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# **The commons-based international Food Treaty: A legal architecture to sustain a fair and sustainable food transition\***

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*“Between the strong and the weak, between the rich and the poor, between the lord and the slave,  
it is freedom which oppresses and the law which sets free”*  
Henri-Dominique Lacordaire (1802-1861)

## **Summary**

*Food as a purely private good prevents millions to get such a basic resource, since the purchasing power determines access and the price of food does not reflect its multiple dimensions and the value to society. With the dominant no money-no food rationality, hunger still prevails in a world of abundance. Hunger is needlessly killing millions of our fellow humans, including 3.1 million young children every year, condemning many others to life-long exposure to illness and social exclusion. This paper argues this narrative has to be re-conceived and a binding Food Treaty, based on a commons approach to food, will create a more appropriate framework to work together towards a fairer and more sustainable world. The eradication of hunger no later than 2025 would be the main objective within a broader framework whereby food and nutrition security shall be understood as a Global Public Good. Within the treaty framework, those governments that are genuinely determined to end hunger (a coalition of the willing) could commit themselves to mutually-agreed binding goals, strategies and predictable funding. The paper presents the rationale to substantiate the treaty, as well as objectives, provisions and a possible route map for the process.*

## **Introduction**

Widespread malnutrition and the role of the state in fighting food insecurity, namely hunger and obesity, are issues at the forefront of contemporary debates. Record levels of world hunger prevail despite bountiful harvests and soaring profits for the transnational corporations that dominate the global food supply (De Schutter, 2010). With millions of people needlessly dying each year because of hunger in a world of

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\* *In Penser une démocratie alimentaire* Volume II – Proposition Lascaux entre ressources naturelles et besoins fondamentaux, F. Collart Dutilleul et T. Bréger (dir), Inida, San José, 2014, pp. 177-206. Le programme Lascaux est un programme européen entant dans le cadre du 7e PCRD - Programme spécifique “IDEES” – ERC (Conseil Européen de la Recherche) – *Grant agreement for Advanced Investigator Grant* (Sciences sociales, 2008). Il porte sur le nouveau droit agroalimentaire européen, examiné à l’aune des problématiques de la sécurité alimentaire, du développement durable et du commerce international. Il est dirigé par François Collart Dutilleul, professeur à l’Université de Nantes et membre de l’Institut universitaire de France (pour plus d’informations, consulter le site de Lascaux : <http://www.droit-aliments-terre.eu/>).

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ample food supplies<sup>1</sup>, nobody can dispute the need for institutional mechanisms that raise the level of attention given to food security and nutrition-related issues and lead to better coordinated action among the many actors that are concerned with the multiple dimensions of the problem. The world is not doing well with hunger reduction, the closing of the inequality gap and the growing obesity pandemic and thus unconventional and radical perspectives need to be brought to the debate (Krasner, 1999).

One of those radical perspectives would be to consider food as a common or a public good that should be governed in a commons-based manner, and not just produced and distributed as any other commodity. At present, food is largely regarded as a pure private good, as it is excludable and rival, although wild foodstuff could perfectly be considered a commons. The value of food is no longer based on its many dimensions that bring us security and health, values that are related to our cultural foundations (food as culture), to human rights considerations (the right to food), to the way food is produced (food as a sustainable natural resource) or to its essential nature as fuel for human body. Those multiple dimensions are superseded by the tradable features, being value and price thus mixed up. This article defends that a fairer and more sustainable food system shall revalue the non-monetary dimensions of food, and hence the global and local food production and distribution systems shall not be exclusively governed by supply-demand market rules<sup>2</sup>. Food can and must be shared, given for free, guaranteed by the State, cultivated by many and also traded in the market. The purchasing power cannot exclusively determine our access to such essential. Food is a *de facto* impure public good, governed by public institutions in many aspects (food safety regulations, seed markets, fertilizer subsidies<sup>3</sup>, the EU CAP<sup>4</sup> or US Farm Bill<sup>5</sup>), provided by collective actions in thousands of customary and post-industrial collective arrangements (cooking recipes, farmers' seed exchanges, consumer-producers associations) but largely distributed by market rules: you eat as long as you have money to purchase either food or food-producing inputs. We have to change that narrative.

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<sup>1</sup> Today, 7100 children under five have died of malnutrition, what means 300 every hour and 5 every minute. More than double also died of causes directly associated to malnutrition such as diarrhea or pneumonia.

<sup>2</sup> Moreover, following the philosopher Michael SANDEL, market rules not only put prices to goods but in doing so markets corrupt their original nature (SANDEL, 2012). The commodification of food crowds out non-market values worth caring about, such as recipes associated to some types of food, the conviviality of cropping, cooking or eating together, the local names of forgotten varieties and dishes or the traditional moral economy of food production and distribution, materialised in the ancient and now proscribed practices of gleaning or famine thefts.

<sup>3</sup> Fertilizer subsidies are widely used all over the world, either explicitly or in more subtle ways, as government recognizes that the agricultural sector is a strategic one. <http://www.voanews.com/content/fertilizer-subsidy-costs-could-outweigh-benefits/1693403.html> [Accessed January 7 2014].

<sup>4</sup> The Common Agricultural Policy (CAP) of the European Union is a multi-state supported programme to help food producers to earn a better living, increase price competitiveness in the international market and incentivize the rural inhabitants to remain in rural areas so as to become custodians of the landscapes and the environment. In 2011, total CAP budget for 27 EU countries was 58 billion euro [http://ec.europa.eu/agriculture/statistics/factsheets/pdf/eu\\_en.pdf](http://ec.europa.eu/agriculture/statistics/factsheets/pdf/eu_en.pdf) Comparative data on state support to agriculture can be found in EU (2012). [Accessed January 7 2014].

<sup>5</sup> The US Farm Bill incorporates not only schemes to support agriculture but also nutrition programs such as food stamps and school lunches. In 2012, only the food stamps amounted 100 billion \$ and the US Senate schedules nearly 1 trillion \$ for the next 10 years of the Farm Bill. <http://capreform.eu/the-us-farm-bill-lessons-for-cap-reform/> [Accessed January 7 2014].



Another daring proposal to combat the growing inequalities the free-trade globalisation is exacerbating would be to share higher areas of state sovereignty and transfer them to international semi-sovereign institutions (Brauer and Haywood, 2010), such as those already functioning in internet (ICANN, the Internet Corporation for Assigned Names and Numbers), the industrial sector (ISO, the International Organization for Standardization), the humanitarian affairs (ICRC, the International Committee of the Red Cross) or sports (IOC, the International Olympic Committee or FIFA, Federation International of Football Associations).

In a world whose food production is threatened by climate change, global stagnant yields, diminishing water, soil and agro-biodiversity resources and the current energy and economic crises, sharing sovereignty seems to be, at least, a debatable option to safeguard our existence (Corner, 2008). The objective of sharing any given nation's sovereignty and submitting to an international treaty would be to address global problems with worldwide implications that cannot be solved with the current nation-state set up, implications that can be considered Public Bads (Stiglitz, 1999). Each nation-state, during international talks, tends to maximize its own benefit (for its citizens, economy or environment) and this plays against the maximum benefit for all, as the tragedy of the commons theory has already proven (Hardin, 1968). Sharing of sovereignty should come in exchange of sustainable food production, fair food trade and social stability for the entire world.

If food security is to be achieved, a binding international convention with redress and sanctioning mechanisms and the partial sharing of sovereignty to supranational institutions are two of the previously-considered anathemas<sup>6</sup> that need to be re-examined with a sight into the post-2015 talks to be concluded in 2015. Those two political options (food as a commons and a binding food treaty), amply discarded in the past decades, should be reconsidered in light of the current failures of the global food system to provide food for all.

### **I - Reasons that can justify a negotiation process towards a binding food treaty**

More and more, it seems evident the dominant fuel-based industrial food system must be reinvented as it has failed to fulfill its goal. The four major driving forces to justify that rationale are a hungry world, the depletion of current energy sources, the increasingly evident negative consequences of climate change to human societies and the over-reliance on market-driven mechanisms to attain global food security.

