of strategy worsened the households' economic situation in the long-  
12 term and was undertaken only under extreme situations.  
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18 Some households said that they had spent their financial savings (cash at home or in the  
19 bank) during the conflict to buy foods.  
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24 *"During the conflict, I spent almost all my money in buying food for my family*  
25 *and my children, so there was only a little left, but now, thank God, I am back*  
26 *to my previous job and my salary has restored and the situation is not too*  
27 *bad"* (interview 39-S, 1 Jan 2017).  
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35 Asset selling however was not entirely driven by poverty or household expenditure  
36 requirements. Some urban households, for example, sold their luxury items because  
37 of fear, since wealthy household members were being kidnapped for ransom  
38 (interview 9-S, 30 Nov 2016).  
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#### 45 46 ***Change in employment and income generation***

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48 This category included both legal or positive and illegal or negative activities. One of the  
49 positive or legal coping strategies included starting part time work alongside regular  
50 work, which was the case for more than a quarter of the 44 households interviewed.  
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56 *"Also, I have a part time job at this time and this work is enough to provide*  
57 *food for the family"* (interview 11-Z, 4 Dec 2016).  
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3 Moreover, non-earning household members like women started working in various jobs.  
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5 Before the 2011 conflict, women were mostly working as homemakers. According to  
6  
7 Muslim and Arab cultural (tribal) traditions in Libya, women were restricted from  
8  
9 undertaking work outside of their homes, with the exception of some disciplines, such as  
10  
11 healthcare (nursing) and education (teaching). However, the conflicts changed this  
12  
13 situation and many women became engaged in new jobs such as sales workers,  
14  
15 government office workers, and self-employment. One such household said:

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20 *".... recently my wife started working and this was a surprise to my family*  
21  
22 *and tribe. In the past it was hard to be a working woman; women just stayed*  
23  
24 *at home without education or work, but now women obtained this kind of*  
25  
26 *freedom especially after we faced a difficulty in covering household expenses*  
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28 *these days"* (interview 20-T, 9 Dec 2016).  
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33 Another positive strategy was that some households started working on their lands to  
34  
35 contribute to household food consumption. This specially happened in 2015-2017 when  
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37 foreign agricultural workers had left Libya and food became more expensive due to the  
38  
39 fall of the Libyan dinar against foreign currency.  
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43 *"In fact, my land was neglected before the conflict and we did not rely on it*  
44  
45 *a lot, but after the conflict, we looked after our land to produce some*  
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47 *vegetables"* (interview 19-T, 9 Dec 2016).  
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52 Regarding illegal or negative strategies, in some households, the youths stopped their  
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54 university or school studies and joined militia groups for income. However, this strategy  
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56 had harmful consequences, such as losing some young family members.  
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3 *"I have lost two martyr sons in the conflict of 2011, the first dated 01/05/2011*  
4 *and the other son was killed on 5/12 / 2011"* (interview 13-Z, 6 Dec 2016).  
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9 Some household members became involved in illegal trading, for example, smuggling  
10 weapons from neighbouring countries such as Tunisia and Egypt. Weapons could be seen  
11 for sale on public roads, markets, and streets as well as on social media sites such as  
12 Facebook. These activities were illegal before the conflict, but since the conflict began,  
13 the Libyan state had been unable to control its borders. Another reason was that the  
14 neighbouring countries, Egypt and Tunisia, also witnessed similar conflicts as Libya  
15 during the period known as the Arab Spring. Thus, weapon sales were rapidly growing  
16 and becoming a source of livelihood for many households, especially those who lived  
17 close to the border between Libya, Tunisia and Egypt (interview 1-T, 7 Dec 2016;  
18 interview 2-T, 13 Dec 2016; interview 2-Z, 19 Dec 2016; interview 5-Z, 18 Nov 2016).  
19 Smuggling food was another illegal coping strategy that many people adopted. One food  
20 official described this in the following way.  
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37 *"Many people are dependent on smuggling as the source of their income,*  
38 *especially in these circumstances, taking advantage of the weakness of the*  
39 *government and the regulatory bodies in the state"* (interview FO2-T, 9 Dec  
40 2016).  
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49 Income, however, was not always the driver of food (and fuel) smuggling. Some  
50 households said that they were compelled to do so because of siege on their cities (e.g.  
51 interview 11-Z, 4 Dec 2016; interview 13Z, 6 Dec 2016).  
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57 The illegal coping strategies were mostly adopted by the most vulnerable and food-  
58 insecure households who did not have assets or savings. This strategy was their last resort  
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3 as it was highly risky, since it could result in irreparable damage, such as a loss of family  
4 members, as mentioned in the quotation above (interview 13-Z, 6 Dec 2016).  
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### 8 9 ***Budgeting***

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11 Several budgeting strategies have been identified. Almost one-half of the 44 households  
12 interviewed said that they had cut down on non-food items in order to provide for  
13 household food and medical treatments, with one household stating:  
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19 *“The household's budget goes almost all on food and treatment; there is not*  
20 *enough amount left to buy clothes and electronic devices”* (interview 21-T,  
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10 Dec 2016).

Another positive strategy was reducing the amount of foods purchased for household consumption. During the pre-conflict period Libya was an affluent country with a wasteful culture (as can be seen now in many Western societies). At that time most households used to buy excessive quantities of food, more than was necessary for their households. This excess food, in most cases, was wasted (e.g., dumping in rubbish bins and landfills) or given to the poor as *Zakat*. During the post-conflict period, however, most households tried to avoid food wastes.

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*“We have become rationed in the consumption of food, so this pressure on household budget is driving us to cut food waste too”* (interview 17-T, 7 Dec 2016).

Other households saved money for food by cutting expenses on luxury goods. For instance, some households sold their expensive cars, precious furniture, and smartphones and purchased cheaper ones.

