

### Food scarcity as a trigger for civil unrest

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**Abstract.** Throughout history, there have been periods of civil unrest. From religious wars to wars of conquest, historians believe that the causes of wars are closely related with religious, political or economic reasons. But when we discuss about civil unrest inside a country with the power of transforming it into a civil war and expanding at regional level, the triggering factors have yet to be discovered. From the period of the Qing Dynasty (1644-1911) in China to the Great Depression in the 1930s in the USA or the beginning of the second World War in France, these periods have two common points: civil unrest and food shortages.

**Key Words:** Food scarcity, famine, civil unrest, trigger, food insecurity.

**Rezumat.** De-a lungul istoriei, au existat perioade marcate de tulburări civile. De la războaie religioase la războaie de cucerire, istoricii consideră că factorii declanșatori ai războaielor sunt strâns legați de motive religioase, politice sau economice. Dar când vorbim de tulburări civile în interiorul unei țări cu potențialul de a le transforma în război civil și a se extinde la nivel regional, factorii declanșatori încă nu au fost descoperiți. Din timpul Dinastiei Qing (1644-1911) în China la Marea Depresiune din anii 1930 din SUA sau începutul celui de-al Doilea Război Mondial în Franța, aceste perioade au două puncte comune: tulburări civile și penurie de produse alimentare.

**Cuvinte cheie:** Deficit de alimente, foamete, tulburări civil, factor declanșator, insecuritate alimentară.

**Introduction.** During the Qing Dynasty, spontaneous uprising in reaction to chronic shortages of food and high prices were a persistent phenomenon. Crowds often gathered at markets and government offices to protest high grain prices. Groups of people stormed the gates of rich families demanding cheaper grain and loans, and others attempted to block roads and rivers to keep scarce grain from leaving their areas. Most conflicts were generated by the refusal of those with grain to sell their stocks at lower prices, make loans, or restrict exports. This type of small-scale, short-term social action often involved only a few dozen people and usually lasted no more than a few days. In larger food riots, however, participants occasionally exceeded one hundred. When officials failed to act promptly and decisively to curb the disturbances, food riots in a particular locale might reoccur over a period of weeks. Few regions of the country appear to have been exempt from these disturbances (Bin Wong 1982).

In its most basic definition, a "*food riot*" is defined as an expression of competing claims over a limited food supply. A complete definition of "**food riot**" must consider both the economic and social aspects, while also including the political issues in its analysis. Food riots often occur if there is a shortage or an unequal distribution of food. Usually these are caused by food prices rises, insufficient storage facilities, food speculation, transport problems, hoarding, poisoning of food or pests attacks, weather related factors or many other factors. As in the 1977 Egyptian Bread Riots, people can often become too desperate by both the shortage of food or even by the perspective of a future shortage of food and attack shops, markets, the government building in order to obtain bread, grain or other staple foods.

**Material and Method.** The present study is part of a larger study on global food security policies named "A Global Agricultural Policy: how to feed the world?". The research material used for the present study is drawn from:

1. A review of relevant scientific literature concerning food related riots or civil unrest as marked by historians or other social scientists;
2. A review of relevant mainstream media reports on food related civil unrest in the period 2011-2013;
3. A mapping process of food insecurity hotspots.

**Results and Discussion.** According to the FAO (FAO SOFI 2013), in 2013, 842 million people are undernourished, a slight decrease in comparison with 2012, but still double in comparison to the 1950s. Despite huge efforts made by the international community in the past 20 years, food insecurity is still one of the biggest societal challenges today, mainly because of poor access to food and an unequal distribution of food at national, regional and global level. Because of different levels of development and agricultural competitiveness at global level, developing countries are often hit by food crisis provoked unintentionally by the national policies of developed countries. One relevant example is the US incentivization of biofuels production that has led to a 50% price increase in corn worldwide, because major corn producers in the country have considered that it is more profitable to grow the crop for biofuels than for human consumption. As the quantity available for human consumption decreased dramatically, food speculators bought corn and deposited it, waiting for a price surge. This led to civil unrest in many developing countries, as a price rise in one agricultural output can lead to growth in the prices of others.

