Transition towards a food commons regime: re-commoning food to crowd-feed the world

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1. Introduction

Food, air and water are the three essentials our human body requires to function, but their public-private nature is diverse. Air is still considered a commons, notwithstanding the fact that its commodification has already begun in the use of creative accounting for economic valuation of environmental processes, with emissions trading schemes and pollution quotas essentially operating as private entitlements to pollute. Water is in the process of being transferred from a public to private good (Finger & Allouche, 2002), through the combination of an absolute commodification of the good itself, or ‘water grabbing’ (Franco, Mehta & Veldwisch, 2013), and the transfer of consumer supply and waste-water treatment from public (state) to privately owned enterprises, although there is also a push-back against this. Food, however, is largely regarded as a pure private good (although wild foods could perfectly well 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 foundations in human society (food as culture) and the way food is produced (food as a sustainable natural resource) as well as to human rights considerations based on its essential nature as fuel for human body (so, ultimately, the right to life). Instead, these multiple dimensions are combined with and superseded by its tradable features, thus

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2 The emissions (e.g. carbon) trading markets that emerged from and after the 1997 Kyoto Protocol assume property-rights based systems in legislating for corporations to pollute air thought to belong to everyone, or to no-one (Bohm, Misoczky & Moog, 2012; Newel & Paterson, 2010); meanwhile, ‘airspace’ (air as location rather than substance) is nowadays regulated in various ways (e.g. around ‘sensitive’ installations and airports and with global flight paths), which makes it intrinsically vulnerable to forms of commodification.

3 The private claim to (purchase and extraction for profit of) groundwater and glacial reservoir resources has been ongoing especially since the neoliberal shift in the 1980s, with individual consumption of bottled (branded ‘mineral’) water now established as a ubiquitous feature of contemporary culture; on the other hand, the denationalisation of household, business and public water provision services has become contested in many cities, with the re-nationalisation of water services gaining momentum in places as disparate as Paris, Budapest, Jakarta and Dar el Salaam (despite privatising efforts promoted by international institutions such as the World Bank and intensively pursued by private companies, such as GDF Suez and Veolia). http://www.remunicipalisation.org http://www.world-psi.org/sites/default/files/documents/research/dh-remunicipalisation_presentation-ppt.pdf.

4 In the context of wild foods, genetic rights now become an issue, so even here the commons is no longer assumed (see Ruivenkamp, this volume).
conflating value and price (understanding the former in terms of the latter). The industrialisation and commodification of food has brought humanity some positive outcomes, such as accessibility (by lowering prices), availability (by sufficient production to feed us all) and economic efficiency (in cultivation techniques), but it has also yielded many negative externalities and unfulfilled promises – such as pervasive hunger and mounting obesity, environmental degradation, oligopolistic control of farming inputs, diversity loss, knowledge patenting and neglect of the non-economic values of food. Here, these issues are analysed in proposing a transition path to a new food system, a radically different food narrative and a better-balanced governance system.

2. Ever more and cheaper food

The industrial technology-dominated food system achieved remarkable outputs during the second half of the 20th century in the form of increased food production and food access for millions of urban and rural consumers. Tripling global crop production, raised yields, lower food prices and the move away from traditional habits and skills to more systematically organised and controlled ways of production were all commendable achievements for human kind (Bindraban & Rabbinge, 2012). Along with the expansion of arable land and irrigation schemes and greater crop intensification for higher food production, agricultural mechanisation and better agronomic knowledge are responsible for the synergistic effects of the many interacting, innovative technologies, especially improved high-yielding varieties developed by international and national research centres (Evans, 1998) supplemented with the development of better and cheaper fossil fuel-based agro-chemicals to fight plagues and diseases and increase growth (UNEP, 2009).

As a matter of fact, between 1960 and 1990, the proportion of undernourished people in the world fell significantly, since improved availability and decreased staple food prices dramatically improved the energy and protein consumption of the poor (FAO, 2013a). And for the two decades after that, the FAO (2013b) reports an absolute as well as relative reduction of 173 million hungry people, from 1015 million (19 percent of the population) in 1990 to 848 (12 percent) in 2013, representing a decrease of 7.5 million starving and half-starving people each year – which the UN (2013a) confirms with a figure of 700 million fewer people living in conditions of extreme poverty in 2010 than in 1990. Manifestly, the linear increase in food production has outpaced population growth, benefitting most people in the world and the poor in particular, both because their nutritional needs are greater and because they spend a greater share of their income on food. However, this mechanisation and commodification of the industrial food system did not come for free, and many undesirable externalities and consequences are now evident.

3. An iniquitous, inefficient and unsustainable food system

The most relevant systemic fault lines in the current food system – even, that is, within its own mono-dimensional framework – may be identified as inequality, inefficiency and
unsustainability within the planetary boundaries.\textsuperscript{5} Crucially, these cannot be reversed or corrected by simply applying a sustainable intensification lip service (Godfray & Garnett, 2014) that mostly addresses the technological challenges and obscures the social and power imbalances.

\textit{Iniquitous: many eat poorly to enable others to eat badly and cheaply}

In global terms, we have a troublesome relationship with food, since so many people in so many parts of the world eat in ways that damage its health. All but two countries in the world suffer from three common forms of malnutrition, namely stunting, anaemia or overweight (IFPRI, 2014), so we can say that eating is not just a satisfied need and source of pleasure but also a compulsory habit and certainly a cause of concern. In fact, obesity and under-nutrition combined affect an estimated 2.3 billion people globally, about one third of the world’s population (GAIN, 2013), pushing food and nutrition security to the forefront of contemporary political debates. While overweight and obesity currently cause 2.8 million deaths annually (WHO, 2012), and 1120 million people – around one in eight worldwide – are expected to be classified as obese by 2030 (Kelly et al., 2008), hunger continues as the largest single contributor to maternal and child mortality worldwide, with 3.1 million children dying every year from hunger-related causes (Black et al., 2013).

Indeed, despite years of international anti-hunger efforts, rising levels of gross national income and per capita food availability, the number of hungry people has been reduced at a very slow pace since 2000, even in a world that produces enough food to adequately feed all (FAO-IFAD-WFP, 2014). Stunting currently affects over 160 million chronically malnourished children (de Onis et al., 2013), wasting eight percent of the total child population and 29 percent of women and children live with anaemia (UNICEF-WHO-World Bank, 2014). Malnutrition leads to the squandering of 11 percent GNP as a result of lives lost, reduced learning in school and earnings in the workplace, and yet a mere one percent of total overseas development assistance goes to nutrition programmes (IFPRI, 2014).

Among the painfully ironic paradoxes of the globalised industrial food system are the facts that half of those who grow 70 percent of the world’s food are hungry (ETC Group, 2013) – or, 70% of the hungry are themselves small farmers or agricultural labourers (UNCTAD, 2013) – yet food kills the wealthy, while food is increasingly not for humans (an ever greater share is being diverted to livestock feeding and biofuel production) and, perhaps most shockingly, a third of the total global food production every year ends up in the garbage, enough to feed 600 million hungry people (FAO, 2011). Agriculture is also highly demanding of water – using 96 percent of world non-marine water (Marsily, 2007) – but it makes poor use of that scarce public good; the industrial system diminishes the nutritious properties of many foods, through cold-room storage, (over) peeling and boiling, and transformation processes (Sablani, Opara & Al-Balushi, 2006); and the overemphasis on production of empty and cheap calories that renders obesity a growing global pandemic is set alongside highly energy inefficient food production, as we need

\textsuperscript{5} Planetary boundaries: thresholds in Earth-system variables that, if traversed, could generate unacceptable change in the biophysical processes of the world's natural environments (Rockstrom et al., 2009a).
10 kcal to produce 1 kcal of food (Pimental & Pimental, 2008); not to mention profound and growing issues related to soil degradation and biodiversity loss, among others.