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3 *“I sold my Toyota 2010 car and purchased cheaper car with lower price. I*  
4 *saved about 15,000 dinars and I used this money for the family expenses of*  
5 *food and medicine, etc.”* (interview 13-Z, 7 Dec 2016).  
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12 As mentioned earlier, however, this coping mechanism was not entirely driven by  
13 household expenditure and consumption requirements. For some households the  
14 motivation was the fear of being kidnapped for ransom.  
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### 19 ***Borrowing and renting***

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21 Some households adopted measures such as borrowing money from friends or relatives  
22 and buying food on credit from private grocers. These strategies were adopted mainly by  
23 households with larger family size (e.g., >5 people). A quarter of the 44 households  
24 interviewed used cheques to buy food instead of using cash due to the lack of liquidity in  
25 banks.  
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35 *“To overcome the problem of lack of money in banks I have used cheques to*  
36 *buy food. I have dealt with two food stores and in a way that helped me a lot*  
37 *to get food”* (interview 22-T, 10 Dec 2016).  
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44 Two rural households mentioned that they had rented agricultural tools instead of buying  
45 them due to the high prices of agriculture equipment.  
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49 *“Well, some equipment, like the tools for the tractor and harvester, became*  
50 *very expensive after the conflict, so sometimes I rented them for several days”*  
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54 (interview 19-T, 9 Dec 2016).  
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### ***Relying on food aid***

Interviews with the food officials revealed that, during the 2011 conflict, there was some minor food relief, coming mostly from UN organizations such as the WFP and the FAO, as well as some donor countries, especially the UAE and Saudi Arabia. However, this aid began to gradually disappear in 2012-13 until it slightly returned in 2014-16 when Libya faced another conflict that resulted in the displacement of many households in the city of Sirte, Tripoli, Benghazi and other parts of Libya. Only two households said that they had relied on food aid from the FAO and the WFP, with one household saying:

*"We received food aid including a small box of tomatoes, a bottle of oil, rice and some biscuits that meant it was just a little help and was distributed once a month" (interview 11-Z, 4 Dec 2016).*

However, there were also local charities and NGOs, which played significant roles in helping the conflict-affected households. These associations started again in 2016 and provided some basic foodstuffs – such as oil, sugar, tomatoes, rice and flour – at reasonable prices. Some households took their share monthly.

### ***Using local cooperation***

Historically, the nature of cooperation in Libya has been tribe-based. Tribal affiliation has been deeply entrenched in Libyan society for hundreds of years. Many Libyans still felt proud to belong to their tribes. Tribal affiliation played many positive roles in household food security during the conflicts. For example, tribal leaders supervised the collection of donations and provided financial and food aids to households in need. Some households also mentioned the role of tribal leadership in resolving disputes, e.g. concerning the inheritance of lands and other assets. Many households mentioned that the

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3 solidarity and cooperation between households and their friends, relatives and tribes  
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5 became stronger since the conflict had begun.  
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9 *“Social relationships here in Alzintan are very good and the whole town of*  
10 *Alzintan is considered as one family and one tribe and it is like a social*  
11 *umbrella for all residents. People are getting support when they need from*  
12 *tribe members”* (interview 12-Z, 22 Nov 2016).  
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19 This local cooperation included food, medicine, gifts and cash. However, this help did  
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21 not fully cover all food needs of the households.  
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26 Some rural households used their social networks based on kinship and neighbourhoods.  
27  
28 For example, when faced with a fuel shortage to travel to the market, some rural  
29  
30 households obtained their foods and other household commodities through neighbours  
31  
32 and relatives (interview 19-T, 9 Dec 2016).  
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### 36 37 **Migration**

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39 A commonly used coping strategy was temporary migration to areas less affected by  
40  
41 conflict or to areas considered safer. Many households from the west of Libya, such as  
42  
43 Alzintan and Sabha regions, moved to Tunisia. However, in eastern regions such as  
44  
45 Tobruk, some households migrated to Egypt, which is on the border with Tobruk. The  
46  
47 households mentioned that migration was their last choice and this choice was made only  
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49 under extremely compelling conditions.  
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55 *“Well, in fact, the war was brutal and Gaddafi's forces bombed Alzintan with*  
56 *Grad rockets. People were afraid and many of them fled to Tunisia to protect*  
57 *women and children”* (interview 14-Z, 5 Jan 2016).  
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3 The households who fled to Tunisia found shelters under the auspices of the United  
4 Nations and some countries such the UAE, Qatar, and Saudi Arabia. Some households  
5 who had financial savings had rented houses with their own money in Tunisia, while other  
6 households had lived with their friends in Tunisia and Egypt. All households had returned  
7 to their homes by the end of the conflict in 2011. Although migration had temporarily  
8 improved food access, the costs incurred in migration negatively affected household  
9 economic situations in the longer term, thereby affecting households' ability to buy  
10 quality foods (interview 11-Z, 4 Dec 2016; 12-Z, 6 Dec 2016).  
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24 The drivers of migration were, however, quite diverse and complex and were not always  
25 related to consumption problems (although this strategy did affect household food  
26 access). In addition to military violence, many households, in particular the wealthy ones,  
27 migrated to safer areas because of fear of kidnapping (interview 9-S, 30 Nov 2016).  
28 Others, for example, two households with sick children and elderly members, migrated  
29 to Tunis because of a lack of availability of medicines in their home towns (interview 11-  
30 Z, 4 Dec 2016; interview 08-Z, 30 Nov 2016).  
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## 44 **5. Discussion and Conclusions**

