Agricultura, Sociedad y Desarrollo

LOSS OF FOOD SOVEREIGNTY: A CURRENT FACET OF UNDERDEVELOPED COUNTRIES

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Citation: Morett-Sánchez JC, Cosío-Ruiz C. 2023. Loss of food sovereignty: a current facet of underdeveloped countries. Agricultura, Sociedad y Desarrollo https://doi.org/10.22231/asyd.v20i2.1434

ASyD 20(2): 178-205

Editor in Chief:
Dr. Benito Ramírez Valverde

Received: June 28, 2021.
Approved: October 25, 2021.

Estimated publication date:
April 18, 2023.

ABSTRACT

In the current phase of the world economy - globalization - underdeveloped countries are moving even further away from achieving robust, sustainable, supportable, and balanced economic growth among the economic sectors and regions of their territories, which would allow them to reduce poverty and create societies with fewer inequalities. Underdevelopment has increased in these regions due to various economic and political causes, which, moreover, tend to perpetuate themselves. The objective of this article is to explain that one of these causes is the loss of the capacity to feed their populations with internal resources. The methods of study were comparative and deductive, to find common characteristics and to identify trends; historical-logical to address the background; and, based on the analysis of various sources of information, a framework of four variables of the causes of the non-existence of food sovereignty in underdeveloped countries was prepared *ex profeso.* The research found that two thirds of underdeveloped countries lack food self-sufficiency, a situation that forces them to depend on the purchase of food from the external market, where interests of large transnational agribusiness corporations prevail, which has the effect of gradually distancing them from food sovereignty, as they lack the power to decide on the food of their peoples. The main conclusion is that food insufficiency is no longer a temporary or transitory condition, but a structural or permanent one (exacerbated by the consequences of the COVID-19 pandemic), which is yet another obstacle to the development of these countries. Modifying this situation requires a complete change in the policies of the governments of underdeveloped countries, which have given priority to agribusiness and food security based on imports, abandoning self-sufficiency and deepening food dependence; in addition, leaving small farmers without support, who, even with their limited resources and very few incentives, are the mainstay of world food supply, generating more than 80 percent of the planet's food.

Keywords: underdevelopment, food self-sufficiency, food security, food dependency.

INTRODUCTION

Although the nations of the world set the goal by 2030 to end hunger, food insecurity and malnutrition in the Agenda for Sustainable Development (2015), there is no considerable progress in achieving these goals. According to data from the Food and Agriculture Organization of the United Nations (FAO, 2022b) there is no progress in ensuring access to safe, nutritious, and sufficient food for all people forever, nor in eradicating all forms of malnutrition.

Currently, moderate or severe food insecurity affects a quarter of the world's population and has been increasing since 2014, while - in parallel - there has been an increase in food prices (Global Food Price Index-GFPI, 2020). More than half of the population

in Africa, almost one third in Latin America and the Caribbean, and more than one fifth in Asia suffer from such insecurity (FAO, 2021). According to FAO (2021), food insecurity is a pressing problem in the economically weaker countries, since 97.5% of the population suffering from this condition is in countries that do not have high incomes. The above situation will be further aggravated by the economic and social aftermath of the COVID-19 pandemic, which generated the greatest recession in the last 150 years on a planetary scale and has hit underdeveloped countries the hardest (WB, 2020).

There are several ways of categorizing the 193 countries of the world in relation to the development achieved: the UN divides them into Developed Countries, Developing Countries and Less Developed Nations; the UNDP (2019) classifies them with: Very High Human Development, High Human Development, Medium Human Development and Low Human Development; and the World Bank (WB, 2021) categorizes them into four groups based on the level of *per capita* income: High, Upper Medium, Lower Medium and Low.

Developed countries, where 13.4% of the world's population resides, include thirty one, which reach, without exception and with slight differences between them – depending on the classification method – the highest values in all the parameters established for each of the scales. Meanwhile, the other 162 countries, the so-called "Global South" (Mahler, 2017), in opposition to the former, would be nations that have not reached development and which, from different economic, theoretical, political, historical and ideological perspectives, have been classified as underdeveloped, dependent, peripheral, poor or backwards. Of the world's population, 86.6% inhabit these countries (ONU, 2019), and although there are great differences between them, they share a characteristic in common: in the present phase of the global economy, they are moving further away from attaining development.

