**Conflict Factsheet**

**Global Food Price Shocks**

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**Conflict Summary**

This analysis highlights the factors leading to global food-price shocks, explains how the impacts of food price spikes differ depending on countries and points out the risks of such shocks leading to situations of fragility.
Conceptual Model

Climate Change
- Gradual Change in Temperature and/or Precipitation
- More Frequent / Intense Extreme Weather Events

Environmental Change
- Increased Water Scarcity
- Increased Land Scarcity

Intermediary Mechanisms
- Change in Access / Availability of Natural Resources
- Anti-State Grievances

Fragility and Conflict Risks
- Volatile Food Prices

Social and Economic Drivers
- Demographic Change
- Land Use Change
- Economic Development
- Infrastructure Development
- Environmental / Climate Policies

Context Factors

Food Import Dependency

Eroded Social Contract
- Food Insecurity
- High Unemployment
- Inadequate Infrastructure
- Unresponsive Government

Agricultural / Pastoral Land, Water
Conflict History

Factors leading to food price shocks

Environmental changes and human interference in the environment: role in food price shocks
Among the many factors which have been identified as playing a role in food-price peaks, environmental changes and human interference in the environment pose significant risks for international food price stability. The extreme weather events experienced by major exporting countries prior to the 2007-2008 and 2010-2011 food-price spikes have highlighted the role played by weather conditions in the international food crisis (Dupont and Thirlwell, 2009). Examples include the drought in Russia and Ukraine, which affected food production in both 2007 and 2008. Only three years later, in 2010, the renewed effects of a drought combined with wildfires decimated the summer harvest in Russia (see Droughts and export ban in Russia). Adverse weather events also highly affected the production of crops in the US during these periods. In 2007, a freeze affected the productivity of wheat whilst a period of drought in summer 2010 destroyed three quarters of corn (Ibid.; Plumer, 2012; Euractiv, 2012). Similarly, adverse weather events led to low crop yields in Canada and Australia as well as in Southern Europe (Dupont and Thirlwell, 2009; Euractiv, 2012). Scholars have raised concerns about the possible impacts of climate change -- variations in temperatures, rainfall and drought patterns and shifts in growing seasons -- on food productivity over time (von Braun and Wheeler, 2013).

In addition to the impacts of adverse weather events, human interference in the environment also stands as a threat to agricultural productivity, which may lead to food price shocks. Each year, human-induced pollution, salinisation and soil degradation cause the loss of between 5 to 12 million hectares of agricultural land (Dupont and Thirlwell, 2009). As a result of these activities, the surface of arable land in the world has been decreasing since the end of the 1990s (Ibid.). Moreover, the unsustainability of water extraction -- particularly in China, South Asia, the Middle East and North Africa -- intensifies this threat by increasing water scarcity (Ibid.). Essentially, human activities are highly significant in reducing the availability of arable land and water for agricultural purposes.

Population growth and economic factors
Many factors have been identified as contributing to food price shocks in addition to environmental changes. These factors include the inability of supply to match higher demand in food, due to population growth and increasing demand for a varied diet as a result of rising global prosperity; the depreciation of the US dollar; the lack of investment in and low productivity growth of agriculture; as well as high energy prices (Trostle, 2008; Marti et al., 2011).

Energy prices and policies
The impact of high energy prices is twofold and has been observed during the recent food-price shocks. First, since modern agriculture is highly dependent on energy – for agricultural machinery, transport, refrigeration and fertilizers -, rising oil prices are strongly connected to food price increases. Second, high energy prices combined with climate mitigation objectives have led developed countries’ governments to encourage through subsidies the diversion of crops to produce biofuels (Dupont and Thirlwell, 2009; von...
These climate policies have been successful in that they led to a three-fold increase of biofuel production between 2000 and 2007. Yet there has been an intense debate on whether these policies have unintended effects on global food-price shocks. Whilst the FAO claimed that those policies caused lesser production of cereals to the tune of nearly 100 million tons which would otherwise have been available for human consumption, other studies, e.g. by the US Environmental Protection Agency, have contested this conclusion (Euractiv, 2012). Some scholars argue that biofuel production does not necessarily lead to food price increases. Babcock explains that it is possible to produce biofuels without limiting the production of crops which are suitable for human consumption (Babcock, 2008). Moreover, Taheripour et al. argue that co-products from biofuels, which are unsuitable for human consumption, can be used to feed pigs, therefore reducing the competition between animals and humans for food (Taheripour et al., 2013).