#### ***A Hungry World: The failure of the global food system to feed the world.***

The industrial technology-dominated food system has achieved remarkable outputs during the second half of the 20<sup>th</sup> century by increasing food production and facilitating food access to millions of urban and rural consumers. As a matter of fact, between 1960 and 1990, the share of undernourished people in the world fell significantly since improved availability and decreased staple food prices dramatically improved energy and protein consumption of the poor (Hazell, 2010; FAO, 2013a). FAO reports a reduction of 173 million hungry people from 1015 million (19%) in 1990 to

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<sup>6</sup> The definition of anathema stands for a thing detested, loathed, accursed or consigned to damnation or destruction. In the political arena, it refers to ideas that are non-treated, discarded or attacked by being naïve, out-fashioned or impossible. The *Real Politik* does not count on them at national and international talks. However, any potential option should be explored to improve the weak global governance of food and its nemesis, hunger.



848 (12%) in 2013, representing 7.5 million less per year (FAO, 2013b). And the UN also confirms that 700 million fewer people lived in conditions of extreme poverty in 2010 than in 1990 (UN, 2013a). This linear increase in food production has outpaced the population growth benefiting virtually most consumers in the world and the poor relatively more because they spend a greater share of their income on food<sup>7</sup>.

Productivity gains, however, have been uneven across crops and regions (Evenson and Gollin, 2003) and global increases in production have been confined to a limited range of cereal crops (rice, maize, and wheat) with smaller increases in crops such as potato and soybean (Godfray *et al.*, 2010). Increased cereal production has supported the increase in chicken and pig production, but also led to concerns that human diets are becoming less diverse and more meat-based, with the subsequent increase in the ecological footprint. We produce 4600 kcal per person of edible food harvest, enough to feed a global population of 12-14 billion (UNCTAD, 2013), but after waste, animal feed and biofuels, we end up with no more than 2000 Kcal per person (Lundqvist *et al.*, 2008). And it seems that yield improvements are already reaching a plateau in the most productive areas of the world (Cassman *et al.*, 2010; Lobell *et al.*, 2009), rendering almost impossible to double food production by 2050 with the current trends (Ray *et al.*, 2013). That explains why many scientists and agri-food corporations are calling for a Greener Revolution or Green Revolution 2.0 (Pingali, 2012).

However, this mechanisation and commodification of the industrial food system did not come for free and many undesirable externalities and consequences are evident nowadays. Globally speaking, we have a troublesome relationship with food, as more than half the world eats in ways that damage their health. Eating is not a source of pleasure for billions but a compulsory habit and certainly a cause of concern. Obesity and undernutrition affect an estimated 2.3 billion people globally, about one third of the world's population (GAIN, 2013), and food and nutrition security is at the forefront of contemporary political debates. Hunger is the largest single contributor to maternal and child mortality worldwide, with 3.1 million children dying every year of hunger-related causes (Black *et al.*, 2013). Additionally, overweight and obesity cause 2.8 million deaths (WHO, 2012). Despite years of international anti-hunger efforts, rising gross national incomes and per capita food availability, the number of hungry people has been reduced at a very slow pace since 2000 and we have 848 million undernourished people in the world (FAO, 2013a). Obesity is rapidly mounting and 1120 million obese people are expected by 2030 (Kelly *et al.*, 2008). The ironic paradoxes of the globalised industrial food system are that half of those who grow 70% of the world's food are hungry (ETC Group, 2013), food kills people, food is increasingly not for humans (a great share is diverted to biofuel production and livestock feeding) and 1/3 of global food production ends up in the garbage every year, enough to feed 600 million hungry people (FAO, 2011).

The side-effects of the industrial food system can be illustrated by the fact that 70% of hungry people are themselves small farmers or agricultural labourers (UNCTAD, 2013), agriculture is highly demanding of water and it makes a poorly use of that scarce public good, the industrial system diminishes the nutritious properties of some foods, by storing in cold rooms, peeling, boiling and the transformation processes (Sablani *et al.*, 2006; Toor and Savage, 2005), an overemphasis on production of empty and cheap

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<sup>7</sup> Although consumers generally benefited from declines in food prices, farmers benefited only where cost reductions exceeded price reductions (EVENSON and GOLLIN, 2003).



calories renders obesity a growing global pandemic, food production is highly energy inefficient as we need 10 kcal to produce 1 kcal of food (Pimental and Pimental, 2008), soil degradation and biodiversity loss amongst others. With the current levels of food production and consumption, if we all were a standard US citizen, we would need 5.2 planets to cover our needs (WWF, 2012). And nevertheless the 1.2 billion poorest people account for only 1 per cent of world consumption while the billion richest consume 72 per cent (UN, 2013b). And the future looks gloomier as hunger will likely increase in the future (UK Government, 2011).

Moreover, in the last decade it seems to have gone too far in the radical consideration of food as a pure commodity that can be speculated with, diverted from human consumption to biofuel production and used as a justification for unethical land grabbing in the poorest but land-rich countries by the richest but land-poor ones. And this excessive commodification has not even rendered more efficient or cost-benefit than the more sustainable food systems (either modern organic or customary) as the industrial food system is heavily subsidized and amply favoured by tax exemptions<sup>8</sup>. The great bulk of national agricultural subsidies in OECD countries are mostly geared towards supporting this large-scale industrial agriculture<sup>9</sup> that makes intensive use of chemical inputs and energy (Nemes, 2013), and that helps corporations lower the price of processed food compared to fresh fruits and vegetables. The alternative organic systems are more productive, both agronomically and economically, more energy efficient and they have a lower year-to-year variability (Smolik *et al.*, 1995) and they depend less on government payments for their profitability (Diebel *et al.*, 1995).

#### *The Depletion Dilemma: The decadence of fossil fuels*

The world is approaching the sunset of the oil era in the first half of the 21<sup>st</sup> century (Rifkin, 2002). The oil peak will arguably be reached before 2020 (Sorrell *et al.*, 2010), unless oil reserves not yet accessible can be open up for commercial purposes, and it is forecasted that before 2050 oil will no longer be a commercial source of energy for the world. Most oil-exporting countries will reach the plateau of production between 2010 and 2020, starting the decline from 2020 (Mitchell and Stevens, 2008). This declining of oil and gas stocks while the growing population does not cease to demand more energy is a huge challenge. On top of that, the global food system is living outside its means, consuming resources faster than are naturally replenished (IAASTD, 2009). Substantial changes will be required throughout the food system and related areas, such as water use, energy use and addressing climate change, if food security is to be provided for a predicted nine billion or more people out to 2050. By improving the knowledge of agro-ecological practices, we can delink the production of food from its current dependency on fossil energy, which has nowadays become unsustainable

#### *The threats of Climate change: an external problem that requires global solutions*

Climate change is already modifying weather and rainfall patterns. In many vulnerable areas of the Global South, the gradual rise of temperatures, the diminishing rainfall and the impact of extreme weather events are already having impacts in food production and food security. Climate change will contribute to food and water scarcity

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<sup>8</sup> The Global Subsidies Initiative <http://www.iisd.org/gsi/> [Accessed January 7 2014].

<sup>9</sup> The average support to agricultural farmers in OECD countries in 2005 reached 30% of total agricultural production, equalling to 1 billion \$ per day (UNCTAD, 2013). In OECD countries, agricultural subsidies amount \$400 billion per year. Moreover, the world is spending half a trillion dollars on fossil fuel subsidies every year. In 2011 the US government gave \$1billion in fuel tax exemptions to farmers. The overall estimate for EU biofuels subsidies in 2011 was €5.5–€6.8 billion (IISD, 2013; WWF, 2011).



and it will increase the spread of disease, and may spur or exacerbate mass migration and the further weakening of fragile states (US Department of Defense, 2010) which in turn may increase the likelihood of global instability and risk to national security (World Economic Forum, 2011). Human civilization and ecosystems will surely change to adapt to the rapidly changing global climate, and that transition will not be easy or fast. Climate change and its consequences for food and nutrition security, health and economic development will likely be the external agent that may trigger a re-conceptualization of our nation-state approach to global problems as well as to global public goods, opening up the debate on the leading role of the states vis a vis the transnational agri-food corporations and the unregulated markets. In such scenario, could it be possible to broker an international food security treaty to end world hunger through the rule of law?

