

## Food sovereignty and rural development: beyond food security

### Soberanía alimentaria y desarrollo rural: más allá de la seguridad alimentaria

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#### ABSTRACT

Food sovereignty and food security are not the same issue. Both are different but many people around the world confuse the two. This article explores and analyzes the issues surrounding food security and food sovereignty in order to explain the differences between them, identifies the principal statements in food sovereignty and compares some data from different countries in an attempt to highlight the fact that food security policies result in hunger, poverty and environmental damage. Food security and rural development share similar goals, both seek to improve the quality of life of peasants and rural inhabitants; however, economic ideas are unfortunately still prized more than people.

**Key words:** hunger, rural poverty, food production, obesity-undernourishment, rural traditions.

#### RESUMEN

Soberanía alimentaria y seguridad alimentaria no son lo mismo, a pesar de ser conceptos e ideas diferentes muchas personas en el mundo los confunden. Este artículo explora y analiza aspectos relacionados con ambas nociones para intentar explicar las diferencias entre ellos, identifica las principales características de la soberanía alimentaria y compara algunos datos de varios países tratando de destacar que los resultados de las políticas de la seguridad alimentaria han sido hambre, pobreza y daños ambientales. La soberanía alimentaria y el desarrollo rural comparten objetivos similares, ambos persiguen mejorar la calidad de vida de los campesinos y habitantes rurales, sin embargo, infortunadamente las ideas económicas están por encima de la gente todavía.

**Palabras clave:** hambre, pobreza rural, producción de alimentos, obesidad-desnutrición, patrimonios campesinos.

## Introduction

The goal of this document is to show some elements related to food sovereignty. The first issue is the context from which this concept was born, who started the discussion and how it is currently expanding worldwide. Afterwards, there is an essential discussion on how the following two concepts are not same but are confused by many people: food security and food sovereignty. Once clarified, the third part shows food sovereignty's main characteristics and goals. Based on these topics, this article highlights how food sovereignty goals are opposed to World Trade Organization (WTO) goals. Finally, the present article discusses how food sovereignty and rural development are closely linked because they have similar goals.

Through a comprehensive literature review, including the latest research, for the different issues related to this topic, the food sovereignty principles were thoroughly analyzed. These principles, such as access to different kind of resources, production modes, transformation and commercialization methods and agricultural policies, among

others, show the main differences between the food security and food sovereignty approaches, which have been highlighted by authors such as Rosset (2003), Aistara (2013), Allen (2013), Altieri and Toledo (2011), and so on, and statistically revealed in studies from institutions such as Garay (2010) or FAO (2012) and authors such as Gustavson (2011), Kachika (2011) and Kneafsey *et al.* (2013).

## The rise of food sovereignty

The food sovereignty concept began to be discussed in the early nineties when a new economic model, neoliberalism, was implemented in many countries worldwide. In this concept, state subsidies disappeared and the free market became a new development guideline. In this context, food commercialization is part of the free market. In order to regulate the new market, the General Agreement on Tariffs and Trade (GATT) was replaced during the Uruguay round negotiations in 1995 by the World Trade Organization.

Small farmer organizations and civil society organizations, in response to the new policies, proposed the food

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sovereignty approach as an alternative for the survival of agriculture in southern countries. Initially, the scenario involved condemning unfair trade practices for peasants, but the proposal grew and, at the same time, more people and organizations began joining the worldwide movement, wherein 'Via campesina' (International Peasant's Movement) played a leading role. It is remarkable that, in this worldwide battle against the model, indigenous people as well as peasants have joined the fight because both social groups have been affected.

In these social movements, small farmer organizations, civil society and indigenous organizations have been criticizing developed-country policies that provide agricultural export subsidies. The consequences of these policies are food dependency, malnutrition and food vulnerability in developing countries (Laroche and Postolle, 2013).

A basic topic of the food sovereignty discussion is related to the meaning of peasant. So, a basic topic of food sovereignty discussion is related to the meaning of peasantry. In simple terms, it means "people of the land that, worldwide, have a special relationship with the land and food production (...) and are much more closely linked to the places where the food is grown and to how the food is grown" (Desmarais, 2008). This means that rural farmers everywhere share similar feelings, which explains how the food sovereignty movement is growing worldwide. Even though this analysis is focused on peasants, it is necessary to highlight that indigenous people suffering the same consequences of this model as are other rural inhabitants.

This debate brings up the scenario of an old academic debate related to the survival of peasantry from the seventies, mainly in Mexico but also generally in Latin America. Based on the "nonpeasants" scientists point of view, the future for peasants, in a development model based on food production for international markets, would disappear because they were not competitive. On other hand, the "pro-peasant" scientists argued that peasants would survive because they could combine their land labor with other kinds of work, becoming semi-proletariats seeking to improve their family incomes (Pachón, 2011).

As a result of this social struggle, global indigenous and peasants movements have brought, even to the developed countries, food sovereignty and food security issues. The main result is that the national constitutions of some countries, such as Ecuador, Bolivia, Nepal, Mali, Nicaragua and Venezuela, have adopted food sovereignty as a principle (Ortega and Rivera, 2010).

As a response to peasant and indigenous movements, international institutions relaunched the food security concept as an alternative for solving the global nutrition issue. However, this concept is not extensive or integral like food sovereignty. The following section shows some differences between these topics.

### **The food sovereignty approach contrasted against the food security approach**

As has been discussed, the food sovereignty concept was started during the nineties; food security is older. During the post-war period, the paradigm of agricultural development based on food self-sufficiency in all countries was the most relevant one. Even today, in many countries, this idea predominates and has been confused with rural development. A political proposal that aimed to achieve agricultural development was the Import Substitution Industrialization (ISI) model, which has been implemented in developing countries for at least four decades. In the ISI model, agricultural production is the basis for generating incomes that, in the future, will ensure 'development' of these countries (Pachón, 2011).

If the agricultural sector is basic to development, it will be necessary to increase its productivity. That is why governments have spent a lot of money in order to improve this sector. Afterwards, agricultural production would be able to meet domestic demands and produce surpluses for international markets as well. In this context, the first official definition of food security was released in 1974: "... food security is the availability, at all times, of adequate global food supplies of basic food stuffs to sustain a steady expansion of food consumption and to offset fluctuations in production and prices" (United Nations, 1975; Patel, 2009). If the definition is analyzed, some unclear, central issues might be found. For instance, the importance of the place where food is being produced or who is producing it and how, are not really a relevant matter.

In the mid-nineties, while the indigenous and peasant movements were talking about food sovereignty, the FAO declared that food security is when, "...at the individual, household, national, regional and global levels, when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life (FAO, 1996; Patel, 2009). Once again, clearly, some topics are left out of the discussion when talking about food security.

When the eighties were coming to an end, concerns for environmental care were increasing, mainly due to the Brundtland report. However, this issue was not present in the food security approach. Also, climate change and fair trade were not discussed. Possibly, fair trade was secondary due to the WTO being recently created and new agreements on agricultural trade being developed. This special topic will be examined in the following section.

At beginning of this century, the FAO again talked about food security and it was defined as: "...a situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life (FAO, 2001; Patel, 2009). Basically, the food security discussion has remained similar over time. However, nowadays, it includes two central goals: "...first, that food production needs to increase by 50% by 2030 to meet rising demand; and second, that food production needs to double by 2050 to feed a world population of 9 billion" (Maye and Kirwan, 2013).

Based on the food security concept, a food's origin is not a crucial matter. So, some developed countries can flood developing countries with food at an artificially low price due to heavily subsidized production, producing evident consequences such as bankruptcies, emigration and job losses for indigenous and rural populations. A clear example of this argument is the 'North American Free Trade Agreement (NAFTA) Refugees' resulting from massive US corn imports to Central America with more than 6.2 million emigrates up until 2005 (Barker, 2007).

This is why food sovereignty proposes a different viewpoint, which is discussed in next section. Some of the principal food sovereignty characteristics are compared with food security. Additionally, some data on the global food state are discussed in order to identify the consequences of the food security model.