**Inefficient: oil-based food systems are nothing without state subsidies**

Agronomically speaking, the industrial food system is not performing much better than the traditional, pre-industrial, insofar as productivity gains have been uneven across crops and regions (Evenson & Gollin, 2003) and global increases in output 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 and conversion to animal feed and biofuels, we end up with no more than 2000 Kcal per person (Lundqvist, de Fraiture & Molden, 2008). Moreover, it seems that yield improvements are already reaching a plateau in the most productive areas of the world (Cassman, Grassini & van Wart, 2010; Lobell, Cassman & Field, 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), led by genetic engineering and urban-based production, including alternative (e.g. hydroponics) production systems.

Moreover, the industrial food system does not even show greater efficiency in material or financial terms than the more sustainable food systems (traditional or modern organic, permaculture, etc.), as it is heavily subsidised and amply favoured by tax exemptions (e.g. through national fertiliser subsidies, the EU CAP and US Farm Bill). The great bulk of national agricultural subsidies in OECD countries are mostly geared towards supporting the intensive use of chemical inputs and energy (Nemes, 2013) and helping corporations lower the prices of processed foods. Contrary to popular wisdom, the alternative, organic systems are more productive, both agronomically and economically, more energy efficient and have a lower year-to-year variability (Smolik, Dobbs & Rickerl, 1995), and they depend less on government payments for their profitability (Diebel, Williams & Llewelyn, 1995). Small and medium-sized family farms tend to have higher agricultural crop yields per hectare than larger farms because they manage resources and use labour more intensively (FAO, 2014). The point, however, is not to pit ‘organic’ against ‘industrial’ agriculture but rather to value the multiple dimensions of food for human beings – beyond its (artificially low) price in the market, where the major driver for agri-businesses in the mono-dimensional approach to food-as-commodity is merely to maximise profit.

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6 Fertiliser subsidies are widely used all over the world, either explicitly or in more subtle ways, as governments recognises that the agricultural sector is a strategic one. http://www.voanews.com/content/fertilizer-subsidy-costs-could-outweigh-benefits/1693403.html

7 In 2011, the total Common Agricultural Policy (CAP) budget for 27 EU countries was 58 billion euros (EU, 2012); see also http://ec.europa.eu/agriculture/statistics/factsheets/pdf/eu_en.pdf

8 The US Farm Bill funding of food stamps alone amounts to 100 billion dollars annually; see http://capreform.eu/the-us-farm-bill-lessons-for-cap-reform/
**Unsustainable: eating our planet and beyond**

Since the Industrial Revolution in the latter part of the 18th century, humans have been altering the Earth on an unprecedented scale and at an increasing rate, radically transforming the landscape, using (up) natural resources and generating waste (Hoekstra & Wiedmann, 2014). Our human society is living beyond its means (WWF, 2012), and the current environmental effects of human activity are just not sustainable (Hoekstra & Wiedmann, 2014), with, for example, the appropriation of natural resources exceeding available biocapacity by 50 percent (Borucke et al., 2013). Respected researchers and long-term thinkers are warning of an apocalypse triggered by climate disruption and resource scarcity within this century (KPMG, 2014; Motesharre, Rivas & Kalnay, 2014).

In this road to perdition, food production (largely, the industrial food system) has become a major driving force in pushing the environment beyond the planetary boundaries. Agriculture, as the largest user of land (Ramankutty et al., 2008), is now the dominant force behind many environmental threats, including biodiversity loss and degradation of land and freshwater, while it is responsible for 30-35 percent of global greenhouse gas emissions (Foley et al., 2011). Of the two – global water and total ecological – footprints analysed in the 2014 ‘Living Planet’ report, food systems account for 92 percent (WWF, 2014) and a third, respectively. Human society is quickly approaching two planetary thresholds associated with unsustainable food systems, namely, land conversion to croplands and freshwater use (Rockstrom et al., 2009b). This situation will only worsen as growing water and food needs due to population growth, climate change, consumption shift towards meat-based diets and biofuel development exacerbate the already critical challenges to planet boundaries. If we extrapolate current food consumption and production trends, humanity will need three Earths by 2050 to meet demand (Clay, 2011). Meanwhile, the 1.2 billion poorest people presently account for only one percent of world consumption, while the billion richest consume 72 percent (UN, 2013b).

4. The commodification of food

The conversion of goods and activities into commodities has been a dominant force transforming all societies since at least the mid-nineteenth century (Polanyi, 1944; Sandel, 2013; Sraffa, 1960), a process that has led to today’s dominant industrial system that fully controls international food trade and is increasingly exerting a monopoly over agricultural inputs (seeds, agro-chemicals, machinery), while both feeding and failing the world’s population and in an unsustainable manner, as indicated above. Essentially, food has evolved into a private, transnational, mono-dimensional commodity in a global market of mass consumption (Fischler, 2011). The mechanisms of enclosure, or restriction and privatisation of common resources through legislation, excessive pricing and patents, have obviously played a major role in limiting access to food as a commons, while the social construct of food as a commodity denies its non-economic attributes in favour of its tradable features, namely durability, external beauty and the standardisation of naturally-diverse food products, leading to a neglect of nutrition-related...

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9 The latter is an estimate made by the author based on data from the Global Footprint Network, including footprints of croplands, grazing lands and fishing grounds. [http://www.footprintnetwork.org](http://www.footprintnetwork.org)
properties of food, alongside an emphasis on cheap calories. These cheap calories not only come at great cost to the environment (the sustainability issue), but also human health (the obesity issue), while lowering prices for producers and promoting cheap rural labour, forcing small-scale farmers to flee to urban areas (Carolan, 2013; Roberts, 2013) and thereby turning rural areas into paradoxically barren, depopulated zones of production.

Under capitalism, the value in use (a biological necessity) is highly dissociated from its value in exchange (price in the market) (Timmer, Falcon & Pearson, 1983), giving primacy to the latter over the former (McMichael, 2009). Food as a pure commodity can be speculated in by investors, modified genetically and patented by corporations, or diverted from human consumption just to maximise profit, the latest twist on this being the substitutionism of food commodities (Araghi, 2003), whereby tropical products (sugar cane, palm oil, etc.) are replaced by agro-industrial (and pharmaceutical) by-products (for high fructose corn syrup, margarine, etc.). Ultimately, industrial food systems alienate food consumers from food producers in socially disembedded food relations, and in so doing, it is argued, they damage societal well-being (disconnecting us from nature and deeply undermining a holistic sense of life). Indeed, the development of food as a pure commodity radically opposes the other dimensions, rather important for our survival, self-identity and community life: food as a basic human need to keep its vital functions (Maslow, 1943), food as a pillar of every national culture (Montanori, 2006), food as a fundamental human right that should be guaranteed to every citizen (UN, 1948; 1966; Vivero & Erazo, 2009) and food as a part of a wider ecological context involving sustainable production. This reduction of the food dimensions to one of a commodity explains the roots of the failure of the global food system (Kotagama et al., 2008-09; Magdoff & Tokar, 2010; Zerbe, 2009). Moreover, 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 and the idea of food as something worth caring about.

It is becoming obvious to many that the reliance on massively distorted (imperfect) market forces, industry self-regulation and public-private partnerships to improve public health and nutrition does not result in substantial evidence to support any major claim for their effectiveness in preventing hunger and obesity, let alone in reducing environmental threats (Fuchs, Kalfagianni & Havinga, 2011; Hawkes & Buse, 2011). On the contrary, transnational corporations are major drivers of the latter two of these, in the case of obesity epidemics, for example, by maximising profit from increased consumption of ultra-processed food and drink (Ludwig, Peterson & Gortmaker, 2001; Monteiro et al., 2011). The conventional industrialised food system, dominated by mega corporations, is basically operating to accumulate and under-

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10 Cheap calories: low-cost sources of dietary energy such as refined grains, added sugars and fats, which, inexpensive and tasty, together with salt form the basis of ultra-processed industrial food; the more nutrient-dense lean meats, fish, fresh vegetables and fruit are generally more costly because they are not so highly subsidised (Drewnowski & Darmon, 2005).