The classification of underdeveloped countries includes the fourteen nations known as "emerging and developing economies" (WB, 2020), which, although presenting higher average growth rates than the rest of the countries of the Global South, have high gross domestic products and have achieved significant economic growth. It is also true that they remain with large structural imbalances and limitations, so deep that it is difficult for any of them to become fully developed in the short term. This does not mean that the path, the model, ideal or paradigm to follow is that of the countries currently considered as developed, thus disagreeing with the ahistorical idea that the progression of economies and societies is a linear march composed of three successive stages that begin with underdevelopment, then countries would be in the phase called in the process of developing, and finally they would reach development.

In general, underdeveloped countries[1] present backwardness (mainly in technology generation) and weaknesses (economic and political). Moreover, in them, backwardness, deformations, imbalances, inequalities (economic, social and regional), distorted growth of certain productive sectors (usually those oriented towards the external market), plundering of their natural resources, scarce progress, the exorbitant weight of foreign

debt, and subordination to the great powers and transnational corporations have been accentuated and deepened for various reasons, one of the most important being the loss of the ability to feed their inhabitants with internal resources. Thus, while developed countries as a whole import 6. 4 % of their food[2], dependent countries must obtain more than half of their food (55.6%) outside their borders (FAO, 2021).

Until the end of the 1970s, most of the underdeveloped nations had surplus agriculture and livestock production, which allowed them to feed their inhabitants and export agricultural raw materials and food products; since then, the context began to change until they ended up in the opposite situation, becoming net importers of food (FAO, 2003), as a result of the conjunction of several phenomena: the exhaustion of import substitution industrialization in many of them, parallel to the expansion of transnational capital and a new international division of production, together with changes that these countries were forced to make to face the foreign debt crisis of the 1980s. Under pressure from the World Bank, the International Monetary Fund and behind them -evidently- the great powers, they accepted to become part of the dynamics of globalization, which assigned them the role of specializing in certain export goods, mainly raw materials, oil and some agricultural products. Specialization in a few export items made these economies more fragile, since their stability comes from external sources, and their success is therefore not subject to internal conditions but to variations in demand and the economic dynamics of the countries to which their exports are destined.

The governments of underdeveloped countries increased food dependency by making structural adjustments in the agricultural sector, based on supposed comparative advantages, assuming that it would be cheaper to import food than to produce it domestically, which would theoretically lower inflation, but without sufficiently calculating the set of negative consequences that this would entail (García, 2003). With neoliberal policies, these countries opened their borders to massive imports of agricultural products from developed countries at dumping prices and reoriented agriculture and livestock production towards exports, to the detriment of production for the domestic market of basic foods. This has led to the ruin of millions of farmers who cannot compete with their counterparts in developed countries and who, expelled from rural areas, migrate massively to the cities and other countries (IOM, 2020). The most serious consequence of structural adjustments is that food insecurity currently prevails in 68% of underdeveloped countries (FAO, 2021); and by losing the capacity and autonomy to feed their populations with internal resources, these countries lack food sovereignty. Therefore, the objective of the research was to explain that the loss of food sovereignty is a new characteristic of dependent countries and that this situation distances them further from development, because it is not a transitory phenomenon; today it has become a structural and permanent condition for them, which is exacerbated by the effects of climate change, which worsen phenomena such as the depletion of natural resources, deforestation, soil erosion, low crop yields and loss of biodiversity (IOM, 2020).

In addition to the above, there is the danger that, given the gradual reduction in oil production (IEA, 2019), underdevelopment may be accentuated due to the increase in food costs, because of the pressure to use larger areas of land in dependent countries in the production of agrofuels, bioplastics, vegetable fibers and natural rubber, which will have repercussions on the reduction of cultivated areas destined for human and animal consumption; this will make it necessary to import more food at increasing prices, which could deepen the backwardness of these countries.

Reversing this situation requires a change in the economic model of dependent countries, which have given priority to agribusiness and the search for food security through imports, neglecting food self-sufficiency and significantly reducing support for small-scale farmers, who, even with their limited resources and very few incentives, are the mainstay of the world's food supply. Family peasant units (non-capitalist) represent more than ninety percent of all agricultural production units on the planet, occupy between 70 and 80 percent of the land, and produce more than 80 percent of the world's food in terms of value (FAO, 2019a). Contrary to the general idea, these data express that, even with their small plots and limited means of production, they are units with significant productivity, which is reinforced when considering that four out of five of the world's farms have less than two hectares (FAO, 2019a), most of them in dependent countries, since in developed countries the average farm size is 197 hectares and in underdeveloped countries it is 59.3 hectares.