Speculation
Speculation has also been pointed at as a major factor of the 2008 food-price shock. Some scholars and international organizations draw a clear link between speculation and food-price spikes in the occurrence of the 2007-2008 food price shock (Bar-Yam et al., 2011). Nevertheless, whilst acknowledging the serious implications that speculation could have for food security, other scholars argue that the already high prices led to speculation, and not the other way around (Dupont and Thirlwell, 2009).

Government interventions
Another major factor which may worsen food-price shocks is the reaction of governments to price volatility. These reactions may take the form of export restrictions, quotas or import taxes to protect domestic customers. Such market interventions, which may induce more volatility of commodity prices, were observed during the 2007-2008 and 2010-2011 food price shocks (Abbott and Borot de Battisti, 2009). As of June 2008, 14 countries had limited or banned rice exports, 15 countries had capped or halted wheat exports and more than 12 had restricted maize exports, thereby intensifying the situation of food shortage at the global level (Dupont and Thirlwell, 2009). For instance, the export ban imposed by Russia in 2010 had significant consequences for countries like Egypt and Pakistan, which were highly dependent on wheat imports from Russia.

Impacts of food price shocks
Food price rises at the global level may have different impacts from region to region (Gregory et al., 2005) and do not necessarily have direct impacts at the national level. In analysing the impacts of food price shocks, it is important to take into account country specificities, such as varying levels of import dependency, poverty amongst the population, and the policies set up by governments to cope with food price spikes. Figure 1 (see below) clearly shows that global prices are not necessarily reflected in domestic prices.

Variations in Vulnerability

National Level - Import dependency
How a country is affected by high food prices is a result of its dependency on food imports and its ability to finance those. Developing countries have become increasingly dependent on food imports in order
to reduce investments in agricultural infrastructure, such as food storage (Dupont and Thirlwell, 2009). Whilst in the 1960s countries in Asia and in Africa imported as much food as they exported, in 2011 they had become highly dependent on imports (Haggard and Hendrix, 2015). These changes of strategy stem from the fact that commodity prices had remained low and stable for the last two decades of the 20th century and that the depreciation of the dollar had reduced import costs (Trostle, 2008; Marti and al., 2011). Importing goods appeared to be a more rational strategy for developing countries. Yet import dependence can have diverse consequences. A country that is able to generate foreign exchange to finance these imports might not be greatly affected by price spikes (Breisinger et al., 2012). For instance, the Middle-East and North Africa (MENA) region is highly dependent on food imports because of its limited agricultural potential due to severe water constraints (see also: Food price volatility and fragility in the MENA region). However, whilst oil-exporting countries have the ability to generate foreign exchange to finance food imports, financing high-food prices represents a serious challenge for oil-importing countries, namely Egypt, Jordan, Lebanon, Mauretania, Morocco, Syria, Tunisia and Turkey (Ibid.).

Household level
At the household level, food price shocks particularly affect poorer households. In fact, in developing countries, poorer households use an average of 49.4% of their budget to buy food (Haggard and Hendrix, 2015). Moreover, food-price increases are likely to have more impacts on residents from urban than from rural areas, as urban residents are more dependent on purchased food (Ibid.). Governments may use mechanisms to mitigate the effects of food-price shocks at the national level, such as subsidies, price control and export taxes – (as will be discussed in the next section) (Dupont and Thirlwell, 2009). This is for instance the case in the MENA region, where, as a result of the global food price crises, rising food and fuel prices have led to increases in fuel and food subsidies, public sector wages and other government welfare spending (Breisinger et al., 2012).

From food price shocks to situations of fragility
Many scholars have drawn a link between food price shocks and the emergence of situations of fragility, i.e. unrest and political instability (Smith, 2014a; Haggard and Hendrix, 2015; Dupont and Thirlwell, 2009). During the food price shock period in 2007-2008, protests and riots related to food prices were reported in 30 countries (Haggard and Hendrix, 2015). These authors also report a resurgence of food-related protests during the 2010-2011 food-price shock in several countries in Africa, South Asia, the Middle-East and across North Africa (Ibid.; see also case: Food price volatility and fragility in the MENA region). The causes of these so-called food riots are debated among scholars.

A direct link between food prices and riots is too simplistic
Using data from the FAO, some scholars and media have drawn a direct link between global food-price spikes and the emergence of riots, based on the assumption that global food prices systematically impact prices at the national level (Bellemare, 2012; Bar-Yam et al., 2011, Smith, 2014b). However, the impacts of food price spikes vary between countries according to a number of national characteristics, for instance the dependency on food imports and the policies put in place by the state to control prices. Moreover, focusing on the link between food prices and riots may be too simplistic: because food prices are interdependent with other factors such as energy prices, the rise of energy prices may trigger food price spikes, which would then trigger protests (Smith 2014a). Given this interrelation, it can be difficult
to ascertain whether situations of fragility are originally caused by high food prices or by related factors (Smith, 2014a). The case of Nigeria illustrates this complexity: the removal of fuel subsidies in January 2012 led food prices to increase and thousands of Nigerians took the streets to protest (Smith, 2014b).