11 Abstracting food from its physical form into highly complex agricultural commodity derivatives for fuel and animal feed as well as foodstuffs (Clapp, 2014), this is a sophisticated version of Marx’s metabolic rift, the absolute separation of social production from its natural biological base.

12 E.g. recipes associated with 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.
price calorie-based food resources and maximise the profit of food enterprises instead of maximising the nutrition and health benefits of food to all (Azetsop & Joy, 2013; Clapp & Fuchs, 2009; Rocha, 2007; Weis, 2007).

The increase in consumption of unhealthy food and drinks is occurring fastest now in poorer (‘developing’) countries where the food systems are highly penetrated by foreign multinationals (Stuckler et al., 2012) and the state institutions are usually not capable of controlling corporate leverage; but even in advanced countries, the only mechanisms that have clearly been shown to prevent the harm caused by unhealthy commodities are public regulation and market intervention (Moodie et al., 2013; WHO, 2013). This means more state, not less. Governed by self-interest, markets will not provide an adequate quantity of public goods, such as health, nutrition and hunger eradication, which have enormous benefits to human beings but are non-monetised, as the positive externalities cannot be captured by private actors.

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 change. There is a clear and urgent demand for unconventional and radical perspectives to be brought into the debate to look for possible solutions and a transition towards a fairer, healthier and sustainable food system. In addressing this need, the power of food to generate a substantial critique of the neoliberal corporate and industrialised production and service system and to harness multiple and different alternative collective actions should not be underestimated (McMichael, 2000). Food is a powerful weapon for social transformation.

5. The historical evolution of food governance: from commons to commodity

Historically, human societies have developed different institutional arrangements at local and regional levels to produce, manage and consume food, and the major features of these have often been an unstable balance between private provision, state guarantees and collective actions based on the commons of land, water and labour force. Food has certainly not always been regarded as a pure commodity devoid of other important dimensions. For millennia, indeed, food was generally cultivated in common and regarded as a sacred item in a mythological context; many societies have considered, and still consider, food as a commons, as well as the land and water and its forests and fisheries; and the consideration different civilisations have assigned to food-producing commons is rather diverse and certainly evolving.

Historical developments and present evidence

While anthropological studies have been reporting on tribal societies with essentially communal hunter-gatherer and gardening arrangements for food since the nineteenth century, historical

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\[13\] Within these three categories, of course, a wide range of different rights and duties can be identified, related to access, withdrawal, management, exclusion and alienation, being the result of complex societal arrangements by different human groups (Schlager & Ostrom, 1992).

\[14\] Many types of food are still endowed with sacred beliefs (quinoa is sacred for the Peruvian Incas, cows are sacred and inedible for Hindus, etc.) and their production and distribution thus governed by non-market rules (Diamond, 1997; Montanori, 2006).
historical records indicate commons-based agrarian food-production systems ranging from the early Babylonian Empire (Renger, 1995) and ancient India (Gopal, 1961) to medieval Europe (Linebaugh, 2008) and early modern Japan (Brown, 2011). This historical diversity is reflected in the current world’s wealth of proprietary schemes for natural resources. Even now, the private arrangements that characterise agro-industrial agriculture are not universally prevalent in large areas of the world, where subsistence, traditional and agro-ecological types of agriculture are the norm. Actually, in simple population numbers, small, traditional farmers with mixed proprietary arrangements for natural resources are greatly in the majority, with, for example, just 27 million farmers working with tractors as compared to 250 million using animal traction and over a billion working just with their hands and hand-tools.

Across the world, commons-based land and food systems are often found in relatively ‘wild’, depopulated territories, such as in parts of the Asian interior (e.g. in Mongolia), the hills of Borneo and the Amazon rainforest. In sub-Saharan African, about 500 million people still rely on food from communal land (Kugelman & Levenstein, 2013), and tribes regard themselves as custodians of the land for future generations rather than its owners, and the land-plots are usually inalienable and legally recognised (Ike, 1984). There are well-documented examples of functioning food-producing commons in Fiji (Kingi & Kompas, 2005) and Mexico’s Ejidos (Jones & Ward, 1998), while in countries such as Taiwan, India, Nepal and Jamaica, land ownership by ethnic minorities is also granted as common land. At the other end of the world developmental scale, in the US there are lobster-fisheries (Wilson, Yan & Wilson, 2007), in the Scandinavian countries anyone can forage wild mushrooms and berries under the consuetudinary Everyman’s Rights (La Mela, 2014) and the Spanish irrigated huertas (vegetable gardens) are a well-known and robust institution (Ostrom, 1990), while there are thousands of surviving community-owned forests and pasturelands across Europe where livestock freely range, including the Baldios in Portugal (Rodrigues, 1987), Crofts in Scotland, Obste in Rumania (Vassile & Mantescu, 2009) and Montes Vecinales en Mano Comun in Spain (Grupo Montes Vecinales IDEGA, 2013). In fact, and despite centuries of encroachments, misappropriations and legal privatisations, millions of hectares of common land have survived in Europe.15

Historical and modern studies have demonstrated that the traditional food-producing common-pool resources systems were, and still are, efficient in terms of resource management (Ostrom, 1990; De Moor, Shaw-Taylor & Warde, 2002).16 In Europe, common lands were pivotal for small farming agriculture throughout Europe throughout history, as they were source of organic manure, livestock feedstock and pastures, cereals (mostly wheat and rye in temporary fields), medicinal plants and wood. Peasants pooled their individual holdings into open fields that were jointly cultivated, and common pastures were used to graze their animals. In Fiji, the proprietary regime in commons, organised under traditional practices, seems to improve farm productivity

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16 The same can be said of community-managed forests, worldwide (Porter-Bolland et al., 2012).
and efficiency as compared to modern farming enterprises (Kingi & Kompas, 2005). Many Latin American countries, such as Brazil, Honduras, Venezuela and Nicaragua, have formally recognised the communal rights of indigenous communities to their traditional territories (Robson & Lichtenstein, 2013), with common lands preserving habitats better than privately-owned ones (Ortega-Huerta & Kral, 2007). Likewise, in Asia, over 10,000 villages in Vietnam are managing more than two million hectares of community forests with good results (Marschke et al., 2012), while common-pool resources, covering 25.6 percent of India’s territory, are estimated to contribute 20 to 40 percent of household annual incomes nationwide (Chopra & Gulati, 2001). The agricultural and related utility of commons to human societies has enabled them to survive up to the present day, despite the waves of enclosure.

The enclosure of the commons

Enclosure (originally ‘inclosure’) is the act of transferring resources from the commons to purely private ownership (Linebaugh, 2008) or the decrease of accessibility of a particular resource due to privatisation, transferring common properties ‘from the many to the few’ (Benkler, 2006; Nuijten, 2006). The commons-based food-producing systems in Europe started to be dismantled soon after the end of the Medieval Age, when royal and feudal landowners began enclosing common lands, especially in Tudor England (Linebaugh, 2008) and Trastamara Spain (Luchia, 2008). Through legal and political manoeuvres, wealthy landowners marked and hedged off sections of the commons for their own profits, impoverishing many villagers and ultimately destroying their communitarian way of life in what Polanyi (1944) dubbed ‘a revolution of the rich against the poor’.