### ***The over-reliance on market forces***

One of the dominant economic doctrines of recent decades has been that market forces by themselves could regulate the national and international food systems to pull hungry people out of the plight of starvation and destitution. It was praised that market-led food production and allocation would finally achieve a better-nourished population, as long as the world's average wealth increased. However, reality has proven otherwise as unregulated markets may still not provide a socially efficient quantity of food even if enough income was distributed to low-income groups. Moreover, despite the reliance on industry self-regulation and public-private partnerships to improve public health and nutrition, there is no evidence to support their effectiveness against hunger, obesity and safety considerations (Hawkes and Buse, 2011; Moore-Lappe *et al.*, 1998). Transnational corporations are major drivers of obesity epidemics by maximising profit from increased consumption of ultra-processed food and drink (Ludwig *et al.*, 2001; Monteiro *et al.*, 2011). Marion Nestle has recently uncovered how Coca Cola is supporting scientific research to influence in the public opinion towards their industrial fatty and high-sugar products<sup>10</sup>. These conflicts of interest between economic profit and scientific knowledge have proven to exert a reporting bias in industry-financed academic research so as to mask or discard the direct relationship between ultra-processed sweetened drinks and obesity (Bes-Rastrollo *et al.*, 2013). The consumption of unhealthy food and drinks is occurring faster in food systems that are highly penetrated by foreign multinationals in poor countries (Stuckler *et al.*, 2012), where government regulations and public opinion are usually not capable of controlling corporate leverage. That explains why the only evidence-based mechanisms that can prevent harm caused by unhealthy commodity industries are public regulation and market intervention<sup>11</sup>. This means, more state not less.

A food system anchored in the consideration of food as a commodity to be distributed according to the demand-supply market rules will never achieve food security for all (Rocha, 2007). It is evident that the private sector is not interested in people who do not have the money to pay for their services or goods, whether be healthy food or staple grains. Moreover, markets, governed by private, individual self-interest, will not provide an adequate quantity of public goods, such as public health, good nutrition or hunger eradication, with enormous although non-monetised benefits

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<sup>10</sup> <http://www.foodpolitics.com/2013/10/annals-of-nutrition-science-coca-cola-1-nhanes-0/> [Accessed January 7 2014].

<sup>11</sup> Strong laws consistently had a biggest impact in curbing school sales of junk food and sweetened drinks and thus in slowing childhood obesity (MOODIE *et al.*, 2013; TABER *et al.*, 2012; WHO, 2013).



to human beings, as the positive externalities cannot be captured by private actors. Those public goods have to be sought and maintained by the public sector and the collective actions of citizens.

## **II - A legally-anchored food transition that guarantees sustainability: practical implications**

With millions of people needlessly dying prematurely each year from hunger and obesity in a world of ample food supplies, nobody can dispute the need for a change. The mass industrial food model, which is becoming highly dominant, is increasingly failing to fulfil its basic goals: producing food in a sustainable manner, feeding people adequately and avoiding hunger. There is a need to bring unconventional and radical perspectives into the debate on possible solutions for a transition towards a fairer and sustainable food system. Following Wrights' real utopias, there is an urgent need to develop alternative visions to the industrial food system, no matter how little support that may get, since the mere fact of proposing alternatives outside the dominant mainstream may contribute to creating the conditions in which such support can be built (Wright, 2010). And the power of food to generate a substantial critique to the neoliberal corporate and industrialized food system and to harness multiple and different alternative collective actions for food shall not be underestimated (McMichael, 2000). Food is a powerful weapon for social transformation.

At present, the globalised world is at the crossroad of two food transition streams: the well advanced nutritional transition from vegetable- to meat-dominated diets and the incipient food transition from oil-dependent industrial agriculture to more sustainable and local food systems. The path selected by the majority of the population and the new food paradigm that will emerge from these transitions will greatly affect our survival within the Earth's carrying capacity. Nevertheless, all previous transitions shared a common denominator: food was always viewed as a private good produced by private means and traded in the market. Almost none of the most relevant analyses produced in the last decades on the fault lines of the global food system and the very existence of hunger has ever questioned the nature of food as a private good (FAO, 2012; UK Government, 2011; World Bank, 2008; World Economic Forum, 2013), although some authors already suggested the idea (Anderson, 2004; Ausin, 2010; Wittman *et al.*, 2010). And therefore the common understanding affirms the main problem nowadays is the lack of food access, reaffirming the private nature of food and its absolute excludability<sup>12</sup>. But problems cannot be solved with the same mind-set that created them, as Einstein wrote.

If food is considered a commons, the legal, economic and political implications would be paramount. Food would be kept out of trade agreements dealing with pure private goods (Rosset, 2006) and there would thus be a need to establish a commons-based governing system for production, distribution and access to food, such as those

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<sup>12</sup> All researchers and policy makers implicitly agree that food is purely a private good, that you gain access to when you purchase it in the market or produce it yourself with other privately-owned inputs. Along those lines, there is a common understanding that the main problem nowadays is the lack of food access, although food production concerns are also gaining momentum. This approach is evident in the following global food security policy documents: MDG and WFS Plans of Action, the CFS Global Strategic Framework for Food Security and Nutrition 2012, the G-8 New Alliance for Food Security and Nutrition 2012, the G-20 L'Aquila Food Security Initiative, The G-20 Action Plan on food price volatility and agriculture 2012 and the World Economic Forum New Vision for Agriculture. Additional references can also be found in Vivero (2013).





agreements proposed for climate change and universal health coverage. That would definitely pave the way for more binding legal frameworks to fight hunger (MacMillan and Vivero, 2011). In the same line, a Universal Food Coverage<sup>13</sup> could also be a sound scheme to materialise this new narrative. This social scheme would guarantee a daily minimum amount of food for all citizens (HLPE, 2012) (i.e. one loaf of bread or ten *tortillas*). This universal entitlement would protect the only human right declared as fundamental in the ICESCR: freedom from hunger, and it would recognize that eating is a fundamental human need. The food coverage could also be implemented as a Basic Food Entitlement (Van Parijs, 2005) or a Food Security Floor (Deacon, 2012). During the transition period, and as an immediate mechanism, the state should guarantee the minimum salary equals the food basket. Moreover, there would be a legal and ethical ground to ban futures trading in agricultural commodities, as the speculation on food influences considerably the international and domestic prices and benefits none but the speculators. Considering food as a commons would prioritize the use of food for human consumption, limiting the non-consumption uses. Today, by applying the economic rationale, the best use of any commodity is where it can get the best price (i.e. feed for livestock, pharmaceutical by-products or biofuel).

Food as a commons would provide the adequate rationale to support the non-economic arguments favouring a more sustainable and fairer food system, arguments more related to valuing the multiple dimensions of food to human beings other than its artificially-low price in the market. For instance, dimensions related to fair production and nutritional and enjoyable consumption, compared to the mono-dimensional approach to food as a commodity, where the major driver for agri-businesses is to maximize profit by producing and delivering cheap food with low nutritional value and high-energy demanding. Those dimensions should be legally-anchored in an international Food Treaty, downsizing the trade and commodity dimensions of food and emphasizing its importance for human bodies and human cultures.

### **III - Finding a more adequate framework to negotiate food production and trade**

The three self-contained legal regimes that currently regulate food and agriculture, namely international human rights law, international environmental law and international trade law, are still working separately, with international trade law taking precedence over the other two to the detriment of small farmers and the environment. The absence of coordination among these regimes and the fact that trade and investment rules are often enforced by sanctions, while human rights obligations are not, gives trade and investment rules the *de facto* advantage. We urgently need a better coherence regarding the three major sets of international law related to food and agriculture (CEHAP, 2009).