In recent years, the world has witnessed several major food crisis associated with investor speculation and national policies. The first was in 2007-2008 when the food prices rose with over 51% and caused civil unrest in many developing countries in Asia, Africa and Europe (Schneider 2008; Bush 2010; Berazneva & Lee 2011). The second food crisis, that culminated with famine in the Horn of Africa, started with a 40% price increase between January 2010 and February 2011. The second food crisis saw a rapid rise in food prices and a growing concern in the population about access to food. This food crisis has been widely promoted by the mainstream media as being associated with and being the triggering factor of the Arab Spring that led to the collapse of the Ben Ali regime in Tunisia and the Mubarak regime in Egypt. Although many authors agree that speculative investments in the food sector can lead to increases in food prices (Lagi et al 2011) and some authors have linked food riots to high food prices (Berazneva & Lee 2011), it would not be correct to say that the triggering factor in the Arab Spring or in any civil unrest registering in an period with high food prices is food scarcity.

As the world population is expected to grow to 9.6 billion by 2050 (UNFPA 2012), there is growing concern that, although agriculture keeps a 2% annual growth in yields, we will not be able to provide enough food to this growing population. M. Bellemare (2012) has tried to identify through mathematical models whether or not food prices can cause civil unrest. Considering price volatility, but also analyzing socio-economic and political factors, Bellemare has built a model starting from models used for forecasting natural disasters. Lagi et al (2011) have developed a model starting from the FAO Food Price Index, comparing spikes in food prices with the beginning of "food riots" (Figure 1).

All models developed so far consider "de facto" high food prices as a triggering factor of civil unrest, not taking into consideration the human factor. As you can see in Figure 2, the countries that are most affected by chronic hunger have not experienced major civil unrests. These have been affected by local level riots caused by lack of access to food.

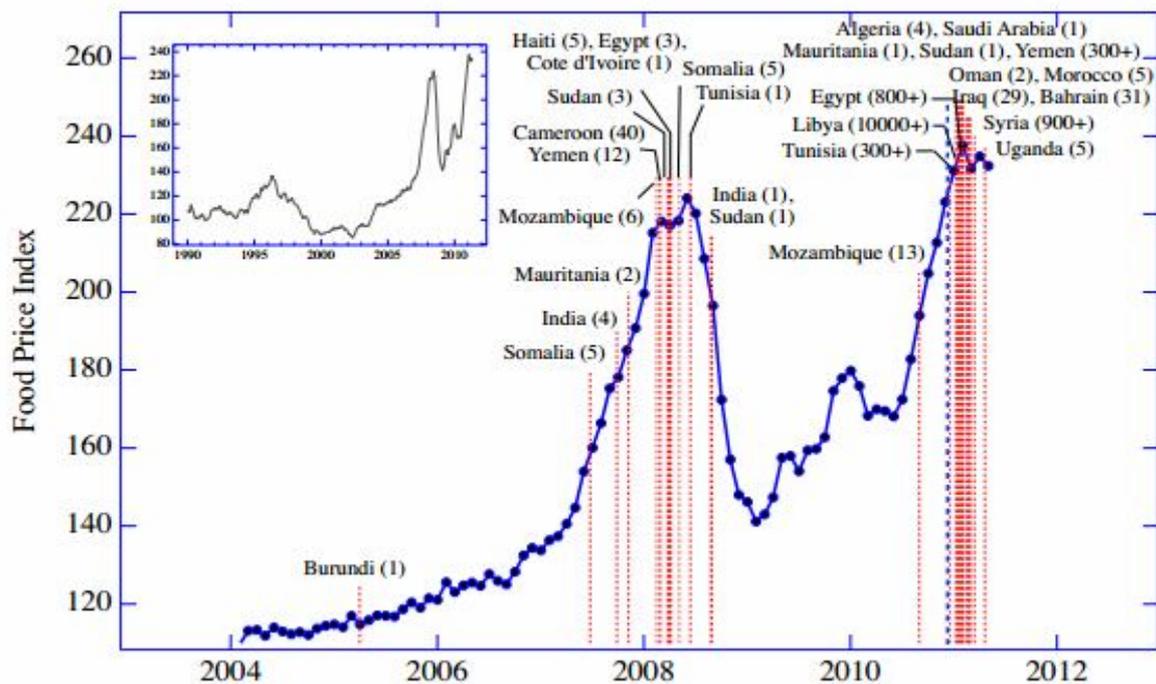


Figure 1. Time dependence of FAO Food Price Index from January 2004 to May 2011. Red dashed vertical lines correspond to beginning dates of "food riots" and protests associated with the major recent civil unrest in North Africa and the Middle East. The overall death toll is reported in parentheses. Blue vertical line indicates the date, December 13, 2010, on which we submitted a report to the U.S. government, warning of the link between food prices, social unrest and political instability (Source: Lagi, Bertrand and Bar-Yam 2011)