The latter part of the eighteenth and early nineteenth centuries saw a second wave of enclosures, again notably in England and Spain; during this period, of course, enclosure was also globalised, as a feature of the colonializing activities of the maritime empires of Western Europe claiming native lands in the Americas, Africa, southern Asia and Australasia. The processes undoing the communal regime continued through the late nineteenth and the twentieth centuries, relentlessly pursued by the state and wealthy private owners realising the value of land for the production of food and other goods (cotton, sugar, rubber, etc.). Internationally, it was first promoted by imperial trading companies supplying to mother countries and then continued in the post-colonial context; in north America, it took the form of the barbed-wire fencing of open range, while in the Soviet Union, land was ‘consolidated’ in the collectivisation drive of the 1930s; generally, it was propelled by the need for rural areas to supply the growing urban populations and later justified by the idea that communal property was an obstacle to economic growth and did not guarantee conservation of resources (Serrano-Alvarez, 2014). Finally, over the last 30 years, common lands have suffered a third, global wave of commodification and enclosure, ‘land-grabbing’ spurred by the dominant neoliberal doctrine and competition for non-renewable natural resources and supported now by the evolutionary theory of land rights.

17 During the period 1750 to 1850, the Inclosure Acts in England removed a fifth of all land, more than 2.75 million ha of commons, especially the arable, hay-meadow and better pasture land (Rodgers et al., 2011). In Spain, the *desamortizaciones* of 1836 and 1855, two state-led privatisation schemes enacted by Ministries Mendizabal and Madoz, similarly encroached on a large share of commonly-owned resources.
Community-owned lands are presently under huge pressures from voracious states and profit-seeking investment funds, backed initially by the IMF and World Bank in the framing of structural adjustment programmes and lately by drivers such as growing populations, shifting diets (more meat-based), water and soil constraints, climate vagrancies and long-term investments in natural resources with increasing demand (Cotula, 2012).

The third wave of privatisation of food-producing commons systems was theoretically and ideologically grounded on the Demsetz’s (1967) narrative that considers rising populations to drive property values and communal resources upward, leading to increased demand and disputes over natural resources, which can only be solved through government-led property formalisation. Using this theory, Alchian and Demsetz (1973) stated that the increase in the value of a communal resource will inevitably lead to the enclosure of the commons. And Hardin (1968) wrote his famous tragedy. However, with a varied set of successful case studies of common-pool resources, Ostrom (1990) was able to demonstrate the incorrect assumptions of this approach, both theoretical and practical.

The enclosure and commodification of goods owned by no-one is expanded and deepened by capitalism’s insatiable appetite through the modern mechanisms of copyrights, permits, restrictive legislation and taxes on specific activities (Hess, 2008; Lucchi, 2013). For example, plant genetic resources in the form of seeds used to be public goods until scientific and technological progresses enabled us to synthesise DNA, modify living organisms and reconstruct genes in the laboratory; now, private enterprises are granted copyright licenses for the genes and seeds they develop. Enclosure of the commons can be driven by protection rather than profit-seeking, such as the quotas that are set to address the problem of declining open-sea fish stocks due to over-exploitation (Young, 2003) or the licenses and seasonal permits that regulate fishing from the seashore and collecting mushrooms in the forest in many areas and certain seasons. Such regulation can also lead to the development of new markets for the services common-pool resources provide, as in the case of polluting air emissions (see Note 2).

6. Re-commoning food and the food commons regime: theoretical underpinnings

In this scenario, a re-commoning of food would certainly open up the prospect of a transition towards a new food regime in which the several food dimensions are properly valued and primacy rests in its absolute need for human beings. But in order to move in this direction, the very foundations of how economics and social sciences perceive foods and foodstuff have to be reassessed. The following sections aim to show how rivalry and excludability, the features used by the economic school to define private/public/common goods, are just social constructs and not ontological properties of goods. Then, using the food regime theory, discussion moves to some current developments in the industrial food system (mainstream) and innovative niches (urban alternative food networks and rural food sovereignty movement), proposing a transition pathway towards a new model: the food commons regime.

There are currently 1550 million hectares of cultivated land (Bruinsma, 2009), a resource that is becoming increasingly scarce (Lambin et al., 2013) with more than ten global model estimates that present very diverging figures (from no room for cropland expansion without affecting critical ecosystems to availability to expand by three times the current area) (Eiterlberg, van Vliet & Verburg, 2014).
The economic approach to commons revisited

In the popular meaning, a commons is a specific resource that is owned and managed in common, shared by and beneficial to all or most members of a community (Sandel, 2009). The standard economic definition of public goods, meanwhile, is anchored in the non-rivalry and non-excludability features of this – individuals cannot be effectively excluded from use of the common and its use by one individual does not reduce availability to others (Samuelson, 1954; Ver Eecke, 1999). Examples of such public goods (or commons) include things like fresh air, non-patented knowledge, universal public health and peace. In sensu stricto, food is rival, because if I eat, say, a cherry, it is no longer available for others to eat, and excludable, in terms of that cherry or cherries in general. However, cherries are continuously produced by nature and further cultivated by humans, so they are no longer restricted in numbers. As long as the replenishment rate outpaces the consumption rate, food is considered a renewable resource with a never-ending stock, like air. Food produced by nature and harvested in a sustainable way seems to be effectively unlimited, therefore it is available worldwide, although insufficient now to feed us all naturally, requiring us to produce it ourselves.

Excludability and rivalry are not absolute features but social constructs created by human beings. In fact, goods often become private or public as a result of deliberate policy choices. The degree of excludability and rivalry depends upon variables related to the nature of the good, the consumption/utilisation rate, technological developments and the definition and enforcement of property rights defined by entitlements, regulations and sanctions that allow for certain activities and proscribe others for specific groups or individuals. Food excludability and rivalry can thus be contested. Both properties are attributes that human society assigns to different types of good, based largely on a dominant ideology, particular economic thinking and historical considerations; consequently, they can be modified. Although foods, as single items or classes, may be rival, this need not be the case for the category of food as a whole – in a condition of plenty, where there is, in fact, enough for all – and food in general certainly does not have to be an excludable good to anyone. The commodification of natural resources essential for human beings can be reversed. Moving from possibility to prescription, a re-commoning of food is argued for here as an essential paradigm shift. It leads us towards a new regime, which could be called the food commons.

The evolution of different food regimes

A food regime is a rule-governed structure of food production and consumption on a world scale (Friedmann, 1993), with food regime theory – initially formulated by Friedmann (1987) and further expanded by Friedmann & McMichael (1989), Friedmann (2005) and McMichael (2009) – standing as a historical and sociological approach aimed at accounting for recent past and present global food systems. This theoretical framework critically analyses agricultural modernisation, underlining the pivotal role of food in global political-economy and describing the main features of stable food regimes and their fault lines, crises and transitions. The regimes approach also considers shifting balances of power among states and private corporations and
NGOS, along with the rules and institutions that govern the food system and permit capital accumulation. This type of analysis depicts food as a source of power and domination, a power that lies in its material and symbolic functions linking nature, human survival, health, culture and livelihood. Among the variables that define food regimes, one may mention the role of food in capital accumulation, where and how food is produced and by whom, major patterns of food flows and control of food production.

Implicit in the historical narrative of de-commoning, three major food regimes have been identified, namely, the UK-centred colonial-diasporic regime (1870-1930s), the US-centred mercantile-industrial regime (1950s-70s) and the global corporate regime (1980s-2000s), leaving definition of the situation nowadays open, as either the final stage of the corporate regime or a troublesome transition towards a something new. The UK-centred colonial-diasporic regime, defined by food imports from settler and tropical colonies to provision emerging industrialisation in the UK and Europe, developed mono-cultures in tropical colonies and national agricultural systems in settler colonies. The US-centred mercantile-industrial regime, during the post-War reconstruction and Cold War, had export subsidies and US food aid as the international mechanism to deter communism expansion and extend industrialisation in the Global South, when agriculture became more specialised, industrialised (longer food chains) and commoditised (detached from place of origin and non-commercial values), the term ‘agribusiness’ being coined in Harvard, 1954. This regime was also characterised by the technology-driven Green Revolution, land reform schemes to fully privatise community-owned land-plots and the dismantling of Global South diverse agricultures for their transformation into mono-crop agro-exporting systems, the development of processed durable foods and the anathematising of food self-sufficiency.