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46 In this paper we aimed to explore if there were lessons to be learned for food security  
47 assessment and interventions from a study of household coping strategies in conflict  
48 contexts. From our study in conflict-affected Libya we find that the food compromising  
49 strategies adopted by the households are very similar to those identified in non-conflict  
50 contexts. From our study in conflict-affected Libya we find that the food compromising  
51 strategies adopted by the households are very similar to those identified in non-conflict  
52 contexts and can be found in coping-based food security assessment tools like the CSI  
53 and the HFIAS. Similarities can also be found in asset compromising, change in income  
54 generation activities, budgeting and borrowing, relying on food aids, the use of local  
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3 norms of cooperation (social capital), and migration. Although, not all of these measures  
4  
5 were directly related to consumption problems, they did have implications for household  
6  
7 food security. Currently, tools like the CSI/HFIAS include food-related coping  
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9 behaviours only and thus are limited in their ability to provide a comprehensive account  
10  
11 of the behavioural responses that may signify food insecurity.  
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17 This study reinforces the importance of identifying locally appropriate coping  
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19 mechanisms in food security assessment, as suggested by the proponents of coping-based  
20  
21 tools like the CSI (Maxwell and Caldwell, 2008). Some coping mechanisms in Libya –  
22  
23 such as switching to traditional foods like Bazin, the use of tribal-based cooperation, and  
24  
25 reducing food waste – were not previously identified in the literature. Likewise, some of  
26  
27 the strategies reported in the literature – such as going entire days without eating, sending  
28  
29 some household members to eat outside the house, begging, gathering wild food, relying  
30  
31 on fishing or hunting, harvesting immature crops, and permanent migration – were not  
32  
33 found in Libya (Crush, 2013; Farzana et al. 2017; Maxwell and Caldwell 2008;  
34  
35 Rademacher et al. 2014). A reason could be that these coping mechanisms were identified  
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37 mostly in countries less wealthier than Libya<sup>2</sup> (e.g. a considerable proportion of the  
38  
39 sampled Libyan households had assets and employments as shown in Table 2). Moreover,  
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41 Libya did not have livelihoods based on hunting and gathering, which can be found in  
42  
43 many low-income African countries. This reinforces the criticism that coping-based tools  
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45 may not be cross-culturally compatible (Haysom and Tawodzera, 2018; Jones et al.,  
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47 2013), raising the need to develop locally appropriate, country- or region-specific tools.  
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58 <sup>2</sup> For example, in 2017, the GNI PPP was \$19,960 in Libya compared to \$3,250 in Kenya, \$4280 in Ghana, and \$1820  
59 in Uganda, and \$4,040 in Bangladesh (see the World Bank database at  
60 <https://data.worldbank.org/indicator/NY.GNP.PCAP.PP.CD>)

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5 The Libyan study also suggests that coping strategies in conflict-affected areas can be  
6 both negative and positive in terms of their potential long-term impacts on household  
7 welfare. For instance, measures like the selling of productive assets could be harmful for  
8 a household, but measures like allowing women to work outside of home, starting work  
9 on family farms to produce food, and reducing food waste, are likely to have positive  
10 effects on household income and food security. Many oil-rich MENA countries like  
11 Libya, for instance, have historically relied on their oil money to buy foods from overseas  
12 at the neglect of developing their own agriculture and food systems. Agriculture in those  
13 countries has been relegated to a neglected profession and carried out through migrant  
14 workers from poorer African countries. In such a context a refocus on family farms and  
15 the development of agriculture can help enhance the resilience of households against  
16 potential shocks. The same can be said about the importance of empowering women,  
17 developing them as a valuable workforce, and recognising their valuable contribution to  
18 family welfare. In most previous studies, however, such positive aspects of coping  
19 strategies have been ignored. The findings of this study therefore raise the need to  
20 accommodate the unique coping strategies found in conflict-affected areas into the  
21 existing tools, for example, the CSI. In such measures, a reverse weighting system can be  
22 used for the positive coping strategies.  
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49 Another important message from this study is that certain types of coping mechanisms,  
50 such as joining militia groups and engaging in weapons sale, are unique to conflict  
51 contexts, as also found in other countries (see Justino 2012 for a review). These negative  
52 behaviours, if unchecked, may create vicious cycles of conflicts and food insecurity. The  
53 existing literature on conflicts and food insecurity (e.g. as reviewed in section one) do not  
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3 seem to adequately focus on the mediatory role of coping behaviours within the conflict-  
4 food insecurity nexus. Neither do coping-based tools like the CSI/HFIAS include these  
5 unique behavioural responses as indicators of food insecurity. There is, therefore, a need  
6 to develop ‘conflict-sensitive’ CSI tools in food security assessment and monitoring. The  
7 findings also suggest the need to create alternative employment opportunities, especially  
8 for young people, in order to break conflict-food insecurity cycles.  
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19 This study also identifies other issues in relation to quantitative metrics like the  
20 CSI/HFIAS. Although both tools are intended to capture the consumption not only of  
21 food *quantity* but also of food *quality*, the latter is assessed in terms of the consumption  
22 of ‘preferred’ foods (Coates, Swindale, and Bilinsky 2007; Maxwell and Caldwell 2008).  
23 This can be problematic because a food may be culturally preferred, but nutritionally  
24 poor. For instance, eating lamb meat (or any red meat) frequently may not be nutritionally  
25 appropriate from a health perspective, but for the respondents of this study lamb meat  
26 was a preferred food and a reduction in its consumption (e.g. by switching to poultry  
27 meat) equated to a stress. Likewise, store-bought breads were more preferred than local  
28 breads like *Tanur*. Such a choice can be questioned from food quality and nutritional  
29 point of view, given the overwhelming evidence worldwide of the poor nutritional quality  
30 of store-bought or processed foods. Is it appropriate then to consider such behaviour as  
31 indicators of food insecurity?  
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51 Another crucial issue is the ‘sole emphasis’ in both tools on ‘lack of money or resources’  
52 as motives for food-related coping, e.g. in both tools the respondents are asked what they  
53 do when they do not have enough money or resources to buy foods. Although, there is a  
54 strong theoretical basis to focus on assets/resources – for example, according to the  
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3 entitlement, livelihoods and capability related theories (Chambers and Conway 1992; Sen  
4 1981) –, our study shows that such a focus may not be adequate. As we have found, the  
5 adoption of a coping behaviour may not always be due to a ‘lack of money or resources’.  
6  
7 For example, the main driver of using adult milk as baby food and food smuggling was a  
8 food supply shortage in the market caused by conflicts, e.g. road blockage by militia,  
9 disruption in imports due to bombing of airports, siege on cities. Considering monetary  
10 or resource-related stresses only, whilst ignoring such violence, may provide a partial, or  
11 even distorted, picture about food insecurity in a conflict context.  
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24 While this study identifies important lessons for improving coping-based measurement  
25 tools and metrics, it compels us to question the usefulness of the very language of  
26 ‘coping’, which seems to undermine people’s resistance, resilience, and agency. For  
27 instance, faced with income shortfalls many Libyan households broke out of tribal  
28 traditions and allowed women to undertake unconventional employment. Shall this be  
29 considered as a sign of food insecurity or a sign of social progress? Questions can also be  
30 raised about other behavioural responses, e.g. a shift away from a wasteful food culture  
31 and a motive for migration unrelated to hardship or consumption problems. Quantitative  
32 measures like CSI/HFIAS also tells nothing about the violence and suffering that  
33 households in conflict zones encounter, as has been described in section 3.1. We therefore  
34 concur with Davies (1993) who has cautioned about the shorthand use of the term ‘coping  
35 strategies’ in famine early warning systems, policy making, and planning. According to  
36 Davies (1993, 1996), the term may convey a misleading idea that people merely cope, i.e.  
37 get by somehow. The author also cautions that reinforcing coping strategies in food  
38 security interventions may trap people permanently in coping mode. The language of  
39 ‘coping’ may also make it immensely difficult to identify patterns of behaviour that could  
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3 reliably be used to assess and monitor food related stresses only. This, in turn, can make  
4 coping-related data collection, analysis, and interpretation extremely difficult (Davies,  
5 1993, 1996). As this study shows, many of the behavioural responses in Libya were not  
6 necessarily in response to food consumption problems only. Rather, they were related to  
7 overall household welfare and driven by diverse and complex motives. We also question  
8 the usefulness of the term ‘strategy’, since many of the coping behaviours that the Libyan  
9 households displayed were ‘compulsions’ rather than ‘strategies’.