## So, what is food sovereignty?

Food sovereignty is a political concept that elucidates some ideas related to food production, commercialization, availability and the right of people to decide, based on their cultural heritage, how they want to feed themselves.

According to Patel (2009), food sovereignty "...is the right of peoples to define their own food and agriculture; to protect and regulate domestic agricultural production and trade in order to achieve sustainable development objectives; to

determine the extent to which they want to be self-reliant; to restrict the dumping of products in their markets; and to provide local fisheries-based communities the priority in managing the use of and the rights to aquatic resources. Food sovereignty does not negate trade, but rather, it promotes the formulation of trade policies and practices that serve the rights of peoples to safe, healthy and ecologically sustainable production".

According to the declaration of the Forum for Food Sovereignty in Nyéléni (Mali) 2007: "Food sovereignty prioritizes local and national economies and markets and empowers peasants and family farmer-driven agriculture, artisanal – fishing, pastoralist-led grazing, and food production, distribution and consumption based on environmental, social and economic sustainability. Food sovereignty promotes transparent trade that guarantees just incomes to all peoples as well as the rights of consumers to control their food and nutrition. It ensures that the rights to use and manage lands, territories, waters, seeds, livestock and biodiversity are in the hands of those of us who produce food. Food sovereignty implies new social relations free of oppression and inequality between men and women, peoples, racial groups, social and economic classes and generations" (Patel, 2009).

These are the basic elements of food sovereignty; some authors such as Ortega and Rivera (2010) discuss other topics as part of the discourse, however all of them could be considered part of these principles:

**Resources access.** Food sovereignty seeks to encourage and support individual and communal access and control over resources, such as land, seeds, loans, water, infrastructure, and so on. In a sustainable way, it also seeks to respect the rights of use of indigenous and native communities, with a special emphasis on access for women.

**Production modes.** Food sovereignty tries to increase local production by recovering diversified production by families; and also to recover, validate and disseminate traditional production models in an environmentally, socially and culturally sustainable way. This concept supports the endogenous agricultural development models and the right to produce food.

**Transformation and commercialization.** Food sovereignty defends the right of rural farmers, landless rural workers, fisherman, pastoralist and indigenous people to sell their products in order to feed the local population. This involves the creation and support of local markets and direct sales with a minimum of intermediaries.

Right to food consumption. People have the right to healthy food consumption, nutritious and culturally appropriate food from local producers, and production by environmentally sustainable farming techniques.

Agricultural policies. Peasants have the right to know about, participate in and decide on public policies related to feeding, land reform, government profits, social organizations and human rights.

In the same way, the declaration of the Forum for Food Sovereignty, Nyéléni (Mali) 2007, describes some issues that are part of the food sovereignty principles (Patel, 2009):

- Recognition of and respect for women's roles and their rights, including decisions related to their bodies;
- All people, mainly in developing countries, should be able to live with decorum, earning a living wage for their labor and having the opportunity to remain in their homes, if they so choose;
- Peasants should be able to conserve and rehabilitate rural environments, fish populations, landscapes and food traditions based on ecologically sustainable management of soils, water, seas, seeds, livestock and all other biodiversity;
- Recognize and respect diversity of traditional knowledge, peasant's values, food, language and culture, and the methods for organizing and expressing them;
- Peasants need a genuine and integral agrarian reform that guarantees full rights to land access, defend and recover territories belonging to indigenous people, ensure fishing communities' access and control over their fishing areas and eco-systems, assures decent jobs with fair remuneration and labor rights for all, and future for young people in the countryside;
- Peasants should be able to share their lands and territories peacefully and fairly among their people, including indigenous, artisanal fishers, pastoralists, or others;
- In the case of natural and human-created disasters and conflict-recovery areas, food sovereignty acts as a form of 'insurance' that strengthens local recovery efforts and mitigates negative impacts;
- Peasant's power to make decisions about their material, natural and spiritual heritage should be defended;
- All peasants and indigenous people have the right to defend their territories from the actions of transnational corporations.

Based on Rosset (2003), the following section makes a comparison between the food security and food sovereignty models, and in some cases data, emphasizing the consequences of the food security model in Colombia.

### Marketing

In the food security approach, food is part of the free market. Meanwhile, in the food sovereignty model, food is left out of the free trade agreements. According to Barker (2007), the Agreement of Agriculture (AoA) signed by the WTO has been adversely affecting peasants and rural farmers in both developed and developing countries. AoA is focused on four areas:

- Market access, where countries are required to open national and local economies for foreign products, and are even required to import a certain minimum level of agricultural products: 'minimum access rules';
- Reduction of trade barriers, countries are required to convert import quotas into taxes, which are reduced and finally eliminated over time;
- Domestic supports, countries are required to diminish subsidies to domestic farmers; although, developed countries have managed to maintain their subsidy structures and mainly protect their large commodity producers;
- Export competition, countries are required to bind their export subsidies levels to approved rules.

Figure 1 shows that, in developing countries, people spend more money on food than in developed countries. If these data are compared to Fig. 7 (food waste), in countries where people spend less money on food, developed countries, the highest percentage of food loss is plainly in the consumption phase, almost 30%.

In those where people spend less money on food, developed countries, governmental subsidies are significantly higher. As a result, hunger is higher in countries where people spend more money on food, developing countries, even though natural resources for crop production are higher than in developed countries.

The food security approach highlights food availability, which is why, from 2003 to 2012 (Fig. 2), food availability was increased in lower-income countries; nevertheless, food prices were at least twice those of developed countries. So, food is available but hardly obtainable for everyone due to the cost; as discussed above, this is a difference from food sovereignty. Even in the food security approach, other issues lack attention, such as child labor in food production,

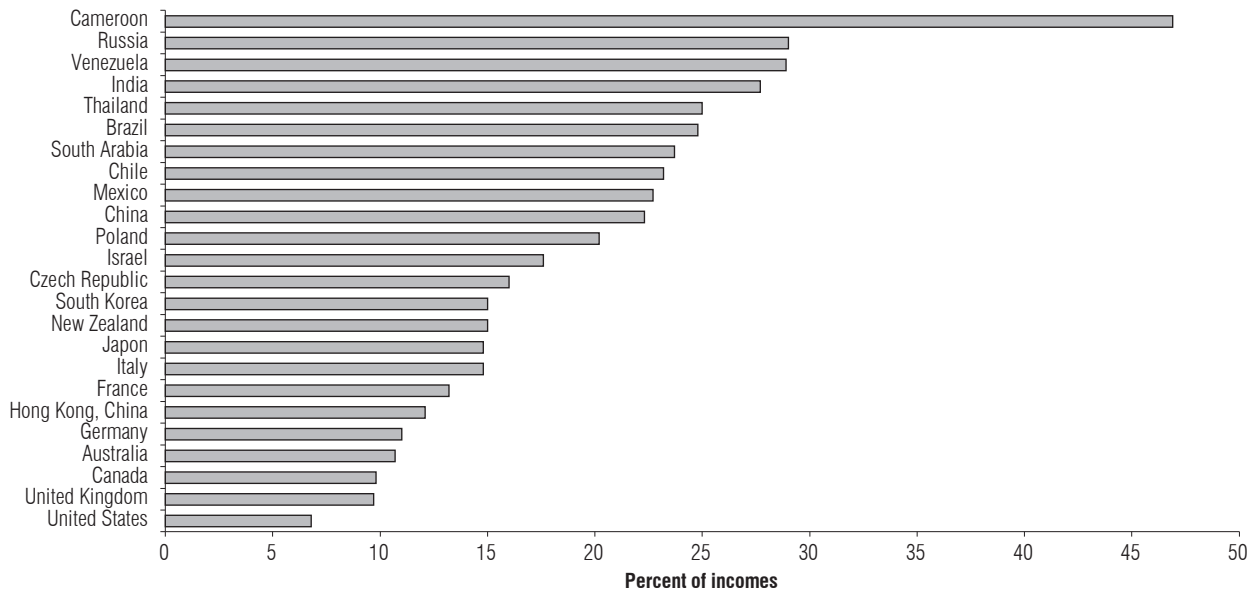


FIGURE 1. Percent of personal consumption expenditures spent on food in selected countries 2010. Source: Illinois Farm Bureau (2012).