Now, the global corporate-environmental (neoliberal) regime defines a set of rules institutionalising corporate power in the world food system (Pechlaner & Otero, 2010), deepening the commodification of food by radically undermining its non-monetary dimensions (food as a human need, a human right and a cultural determinant) and developing its tradable features through the transnational financialisation of food expressed in its transformation (for fuel and animal feeds) and substitutionism (food providing foodstuffs) and the effects of international capital (e.g. supply/demand controls through futures markets). Other pertinent features of this regime include the supermarket revolution and the vertical expansion of retail corporations into production, corporate oligopolies that control the major share of food producing inputs (seeds, agrochemicals, tractors, etc.) and privatisation of agricultural research and enclosure of food-related knowledge commons by intellectual proprietary rights (patents and lawsuits) – the latter a modernist narrative that sees small-scale farmers and peasants as residuals in furthering commodification, homogenising and decontextualising the ‘food from nowhere’ and extending yet greater WTO-styled agricultural liberalisation.

This regime, however, has been attenuated by strong, citizen-led, environmental and justice concerns that have advocated for state-regulated governance of corporative activities within the domains of animal welfare, fair trade, organic and healthy products, and land-grabbing and conversion of forestry into arable land and partially restrained absolute commodification of
natural resources (e.g. endangered species as luxury goods, air as carbon trade schemes).\textsuperscript{19} ‘Sustainable Intensification’ and ‘Green Growth’ are the new narratives developed by the duopolistic neoliberal state-corporations to respond to those concerns (UK Government 2011; OECD, 2013).

\textit{From food sovereignty to a food commons regime}

Transitions between regimes stem from internal strains, claims by marginalised groups, power imbalances, outrageous capital accumulation and contradictory relations resulting in crisis and transition towards a successor regime (Le Heron & Lewis, 2009; Wittman, Desmarais & Wiebe, 2010). Currently, the corporate food regime (industrial food system) is coming under increasing scrutiny by aware citizens, combatant grassroots organisations, concerned governments and small-scale stakeholders in the food chain as the major fault lines of inequality, inefficiency and unsustainability become ever more evident. Within this apparently and at least potentially transitional framework, characterised by experimentation, tension and contestation (Burch & Lawrence, 2009), Wittman (2011) has recently posited food sovereignty as an alternative paradigm, the driver of change that is challenging the corporate food regime with the aim of replacing it with a new one, provisionally named the \textit{food sovereignty regime}.

Although one may be sympathetic to the sociological critique of the corporate regime, however, one cannot ignore the fact that the highly politicised, counter-hegemonic food sovereignty paradigm has only managed to draw a small number of countries to its side (Ecuador, Bolivia, Nicaragua and Mali). Originating from rural organisations and food producers (peasants, small-scale farmers, indigenous peoples, fishermen), this movement has not yet fine-tuned with legitimate concerns for healthy and local food, return to nature and less-polluting forms of food consumption by urban citizens and food consumers. Indeed, up unto 2013, the leaders of the food sovereignty movement were rather oblivious to the range of recent academic and urban developments that were gaining momentum in beginning to shape urban and national policies in several countries (below). This is gradually changing now. The worldwide Via Campesina movement, from which the idea of food sovereignty originated, is now becoming appreciative of the strategic importance of urban-based alternative initiatives.\textsuperscript{20} This is important, since the predominantly rural social movement of food producers from the Global South and the predominantly urban alternative food networks of food consumers and producers from the North do need to combine if some sort of grand coalition of the counter-hegemonic movement is to coalesce as the key development in the transition towards what could be more appropriately termed a \textit{food commons regime}.

The food commons regime, as the name implies, would fundamentally rest on the idea of food as a commons, which means \textit{revalorising the different food dimensions} that are relevant to

\textsuperscript{19} Re carbon trading: NGOs such as Carbon Trade Watch, Carbon Market Watch and Redd Monitor are advocating against the EU Emissions Trading Scheme. See \url{www.carbontradewatch.org}, \url{http://carbonmarketwatch.org} \url{www.redd-monitor.org}.

human beings (value-in use) – food as a natural resource, human right and cultural determinant – and thus, of course, reducing the tradable dimension (value-in exchange) that has rendered it a mere commodity. This regime would inform an essentially democratic food system based on sustainable agricultural practices (agro-ecology) and open-source knowledge (creative commons licenses) through the assumption of relevant knowledge (cuisine recipes, agrarian practices, public research, etc.), material items (seeds, fish stocks, etc.) and abstract entities (transboundary food safety regulations, public nutrition, etc.) as a global commons.

The food commons regime will entail a return move from corporate-state control to a collective, polycentric and reflexive governance, a shift of power from a state-private sector duopoly in food production, transport and distribution to a tricentric governance system, where the third pillar would be the self-regulated, civic, collective actions for food that are emerging all over the world. Presently developing a narrative of valuing food as an essential, natural good, produced and consumed with others and thus a bonding tie in human cultures, these alternative food initiatives will be the organisational drivers of change. In short, a food commons regime will be governed in a polycentric manner by food citizens (Gomez-Benito & Lozano, 2014) that develop food democracies (Lang, 2003; De Schutter, 2014) which value the different dimensions of food (Vivero, 2013).

7. Crowdsourcing the transition to food as a commons

At present, the globalised world appears to be at the crossroads of two food transition streams: the well-advanced nutritional transition from vegetable- to meat-dominated diets (Popkin, 2003) and the incipient food transition from oil-dependent industrial agriculture to more environmentally-friendly and less resource-intense food systems. This nascent stream can evolve towards re-localised, organic food systems, spurred by non-monetised food dimensions and alternative food movements (Heinberg & Bomford, 2009) or to deepen the globalised, profit-driven path of the industrial food system supported by science and technology developments under the ‘sustainable intensification’ or ‘green growth’ paradigms (UN, 2012) (e.g. renewable-energy based hydroponics in city towers owned by retail corporations). The dominant path that emerges from these transitions will determine the new food paradigm.

The proposal here is for a transition towards a food commons regime based on an adequate valuation of all the dimensions of food. This transition path approaches food as a commons, contrary to the history of previous transitions, in which food was first privatised and then commoditised. Although some authors have already suggested this (Anderson, 2004; Ausin, 2010), none of the major 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; WEF, 2013). Following the mainstream rationality, although the most pressing issue is the lack of food access, this only becomes such an intractable problem due to the assumed private nature of food and its absolute

excludability. While the present proposal may seem to be going against the tide of history, that might be regarded rather as a strength than a weakness; as Einstein noted, problems cannot be solved with the same mind-set that created them. And in fact, the consideration of food as a commons is already in play and increasing, with (a) food-related elements being considered as global or national commons (or global public goods, as they are usually termed) in the context of civil struggles for re-commoning, and (b) an evolving governance of the food system being constructed from bottom-up grassroots urban and rural initiatives. These do, in fact, all point in the same direction, towards a very possible future.

Material and non-material food-related elements already considered as commons

There is a need to reclaim a discourse and a rationale of the commons to be applied to food at global, regional/national and local levels. The good news is that policy makers and academics are already moving from the stringent economic definition of public/private goods to a more fluid idea of global public goods, or commons. Regarding terminology here, the former, ‘public goods’, is more usually assumed in the hegemonic discourse of major institutions, while the latter ‘commons’ tends more to be taken up by alternative activists advocates, with both variously appended by ‘global’ or ‘national’.