In quite diverse areas of underdeveloped countries, small-scale farmers are the main producers of foodstuffs commonly consumed by the inhabitants of their localities, supplying a multitude of local, some regional and sometimes even national markets: with this, they are the driving force behind local economies (FAO, 2019a). This means that peasant agriculture is the basis of food self-sufficiency, a primary condition to gain access to food sovereignty.

Underdeveloped countries, their agricultural policies and neo-extractivism

In the era of globalization, characterized by a highly interconnected economy on a planetary scale, in which the vast majority of the earth's nations participate in the same commercial and financial circuit, which is commanded by a handful of transnational corporations, underdeveloped countries have not overcome chronic deficiencies such as: the production of few goods on which they are highly dependent, insufficient endogenous industrial growth, large external debts, low levels of investment, poor infrastructure, fiscal deficits, macroeconomic imbalances, little autonomous technological progress, permanent asymmetries (Sánchez-Ancochea, 2015), deterioration of the terms of trade (Prebisch,1986), and what Kalecki (1976) called "bottlenecks". In addition to the above, there are now new particularities that will make it even more difficult to achieve solid, sustainable, supportable, and balanced economic growth among the different economic sectors and among the different regions of their territories, enabling them to progress, escape poverty and reduce inequality in income distribution within their societies. The

hypothesis is that we are dealing with a neo-underdevelopment, which is accentuating an economically bipolar world, where there is a clear distinction between developed countries at one extreme and those that have not managed to develop at the other, in an environment that tends to perpetuate the backwardness of the dependent nations; since this situation is not a transitory phenomenon, and on the contrary, has always been a structural condition of capitalism, but which is now deepening with new elements.

This situation is further worsened by the economic and social consequences of the COVID-19 pandemic, which generated the greatest recession of the last 150 years at the planetary scale, although it has affected the economically weakest countries with more force, which in the year 2020 faced a reduction of their Gross Domestic Product (GDP) of 7.1% on average, while in developed countries the decrease was of 4.5%. It is also foreseen that the rhythm of economic recovery will be slower in underdeveloped countries and that poverty will increase in them; but not only that: for some of the most vulnerable countries, it will take decades to reach the levels of production and employment that they had in the year 2019 (BM, 2020).

Dependent countries present structural impediments to achieve balanced and sustained economic growth and development; these obstacles, in addition to the aforementioned in relation to food, are: presence of vulnerable export sectors (based on the sale abroad of minerals, oil, agriculture, livestock and fishing products); denationalization of domestic manufacturing production and, in parallel, establishment of industrial export enclaves, commanded by foreign capital; increased extraction of natural resources and raw materials to be traded on the external market; loss of sovereignty of the national banking and financial system; undervaluation of currencies to favor exports; inactive international reserves (but indispensable to maintain currency undervaluation); participation in asymmetric free trade agreements and treaties that are disadvantageous for impoverished countries; energy dependence and the emergence of mega human settlements, lacking most urban public services and exacerbating regional differences within these countries. Also, the presence of powerful transnational corporations in services and trade, such as, for example, large foreign supermarket chains.

In the political sphere, these countries have made little progress in terms of democracy and the nation-state has been weakened by the abandonment by governments of various regulatory activities, which have been left to "free market forces", together with their economic decline due to the sale of state-owned and parastatal companies. Another sign of the weakness of these States is the uprising of various criminal groups and cartels that sometimes control entire regions of these countries. The insurgency of criminal groups is distinguished from social rebellion, whose struggles are to improve the living conditions of the population and to defend their natural resources.

In addition to the above, there is the current COVID-19 pandemic, which worldwide has highlighted the inconsistency and deterioration of public health systems, which are the ones that serve -everywhere- most of the population; this is even more serious in impoverished countries, which simultaneously shows healthcare dependence, which is

the impossibility of sufficiently producing their medicines, vaccines, treatments, clinical supplies, and medical-surgical equipment. The pandemic exposes underdeveloped countries to a health crisis that has led to an economic and social crisis, where each of them deepens the effects of the other (Tutivén, 2020).