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22 Despite such limitations, the use of short-cut, quantitative tools continue to prevail in  
23 international development intervention due mainly to satisfy donor demands for more  
24 rigorous impact measurement in which organisational learning is of secondary  
25 importance (Lewis, 2017). In order for food security assessments and interventions to be  
26 more effective it would be desirable that such a culture of short-cut is changed and more  
27 emphasis is placed on understanding people’s suffering, resilience, and agency.

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Perhaps, the most important conclusion that can be derived from this study is that food  
insecurity in conflict contexts cannot be resolved by focusing only on agricultural  
development or providing short-term food aid and relief, such as the ongoing works of  
the WFP and the FAO in the conflict-affected regions of the Middle East and North  
Africa<sup>3</sup>. Whilst, the importance of such support cannot be underestimated, it is also  
important to create alternative employment opportunities for the youth and women,

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<sup>3</sup> Examples of the ongoing works of the WFP in Libya can be found at <http://www1.wfp.org/countries/libya> and those in Syria at <http://www1.wfp.org/countries/syrian-arab-republic>. The works of the FAO can be found at <http://www.fao.org/emergencies/crisis/syria/en/>

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3 resolve violent conflicts between warring parties, and build or improve the governance  
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5 and law enforcement capacities of the government.  
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## 11 **References**

- 12  
13  
14 Al-Haram, Fathi. 1995. Topography and Geomorphology In: Abo-Lohmah A. and  
15  
16 AlGhazeree M. (Eds), Geography of Libya (in Arabic), *Al-Dar Al-Jamahiriya*  
17  
18 *LAnashir- Libya*: 101-120.  
19  
20  
21 Ben-Mahmoud, Khalifa. 1993. "The Libyan soil; composition, classification, properties,  
22  
23 and agricultural potential". (In Arabic), *National Authority for Scientific*  
24  
25 *Research, Benghazi, Libya*. 47-59.  
26  
27  
28 Bohstedt, John. "Food riots and the politics of provisions in world history. 2014." *IDS*  
29  
30 *Working Papers* (444): 1-31.  
31  
32 Bohstedt, John. 2014. Food riots and the politics of provisions in world history. *IDS*  
33  
34 *Working Papers*, 2014(444): 1-31. [https://doi.org/10.1111/j.2040-](https://doi.org/10.1111/j.2040-0209.2014.00444.x)  
35  
36 [0209.2014.00444.x](https://doi.org/10.1111/j.2040-0209.2014.00444.x).  
37  
38  
39 Breisinger, Clemens, Jean Francois Maystadt, and Jean Francois Trinh Tan. 2014.  
40  
41 "Does food security matter for transition in Arab countries?" *Food Policy* (46):  
42  
43 106-115.  
44  
45  
46 Breisinger, Clemens, Olivier Ecker, and Jean-François Trinh Tan. 2015. "Conflict and  
47  
48 food insecurity: How do we break the links?" In 2014-2015 Global food policy  
49  
50 report. Washington, D.C.: International Food Policy Research Institute (IFPRI).  
51  
52 Chapter 7 Pp. 51-59.  
53  
54 <http://ebrary.ifpri.org/cdm/ref/collection/p15738coll2/id/129073>.  
55  
56  
57 Brinkman, Henk-Jan, and Cullen S. Hendrix. 2011. "Food Insecurity and Violent  
58  
59 Conflict: Causes, Consequences, and Addressing the Challenges." *Occasional*  
60