It is widely known that human beings depend on political processes for collective decision making and for ensuring security in the community. At local level, political systems can engender a greater amount of authority than at national or regional level, thus being able to maintain security even in periods of civil unrest. While conditions of widespread threat to security are often created artificially at local level by policy makers unintentionally when, through decisions at national level, they make food inaccessible, the triggering factor of civil unrest does not yet exist. As was the case with the Arab Spring, although the Tunisian population was facing food shortages for years, the triggering factor was the suicide of Tarek al-Tayeb Mohamed Bouazizi. Easily identifiable in most food related riots, the triggers that caused civil unrests are things that disrupt the status quo and that force the political authority to use violence.

Fourteen of 53 African countries saw mass disturbances following abrupt spikes in food prices in 2007-2008. These riots differed in location, severity and organization – from demonstrations organized by trade unions in Burkina Faso to sit-ins organized by consumers' associations in Senegal, to spontaneous store lootings in Egypt and Guinea. However, they all erupted in response to the unaffordability of food and other staples such as fuel and transportation, as well as perceived government ineffectiveness and corruption. It is worth noting that many of these same factors have been cited as among the causes of the popular uprisings in Tunisia, Egypt, Libya and other Middle Eastern countries in late 2010 and early 2011 (Berazneva & Lee 2011).

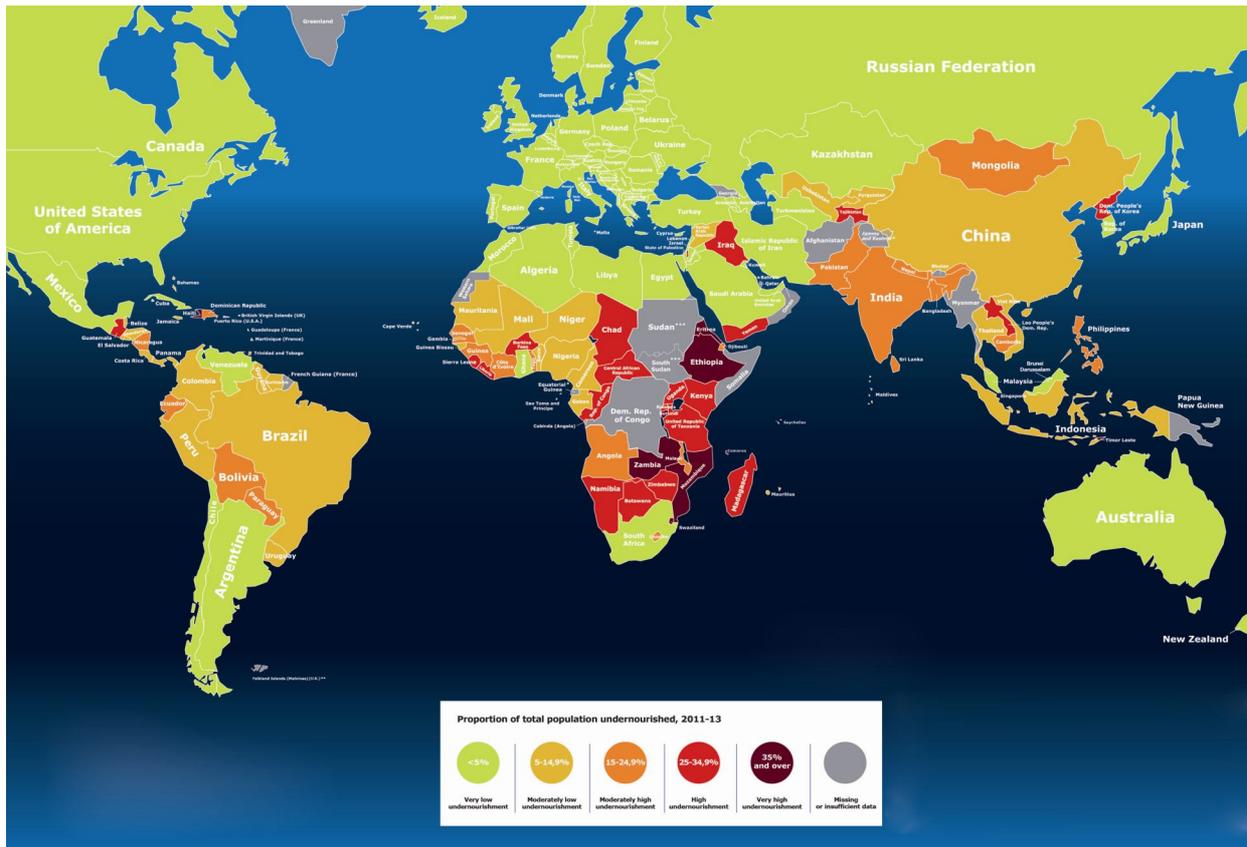


Figure 2. World Hunger Map 2013 (Source: World Food Programme).