The important thing is that these goods/commons, however named, are available worldwide, essential for all human beings, regarded as things that need not and should not be treated as excludable and rival, and whose production and distribution cannot be governed exclusively by one state. Such goods need to be governed in a common manner as they are beneficial for all (Kaul, 2010; Kaul & Mendoza, 2003), even if not everybody is contributing to or paying for their provision. In addition to the material commons and related practices already considered, the following represents a (non-exhaustive) list and commentary of aspects of food that are currently considered as global public goods or global commons.

Edible plants and animals produced by nature
Since Nature’s unenclosed territories (e.g. Antarctica, the deep ocean) are largely assumed as global commons, the natural resources in these are commons as well (including, therefore, fish stocks and marine mammals) (Christy & Scott, 1965). Although there are complicating factors depending on national and international proprietary rights schemes, the basic assumption remains in place for fish stocks in coastal areas (Bene, Phillips & Allison, 2011), as well as for wild foods produced in urban and rural areas.

Genetic resources for food and agriculture
Agro-biodiversity represents a continuum of wild-to-domesticated diversity that is crucial to people’s livelihood and well-being and is therefore considered as a global commons (Halewood, Lopez-Noriega & Louafi, 2013). Some authors and many activists and producers demand genetic resources to be patent-free to enable innovation, free exchange and peer-to-peer

22 Although not yet acknowledging themselves as part of the same movement, grassroots collective-based initiatives related to e.g. degrowth, food sovereignty, commoners, peer-to-peer, veggies, buen vivir, happiness index, open knowledge, occupy and indignados are building a new way of producing, transforming and consuming food.
breeding (Kloppenburg, 2010). Seed exchange schemes – to some extent a phenomenon growing in response to private development programmes and enclosure attempts – are considered networked-knowledge goods with non-exclusive access and use conditions, produced and consumed by communities.\textsuperscript{23}

**Traditional agricultural knowledge**

A commons-based patent-free knowledge contributes to global food security by upscaling and networking grassroots innovations for sustainable and low cost food production and distribution (Brush, 2005). There is widespread evidence of a growing appreciation of the value of this indigenous traditional knowledge to adapt to climate change and mitigate the pervasive effects on food production (Altieri & Nicholls, 2013) and alternative visions of the development of food-related technology (Pretty, Toulmin & Williams, 2011)

**Modern, science-based agricultural knowledge produced by public institutions**

Universities, national agricultural research institutes or international CGIAR, UN and EU centres all produce public science, widely considered as a global commons (Gardner & Lesser, 2003). Although there is pressure on the public production of information by corporate interests, research into something as basic as food is not popularly challenged as a common good. Research funds should be directed towards sustainable practices and agro-ecology knowledge developed by those universities and research centres instead of further subsidising industrial agriculture.

**Cuisine, recipes and national gastronomy**

Food, cooking and eating habits are inherently part of our culture; gastronomy is regarded as a creative accomplishment of humankind, like music or architecture. Recipes are an excellent example of commons in action, and creativity and innovation are still dominant in this copyright-free domain of human activity (Barrere, Bonnard & Chossat, 2012; Harper & Faccioli, 2009). The culinary and convivial commons dimension of food has received little systematic attention from the food sovereignty movements (Edelman, 2014), although it is being properly valued by alternative food networks (Sumner, Mairb & Nelson, 2010).

**Food safety**

Epidemic disease knowledge and control mechanisms are widely considered as global public goods, as zoonotic pandemics are a public goods with no borders (Richards, Nganje & Acharya, 2009; Unnevehr, 2006). Issues in this domain are already governed through a tricentric system of private sector self-regulating efforts, governmental legal frameworks and international institutional innovations, such as the *Codex Alimentarius*.

**Nutrition, including hunger and obesity imbalances**

There is a growing consensus that health and good nutrition can be considered as global public goods (Chen, Evans & Cash, 1999) with global food security recently joining that debate in international forums (Page, 2013). Although this political approach is still at an early stage of

\textsuperscript{23} See, e.g., the Open Source Seed Initiative, recently launched at the University of Wisconsin-Madison. http://www.opensourceseedinitiative.org/about/
development, far from established as a general understanding and certainly without a negotiated
global statement as yet, it is an idea that is taking hold, as witness FAO Director General
Graziano in the closing remarks of the International Conference of Nutrition, November 2014.\textsuperscript{24}

**Food price stability**

Extreme food price fluctuations in global and national markets, such as the world experienced in
2008 and 2011, are a public bad that benefits none but a few traders and brokers. The basic fact
that those acting inside the global food market have no incentive to supply the good or avoid the
bad is increasingly observed, and the need for concerted, state-based action to provide such a
global public good as food price stability is gaining traction (Timmer, 2011).

It goes without saying that all governments have a deep concern about food issues, which is why
subsidised food production and consumption policies are the norm all over the world (see above,
on subsidies to industrial agriculture) and food-related civil unrest is as much a subject of
political concern nowadays as it ever has been (Bohstedt, 2014; Holt-Gimenez & Patel, 2009).
For all governments, food is a very particular good as it is an essential need and thus highly
regulated and heavily subsidised. Indefensibly, the political discourse of the OECD and WTO
calls for a dismantling of national trade barriers and subsidised agriculture in developing
countries while developed nations maintain massively subsidised food systems at home. Yet this
hypocritical approach merely reflects the incoherence between the dominant narrative of the
neoliberal model (food as a pure commodity) and the real politik most governments pursue
(food as a \textit{de facto} impure public good). Since food is strategically governed, massively
supported and strongly protected by public institutions, provided by collective actions in
thousands of traditional and post-industrial collective arrangements (as listed above, with others
like farmers’ markets, various types of food cooperatives, producer-consumer associations, etc.)
and yet largely distributed by market rules, why should we not consider it a commons or public
good, as we actually do with education and health? Shifting the dominant discourse on food and
food system governance from the private sphere to the commons arena would open up a whole
new world of economic, political and societal innovations

**The tricentric governance of the food system as the transition path**

Local transitions towards the organisation of local, sustainable food production and
consumption are taking place today across the world.\textsuperscript{25} Directed on principles along the lines of
Elinor Ostrom’s (1990, 2009) polycentric governance, food is being produced, consumed and
distributed by agreements and initiatives formed by state institutions, private producers and
companies, together with self-organised groups under self-negotiated rules that tend to have a
commoning function by enabling access and promoting food in all its dimensions through a
multiplicity of open structures and peer-to-peer practices aimed at sharing and co-producing

\textsuperscript{24} \url{http://www.fao.org/about/meetings/icn2/friday-21-november/en/}

\textsuperscript{25} E.g. food swaps in Australia, food growing and free harvest in Belgium, food gleaning in the UK, food policy
councils in Canada (Toronto) and Brazil (Belo Horizonte), food trusts and community-supported agriculture in the
US and local food-sheds in New York, and the Slow Food movement originating in Italy and now extended to 150
countries.
food-related knowledge and items. The combined failure of state fundamentalism (in 1989) and so-called ‘free market’ ideology (in 2008), coupled with the emergence of these practices of the commons, has put this tricentric mode of governance back on the agenda. The further development of tricentric governance will comprise (combinations of) civic collective actions for food, the state and private enterprise.