- 1  
2  
3           *Paper No. 24*. Rome: World Food Programme.  
4  
5           BSCL (Bureau of Statistics and Census Libya). 2006. “*Census of the population.*”  
6  
7           Tripoli, Libya. Accessed 11 March 2019. <http://www.bsc.ly/>  
8  
9  
10          Castagnini, Raffaella, and Klaus Deininger. 2004. *Incidence and Impact of land conflict*  
11  
12           *in Uganda*. The World Bank.  
13  
14          Chambers, Robert and Gordon Conway. 1992. Sustainable rural livelihoods: Practical  
15  
16           concepts for the 21st century. *IDS Discussion Paper 296*. Sussex: Institute of  
17  
18           Development Studies.  
19  
20          Coates, Jennifer, Anne Swindale, and Paula Bilinsky. 2007. *Household Food Insecurity*  
21  
22           *Access Scale (HFIAS) for Measurement of Household Food Access: Indicator*  
23  
24           *Guide (v. 3)*. Washington, D.C.: Food and Nutrition Technical Assistance  
25  
26           Project, Academy for Educational Development, August 2007.  
27  
28  
29          Corbett, Jane. 1988. “Famine and household coping strategies.” *World development* 16,  
30  
31           (9): 1099-1112.  
32  
33  
34          Crush, Jonathan. 2013. “Linking food security, migration and development.”  
35  
36           *International Migration* 51(5): 61-75.  
37  
38  
39          Davies, Susanna. 1993. Are coping strategies a cop out? *IDS bulletin*, 24 (4): 60-72.  
40  
41  
42          Davies, Susanna. 1996. *Adaptable Livelihoods. Coping with Food Insecurity in the*  
43  
44           *Malian Sahel*. London: Macmillan Press.  
45  
46  
47          Deininger, Klaus, and Castagnini, Raffaella. 2006. “Incidence and Impact of Land  
48  
49           Conflict in Uganda.” *Journal of Economic Behavior and Organization*, 60(3):  
50  
51           321–345.  
52  
53          FAO, IFAD, and WFP. 2017. *The State of Food Security and Nutrition in the World:*  
54  
55           *Building Resilience for Peace and Food Security*. Rome.  
56  
57           <http://www.fao.org/3/a-I7695e.pdf>.  
58  
59  
60

- 1  
2  
3 FAO. 2016. "AQUASTAT Country Profile – Libya." Food and Agriculture  
4  
5 Organization of the United Nations (FAO). Rome, Italy.  
6  
7 <http://www.fao.org/3/i9803en/I9803EN.pdf>  
8  
9
- 10 Farzana, Fahmida Dil, Ahmed Shafiqur Rahman, Sabiha Sultana, Mohammad Jyoti  
11  
12 Raihan, Md Ahshanul Haque, Jillian L. Waid, Nuzhat Choudhury, and Tahmeed  
13  
14 Ahmed. 2017. "Coping strategies related to food insecurity at the household  
15  
16 level in Bangladesh." *PloS one* 12 (4): 1-17.  
17  
18
- 19 Fitzgerald, Mary. 2016. "Mapping Libya's factions." *London: European Council on*  
20  
21 *Foreign Relations*.  
22  
23
- 24 Gaub, Florence. 2013. *The North Atlantic Treaty Organization and Libya: Reviewing*  
25  
26 *Operation Unified Protector*. Army War College Carlisle Barracks Pa Strategic  
27  
28 Studies Institute. OMB No. 0704-0188: 1-51.  
29  
30
- 31 Haysom, Gareth, and Godfrey Tawodzera. 2018. "Measurement drives diagnosis and  
32  
33 response: Gaps in transferring food security assessment to the urban  
34  
35 scale." *Food Policy* 74: 117-125.  
36  
37
- 38 Hendrix, Cullen S., and Stephan Haggard. 2015. "Global food prices, regime type, and  
39  
40 urban unrest in the developing world." *Journal of Peace Research*. 52 (2):143-  
41  
42 157.  
43  
44
- 45 Jones, Andrew D., Francis M. Ngunjiri, Gretel Pelto, and Sera L. Young. 2013. "What are  
46  
47 we assessing when we measure food security? A compendium and review of  
48  
49 current metrics." *Advances in Nutrition* 4(5): 481-505.  
50  
51
- 52 Justino, Patricia. 2012. "Resilience in protracted crises: exploring coping mechanisms  
53  
54 and resilience of households, communities and local institutions." *High-Level*  
55  
56 *Expert Forum on Food Security in Protracted Crises*, Rome, 13-14 September  
57  
58 2012.  
59  
60



1  
2  
3 [http://www.fao.org/fileadmin/templates/cfs\\_high\\_level\\_forum/documents/Resilience\\_in\\_protracted\\_crises\\_PJustino\\_01.pdf](http://www.fao.org/fileadmin/templates/cfs_high_level_forum/documents/Resilience_in_protracted_crises_PJustino_01.pdf).

7 Kristensen, Nete Nørgaard, and Mette Mortensen. 2013. "Amateur sources breaking the news, meta sources authorizing the news of Gaddafi's death: New patterns of journalistic information gathering and dissemination in the digital age." *Digital Journalism* 1, no. 3: 352-367.

17 Kuperman, Alan J. 2013. "A model humanitarian intervention? Reassessing NATO's Libya campaign." *International Security* 38, no. 1: 105-136.

21 Lagi, Marco, Karla Bertrand, and Yaneer Bar-Yam. 2011. "The food crises and political instability in North Africa and the Middle East." Available at SSRN: <https://ssrn.com/abstract=1910031> or <http://dx.doi.org/10.2139/ssrn.1910031>.