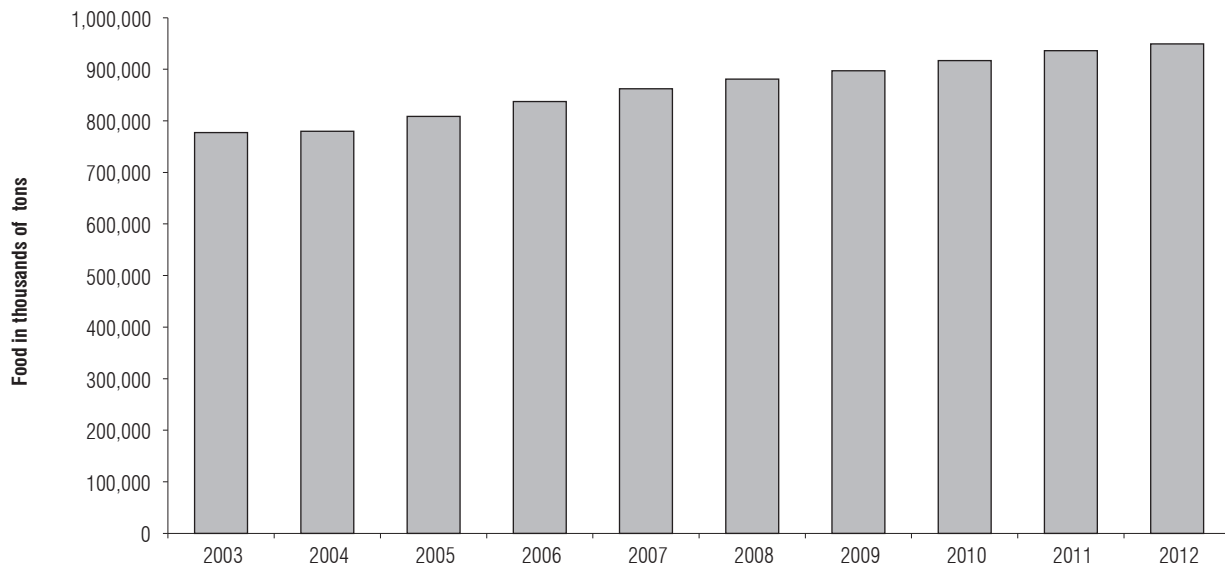


FIGURE 2. Food availability in lower-income countries (2003-2012). Source: ERS-USDA (2012).

contamination of water resources and the environment, and so on.

Figure 3 shows the 15 leading food export countries. There is a remarkable contradiction for the money spent on food (Fig. 1), in some countries such as Mexico, India, Thailand, Brazil, China or Russia, people spend more money on food but, at the same time, their countries are some of the major food exporters worldwide.

### Monopoly

Also, in the food security approach, food price, food availability, food exportation, and monopoly are not a problem.

It is evident that the main food retailers are big companies from industrialized countries (Tab. 1). But in almost all cases, food commercialization is carried out in Europe, North America and some Latin-American, Asian and African countries. A possible explanation is the higher incomes in these countries; but much of the food, for sure, has been produced in other countries, which are not the target market.

### Crop prices

In the food security approach, the market assigns correct prices. While in the food sovereignty proposal, there is



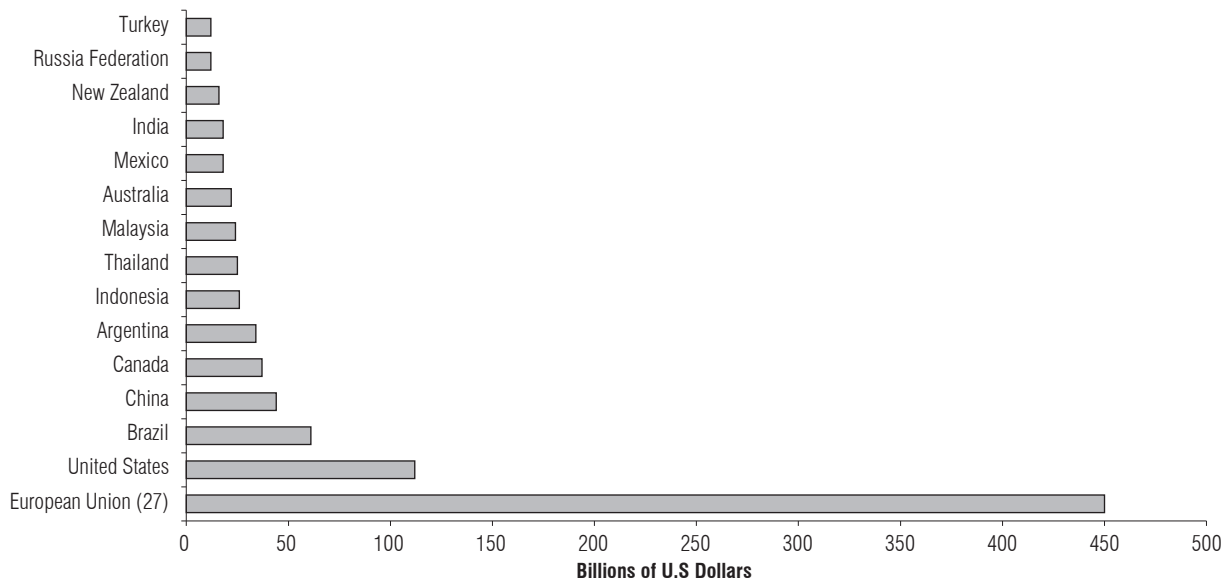


FIGURE 3. Value of the leading 15 food exporters worldwide 2010. Source: World Trade Organization (2011).

TABLE 1. Top 10 global food retailers 2012.

Company	2012 sales billions (US\$)	Number of stores	Operation
Wall-Mart Stores (US)	443.9	10,130	Argentina, Botswana, Brazil, Canada, Chile, China, Costa Rica, El Salvador, Ghana, Guatemala, Honduras, India, Japan, Lesotho, Malawi, Mauritius, Mexico, Mozambique
Carrefour (France)	113.1	9,672	Albania, Argentina, Belgium, Brazil, Bulgaria, China, Colombia, Greece, Cyprus, India, Indonesia, Italy, Malaysia, Poland, Singapore, Spain, Taiwan, Turkey
Tesco (UK)	103.5	6,234	China, Czech Republic, Hungary, India, Ireland, Japan, Malaysia, Poland, Saudi Arabia, Slovakia, South Korea, Thailand, Turkey, UK, USA
Metro Group (Germany)	98.2	2,187	Austria, Belgium, Bulgaria, China, Croatia, Czech Republic, Denmark, Egypt, France, Germany, Greece, Hungary, India, Italy, Japan, Kazakhstan, Luxembourg, Moldova
Schwarz Group (Germany)	90.6	11,029	Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, Malta, Netherlands
Kroger Co. (US)	90.4	2,405	USA
Costco (US)	87.4	592	Australia, Canada, Japan, South Korea, Mexico, Puerto Rico, Taiwan, UK, USA
Aldi (Germany)	73.3	9,845	Australia, Austria, Belgium, Denmark, France, Germany, Hungary, Ireland, Luxembourg, Netherlands, Poland, Portugal, Slovenia, Spain, Switzerland
Target Corp. (US)	69.9	1,763	US. Open in Canada in 2013
Rewe Group (Germany)	66.9	13,423	Austria, Bulgaria, Croatia, Czech Republic, Germany, Hungary, Italy, Romania, Russia, Slovakia, Ukraine

Source: Penton (2013).

a claim of fair prices because peasants have the right to receive just incomes.

The evolution of international food prices has shown an incremental tendency, mainly in the last few years. The higher prices are consistent with high international petroleum prices (Fig. 4). An explanation for this could be the high use of chemical fertilizers but mainly this is due to fact that petroleum is used for transportation over largest distances by ships.