(a) Civic collective actions for food (alternative food networks, AFNs) are generally undertaken at local level to begin with and aim to preserve and regenerate the commons that are important for the community (food as a common good). There have been two streams of civic collective actions for food running in parallel: the challenging innovations taking place in rural areas, led by small-scale, close-to-nature food producers, increasingly brought together under the food sovereignty umbrella, and the AFNs exploding in urban and peri-urban areas, led on the one hand, by concerned food consumers who want to reduce their food footprint, produce (some of) their own food, improve the quality of their diets and free themselves from corporate-retail control, and on the other by the urban poor and migrants in the developing world motivated by a combination of economic necessity and a desire to maintain their old food sovereignty and links to land. Over the last 20 years, these transition paths have been growing in parallel but disconnected ways, divided by geographical and social boundaries. But the maturity of their technical and political proposals and reconstruction of rururban connections have paved the way for a convergence of interests, goals and struggles. Large-scale societal change requires broad, cross-sector coordination. It is to be expected that the food sovereignty movement and the AFNs will continue (and need) to grow together, beyond individual organisations, to knit a new (more finely meshed and wider) food web capable of confronting the industrial food system for the common good.

(b) The state has as its main goals the maximisation of the well-being of its citizens and will need to provide an enabling framework for the commons (food as a public good). The transition towards a food commons regime will need a different kind of state, with different duties and skills to steer that transition. The desirable functions are shaped by partnering and innovation rather than command-and-control via policies, subsidies, regulations and the use of force. This enabling state would be in line with Karl Polanyi’s (1944) theory of its role as shaper and creator of markets and facilitator for civic collective actions to flourish. This state has been called Partner State (Kostakis & Bauwens, 2014) and Entrepreneurial State (Mazzucato, 2013). The partner state has public authorities as playing a sustaining role (enabling and empowering) in the direct creation by civil society of common value for the common good. Unlike the Leviathan paradigm of top-down enforcement, this type of state sustains and promotes commons-based peer-to-peer production. Amongst the duties of the partner state, Silke Helfrich mentioned the prevention of enclosures, triggering of the production/construction of new commons, co-management of complex resource systems that are not limited to local boundaries.

26 Peer-to-peer: the ability to freely associate with others around the creation of common value; alternatively, ‘communal shareholding’: the non-reciprocal exchange of an individual with a totality, being the totality the commons (Fiske, 1991).

27 A term created by Bauer & Roux (1976) to describe the blurred boundaries between urban and rural spaces in ever-growing metropolitan areas where area-specific economic activities and social relations in urban and rural areas influence each other, the food system being a paradigmatic case.
or specific communities, oversight of rules and charts, care for the commons (as mediator or judge) and initiator or provider of incentives and enabling legal frameworks for commoners governing their commons. The entrepreneurial state, meanwhile, fosters and funds social and technical innovations that benefit humanity as public ideas that shape markets (such as, in recent years, the Internet, Wi-Fi, GPS), funding the scaling up of sustainable consumption (like the Big Lottery Fund supporting innovative community food enterprises that are driving a sustainable food transition in UK) and developing open material and non-material resources (knowledge) for the common good of human societies. Public authorities will need to play a leading role in support of existing commons and the creation of new commons for their societal value.

(c) The private sector presents a wide array of entrepreneurial institutions, encompassing family farming with just a few employees (FAO, 2014), for-profit social enterprises engaged in commercial activities for the common good with limited dividend distribution (Defourny & Nyssens, 2006) and transnational, ‘too-big-to-fail’ corporations that exert near-monopolistic hegemony on large segments of the global food supply chain (van der Ploeg, 2010). The latter are owned by unknown (or difficult to track) shareholders whose main goal is primarily geared to maximize their (short-term) dividends rather than equitably produce and distribute sufficient, healthy, and culturally appropriate food to the people everywhere. During the second half of the twentieth century, the transnational food corporations have been winning market share and dominance in the food chain, although space, customers and influence is being re-gained, spurred by consumer attitudes towards corporate foods and the sufficiently competitive (including attractive) entrepreneurial features of family farming (which still feeds 70% of the world’s population) and other, more socially-embedded forms of production, such as social enterprises and co-operatives. The challenge for the private sector, therefore, is to adjust direction, to be driven by a different ethos while making profit – keeping, indeed, an entrepreneurial spirit, but focusing also much more on social aims and satisfying needs. Or, put the other way around, the private sector role within this tricentric governance will operate primarily to satisfy the food needs unmet by collective actions and state guarantees, and the market will be seen as a means towards an end (wellbeing, happiness, social good) with a primacy of labour and natural resources over capital. Thus, this food commons transition does not rule out markets as one of several mechanisms for food distribution, but does it reject market hegemony over our food supplies since other sources are available, a rejection that will follow

28 See the Partner State entry at the P2P Foundation. [http://p2pfoundation.net/Partner_State](http://p2pfoundation.net/Partner_State)
29 Making Local Food Work is a five-year £10 million programme funded by the Big Lottery Fund and delivered by the Plunkett Foundation that helps people to take control of their food supply by supporting a range of community food enterprises across England. [www.makinglocalfoodwork.co.uk](http://www.makinglocalfoodwork.co.uk)
30 Shareholder value maximization is detrimental for company performance in the medium and long term insofar as it subtracts money from profits to be distributed to short-sighted shareholders and stock buybacks instead of being used to re-invest in company assets, higher salaries, fair payments to suppliers, research and innovation or social responsibility (Chang, 2011).
31 The total turnover of food-producing cooperative sector in 2012 was 0.6 trillion US dollars, and growing every year despite the global financial crisis (International Co-operative Alliance, 2014). This information was collected from 523 cooperatives from 30 countries involved in the production, processing and marketing of agricultural goods for members. The agriculture and food co-operative sector is the second biggest in the world, after finance, and includes some huge enterprises, such as the Japanese National Federation of Agricultural Co-operatives (56.8 billion USD turnover), the South Korean NH Nonghyup (50.7 million USD, with 2.4 million members and a financing system serving 37 million customers) and the Fonterra Cooperative Group in New Zealand (16.2 billion USD).
from a popular programme for provisioning of and through the food commons (popular in the sense that it must be democratically based on a generalised public perception of its goodness and efficacy).

According to the typology developed by Harvey et al. (2001), food can be provided by four types of agencies, based on different principles: market (based on demand-supply market rules), state (based on citizen rights or entitlements), communal (based on reciprocal obligations and norms) and domestic (do-it-yourself or household provision based on family obligations). By encouraging (politically and financially) the development of non-market modes of food provisioning (state and/or communal) and (similarly, in parallel) limiting the influence of market provisioning, we can re-build a more balanced tricentric food system (Boulanger, 2010). In plain words, governments will support private initiatives whose driving force is not shareholder value maximization (e.g. family farming, food co-operatives, producer-consumer associations), while citizen/consumers will exert their consumer sovereignty by prioritising food with a meaning (local, organic, fair, healthy) beyond the purely financial (not just the cheapest). The private sector will also, or primarily (depending on the details of any particular tricentric mix), trade undersupplied, specialised and gourmet foodstuffs (food as a private good) and it may also rent commonly-owned natural resources to produce food for the market. Enterprises will further emerge around the commons that create added value to operate in the marketplace, but should probably also support the maintenance and expansion of the commons they rely on.

The transition period for this regime and paradigm shift should be expected to last for several decades, a period where we will witness a range of evolving hybrid management systems for food similar to those already working for universal health/education systems. The era of a homogenized, one-size-fits-all global food system will be replaced by a diversified network of regional foodsheds designed to meet local needs and re-instate culture and values back into our food system (The Food Commons, 2011). The Big Food corporations will not, of course, allow their power to be quietly diminished, and they will, inevitably, fight back by keep on doing what has enabled them to reach such a dominant position today: legally (and illegally) lobbying governments to lower corporate tax rates and raise business subsidies, mitigate restrictive legal frameworks (related to GMO labelling, TV food advertising, local seed landraces, etc.) and generally using the various powers at their disposal to counter alternative food networks and food producing systems. To emphasise, the confrontation continue over decades, basically paralleling and in some ways reversing, in fact, the industrialisation and commodification path that led us to this point.