28 Lewis, Elyssa. 2017. Does it Measure Up? Common Food Security Metrics and their Potential for Local NGO Learning. Accessed 12 March 2019: [http://iad.ucdavis.edu/files/4615/0059/1674/Elyssa\\_Lewis\\_IAD\\_Capstone\\_Paper.pdf](http://iad.ucdavis.edu/files/4615/0059/1674/Elyssa_Lewis_IAD_Capstone_Paper.pdf).

37 LNMC. 2016. "National Meteorological Center." Tripoli, Libya. May 19. Accessed 15 March 2019. <https://www.lnmc.org.ly/demo/climate>.

42 LNN (Libya News Now). 2017. "The Libyan scene between the wrestling of internal parties and international conflict that multiple his interlocutor and interests." September 22. Accessed 5 October 2018. <https://www.libyaakhbar.com/libya-news/246984.html>

51 MALM. Libya. 2016. "Ministry of Agriculture, Livestock and Marine." Tripoli, Libya. May 19. Accessed 26 March 2019: <https://www.agriculture.gov.ly>

56 Maxwell, Daniel and Richard Caldwell. 2008. "The coping strategies index: A tool for rapid measurement of household food security and the impact of food aid

1  
2  
3 programs in humanitarian emergencies.” *Field Methods Manual, Second*  
4  
5 *Edition, January 2008.*

6  
7 [https://documents.wfp.org/stellent/groups/public/documents/manual\\_guide\\_proc](https://documents.wfp.org/stellent/groups/public/documents/manual_guide_proc_ed/wfp211058.pdf?_ga=2.266938573.2107675391.1554821710-1745710939.1423496269)  
8  
9 [ed/wfp211058.pdf?\\_ga=2.266938573.2107675391.1554821710-](https://documents.wfp.org/stellent/groups/public/documents/manual_guide_proc_ed/wfp211058.pdf?_ga=2.266938573.2107675391.1554821710-1745710939.1423496269)  
10  
11 [1745710939.1423496269.](https://documents.wfp.org/stellent/groups/public/documents/manual_guide_proc_ed/wfp211058.pdf?_ga=2.266938573.2107675391.1554821710-1745710939.1423496269)  
12  
13

14 Paoletti, Emanuela. 2011. "Libya: Roots of a civil conflict." *Mediterranean Politics* 16,  
15  
16 no. 2: 313-319.

17  
18  
19 Pargeter, Alison. 2014. "Libya: The Politics of Revenge." *Al-Jazeera Centre for Studies*.  
20  
21 <http://studies.aljazeera.net/en/reports/2014/08/201482695235305911.html>.  
22  
23

24 Pinstrup-Andersen, Per, and Satoru Shimokawa. 2008. "Do Poverty and Poor Health  
25  
26 and Nutrition Increase the Risk of Armed Conflict Onset?" *Food Policy*, 33(6):  
27  
28 513-520.  
29

30 Rademacher, Schulz, Christina, Benjamin Schraven, and Edward Salifu Mahama. 2014.  
31  
32 "Time matters: shifting seasonal migration in Northern Ghana in response to  
33  
34 rainfall variability and food insecurity." *Climate and Development* 6(1): 46-52.  
35  
36

37 Salih, Kamal Eldin Osman. 2013. "The roots and causes of the 2011 Arab  
38  
39 uprisings." *Arab Studies Quarterly* 35, no. 2: 184-206.  
40  
41

42 Sawani, Youssef Mohammad. 2012. "Post-Qadhafi Libya: interactive dynamics and the  
43  
44 political future." *Contemporary Arab Affairs* 5, no. 1: 1-26.  
45  
46

47 St John, Ronald Bruce. 2012. "Libyan election breaks Arab Spring pattern." *The*  
48  
49 *International Spectator* 47, no. 3 (2012): 13-19.  
50

51 Sen, Amartya Kumar. 1981. *Poverty and famines: An essay on entitlement and*  
52  
53 *deprivation*. Oxford: Clarendon Press.  
54  
55

56 Ujunwa, Augustine, Chinwe Okoyeuzu, and Ebere Ume Kalu. 2019. "Armed Conflict  
57  
58 and Food Security in West Africa: Socioeconomic Perspective." *International*  
59  
60