### Subsidies

In the food security approach, subsidies are part of WTO agreements. In contrast, food sovereignty requests the

elimination of this kind of aid, especially, which are geared toward the larger food producers (Fig. 5). Dumping is a common practice used by some countries in order to protect their own production.

In 2012, Colombia signed a Free Trade Agreement with the United States. In the food chapter of this Agreement, an important point was related to subsidies. In 2005, the United States had \$71,269 million US Dollars in subsidies for the agricultural sector, while Colombia spent \$1,143 million US Dollars. The United States used 77% of its subsidies for 'internal aid' and 23% for 'border aid'. Meanwhile, Colombia used just 23% for 'internal aid', and the highest,

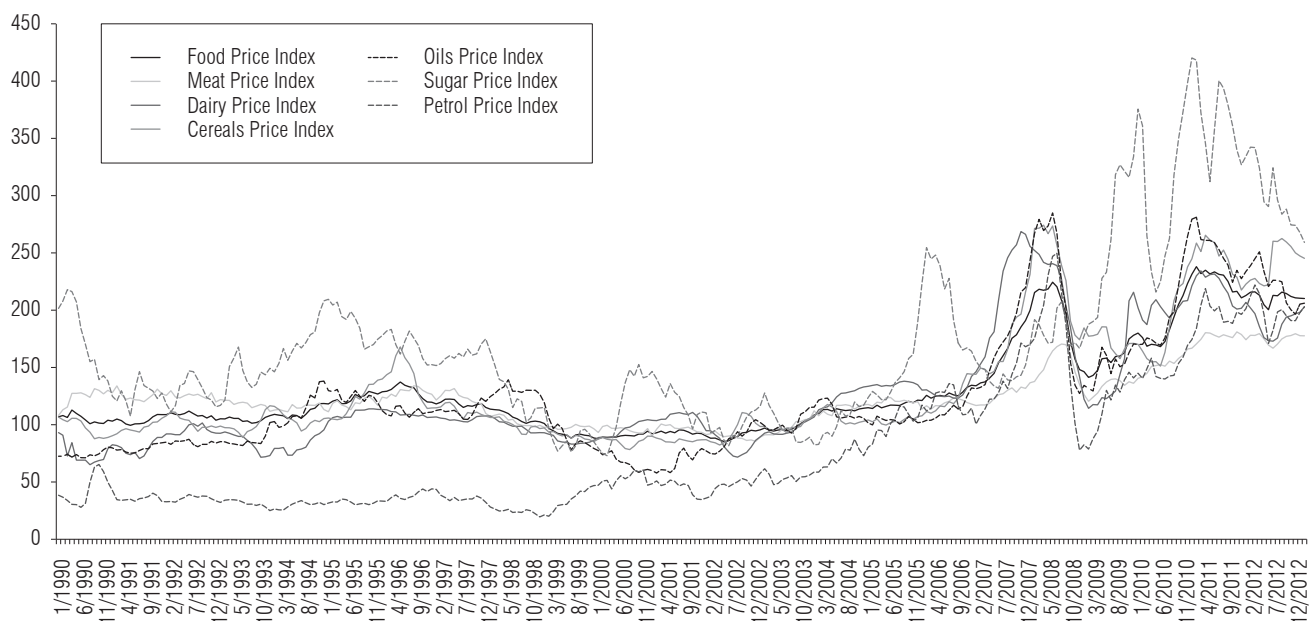


FIGURE 4. International food prices compared to petroleum prices 1990-2013. Source: FAO (2013a) and Index Mundi (2013).

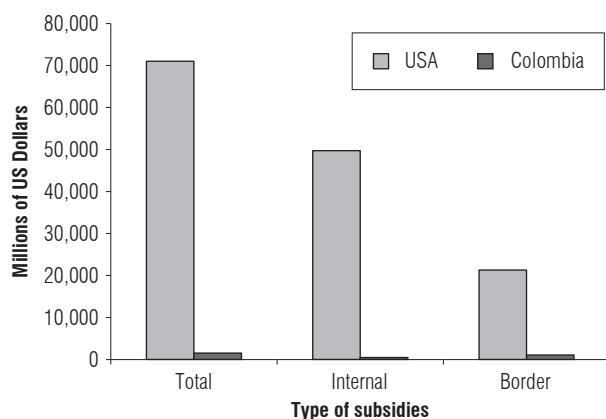


FIGURE 5. Comparison of agricultural subsidies in Colombia and the US, 2005. Source: Garay (2010).

77%, for 'border aid'. In the United States, 'internal aid' made a special target of export crops.

When the Agreement was signed, Colombia agreed to eliminate, after 15 years, all 'border aid', while the United States will keep all 'internal aid'. This means that Colombia must eliminate the highest percentage of subsidies, but the US will maintain the highest percentage.

### Food production

In the food security approach, food is a commodity and agricultural production must be carried out in the most efficient way. In the food sovereignty approach, food is a human right and agricultural production is one of the rights of rural people. Food waste in the food security

approach is not necessarily a problem because the goal is food commercialization.

According to Gustavson *et al.* (2011), food loss worldwide in 2011 was 36.17%, mainly in the consumption phase. In developed countries, the highest loss (almost 30%) of cereals, roots and tubers, fish and seafood and fruit and vegetables is during the consumption phase (Fig. 6). Meanwhile, in developing countries, such as in sub-Saharan Africa, higher loss are seen in the production phase. The minimum loss in developing countries plainly occurs in the consumption phase (less than 3%). Waste food in postharvest handling and storage was 5.68%; 7.16% in processing and packaging and 6.39% in distribution.

Paradoxically, according to Barker (2007), more than forty million people die of hunger each year worldwide. The natural question is: how many people could be fed worldwide with this 36.71% food.

### Hunger

In the food security approach, hunger is due to inefficiency, but, in the food sovereignty model, it is due to distribution. According to the above tables, some reasons for hunger in the world have been demonstrated. According to Barker (2007), during 2006, food production worldwide was enough to supply 2,720 Kcal per person daily. A general average consumption per person daily is close to 2,000 Kcal, which means hunger in the world is not a production issue.

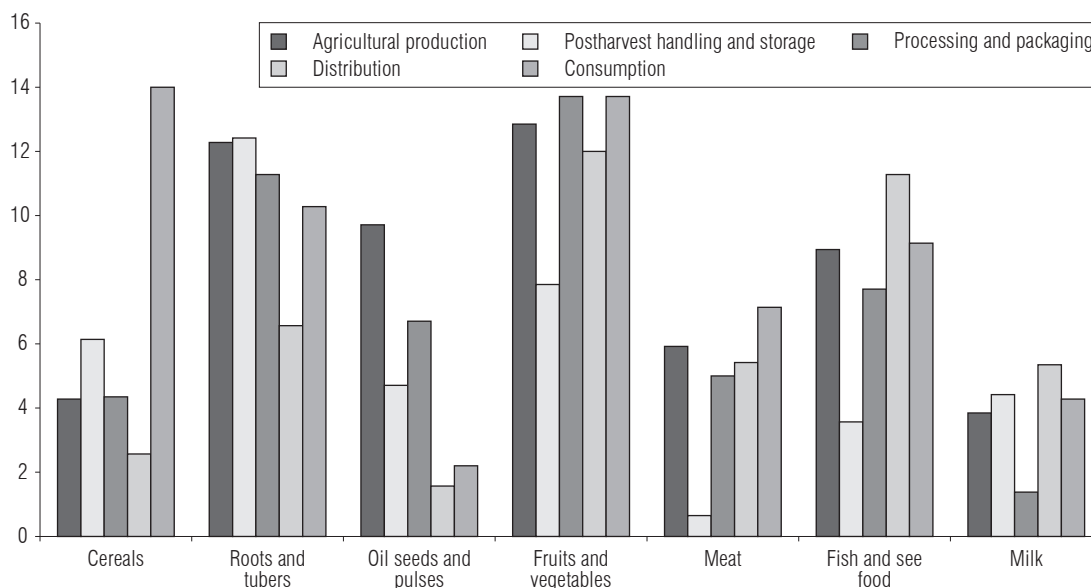


FIGURE 6. Food loss worldwide, 2011. Source: Gustavson *et al.* (2011).