Many critics have long argued that removing agriculture from the WTO would be the necessary first step (Rosset, 2006). The converging food, climate and agrobiodiversity crises, combined with the difficulties encountered during the Doha Round at the World Trade Organization (WTO), have made imperative a new debate on global food politics and our food production and trade model. WTO law does not really consider the full range of human, social and environmental rights and the factors that define agricultural specificity. Therefore, the WTO and the international trade legal

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<sup>13</sup> An idea called for by Nobel Prize Amartya Sen <http://www.governancenow.com/news/regular-story/amartya-sen-bats-universal-food-coverage> [Accessed January 7 2014].



framework do not seem to be the appropriate scenario where the world's food security should be debated. No government should be forced to choose between honouring its commitments made under free trade treaties or at the WTO, and honouring its obligations regarding the right to food (De Schutter, 2011). Even if the current gridlock could be overcome, it is unlikely that the WTO Agreement of Agriculture, with its single-minded emphasis on export production, will encourage farming practices that respect ecological limits and contribute to food security (Gonzalez, 2012). In addition to that, the international regulation is necessary to address the domination of agricultural markets by a handful of transnational corporations (Gonzalez, 2010; Clapp and Fuchs, 2009).

The more challenging step now is to devise a system of global governance that overcomes the fragmentation of international law, invites the participation of civil society, and promotes sustainable approaches to food production, distribution and consumption. But, what type of governance? Still a Westphalian sovereign state-based architecture? Recent history suggests that even if the level of government representation is more elevated than at present<sup>14</sup> existing inter-governmental bodies are unlikely to be successful in ensuring the level of commitment required to trigger action on the scale needed to bring about a massive reduction in hunger and malnutrition. There are three main reasons for this:

a) Firstly, in spite of the commitments repeatedly made, only a few governments are strongly motivated to address food security and nutrition issues. Most prefer to assume that the problems will disappear as a consequence of economic growth (Sumner *et al.*, 2007).

b) Secondly, unscrupulous governments use hunger as a political weapon to appease the demanding citizens or to attract international attention to the humanitarian crisis.

c) Thirdly, the general pattern in existing multilateral institutions dealing with food security and agriculture is for national delegates to assume positions that respond to the short-term interests of their domestic constituencies rather than ones which ensure the greatest good to mankind as a whole. The need to arrive at consensual agreements acceptable to all nations makes it virtually impossible to engage themselves in binding commitments.

In the case of food and hunger, the declarations of successive World Food Summits do not commit individual countries to any specific goals or actions for reducing hunger at a national level or for providing funds towards the costs of hunger eradication in other countries. To a certain extent the same is true of the International Covenant on Economic, Social and Cultural Rights (ICESCR). This has been ratified by 160 countries that recognise "the fundamental right of everyone to be free from hunger" amongst many other rights, but the time-scale within which these rights are to be assured is not defined. In spite of this progress, however, the ICESCR remains a "soft instrument" that is unlikely, alone, to bring about a rapid drop in deaths caused by hunger and malnutrition, though it provides an extremely important element in the arsenal of weapons with which to address the problem. Therefore, in parallel to adjustments to the existing institutions, priority should also be given to creating a new binding framework

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<sup>14</sup> Recent efforts to raise the level of government representation at the CFS have failed, as few ministers and no head of state have so far shown up in those meetings. A highly-reputed Canadian think tank has proposed a re-arrange of the existing UN agencies dealing with food and agriculture (ETC Group, 2009).



within which they can operate with greater effectiveness<sup>15</sup>, as a result of sharpened time-bound goals, an agreed plan of action and more predictable funding.

#### **IV - A Food Treaty for better coherence between food, environment, human rights and trade**

A food treaty, to be useful, shall give hierarchical priority to human rights and environmental norms over obligations contained in trade and investment agreements, with good examples being the right to food or the right to a healthy environment. A convention or treaty to end deaths related to hunger and malnutrition would strengthen the hand of existing intergovernmental institutions to fulfil their mandates in addressing the various dimensions of food security, defining their obligations with greater clarity and encouraging a fuller integration of their programmes, especially at national levels within developing countries. By putting the rule of law behind the aim of eradicating hunger, the Food Treaty would lend legal support to ongoing global food security and nutrition initiatives, such as the Scaling Up Nutrition (SUN), the UN Inter-Agency Renewed Efforts to End Child Hunger (UN REACH), Ending Child Hunger and Undernutrition Initiative (ECHUI) or Hunger-Free Latin America and the Caribbean (ALCSH), and it would complement the Universal Declaration of Human Rights and the ICESCR.

The application of a convention-based approach to the issue of hunger and malnutrition could be successful not only in translating “soft” into “hard” (i.e. accountable) commitments by individual governments, but also in raising the level and predictability of commitments, and hence lead to a marked acceleration in relevant actions and achievement of results. The road towards this treaty will not be easy, being the main obstacles the big and powerful agri-business transnational companies, which already control the complete food chain in most developed countries, and some states where those same companies have the headquarters and, worryingly, strong political ties.

The intermediate target of halving the proportion of hungry people by 2015 has distracted attention from the ultimate goal of eradicating hunger, to the extent that this tends to be forgotten. It is vital to do everything possible to achieve the 2015 target on the road to eradication by 2025, but the 2015 target has all the weaknesses of any half-measure: it fails to inspire a sense of urgency and unity and, even if achieved, it effectively condemns the “other half” to continued hunger and premature death. Nothing short of an absolute goal of eradicating hunger and malnutrition throughout the world (and reflecting this in national goals) within a relatively short period will galvanize the necessary public support, political commitment, creativity and action<sup>16</sup>. The strongest argument is that is now technically possible and financially affordable<sup>17</sup>. The Food Treaty must retain this goal of hunger eradication as its political compass.

#### ***Why should Governments support a Food Treaty?***

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<sup>15</sup> There would seem to be obvious advantages in combining expertise of FAO (expansion of small-scale farm production), WFP (social protection), WHO (nutrition/health), UNICEF (children), UNEP (environment) and IFAD (finance) on assisting countries in implementing national programs to eradicate hunger and malnutrition.

<sup>16</sup> It is relevant to mention that President Lula mobilized Brazil by adopting a “zero hunger” goal for his national food security programme, and thereby imbued it with a sense of urgency that caught popular imagination and led to the rapid creation of institutions and laws for its implementation.

<sup>17</sup> About 40 developing countries are on course to meet the World Food Summit goal of halving the number of hungry by 2015, demonstrating that this is possible.



1.- The food price crisis has made governments increasingly conscious of the huge perils of inaction about food issues, namely food riots, mounting budgets for food imports, high dependence of staple food produced in other countries, land grabbing and loss of food sovereignty among others.

2.- A second political rationale for the treaty would also include to discourage migration towards developed countries, as food secure households tend to stay in their countries (Wainer, 2011); to abate poverty-fuelled terrorism linked to economic exclusion and food deprivation (Pinstrup-Andersen and Shimokawa, 2008) and to mitigate national civil unrest (Holt-Giménez and Patel, 2009).

3.- The growing realisation of the huge economic and social benefits to be gained from reducing hunger and malnutrition should also play a major argument in a market-dominated world. Cohabiting with hungry people is more expensive than putting a remedy to their situation. The World Bank estimates that chronic malnutrition reduces the GDP of developing countries by between 2 and 3 per cent (World Bank, 2006). Children with stunted growth can have an IQ 15 points lower than a well-fed child's. Adults who were malnourished as children earn at least 20% less on average than those who were not (Grantham-McGregor *et al.*, 2007).

4.- The evident failure of business-as-usual approaches to hunger reduction (Fan, 2010): the world produces more food than required to feed appropriately everyone, but there 848 million hungry people in 2011, and that figure is expected to keep on rising due to the economic crisis.

5.- Increasing evidence that well designed national programmes anchored in appropriate legal and institutional frameworks can work (i.e. Brasil, Thailand, Ghana, Peru, Europe and Japan after the Second World War).