Appropriate combinations of self-regulated collective actions, governmental rules and incentives, and private sector entrepreneurship should yield good results for food producers, consumers, the environment and society in general. The tricentric governance schemes will be initiated at both local and regional scales, as they imply a different way of organising the territory: smaller bio-regions with stronger local authorities, community-based civic collective actions and nested markets to supply unmet needs, supported by a partner and also entrepreneurial state with a better balance of command-and-control measures and reflexive

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32 Owned by trusts (in the US), local communities (in Europe or Africa, see above) or the state.
governance tools. Regarding socio-economic and environmental sustainability, the governance of food as a commons will rest on three premises: a) the bonds and multi-dimensional value systems of the food-producing communities, b) the tricentric governance mechanisms steered by partner states that regulate the food production, distribution and consumption, and c) the sustainability of the food producing systems to maintain food footprints within ecological boundaries and to produce good food economically and efficiently.

8. Concrete proposals for re-commoning the future

In the developmental process of re-commoning food, the initial transition phase should witness greater levels of public sector involvement. States have a vital role to play, as throughout history (De Moor, 2008), through enabling legal and financial frameworks for collective actions to maximise the common interest (e.g. taxing and incentive schemes, public subsidies, relatively relaxed regulations for collective actions). The state must be seen as a funding and operational instrument to achieve society’s well-being, including food security. However, the leading role of the state should gradually be shifted to self-initiated collective actions by producers and consumers, as the public provision of food should not surpass the net benefits yielded by the self-organised and socially-negotiated food networks (Bollier, 2003). This will be crucial in order to avoid the pitfalls of the old-style socialist command economies. Therefore, there should be a devolutionary emphasis further enabling and promoting local organisation, agents and agencies (local governments, local entrepreneurs and local self-organised communities).

Second, if food is to be considered a commons, the legal, economic and political implications will go far beyond the territories of the hungry, as the food system governance will bring (further) extra-territorial obligations (Kent, 2008), as pertaining to the global nature of this common good. Until now, advocacy for anti-hunger measures has been based on demonstrating the economic and political impacts that hunger imposes to human societies (Grantham-McGregor et al., 2007; World Bank, 2006) or highlighting the links between food insecurity, social unrest and productivity losses (Messner & Cohen, 2008; Holt-Gimenez & Patel, 2009); alternative, non-economic arguments, such as moral obligation, public health considerations, social cohesion and human rights approaches have largely been neglected (Pinstrup-Andersen, 2007; Sidel, 1997; FAO, CEPAL & PMA, 2007). Considering food as a commons will provide the rationale underpinning these non-economic arguments.

Therefore, food will be kept out of trade agreements dealing with pure private goods (Rosset, 2006), and there will thus be a need to establish instead a transnational commons-based governing system for production, distribution and access to food, such as the agreements proposed for climate change (Griggs et al., 2013), future generations (Gardiner, 2014) and universal health coverage (Gostin & Friedman, 2013). This will pave the way for more binding legal frameworks to fight hunger (MacMillan & Vivero, 2011) and guarantee the right to food for all, as well as reinforce cosmopolitan global policies (Held, 2009) and fraternal ethics (Gonthier, 2000). A scheme for universal food coverage would materialise the new narrative.

33 An idea called for by Nobel prize-winner Amartya Sen.
guaranteeing a daily minimum amount of food for all citizens (HLPE, 2012) and thereby protecting the only human right declared as fundamental in the ICESCR: freedom from hunger. The food coverage will probably need to be implemented as a basic food entitlement (Van Parijs, 2005) or a food security floor, similar to the social protection floor proposed by Deacon (2012). As an immediate mechanism, every state should guarantee the minimum wage as at least equal to the value of food basket.

There will be legal and ethical grounds to ban futures trading in agricultural commodities, as speculation on food has a major impact on international and domestic prices and only benefits speculators. Considering food as a commons will prioritise the use of food for human consumption, and thus limit non-consumption uses. Additionally, it will serve to backstop the narrative to reverse the excessive patenting of life, helping to apply the principles of free software to the food and nutrition security domain. The patents-based agricultural sector appears to be retarding or even deterring the scaling up of agricultural and nutritional innovations (Boldrin & Levine, 2013), while the freedom to copy positively promotes creativity, as can be seen, for example, in the fashion industry and the computer world (Raustiala & Sprigman, 2012). Millions of people innovating with locally-adapted patent-free technologies have a far greater capacity to find adaptive and appropriate solutions to the global food challenge than a few thousand scientists in expensive laboratories and research centres (Benkler, 2006).

9. Conclusion: crowd-feeding the world with meaningful food

This text posits that a fairer and more sustainable food system that takes food as a commons will revalorise its non-monetary dimensions (as an essential resource, human right, cultural item and tradable asset) as against the dominant industrial food system’s mono-dimensional approach to food as a commodity. With the global and local food production and distribution systems no longer exclusively governed by market rules, institutional arrangements based on collective actions, appropriate legal collective entitlements, adequate funding and political support will also be given due consideration by politicians and academics. Self-regulated collective actions for food will represent the third pillar of the governance of the evolving food system. The state-market duopoly in food provision will need to re-accommodate this mounting force of citizen actions to reclaim food as a commons. Food can and must be shared, given for free, guaranteed by the state, cultivated by many and also traded in the market. The world cannot be fed by profit-seeking corporations treating food as a commodity, as we know now. We all need to be involved in food governance; the world should be crowd-fed by billions of small producers that are also consumers.

Food will be better governed by collective actions than by the rules of supply and demand. Unlike the market, the food commons are about cooperation, sharing, stewardship, equity, self-production, sustainability, collectiveness, embeddedness and direct democracy from local to global. Crucially, they involve civic collective actions for food built upon civic engagement, food conviviality, reducing consumption of ultra-processed foods and increasing seasonal and local products. This invokes a radical paradigm shift from individual competitiveness as the engine of progress via endless growth towards collective cooperation as the driver of happiness.
and the common good. The inherent sociability of *Homo sapiens* (Fiske, 1991) will enable the *Homo cooperans* to substitute the *Homo economicus* when dealing with our natural essentials.\(^{34}\)

The de-commodification of food will imply a delinking of commodities and well-being, accepting free food schemes as part of the welfare state and increasing the proportion of goods consumed and services utilised outside both the formal market and the public (state) sphere. The re-commoning of food will open up the transition towards a new food regime in which primacy rests in its absolute needs of human beings and the different dimensions of food are properly valued. This might be termed a food commons regime. It is a food regime for which the world is now eminently ready.

The institutional arrangements that govern local food systems and people's capacity for collective action are essential agencies of any reconfiguration of the global food system to render it more sustainable and fairer. Finding the adequate balance between the tricentric institutional setup envisaged in the programme for a food commons regime as sketched here will be one of the major challenges for humankind to address in the coming century. We need to develop a food system that first, provides for sustainable nutrition for all, and second, provides meaning and not just utility, to food production, trading and consumption (Anderson, 2004). To achieve such a food system, we need to reconsider how food is regarded by our society, not merely or fundamentally as a privatised commodity but as common good.

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\(^{34}\) The *Homo economicus* concept, launched in the 19th century by the philosopher John Stuart Mill, sees humans as rational and narrowly self-interested actors whose main goal in the market is to maximise utility as consumers and economic profit as producers (Persky, 1995); in contrast, the *Homo cooperans* idea regards people as primarily motivated by cooperation, the common of their society, community or group, and to improve their environment (De Moor, 2013).
References


Bruinsma J. (2009). *The resource outlook to 2050: by how much do land, water and crop yields need to increase by 2050?* Rome: FAO.


FAO (2012). *The future we want. End hunger and make the transition to sustainable agricultural and food systems*. Rome: FAO.


http://www.revistaambienta.es/WebAmbienta/marn/Dinamicas/secciones/articulos/Mano.htm


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