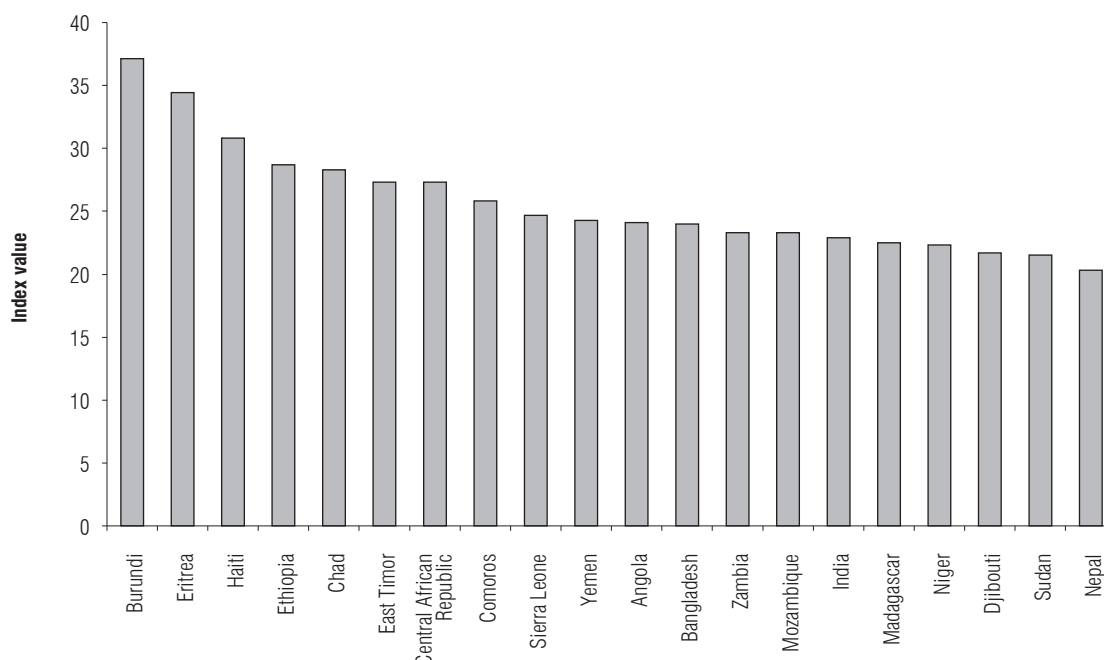


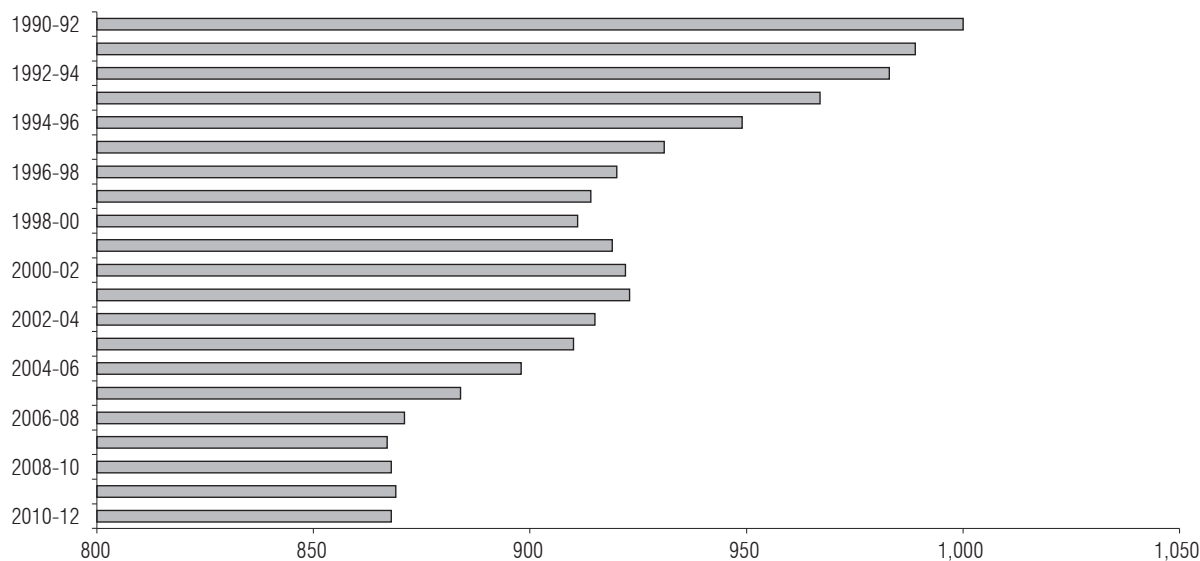
FIGURE 7. Countries most affected by hunger in the world, according to World Hunger Index 2012. Source: Global Hunger Index (2012).

Figure 7 shows the countries most affected by hunger in 2012, according to the World Hunger Index; most of them are located in Africa, the continent that has the most land that is suitable for cultivation. India is part of this list, even though it is one of the 15 major food export countries in the world (Fig. 3). According to Barker (2007), in 2006, more than 900 million people worldwide suffered from hunger. In Colombia, during 2012, 6 million people suffered from hunger.

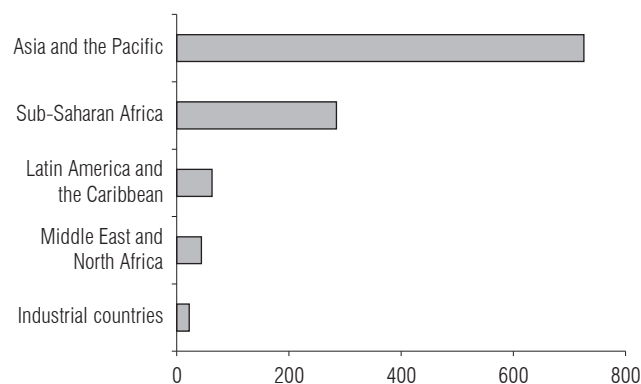
Another hunger indicator is undernourishment or malnutrition, defined as an unhealthy and weak person due to insufficient food or inadequate food types. On the other hand, overweight problems are mainly due to an excessive intake of inadequate food.

According to Fig. 8, the number of people suffering this condition has been decreasing since 1990. From 2008 to 2011, there was an increase in comparison to the previ-





**FIGURE 8.** Millions of undernourished/starving people worldwide 1990-2012. Source: FAO, WFP and IFAD (2012).



**FIGURE 9.** Millions of people with malnutrition worldwide, 2010. Source: FAO and WFP (2010).

ous period. Even though this number is decreasing, more than 850 million people worldwide are suffering from undernourishment.

Asia and the Pacific are the places in the world with more malnourished people, more than 500 million. Again, contradictorily, some countries of this area, such as New Zealand, India, Australia, Malaysia, Thailand and Indonesia are part of the 15 major food export countries (Fig. 9).

It is remarkable that some countries, such as Nicaragua, Peru, Ghana, Albania, Mexico, Turkey and Kuwait, have managed to decrease, by at least in 50%, the number of malnourished people during the last 20 years. Unfortunately, in other countries, such as the Democratic Republic of Congo, it has increased by more than 60% (FAO, 2012).

In Tab. 2, the first column shows the top 15 countries with the highest Kcal intake per day. In contrast, the fourth

column shows the 15 countries with the lowest kcal intake per day. For each country, the average required kcal per day is shown as well. Additionally, the number of people that go hungry in each country is shown. Paradoxically, in some countries, people lack food but in other countries, the modern disease is obesity. For example, in the US, Germany and Belgium, among others, more than 60% of the population is suffering from overweight problems.

Body mass index (BMI) is a simple index of weight-for-height that is commonly used in order to classify overweight and obese adults. It is defined as a person's weight in kilograms divided by the square of his or her height in meters.

Figure 10 shows the percentage of children that are overweight in OECD countries. It is important to remark that this is a public health problem due to the high number of these children that, in the future, possibly suffer diseases associated with inappropriate food intake.