6.- Recognition of benefits of shifting from “soft” to “hard” legally binding reciprocal commitments for the achievement of major global objectives, as it has been the case during the recent climate conference in Durban, where the Durban Platform for Enhanced Action has been established. This platform, including all the Kyoto Protocol signatories plus the United States, aims to bring both developed and developing countries together in a legally binding treaty between 2015 and 2020. This political endeavour is a proof that previous non-binding agreements have been toothless in moving climate change issues in the positive direction.

7.- Growing public consciousness of human rights and especially of the fundamental right to be free from hunger, strongly associated to the right to life.

#### **V - Lessons learned from other legally-binding international agreements**

In fields other than food security, international conventions have been used as instruments within which genuinely interested nations can come together to commit themselves in an explicit and binding manner to work jointly towards the attainment of agreed global goals. Amongst the best known are the Geneva Convention on the Treatment of Prisoners of War, the Ottawa Convention on the prohibition of the use, stockpiling, production and transfer of anti-personnel mines and the Rio Convention on Biological Diversity and the additional protocols, such as the Montreal Protocol on Substances that Deplete the Ozone Layer and the Cartagena Protocol on Biosafety. These agreements, later on, are translated into national legislation designed to enable each signatory nation to fulfil its commitments. In the food and agriculture domain, as well as in other areas of environmental protection, there are binding treaties that can enlighten



us on how to fix the goals, steer the processes to reach the agreements and their success and level of fulfilment.

a.- *The International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA)* is a convention that was approved in 2001 and entered into force on 29 June 2004, being signed so far by 125 member states and ratified by 56 (Esquinas-Alcazar *et al.*, 2011).

b.- *The Cartagena Protocol on Biosafety to the Convention on Biological Diversity* is an international treaty governing the movements of living modified organisms that provides international rules and procedure on liability and redress for damage to biodiversity resulting from living modified organisms.

c.- *The Montreal Protocol on Substances that Deplete the Ozone Layer* has recently been proven as a successful binding tool to reduce methane emissions to the atmosphere and thus lowering the rate of global warming (Estrada *et al.*, 2013).

d.- *The Ottawa Convention on the prohibition of the use, stockpiling, production and transfer of anti-personnel mines* is a milestone in the history of multilateralism, as by first time hundreds of NGOs, UN agencies and Red Cross movement, in a coordinated manner, introduced a legally-binding topic in the international agenda (Cameron, 1999).

e.- Another specific agreement is the already expired *Food Aid Convention*, a post-II World War agreement between food aid supplying countries to guarantee an agreed minimum amount of food assistance each year<sup>18</sup>. A major flaw is that recipient countries were not included in this Convention.

f.- *The International Covenant on Economic, Social and Cultural Rights (ICESCR)* is a binding treaty that does include recognition of the right to food but it does not, however, include time-bound goals or any provision for funding commitments that can be monitored. The recent approval of an Operational Protocol, creating a mechanism for handling complaints of violations, will greatly strengthen the effectiveness of the ICESCR (Villan-Duran, 2009).

Some lessons learned that can be drawn from the history of these processes shows that: a) the process itself raises the level of public knowledge of the issues being addressed; b) a relatively small number of governments may sign up to a convention at early stage, but once ratified by the required number, more nations progressively become signatories (i.e. the ITPGRFA), and c) the fact that the governance of each convention is provided only by signatories means that the types of actions for which commitments are made are on a higher plane than if they were defined through negotiations involving all governments in a decision-making role.

## **VI - Elements and main bodies of a Food Treaty**

Those governments and institutions that are willing to enter into long-term commitments to end hunger shall elaborate, negotiate and sign an international Treaty that would provide a legally binding framework for inter-country cooperation and for real mutual accountability for agreed actions at national and international levels, involving defined roles and responsibilities for governments, UN agencies and civil society.

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<sup>18</sup> A number of NGOs are pressing for a revision of the FAC and the transfer of its secretariat from the London-based International Grains Council to a UN agency. The FAC could easily be covered by a Protocol to the proposed Food Treaty.



The Food Treaty would aim to establish enforceable international law guaranteeing the right to be free from hunger and it should trigger the issuance of anti-hunger laws, also called food security and nutrition laws, as the seven laws already issued and the 10 draft laws being developed in Latin America (Vivero, 2010). A preliminary draft of a possible Treaty has already being proposed by the author and a colleague in 2011 (MacMillan and Vivero, 2011). This draft, however, should be considered essentially as an academic exercise so as to help countries launch the necessary debate. Judging from the experience of recent conventions, the above process could take as long as 10 years. The process itself, however, will from the outset generate awareness, commitment and institutional support.

Some features of the Treaty are presented as follows:

a.- The focus of any convention should be on “eradication” rather than “halving” hunger.

b.- The goal should be achieved no later than 2025, because we have already the means and knowledge to do it, and the treaty needs to set up a feasible timeframe that does not delay the goal beyond a reasonable political time.

c.- The Food Treaty should cover both hunger as well as other manifestations of malnutrition that are contributing to premature death<sup>19</sup>.

d.- The provisions of the Food Treaty should be set up in such a way that they act in the long-term global interest.

e.- They must also involve the self-imposition by all governments that are motivated to participate of binding and monitorable long-term commitments.

f.- Link the commitments of developing country parties to embark on defined comprehensive long-term programmes to end hunger no later than 2025 with commitments by donor countries to assist in funding their programmes and in providing technical cooperation services in a predictable manner<sup>20</sup>. In any case, the donor and the recipient country should deposit the pledge at the International Register of Commitments against Hunger, a unit established in the Secretariat of the Treaty<sup>21</sup>.

g.- The agreements included in the Food Treaty should incorporate provisions whereby countries abide by decisions taken by the Conference of the Parties so as to improve governance and accountability during the lifespan of the treaty.

h.- Whereas the signatories of the Treaty would be nations, the governance arrangements should be broadened to engage the UN system, civil society organizations, the private sector, philanthropic foundations, academia and churches. Small-scale and large-scale food producers and consumers shall be given an appropriate decision-making space.

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<sup>19</sup> One issue is whether, in addressing malnutrition, the Convention should cover both under-nutrition and the food consumption and life-style habits that are leading to a rapidly growing incidence of obesity and related life-threatening diseases in both developed and developing countries. This consideration should be raised during early discussions of the Food Treaty amongst interested parties.

<sup>20</sup> Funds could be channelled directly to requesting countries or through a multilateral fund operated by an existing multilateral financing institution.

<sup>21</sup> A register-like process has been launched within the G-8, under the L’Aquila Food Security Initiative (AFSI), to monitor the delivery of public and private financial investments by donors, in partnership with OECD and to monitor the implementation of food security programmes and the extent to which funds are contributing to these programmes.



i.-The secretariat of the Treaty could be hosted by an existing UN agency or, better still, by the Committee of Food Security (CFS). However, other possibilities could also be considered, such as a consortium of UN agencies or any other suitable institution that may emerge from current debates at CFS, G-8, G-20, G-77, Rio+20 or the UN General Assembly.

j.- The Food Treaty shall have a double accountability system, being operating at national and international level. The international mechanism could be based on a peer-review process similar to those undertaken by the Human Rights Council's Universal Periodic Review, the OCDE or the New Partnership for Africa's Development. On the other side, the national accountability system could be led by the National Ombudsman Office or any other independent Human Rights institution.

k.- Support the creation and implementation at national and global levels of real-time systems for monitoring delivery on commitments and progress towards the goal adopted by the Treaty.

l.- Offer a forum where ratifying countries could agree on strategies to be adopted in international negotiations that may have a significant effect on hunger and malnutrition, especially those related to food trading, regulation of market speculation and food monopolies, land grabbing, safe global food stock levels and agricultural research for small-scale farming.

m.- Bring the failure by any state party to honour its commitments to the attention of the Conference of the Parties (or the Claim and Redress Committee), and put in place procedures requiring them to remedy the situation.