- 1  
2  
3 *Journal of Social Economics* 46, (2): 182-198.  
4  
5 UN. 2018. “UN poised to scale up support for Libya’s post-conflict transition, Security  
6  
7 *Council told.*” New York, DC: United Nation.  
8  
9  
10 <https://news.un.org/en/story/2018/01/1000622>  
11  
12 Walton, John, and David Seddon. 1994. *Free markets and food riots: The politics of*  
13  
14 *global adjustment.* Oxford: Wiley-Blackwell.  
15  
16 WFP (World Food Program). 2016. “*Rapid Food Security Assessment, Libya Report.*”  
17  
18 Room, DC: World Food Program. 1-10.  
19  
20 [https://reliefweb.int/sites/reliefweb.int/files/resources/WFP-](https://reliefweb.int/sites/reliefweb.int/files/resources/WFP-Libya%20Rapid%20Food%20Security%20Assessment%20final.pdf)  
21  
22 [Libya%20Rapid%20Food%20Security%20Assessment%20final.pdf](https://reliefweb.int/sites/reliefweb.int/files/resources/WFP-Libya%20Rapid%20Food%20Security%20Assessment%20final.pdf)  
23  
24  
25 WFP (World Food Program). 2017. “*At the root of exodus: food security, conflict and*  
26  
27 *international migration.*” Room, DC: World Food Program. 5-70.  
28  
29 [https://docs.wfp.org/api/documents/WFP-](https://docs.wfp.org/api/documents/WFP-0000015358/download/?_ga=2.41792610.1312753646.1554298285-1397317770.1554298285)  
30  
31 [0000015358/download/?\\_ga=2.41792610.1312753646.1554298285-](https://docs.wfp.org/api/documents/WFP-0000015358/download/?_ga=2.41792610.1312753646.1554298285-1397317770.1554298285)  
32  
33 [1397317770.1554298285](https://docs.wfp.org/api/documents/WFP-0000015358/download/?_ga=2.41792610.1312753646.1554298285-1397317770.1554298285)  
34  
35  
36 WFP (World Food Program). 2018. “*Food security information network (FSIN): Global*  
37  
38 *report on food crisis.*” Room, DC: World Food Program.  
39  
40 <https://sway.office.com/IUKJJqCJINB4wkvt?ref=Link>  
41  
42  
43 WFP (World Food Program). 2019. Libya interim country strategic plan (2019–2020).  
44  
45 [https://docs.wfp.org/api/documents/WFP-](https://docs.wfp.org/api/documents/WFP-0000101916/download/?_ga=2.87332511.607109167.1561380440-502041115.1561380440)  
46  
47 [0000101916/download/?\\_ga=2.87332511.607109167.1561380440-](https://docs.wfp.org/api/documents/WFP-0000101916/download/?_ga=2.87332511.607109167.1561380440-502041115.1561380440)  
48  
49 [502041115.1561380440.](https://docs.wfp.org/api/documents/WFP-0000101916/download/?_ga=2.87332511.607109167.1561380440-502041115.1561380440)  
50  
51 World Bank. 2010. “*Food Security and Conflict.*” The World Bank. Washington DC.  
52  
53 [http://web.worldbank.org/archive/website01306/web/pdf/wdr%20background%](http://web.worldbank.org/archive/website01306/web/pdf/wdr%20background%20paper_bora%20et%20al.pdf)  
54  
55 [20paper\\_bora%20et%20al.pdf.](http://web.worldbank.org/archive/website01306/web/pdf/wdr%20background%20paper_bora%20et%20al.pdf)  
56  
57 World Bank. 2011. *World development report 2011: Conflict, Security, and*  
58  
59 *Development.* Washington, DC: World Bank.  
60

**Table 1:** Key characteristics of the study sites

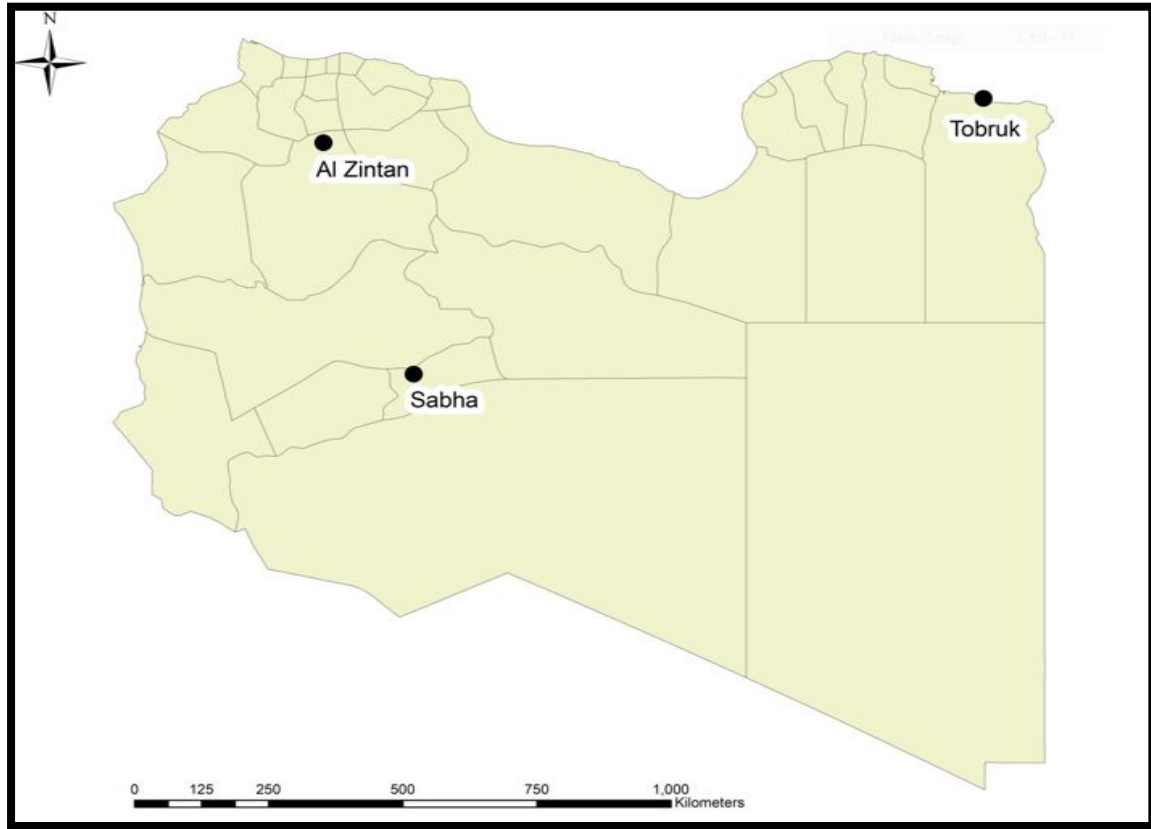
Dimensions	Study sites		
	<i>Alzintan</i>	<i>Sabha</i>	<i>Tobruk</i>
Area (Km <sup>2</sup> )	2,666	17,066	84,996
Population	50,787	133,206	157,747
<i>Male</i>	27,635	70,110	79,796
<i>Female</i>	23,152	63,096	77,951
No of households	7,784	19,777	20,907
<i>Urban</i>	5,807	15,665	17,598
<i>Rural</i>	1,977	4,112	3,309
Average size of household	5.9	6	7.2
Education of household head			
<i>Primary</i>	32%	28.6%	25.3%
<i>Secondary</i>	19.6%	45.8%	38.4%
<i>University</i>	30.8%	14.3%	28.7%
<i>Master or PhD</i>	1.4%	0.7%	2.6%
<i>Unknown</i>	7%	10.6%	5%
Occupation of household head			
<i>Agriculture and Animal Husbandry</i>	15.6%	19%	8%
<i>Government workers at Public administration</i>	45%	41%	43%
<i>Construction workers</i>	1.5%	2%	4.6%
<i>Sales workers</i>	2%	5%	13%
<i>Unemployed</i>	22%	17%	18%
<i>Unemployed, but receive government benefits</i>	11% <sup>0</sup>	12.4%	9.2%
<i>Unknown</i>	2.9%	4%	2.4%
Main economy	Mostly pastoralism	Mostly agriculture	Mostly trading
Climate and geography	Semi-arid mountainous terrain	Dry, Sahara desert	Mediterranean along coast, Semi-arid