On the other hand, Fig. 11 shows same issue for adults. Importantly, the majority of this problem is in developed countries, mainly Europe, North America and some countries in Asia. Special emphasis is placed on India because, while some part of the population, mainly children, is suffering from being overweight, it is one of the countries with a higher World Hunger Index.

According to the National Survey of Nutrition Situation (ICBF, 2010), in Colombia, 35.0% of women and 34.5% of men are suffering overweight problems. 20.1% of women and 11.5% of men are suffering obesity. Malnourished

TABLE 2. Kcal consumption per day, 2012.

Top 15 countries	Kcal required/day	Kcal cons./day	Mill of hungry People	Lower 15 Countries	Kcal required/day	Kcal cons./day	Mill of hungry People
Austria	1,964	3,732	00	Namibia	1,836	2,106	1
Belgium	1,968	3,664	0	Mozambique	1,711	2,065	9
Belarus	1,927	3,604	0	Uganda	1,684	2,045	12
Greece	1,951	3,588	0	Kenya	1,728	2,041	13
Luxembourg	1,984	3,564	0	Tanzania	1,690	2,018	18
USA	1,975	3,562	0	Gaza	1,755	2,011	1
Italy	1,948	3,554	0	Congo, Rep.	1,683	2,005	34
Ireland	1,925	3,545	0	Yemen	1,687	1,992	8
Turkey	1,863	3,543	0	Haiti	1,813	1,973	5
Portugal	1,948	3,538	0	Madagascar	1,696	1,965	7
Germany	1,970	3,489	0	Comoros	2,169	1,931	1
Cuba	1,907	3,472	0	Timor-Leste	1,648	1,856	0
France	1,934	3,469	0	Zambia	1,694	1,793	6
Romania	1,927	3,421	0	Eritrea	1,756	1,636	4
Hungary	1,957	3,421	0	Burundi	1,753	1,525	6

Source: FAO (2013b).

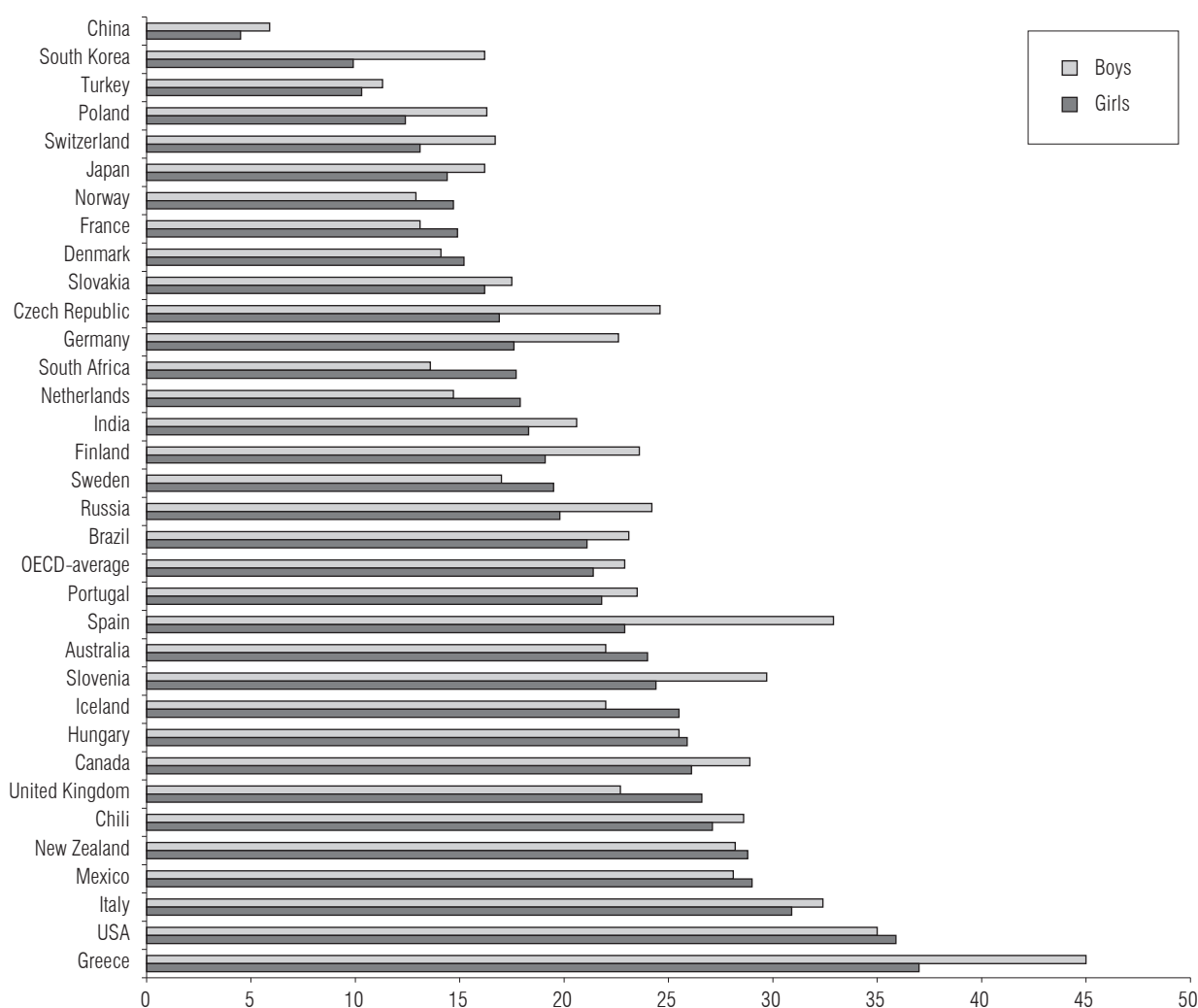


FIGURE 10. Percentage of youths who are overweight in OECD countries in 2011, by gender. Source: OECD (2011).