The Food Treaty could form the legal backbone to vertebrate the global food system, a revamped institutional architecture compounded by the following institutions:

- 1) *The Committee of Food Security*, as the inter-governmental forum for political decisions (the Conference of the Parties of the Food Treaty), where civil society organisations, farmers' associations and the private sector would also be represented. Systems of representation and voting weights should be discussed along the process.
- 2) *A Treaty Secretariat* that would be ideally formed by a merge of the four Rome-based UN agencies plus the CGIAR steering Committee, taking stock from the ad-hoc UN High Level Task Force on the Global Food Security Crisis (the Technical Subsidiary Body of the Treaty).
- 3) *An annual report of the State of Food Insecurity*, with data provided annually by the countries, according standard formats. This annual report is already done by FAO, WFP and IFAD.
- 4) *The Global Food Information system* that has been proposed by the L'Aquila Food Security Initiative.
- 5) *The Global Food Security and Agricultural Fund*, currently hosted by the World Bank, would be the funding mechanism to support the implementation of the treaty agreements.
- 6) *A mechanism of claims, sanctions and redress of violations to the Treaty*, whose rulings would be compulsory. The mechanism to enforce the Treaty shall take shape in different forms, such as a Specific Treaty Court; or the current UN Human Rights Council, should specific judicial powers be given to that Council under the Treaty umbrella; or a Peer-to-Peer Assessment whose decisions would be compulsory to fulfil.
- 7) *An external monitoring panel*, consultative but not binding, that supervises and provides recommendations on the implementation of the Treaty by the member states. This panel could be either a peer-to-peer regular assessment process or a high-level panel of experts selected by personal and professional capacities.

**VII - A possible path to kick start the process: the "coalition of willing" and an accompanying civil society campaign**



During the initial stages of the ITPGRFA, a US think-tank (the Keystone Center) hosted and funded several meetings with specific people who were leaders and well-reputed specialists in agriculture, environment and rural development, so as to propose and discuss main guidelines, intermediate goals and the initial draft that later on would be approved as the ITPGR<sup>22</sup>. A similar approach could be proposed in this case: a series of meetings with a highly-respected and strongly-committed group of people could be arranged so as to analyse the idea, draft the structure, goals and provisions that could be part of a Treaty, and liaise with a broader network of key players so as to pulse the idea and have preliminary outcomes peer-reviewed. After that process, or in parallel if so considered, preliminary talks would be initiated by a “coalition of the willing” formed by countries, international institutions, private entities and CSOs that are really committed to end hunger and are willing to abide themselves to an international convention that establishes goals and objectives.

Finally, the process leading to the creation of an international Treaty should ideally be accompanied by a well-orchestrated national and international campaign, led by NGOs/CSOs, aimed at reinforcing citizen support for urgent large-scale action against hunger and malnutrition. The immediate objective of the campaign<sup>23</sup> would be to call on governments to negotiate and later on sign up to the Food Treaty, as well as to ensure that their governments deliver on their World Food Summit and Millennium Summit commitments to halve the number of hungry people between 1990 and 2015. Moreover, the campaign would raise public awareness and understanding of the hunger problem and of solutions and it should be based on already existing movements/campaigns, networks and initiatives, fostering partnerships, based on a common commitment to eradication, while respecting their autonomy and special interests at national level. As a suggestion, the anti-hunger campaigners and institutions should draw ideas from the successful multi-agency campaigns that are so frequent in the biodiversity domain, achieving concrete results in preserving animals and plants<sup>24</sup>. Why not a similar campaign to preserve stunted and wasted human beings?

### **VIII - Ethical epilogue: Preventing hunger-related deaths is a moral imperative**

The existing flaws in global governance of the world’s food production are well-acknowledged. From energy, forests to food security, water and desertification, global governance has repeatedly fallen short when it comes to proactive and swift responses to risk, even in the face of worst case scenarios (Oosterveer, 2007). In that sense, exploring the international human rights framework so as to pulse the timing for a binding international Food Treaty to regulate specific considerations on food security and hunger in a changing climate may sound foolish today although rather necessary in the near future. Moreover, re-conceiving the nature of food as a purely private good to start seeing it as a commons is a rather necessary narrative and a moral imperative. Preventing death from hunger and malnutrition through enabling all human beings to eat adequately would be a huge moral victory for those who believe in a more just and equitable global society. It would add credibility to the processes of globalization. And it

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<sup>22</sup> This series of meetings were known as the “Keystone Process” and the visionary group that gave shape the idea of a binding treaty to share benefits from plant genetic resources was known as the “Keystone Group”.

<sup>23</sup> The term “campaign” means in this case a sustained, time-framed and coordinated effort by a group of stakeholders to raise public awareness of specific goals and to make a change happen.

<sup>24</sup> The Alliance for Zero Extinction (<http://www.zeroextinction.org>) is a good example.





would also release a huge amount of latent human energy and creativity for the benefit of mankind.

The de-commodification of food will imply to delink commodities and well-being and sharing sovereignty in the food domain to international regulating bodies for the sake of the global common good. A globalised world demands a truly global food system geared towards feeding everybody adequately, producing food sustainably and valuing the non-commercial dimensions of such essential element. Using McMichael's food regimes conceptual framework (McMichael, 2009), the re-commonification of food and its practical implications would certainly open up the transition towards a new food regime, different from the corporate one we have at present. We need to develop a food system that provides meaning, and not just utility, to food production, trading and consumption (Anderson, 2004). To achieve this sustainable food system we need to reconsider how food is regarded by our society, not merely as a privatized commodity but as common good to be enjoyed by all at any time. A binding Food Treaty would provide a legal architecture to that vision, giving primacy to sustainable production and fair distribution of food, spurring the development of Universal Food Coverage in all signatory states.

Last but not least, the fight against hunger must also recall the fraternity between human beings, a concept that stemmed from the French Revolution triad but it was quickly surpassed by their companions, liberty and equality (Rawls, 1999; Gonthier, 2000), both of them considered as the political, philosophical and ethical foundations of the neoliberal economy and democratic societies. Fraternity, understood as solidarity between states, societies and human beings, implies a sense of civic friendship, cosmopolitanism (Held, 2009), reciprocity and social solidarity that are so much needed in those times of growing self-interest, isolationism and private rights.

## **Bibliography**

- Anderson, M. 2004. Grace at the table. *Earthlight*, 14 (1), Spring.
- Ausin, T. 2010. El derecho a comer: Los alimentos como bien público global. *Arbor, Ciencia, Pensamiento y Cultura* 745, 847-858.
- Bes-Rastrollo M., M.B. Schulze, M. Ruiz-Canela and M.A. Martinez-Gonzalez. 2013. Financial Conflicts of Interest and Reporting Bias Regarding the Association between Sugar-Sweetened Beverages and Weight Gain: A Systematic Review of Systematic Reviews. *PLoS Med* 10 (12): e1001578. doi:10.1371/journal.pmed.1001578
- Black, R.E., C.G. Victora, S.P. Walker, Z.A. Bhutta, P. Christian, M. de Onis, M. Ezzati, S. Grantham-McGregor, J. Katz, R. Martorell, R. Uauy and the Maternal and Child Nutrition Study Group. 2013. Maternal and child undernutrition and overweight in low-income and middle-income countries. *The Lancet* 382 (9890), 427-451.
- Brauer, J. and R. Haywood. 2010. *Non-state Sovereign Entrepreneurs and Non-territorial Sovereign Organizations*. Working paper 2010/09, United Nations University WIDER, Helsinki. [http://www.wider.unu.edu/publications/working-papers/2010/en\\_GB/wp2010-09/](http://www.wider.unu.edu/publications/working-papers/2010/en_GB/wp2010-09/) [Accessed January 7 2014]
- Cameron, M.A. 1999. Global civil society and the Ottawa process: Lessons from the movement to ban anti-personnel mines. *Canadian Foreign Policy Journal*, 7(1), 85-102