As food insecurity increases at both national and regional level, policy makers are increasingly worried about the possibility of new food prices spikes and food-related civil unrests. In an exercise to map food scarcity in real time, we overlapped previous regions known for major socio-economic problems and that have faced civil unrest in the past 20 years with real time food shortages reports obtained through various communications tools.

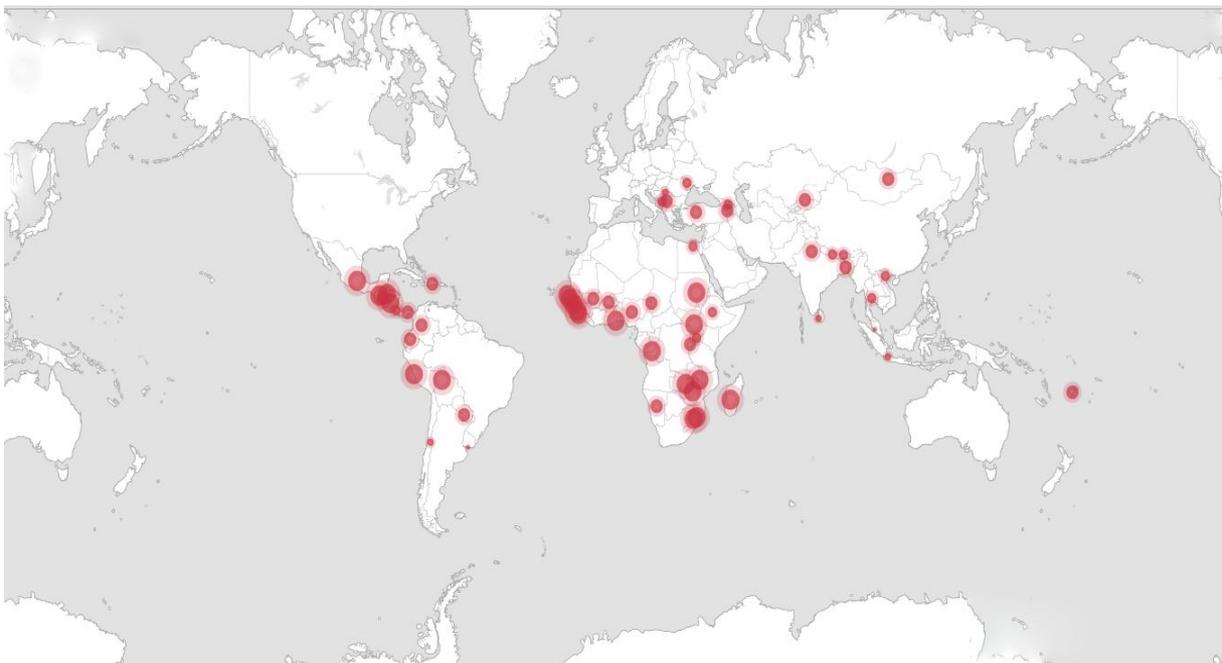


Figure 3. Mapping food insecurity hotspots (Source: Elaborated by author using data from own research).

As you can see in Figure 3, there have been identified several possible food insecurity hotspots that have the potential of transforming into civil unrests and expanding, if a violent triggering factor will exist. As this is still a purely empirical model, further research must be done in order to transform it into a working research model that can be used by policy and decision makers in order to prevent civil unrests. Such a model could be used for the forecasting of food insecurity hotspots and for enabling local and central governments to establish their authority in order to prevent the escalation of food riots.

**Conclusions.** Civil unrests have been linked throughout history by access to food. Many scientists have proven that the lack of access to food or an unequal distribution of food can lead to a failure in the political system's ability to ensure security at both local and national level, as a result of a change in human behaviour. As human beings feel themselves and their families threaten, they will relinquish the sense of dependency to any authority (political, religious or economic) and try to protect or ensure his wellbeing and that of his family.

Starting from the mathematical models that have been built to prove the connections between high food prices and food riots and with the use of communications tools, a process of mapping food insecurity hotspots has been developed in order to aid decision makers track possible food riots spots.

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