**Fragility as a trigger for "food-riots"**

Beyond food prices, unrest is triggered by drivers such as poor governance and lack of government accountability; lack of public service delivery; lack of political freedom to voice grievances; perceived lack of justice and equity in global food and economic systems; as well as poor workplace conditions and labour disputes (Smith, 2014a). Rather than price volatility as such, it was the broader incapacity of the government to guarantee the population access to and availability of food (i.e. food security) which was the main root cause for unrest (Ibid.). In fact, although some scholars have argued that the Arab Spring was caused by food shocks, economists have attributed the movement to people's dissatisfaction with their standard of living, high unemployment and growing inequalities (Breisinger et al., 2012). This argument has also been used in the case of Syria. Whilst food price hikes doubled the price of wheat from 2010 to 2011, De Châtel argues that it was the overall incapacity of the state to deliver goods to the population which led to protests against the regime (2014). In those cases, it seems that food-price spikes have been an aggravating driver and perhaps a symptom, which added to the already existing fragility and triggered a situation of fragility.

**Influence of regime type on situations of fragility**

Research has shown that a rise in global food prices is correlated with urban unrest in democracies and anocracies – hybrid regimes between democracies and autocracies – but not in autocracies (Haggards and Hendrix, 2015). Because democratic leaders risk removal from office through elections, they have less incentive to favour urban areas at the expense of rural areas. On the other hand, in autocracies, governments have a tendency to be more responsive to the concerns of the urban population – which is more likely to organise than in rural areas -- to limit the discontent of the population and avoid unrest (Ibid.). By providing urban residents with subsidies and other kinds of benefits, autocratic authorities expect to limit the dissatisfaction of the urban population and thereby avoid being removed from office by a coup or popular upheaval.

Of course, autocratic governments may not be able to sustain such subsidies. In 2002 food and fuel subsidies in Egypt amounted to 1.4% of GDP, whilst by 2011 they amounted to 8% of GDP (Haggard and Hendrix, 2015). In the case of Syria, after decades of massive food and fuel subsidies, Assad’s government withdrew these benefits in the early 2000s. This put the population under intense pressure and led to protests in 2009, which later fed into the civil war that is still ongoing (see Syrian Civil War: The Role of Climate Change).

**Factors intensifying situations of fragility**

Scholars have also identified factors which are likely to intensify situations of fragility. A number of studies have analysed the exacerbating effect of climate change on unrest, through decreased food crop productivity and lower economic growth (Demarest, 2014; Miguel et al., 2004; Koubi et al., 2012). Not all scholars agree on this causal pathway and the debate is ongoing. In a recent article Raleigh et al. state that this causation depends on the vulnerability of places to climate change (Raleigh et al., 2015). They argue that, because rural areas have less capacity to react to climate impacts through legislation, commodity...
substitution and coping strategies, climate changes are more likely to lead to political instability in rural places (Ibid.). Brinkman and Hendrix reckon that low levels of development, deteriorating economic conditions or high inequalities amongst groups within a country are likely to heighten the risk of violent conflict (Brinkman and Hendrix, 2011). As for the studies of Smith and O’Loughlin et al., they suggest that increased food prices are more likely to lead to unrest in places which have experienced violence (Smith, 2014a; O’Loughlin et al., 2014). Moreover, Smith identifies a ‘youth bulge’ in the population as being a factor which might increase the likelihood of unrest (2014a). He also argues that situations of fragility are more likely to occur after long-term food-price spikes and during sudden increases in domestic food prices (Smith, 2014a). On top of that, situations of fragility themselves contribute to high food prices and food insecurity (Brinkman and Hendrix, 2011; Raleigh et al., 2015). In fact, conflicts are likely to affect the ability of states to produce and trade food.

Conclusion

To conclude, this case study highlights three major points: First, food price shocks are driven by a number of interconnected factors. Amongst them, adverse weather events were a major driver of the 2007-2008 and 2010-2011 food-price spikes. Moreover, in light of global population growth, scholars are increasingly concerned about the environmental impacts of human activities and the potential effects of climate change on the availability and productivity levels of arable lands. Secondly, global food price spikes do not necessarily have strong impacts at the national level. Countries have different characteristics which make them more or less vulnerable to global food-price spikes, such as their import dependency, level of poverty and policies set up by governments to cope with food price spikes. Third, it is thus not possible to draw a direct causal link between global food-price spikes and the emergence of situations of fragility at the local level. Food is usually only one of many grievances which motivate unrest and the intensity in a situation of fragility varies depending on countries and their specificities. However, food insecurity can contribute to and play a critical role in undermining stability if safeguards fail or prove insufficient. Because scholars anticipate that food prices are likely to remain high and show increased volatility in the foreseeable future, it is critical for national governments to find sustainable ways to mitigate these effects in order to maintain stability.