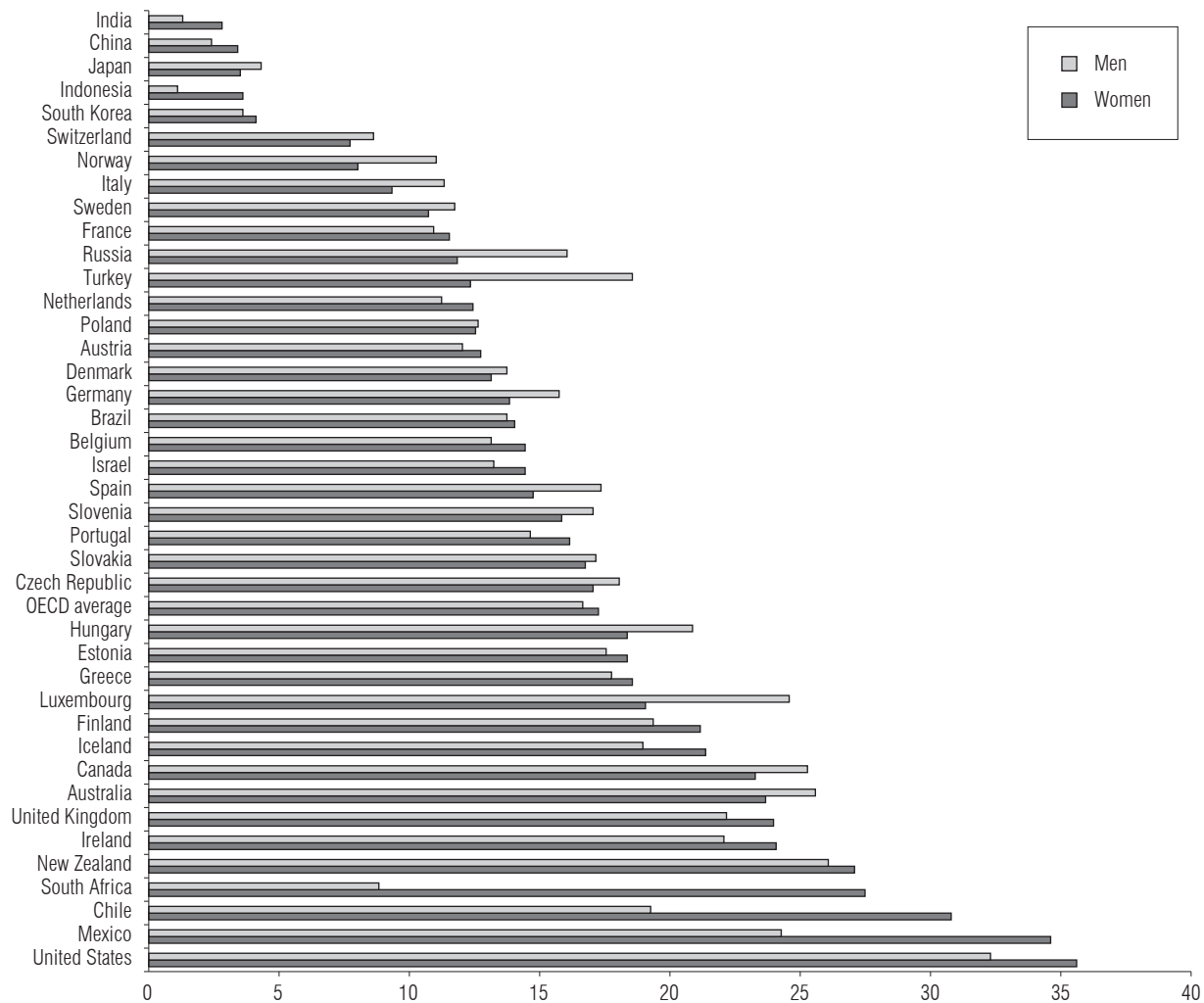


FIGURE 11. Percentage of overweight adults by gender, 2009 in OECD countries. Source: OECD (2011).

people in rural areas is 27%; while in urban areas, it is 16.7% (ICBF, 2010). The Colombian Hunger Index is 4, considered low (Global Hunger Index, 2012). As in India, the Colombian nutritional situation is paradoxical because Colombia uses many land, water and productive resources for producing enough food for all of its inhabitants, but more than 6 million people go hungry (FAO, 2012). Perhaps an answer to this paradox is land distribution; Tab. 3 presents some data on this issue.

### Productive resources control

The food security approach proposes that the control of productive resources must be kept in private hands. In the food sovereignty approach, this control must be with rural farmers and indigenous populations, especially resources such as land and seeds, which they have the right to keep and share with other rural farmers and indigenous peoples.

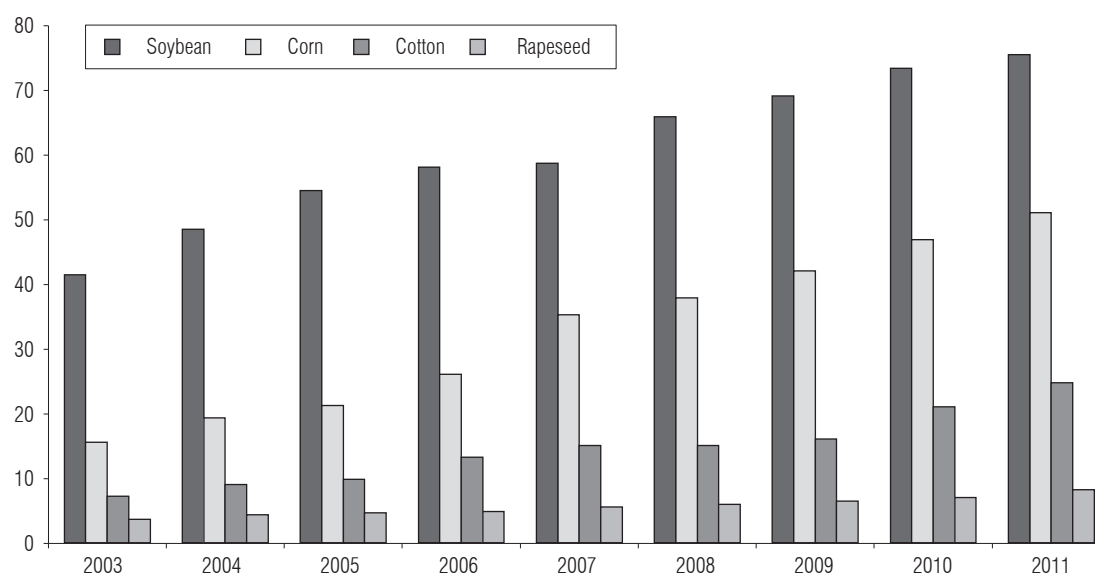
Colombia is one of the countries with a higher land concentration in the world. The Gini coefficient for land distribution in 1960 was 0.86. The same index in 2013 was 0.89. This means that, during the last few years, the concentration of this resource is increasing in a few hands. Farms smaller than 1 ha occupy just 0.41% of all national productive land. In contrast, farms larger than 2,000 ha occupy more than 55% of the productive land.

In Colombia, 50% of the land is being used for unprofitable livestock production; despite the fact that just 20% of all land has this type of use. In contrast, agricultural production occupies less than 8% and the majority of it is for international markets. According to the *Ministerio de Agricultura y Desarrollo Rural* of Colombia, in 2011, land use was: for crops, 5.1 million hectares, of which 61% were for transitory crops, 31% for long-term crops and 8% for forest. Agricultural production has risen to 24.9 million

**TABLE 3.** Land distribution in Colombia, 2013.

Size	Farms	Percentage	Owners	Percentage	Surface (ha)	Percentage
< 1 ha	1,285,113	41.37	1,726,411	41.21	387,073	0.41
1 - 3 ha	655,637	21.10	698,448	16.67	1,135,157	1.21
3 - 5 ha	278,772	8.97	418,375	9.98	1,057,044	1.12
5 - 10 ha	296,760	9.55	448,301	10.70	2,074,296	2.21
10 - 15 ha	139,434	4.48	207,793	4.96	1,684,686	1.79
15 - 20 ha	82,834	2.66	123,779	2.95	1,421,171	1.51
20 - 50 ha	204,708	6.59	303,589	7.24	6,430,547	6.85
50 - 100 ha	88,661	2.85	135,352	3.23	6,080,559	6.48
100 - 200 ha	41,774	1.34	68,788	1.64	5,645,474	6.01
200 - 500 ha	20,288	0.65	36,563	0.87	6,055,280	6.45
500 - 1,000 ha	6,736	0.21	13,261	0.31	4,843,671	5.16
1,000 - 2,000 ha	3,300	0.10	5,422	0.12	4,446,620	4.73
> 2,000 ha	2,114	0.06	3,041	0.07	52,551,200	56.01
Total	3,106,131	100	4,189,123	100	93,812,778	100

Source: IGAC (2013).



**FIGURE 12.** Millions of hectares of genetically modified crops from 2003 – 2011. Source: ISAAA (2012).

tons, 67% from long-term crops and 33% from transitory crops (MADR, 2012).

Around the world, there are 4.2 billion hectares suitable for cultivation. 7% of this land is located in Africa while Latin America has 26%. Even though the majority of land suitable for cultivation is currently available in Africa, people are dying by hunger, as has been discussed. The biggest problem is related to land use; a high proportion of Africa's land is dedicated to the big agribusiness of biofuel production (Kachika, 2011). Just one example is in Mali: the 'Société Sucrière de Markala' (SoSuMAR) in 2010 received a loan from the African Development Bank (AfBD) for 65 million Euros in order to establish 14,132 ha of irrigated sugar cane for producing sugar and bioethanol (AfBD, 2010). However,

according to the FAO (2012), in Mali, at least 1 million people go hungry and undernourished prevalence is 8%.

### Genetically Modified Seeds (GMS)

In the food security approach, GMS are the future of world crop production, but in the food sovereignty approach, seeds are part of the heritage of rural farmers and indigenous populations, which cannot be a commodity or commercialized.