- Cassman, K.G., P. Grassini and J. Van Wart. 2010. Crop yield potential, yield trends, and global food security in a changing climate. In: C. Rosenzweig and D. Hillel, eds. *Handbook of Climate Change and Agroecosystems*, Imperial College Press: 37–51
- Corner, M. 2008. *Towards a Global Sharing of Sovereignty*. European Essay 44. The Federal Trust. London, UK.
- CEHAP. 2009. *A call from the Cordoba Group for coherence and action on food security and climate change*. October 2009, Chair on Hunger and Poverty Studies, University of Cordoba. <http://www.etcgroup.org/content/call-cordoba-group-coherence-and-action-food-security-and-climate-change> [Accessed January 7 2014]
- Clapp, J. and D. Fuchs, eds. 2009. *Corporate power in global agrifood governance*. MIT press, Cambridge.
- De Schutter, O. 2010. *Addressing Concentration in Food Supply Chains: The Role of Competition Law in Tackling the Abuse of Buyer Power*. Briefing note 3. UN Special Rapporteur on the right to food, December 2010
- De Schutter, O. 2011. *The World Trade Organization and the post-global food crisis agenda: putting food security first in the international trade system*. Briefing note 4. UN Special Rapporteur on the Right to Food, November 2011.
- Deacon, B. 2012. The social protection floor. *CROP Poverty Brief*. <http://www.crop.org/viewfile.aspx?id=415> [Accessed January 7 2014]
- Diebel, P.L., J.R. Williams and R.V. Llewelyn. 1995. An economic comparison of conventional and alternative cropping systems for a representative northeast Kansas farm. *Review of Agricultural Economics* 17 (3), 323-335
- Esquinas-Alcázar, J.T., C. Frison and F. López. 2011. A treaty to fight hunger: past negotiations, present situation and future challenges. In: Frison, C. *et al.* (eds.). *Plant genetic resources and food security. Stakeholder perspectives on the International Treaty on Plant Genetic Resources for Food and Agriculture*. Earthscan, London.
- Estrada, F. P. Perron and B. Martínez-López. 2013. Statistically derived contributions of diverse human influences to twentieth-century temperature changes. *Nature Geoscience*, 6, 1050–1055.
- ETC Group (2009). *Who Will Govern? Rome's Food Summit may determine who decides who will eat*. ETC Group, Ottawa. <http://www.etcgroup.org/es/node/4922> [Accessed January 7 2014]
- ETC Group. 2013. *With climate change...Who will feed us? The industrial food chain or the peasant food webs?* [http://www.etcgroup.org/sites/www.etcgroup.org/files/Food%20Poster\\_Design-Sept042013.pdf](http://www.etcgroup.org/sites/www.etcgroup.org/files/Food%20Poster_Design-Sept042013.pdf) [Accessed January 7 2014]
- Evenson, R.E. and D. Gollin. 2003. Assessing the Impact of the Green Revolution, 1960 to 2000. *Science* 300 (5620), 758-762.
- EU. 2012. *Comparative analysis of agricultural support within the major agricultural trading nations*. Directorate General for Internal Policies, European Union, Brussels.
- Fan, S. 2010. *Halving hunger: meeting the first Millennium Development Goal through business as unusual*. International Food Policy Research Institute, Washington D.C. <http://www.ifpri.org/sites/default/files/publications/pr22.pdf> [Accessed January 7 2014]
- FAO. 2011. *Global food losses and food waste. Extent, causes and prevention*. FAO, Rome and Swedish Institute of Food and Biotechnology, Gothenburg.



- FAO. 2012. *The future we want. End hunger and make the transition to sustainable agricultural and food systems*. FAO, Rome.
- FAO. 2013a. *FAO statistical yearbook 2013*. FAO, Rome.
- FAO. 2013b. *The State of food insecurity in the world 2013*. FAO, WFP & IFAD, Rome.
- GAIN. 2013. *Access to nutrition index. Global Index 2013*. Global Alliance for Improved Nutrition.
- Godfray H.C.J., J.R. Beddington, I.R. Crute, L. Haddad, D. Lawrence, J.F. Muir, J. Pretty, S. Robinson, S.M. Thomas and C.Toulmin. 2010. Food security: the challenge of feeding 9 billion people. *Science* 327, 812-818.
- Gonthier, C.D. 2000. Liberty, Equality, Fraternity: The Forgotten Leg of the Trilogy. *McGill Law Journal* 45, 567-589.
- Gonzalez, C.G. 2010. The Global Food Crisis: Law, Policy, and the Elusive Quest for Justice. *Yale Human Rights and Development Law Journal* 13, 462-468.
- Gonzalez, C.G. 2012. The global food system, environmental protection, and human rights. *Natural Resources & Environment*, 26, 3.
- Grantham-McGregor, S., Y.B. Cheung, S. Cueto, P. Glewwe, L. Richter, B. Strupp and the International Child Development Steering Group. 2007. Development potential in the first 5 years for children in developing countries. *The Lancet*, 369, 60-70.
- Hardin, G. 1968. The Tragedy of the Commons. *Science* 162 (3859), 1243-1248
- Hawkes, C. and K. Buse. 2011. Public health sector and food industry interaction: it's time to clarify the term 'partnership' and be honest about underlying interests. *Eur. J. Public Health* 21 (4), 400-401.
- Hazell P. 2010. The Asian Green Revolution In: Spielman D. and R. Pandya-Lorch, eds. *Proven Successes in Agricultural Development*, International Food Policy Research Institute Washington, DC. Pp. 67-97.
- Held, D. 2009. Restructuring global governance: cosmopolitanism, democracy and the Global Order. *Millenium: Journal of International Studies*, 37 (3), 535-547.
- HLPE. 2012. *Social protection for food security*. A report by the High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security, Rome 2012. 58-59.
- Holt-Gimenez, E. and R. Patel. 2009. *Food Rebellions: Crisis and the Hunger for Justice*. Fahumu Books, UK.
- IAASTD. 2009. *Agriculture at a crossroads: the global report*. International Assessment of Agricultural Knowledge, Science and Technology for Development. Island Press.
- IISD. 2013. *Biofuels-At What Cost? A review of costs and benefits of EU biofuel policies. Addendum*. August 2013. International Institute of Sustainable Development, Geneva.
- Krasner, S.D. 1999. Globalization and sovereignty. In: D.A.Smith, D.J. Solinger and S C. Topik, eds. *States and sovereignty in the global economy*. Routledge. Pp. 34-53.
- Kelly, T., W. Yang, C.S. Chen, K. Reynolds and J. He. 2008. Global burden of obesity in 2005 and projections for 2030. *Int. J. Obesity* 32, 1431-37.
- Lobell, D.B., K.G. Cassman and C.B. Field. 2009. Crop yield gaps: their importance, magnitudes, and causes. *Annual Review of Environmental Resources*, 34, 179-204.
- Ludwig, D.S., K.E. Peterson and S.L. Gortmaker (2001). Relation between consumption of sugar-sweetened drinks and childhood obesity: a prospective, observational analysis. *The Lancet*, 357 (9255), 505-508.