Resolution Efforts

Policy recommendations

Because scholars anticipate that food prices are likely to remain high and show increased volatility in the foreseeable future (Brinkman and Hendrix, 2011; Breisinger et al., 2012) in light of population growth and increased global demands for a more varied diet, it is crucial for governments to set up policies to mitigate these effects and avoid situations of fragility. Based on this, the following policy ideas deserve consideration:

1) Considering the exacerbating impacts of human activities on land and water scarcity where demand for agricultural products is likely to increase by about 50% by 2030, it is necessary to find remedies to these unsustainable practices. Solutions could come from the development of new crop varieties and other technological innovations.
2) Improving local infrastructure - i.e. transportation networks to deliver food and storage capacity - and modernizing irrigation to reduce vulnerability to changing rainfall patterns in order to ensure that the population will have access to food during periods of food price crises (Smith, 2014a). This is particularly important for import-dependent states.

3) Taking food-price stabilisation measures to limit price fluctuations for the population and avoid situations of fragility. Such measures should be favoured over unilateral measures such as export bans, which may enhance food security in the countries imposing the bans but worsen the price fluctuations at the global level. In addition to safety nets, in situations of food crisis, states may consider lowering import tariffs to lower prices for the population (Ibid.).

4) Instead of seeking to shield populations affected by food price shocks through fuel and food subsidies, social protection systems should be implemented to protect the population. International organizations usually advise against the use of food and fuel subsidies because they are difficult to remove once in place, even if they do not serve their purpose (anymore). Moreover, it is difficult to ensure that poorer households benefit from them in the first place. In some countries such as e.g. MENA states, fuel and food subsidies are higher than traditional/other social spending (Breisinger et al., 2012). The social protection systems recommended replacing food and fuel subsidies need to be inclusive of young people as situations of fragility are correlated with their relative size within overall population (Brinkman and Hendrix, 2011).
## Intensities & Influences

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<td><strong>INTENSITIES</strong></td>
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<td>International / Geopolitical Intensity</td>
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<td><strong>INFLUENCES</strong></td>
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### Violent Conflict
- Yes

### Mass displacement
- Less than 100,000 and less than 10% of the country's population are displaced within the country.

### Cross Border Mass Displacement
- Less than 100,000 and less than 10% of the population are displaced across borders.

## Resolution Success

### Reduction in Violence
- There was no reduction in violence.

### Resolve of displacement problems
- Displacement continues to cause discontent and/or other problems.

### Reduction in geographical scope
- There has been no reduction in geographical scope.

### Increased capacity to address grievance in the future
- There is no increased capacity to address grievances in the future.

### Grievance Resolution
- Grievances have been partially addressed.

### Causal Attribution of Decrease in Conflict Intensity
- The decline in intensity can be explained purely by the decline of the environmental stressor.
Entry Points for Resilience and Peace Building

<table>
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<th>Cooperation</th>
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<td>Intra-regional trade could be developed to capitalise on comparative advantages and reduce the costs of imported food.</td>
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<th>Reducing dependence on specific supplies</th>
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<tr>
<td>Countries vulnerable to food price shocks can adopt measures to support local producers and encourage investments in an effort to increase domestic food production capacities and reduce dependence on international markets.</td>
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<th>Containing (effects of) price volatility</th>
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<tr>
<td>Food-price stabilisation measures to limit price fluctuations could sensibly reduce exposure and vulnerability to food price shocks. Social protection systems need to be implemented to protect populations affected by food price shocks.</td>
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<th>Reducing trade barriers</th>
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<td>In food crisis situations, states may consider lowering import tariffs on food as a way of lowering prices for the population.</td>
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<th>Improving resource efficiency</th>
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<td>Modernizing irrigation and introducing more water efficient varieties of crops could improve domestic food production and reduce food import dependence.</td>
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Resources and Materials

Conflict References

- Food price volatility and fragility in the MENA region
- Droughts and the Grain Export Ban in Russia

References with URL

Plumer, B. (2012). As food prices spike, how close is the world to another crisis? The Washington Post. (Retrieved 06.07.2015)

References without URL

Further information
https://factbook.ecc-platform.org/conflicts/global-food-price-shocks