According to Barker (2007), in 1995, the WTO signed the 'Agreement on Trade Related Intellectual Property Rights' (TRIPs). Essentially, TRIPs allow large foreign corporations to obtain a patent control of local production and distribution of seeds, plants and life forms. In practice, indigenous

and rural populations must pay for using resources that belong to them. Some results related to TRIPs include: before putting the Agreement into practice, an average of eight patents were awarded per year for corn and soybeans; after TRIPs (1999-2001), 281 patents were awarded each year for corn and soybeans.

Shiva *et al.* (2004) explain the importance of seeds as the first link in the food chain, the embodiment of life's continuity and renewability. They are not just a resource for future plants but are also the storage place of culture, history, and heritage.

Each year, the number of hectares cultivated with GMS increases (Fig. 12). The soybean and corn are leading crops. These crops are used for human consumption, directly or indirectly through animal meat. But in the last few years, uses for biofuel production have been increasing as well.

The USA is the leading country for this kind of crop with almost 70 billion hectares. Brazil is the second with 30 billion hectares, third is Argentina with 23, fourth is Canada with 10 and fifth is China with 5 million. South America has more than 50,000 ha of crops using GMS.

### Climate change

In the food security approach, climate change is a problem but industrial agriculture must continue because it is the solution for world hunger. In the food sovereignty approach, rural food production is a solution for climate change.

Nevertheless, industrial agriculture is related to global warming (Barker, 2007):

- Industrial agriculture is responsible for one-third of emissions that contribute to global warming
- 25% of green-house carbon dioxide is produced by agricultural pesticides and chemicals, via deforestation and burning of bio-mass
- Most of the methane in the atmosphere comes from domestic ruminants, forest fires, wetland rice cultivation and waste products
- Fertilizer use accounts for 70% of nitrous oxides

### The food sovereignty approach and rural development

As discussed in the first section, food sovereignty and rural development share similar issues. Furthermore, many people have confused food security and food sovereignty; there has been similar confusion between agricultural

development and rural development.

Both agricultural development and food security perceive the rural sector mainly in an economic light. That is why the traditional and most extended idea related to economic development has transcended the rural sphere and many public policies, mainly in developing countries, have claimed that increasing agricultural production and the resulting economic growth are the way to achieve rural development.

Agricultural development goals include improving crop production through new technologies and the modernization of crops and livestock in order to maximize production; the green revolution has been the most important way to achieve these goals. In other words, food security and agricultural development share similar goals and methods.

On the other hand, rural development, in addition to improving crop and livestock production, which are part of agrarian activities, mainly aims to improve the quality of life for all inhabitants of rural spaces, mainly peasants and indigenous populations. However, other issues such as quality of rural education, improving rural infrastructure, electrification, human rights, food rights, water access, participation, biodiversity, social recognition, loan access, and so on, are important as well. (Pachón, 2010; Pachón, 2011).

Food sovereignty and rural development have transcended productive issues; the scope of both is political, the aim is a new view for rural spaces where despite the importance of the economic activity, people who live there, are more important.

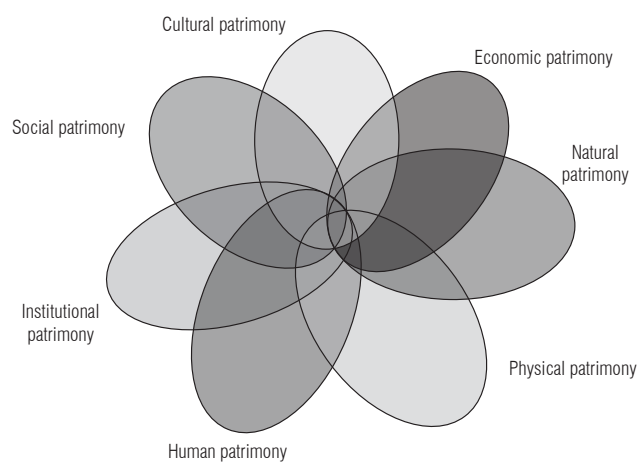
According to this, the rural sector, and hence rural inhabitants, peasants and indigenous populations are important as persons and not just as productive actors. Almost all policies and government profits are related to rural economic activity but fail to take into account the quality of life and other issues that are not necessarily in the productive atmosphere.

Some years ago, the rural sector was understood to be multifunctional with many activities that can be done there. Therefore, it is vital to think about new forms for how food sovereignty and rural development can work together for achieving the final goal: improving the quality of life for rural inhabitants.

Rural territories, perhaps not much as other sectors, are very complex, mainly in developing countries where indus-



try has not been developed. The rural sector must comply with many additional functions to produce food, such as environmental balance, cultural conservancy, offering of landscapes, water, and oxygen. In this scenario of multifunctionality and pluriactivity, peasants and indigenous populations must combine their patrimonies (Fig. 13) in order to improve the quality of life.



**FIGURE 13.** Peasants and indigenous patrimonies.

The proposal for understanding complex rural territories must take into account the more important paradigms of rural development (rural livelihoods, new rurality, territorial rural development, human scale development, and the food sovereignty approach). As a result of the interaction of the main characteristics of the mentioned paradigms, peasants and indigenous peoples in rural areas have been combining all their talents, abilities, faculties, capacities, endowments from their patrimonies in order to improve their quality of life. The above graphic shows the different identified patrimonies: cultural, economic, social, human, natural, physical and institutional.

The sustainable rural livelihoods approach proposes that peasants have different assets, which are part of some capitals that normally have been used for survival. Even though this approach takes into account many issues from rural areas, according to Scoones (2009), it has neglected other topics, such as institutions. Institutions are one of the basic postulates from the territorial rural development approach, which highlights that, in rural territories, institutions would enable interactions between different actors inhabiting the area. The sustainable rural livelihoods approach emphasizes, in an economic way, that rural inhabitants use their capitals and assets for survival. However, it is important to remark a crucial change in the

understanding about this approach. This paper proposes understanding the capitals as patrimonies. This is not only a semantic difference, it comes move away from a capitalist vision to another where are valued as part of the peasant heritage, and therefore can not be commercialized, by contrast must be respected.

On the other hand, the human scale development approach highlights that, as result of mixing different fundamental human needs, people seek to satisfy these needs. Satisfiers must be synergic, because when one of them is adequately pleased, help for the others satisfiers to fulfill all human needs is needed. Some of the synergic satisfiers are represented by the principles of food sovereignty approach analyzed in the previous sections, while the opposite examples, such as satisfier-violators or destroyers, pseudo-satisfiers or satisfier-inhibitor were described as hunger, overweight problems, undernourishment, obesity, and so on.

In order to locate satisfiers and food sovereignty principles as talents, abilities, faculties, capacities or endowments of the patrimonies, it is necessary to take into account all the discussion. For instance, the Principle of the production modes has relations to all of the described patrimonies and is able to meet some human needs such as subsistence, protection, participation, identity and freedom. Meanwhile, hunger, a consequence of the food security approach, has relations to all patrimonies but is a satisfier-inhibitor in relation to human needs, such as subsistence, protection, affection, understanding, participation, creation, identity and freedom.

## Conclusions

The main conclusion of this paper is that the food security and food sovereignty approaches are not the same. Food security shares many points with agricultural development and the most important issue is to increase food production. Food sovereignty, on the other hand, shares many topics with rural development and the main goal for both is improving the quality of life for peasants, indigenous populations and, in general, rural inhabitants.

Based on data from different countries, it is easy to understand that the food security approach has not been able to consistently decrease hunger worldwide. Instead, starvation, malnutrition and obesity are currently part of the new problems related to food consumption in many countries.

The food security approach favors food export over national or local consumption. A result is an increased use of many

resources, such as mainly petroleum for transportation by ships. This explains how food prices are linked to petroleum prices. A result is that some countries, such as India, are a major food exporter, but have many inhabitants that are suffering from hunger each day.

A clear relationship exists between the food sovereignty approach and rural development. The described principles clearly seek to improve the quality of life of peasants and indigenous peoples. This relation was established through a new way for understanding rural development, where some interesting ideas from the latest paradigms of rural development are mixed. Even though this new approach has very interesting results, it is important to continue to try to constitute a deeper characterization of this new form to perceive, in a comprehensive way, the complexity of rural development.

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