- Lundqvist, J., C. de Fraiture and D. Molden. 2008. *Saving Water: From Field to Fork – Curbing Losses and Wastage in the Food Chain*. SIWI Policy Brief. Stockholm International Water Institute.
- MacMillan, A. and J.L. Vivero. 2011. The governance of hunger. Innovative proposals to make the right to be free from hunger a reality. In: Martín-Lopez, M.A. and J.L. Vivero, eds. *New challenges to the Right to Food*. CEHAP, Cordoba and Editorial Huygens, Barcelona.
- McMichael, P. 2000. The power of food. *Agriculture and Human Values* 17, 21–33
- McMichael, P. 2009. A food regime genealogy. *Journal of Peasant Studies* 36(1), 139-169.
- Mitchell, J.V. and P. Stevens. 2008. *Ending Dependence. Hard Choices for Oil-Exporting States*. Chatham House, London.
- Monteiro C.A., R.B. Levy, R.M. Claro, I.R. de Castro and G. Cannon. 2011. Increasing consumption of ultra-processed foods and likely impact on human health: evidence from Brazil. *Public Health Nutr.* 14(1), 5-13.
- Moodie, R., D. Stuckler, C. Monteiro, N. Sheron, B. Neal, T. Thamarangsi, P. Lincoln, S. Casswell on behalf of The Lancet NCD Action Group. 2013. Profits and pandemics: prevention of harmful effects of tobacco, alcohol, and ultra-processed food and drink industries. *The Lancet*, 381 (9867), 670 – 679.
- Moore Lappe, F., J. Collins, P. Rosset and L. Esparza. 1998. *World Hunger: Twelve Myths*. The Institute for Food and Development Policy, California.
- Nemes, N. (2013). Commentary IX (UNCTAD TER 2013): Comparative analysis of organic and non-organic farming systems: a critical assessment of on-farm profitability. In: *UNCTAD. Trade and Environment report 2013*. UNCTAD. Geneva.
- Oosterveer, P. 2007. *Global governance of food production and consumption: issues and challenges*. Edward Elgar, Oxford.
- Pimental, D. and M.H. Pimental. 2008. *Food, energy and society*. CRC Press, Boca Raton.
- Pingali, P.L. 2012. Green Revolution: Impacts, limits, and the path ahead. *Proc. Natl. Acad. Sci. USA* 109 (31), 12302-8.
- Pinstrup-Andersen, P. and S. Shimokawa. 2008. Do poverty and poor health and nutrition increase the risk of armed conflict onset? *Food Policy* 33 (6), 513–520
- Rawls, J. 1999. *A theory of justice*. Revised edition. Harvard University Press.
- Ray D.K., N.D. Mueller, P.C. West and J.A. Foley. 2013. Yield trends are insufficient to double global crop production by 2050. *PLoS ONE* 8(6): e66428. doi:10.1371/journal.pone.0066428
- Rifkin, J. 2002. *The hydrogen economy*. Tarcher/Putnam.
- Rocha, C. 2007. Food Insecurity as Market Failure: A Contribution from Economics. *J. Hunger & Environmental Nutrition* 1 (4), 5-22.
- Rosset, P.M. 2006. *Food is Different: Why the WTO Should Get out of Agriculture*. Zed Books, London, UK.
- Sablani, S.S., L.U. Opara and K. Al-Balushi. 2006. Influence of bruising and storage temperature on vitamin C content of tomato fruit. *Journal of Food, Agriculture & Environment* 4, 54–56.
- Sandel, M.J. 2012. What isn't for sale? *The Atlantic*, Feb. 2012. <http://www.theatlantic.com/magazine/archive/2012/04/what-isnt-for-sale/308902/> [Accessed January 7 2014].



- Smolik, J.D., T.L. Dobbs and D.H. Rickerl. 1995. The relative sustainability of alternative, conventional, and reduced-till farming systems. *American Journal of Alternative Agriculture* 10 (1), 25-35.
- Sorrell, S., J. Speirs, R. Bentley, A. Brandt and R. Miller. 2010. Global oil depletion: A review of evidence. *Energy Policy*, 38(9), 5290-5295.
- Stiglitz, J. E. 1999. *Knowledge as a Global Public Good*. In: I. Kaul, I. Grunberg and M. Stern, eds. *Global Public Goods: International Cooperation in the 21st Century*. Oxford University Press. Pp. 308-325.
- Stuckler D., M. McKee, S. Ebrahim and S. Basu. 2012. Manufacturing Epidemics: The Role of Global Producers in Increased Consumption of Unhealthy Commodities Including Processed Foods, Alcohol, and Tobacco. *PLoS Med* 9(6): e1001235.
- Sumner, A., J. Lindstrom and L. Haddad. 2007. *Greater DFID & EC Leadership on Chronic Malnutrition: Opportunities and Constraints*. Institute of Development Studies, University of Sussex.
- Taber, D.R., J.F. Chriqui, F.M. Perna, L.M. Powell and F.J. Chaloupka. 2012. Weight status among adolescents in states that govern competitive food nutrition content. *Pediatrics*, doi: 10.1542/peds.2011-3353.
- Toor, R. and G. Savage. 2005. Antioxidant activity in different fractions of tomatoes. *Food Res. Int.* 38, 487-494.
- UK Government. 2011. *The future of food and farming: challenges and choices for global sustainability*. Final project report. Foresight, Department for Business Innovation and Skills. The Government Office for Science, London.
- UN. 2013a. *The Millennium Development Goals Report 2013*. New York.
- UN. 2013b. *A new global partnership: Eradicate poverty and transform Economies through sustainable Development*. The Report of the High-Level Panel of Eminent Persons on the Post-2015 Development Agenda. United Nations, New York.
- UNCTAD. 2013. *Trade and Environment report 2013. Wake up before it is too late: Make agriculture truly sustainable now for food security in a changing climate*. UNCTAD, Geneva.
- US Department of Defense. 2010. *Quadrennial review report*. [www.defense.gov/QDR/images/QDR\\_as\\_of\\_12Feb10\\_1000.pdf](http://www.defense.gov/QDR/images/QDR_as_of_12Feb10_1000.pdf). [Accessed January 7 2014]
- Van Parijs, P. 2005. Basic income. A simple and powerful idea for the twenty-first century. In: B. Ackerman, A. Alstott and P. van Parijs. *Redesigning Distribution: basic income and stakeholder grants as cornerstones of a more egalitarian capitalism*. The Real Utopias Project Volume V. Verso, London. Pp. 4-39.
- Villan-Duran, C. 2009. El nuevo Protocolo Facultativo del Pacto Internacional de Derechos Económicos, Sociales y Culturales. In: Vivero, J.L. and X. Erazo, eds. 2009. *Derecho a la Alimentación, Políticas Públicas e Instituciones contra el Hambre*. Serie Ciencias Humanas, LOM Editores, Santiago.
- Vivero, J.L. 2010. El enfoque legal contra el hambre: el derecho a la alimentación y las leyes de seguridad alimentaria. In: X. Erazo, L. Pautassi and A. Santos, eds. *Exigibilidad y realización de derechos sociales. Impacto en la política pública*. Editorial LOM, Santiago, Chile. Pp 163-188.
- Vivero, J.L. 2013. *Food as a commons: reframing the narrative of the food system*. SSRN Working paper series [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2255447](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2255447) [Accessed January 7 2014].



- Wainer, A. 2011. *Development and migration in rural Mexico*. Working paper 11, Bread for the World Institute.
- WHO. 2012. *Obesity and overweight factsheet # 311*. <http://www.who.int/mediacentre/factsheets/fs311/en/> [Accessed January 7 2014]
- WHO. 2013. *Marketing of foods high in fat, salt and sugar to children: update 2012–2013*. WHO Regional Office for Europe. Copenhagen.
- Wittman, H., A.A. Desmarais and N. Wiebe. 2010. The origins and potential of food sovereignty. In: H. Wittman, A.A. Desmarais and N. Wiebe, eds. *Food sovereignty. Reconnecting food, nature and community*. Fernwood Publishing. Pp. 1-14.
- World Bank. 2006. *Repositioning nutrition as central to development. A strategy for large-scale action*. Washington, DC.
- World Bank. 2008. *World development report 2008: Agriculture for development*. Washington, DC.
- World Economic Forum (2011). *Global Risks 2011*. Davos, Switzerland. <http://reports.weforum.org/wp-content/blogs.dir/1/mp/uploads/pages/files/global-risks-2011.pdf> [Accessed January 7 2014]
- World Economic Forum. 2013. *Achieving the new vision for agriculture. New models for action*. The World Economic Forum, Davos, Switzerland.
- Wright, E.O. (2010). *Envisioning real utopias*. Verso, London.
- WWF. 2011. *Livewell: a balance of healthy and sustainable food choices*. WWF and the Rowett Institute of Nutrition and Health.
- WWF. 2012. *Living Planet Report 2012. Biodiversity, biocapacity and better choices*. WWF, Global Footprint Network and National Zoological Society.