Source: Compiled from: Al Haram (1995); Ben-Mahmoud (1993); BSCL (2006); FAO (2016); MALM (2016); LNMC (2016)

**Table 2.** Salient attributes of the sampled households

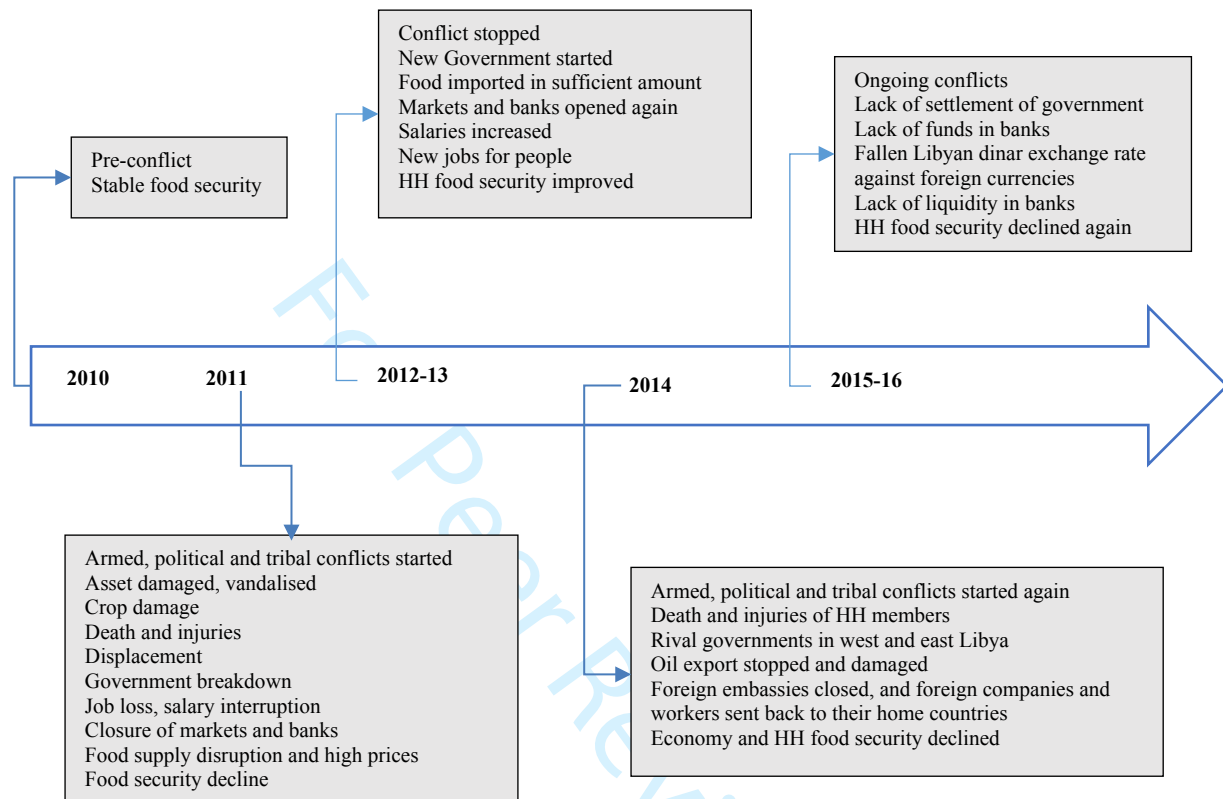
<b>Household attributes</b>	<b>Description</b>
House ownership	Out of the 44 households interviewed, 95% (42) had their own houses. Only two families lived in rented houses, and four owned more than one houses.
Land ownership	Of the 44 interviewed, 84% (37) owned family lands. Of these, 45% (20 households) had productive land with crops and trees and 39% (17) had unproductive lands, used for renting and housing construction. Four households had lands under joint ownership with relatives and tribes.
Livestock ownership	Fourteen households (32%) had livestock which they relied upon for household meat consumption as well as income through the sale of livestock products.
Ownership of other important resource	Two households owned water wells which they used for selling water through trucks carrying water tanks. One household owned forest that provided timber and income.
Ownership of transport and communication devices	Thirty seven households (84%) owned private cars and 33 households (75%) had telecommunications devices such as mobile phones, computers and internet networks.
Employment	In over 84% of the households, the heads (males) had government jobs and in seven households private jobs/businesses (e.g. farming). In 39% households the spouse (wives) were in salaried employment.
Education of household head	Over 95% household heads were educated, with nearly 23% having university degree and nearly 21% diploma. Only two heads had no formal education. Over 77% households had educated spouse (wives), of which 30% with university degrees. Only 8 spouses (18%) were homemakers.
Special vulnerability attributes	Four households had household members suffering from chronic diseases.

Source: Authors' compilation based on interview data



**Figure 1:** Map of Libya showing fieldwork locations (Source: Libyan National Meteorological Center 2018)

Review Only



**Figure 2.** Timeline and key events relating to conflicts and food insecurity in Libya (source: interview data)