Because of all the conditions described above, the States of underdeveloped countries, which are generally fragile (some even failed states), have great economic and political difficulties in promoting and leading development, which is one more cause for the stagnation of these countries.

In terms of agricultural policies, the governments of underdeveloped nations were forced to follow neoliberal principles that led to greater food dependency. Many of them, burdened by the foreign debt crisis of the 1980s and faced with the exhaustion of the import substitution pattern of accumulation, were pressured by the great powers (mainly through international financial institutions) to make structural adjustments in the agriculture and livestock sector in order to reorient it to the external market, based on virtual comparative advantages. They conjectured that it would be cheaper to buy foods from abroad than to produce them domestically and that specialization in certain export products would bring greater economic benefits, given that salary or food goods would not increase exports or strengthen international reserves, which are what the production of export crops does achieve, since it generates currencies.

Domestic food production ceased to be a priority and increasingly relied on the hands of impoverished small-scale farmers, with low levels of technology and insignificant government support. This generates a serious contradiction, since by allocating land for export crops and abandoning support for the domestic production of foods, it leaves these countries completely vulnerable to price variations, speculation, shortages, and even political extortion by the great powers with the diet of these peoples. In this way, food dependence also implies a weakening of the national security of underdeveloped countries.

Dependent countries opened their doors to massive imports of agricultural goods from developed countries, produced with more technology, higher productivity and often sold at persistent dumping prices[3]: that is, products that, being protected and subsidized by their governments, can be sold at low prices and sometimes even below the real cost of production. For example, the U.S. government determined that the price of wheat would be 45% below its cost and that of corn 25%, through a series of large subsidies to its farmers (Rubio, 2015). The above has been in detriment of domestic food production in underdeveloped countries and has led millions of their farmers to ruin, unable to compete in such a disadvantageous situation. Thus, agricultural protectionism of the governments of developed countries poses a difficult problem for less developed nations that are trying to promote competitive agricultural sectors (Hag, 2000). An example of the asymmetry in technology and productivity in agriculture is found in the region of North America, where three economies (two developed and one underdeveloped) interact closely under trade agreements that began in 1994 with NAFTA and were renegotiated in 2020 with the USMCA. Between the three countries there are huge differences in the average size

of production units, in the stock of agricultural machinery and in crop yields, where Mexico has smaller plots, meager agricultural machinery and lower productivity. Under these conditions, Mexican farmers are at a great disadvantage in competing with U.S. and Canadian farmers (Table 1).

Globalization has also encouraged competition between underdeveloped countries to produce and export products and raw materials within the framework of trade agreements, which reduce barriers and restrictions on foreign trade, tariff and non-tariff (prohibitions, prior permits, compensatory quotas, and maximum quotas). Competition between dependent countries for access to exports aggravates the fall in prices and the instability of agricultural product markets. Thus, the slow growth in demand for products that come almost entirely from underdeveloped nations, but which are consumed predominantly in rich countries, such as coffee and cocoa, has kept the trade balance of underdeveloped countries from improving. Moreover, their fluctuating prices and on a downward trend have contributed to worsen the problem (FAO, 2017, 2021).

Likewise, the insertion of agrifood sectors of some underdeveloped countries into the international food market has been unable to articulate these sectors within their own economies and has aggravated their features of extraversion and dependency, in addition to perpetuating their dependent incorporation into the world economy and deepening their structural heterogeneity (Cairó and Cortés, 2022).

All the structural characteristics described in previous paragraphs are framed in what has been called "neo-extractivism" (Acosta, 2011; Petras and Veltmeyer, 2014; Tetreault, 2020), understood as the massive and accelerated extraction of natural resources (unprocessed) from dependent countries to be directed primarily to exports. This new situation goes beyond the traditional extraction of minerals, gas, oil, and other raw materials, but also includes agricultural products, such as the massive planting of African palm or soybean in some impoverished countries, which simultaneously involves deforestation, overexploitation and pollution of land and water, resulting from intensive crops destined for the external market. To complete the previous approach, it is necessary to point out that neo-extractivism is an expression or modality of accumulation by dispossession (Harvey, 2004), now of natural resources.

From a geographic perspective, globalization has led to an international division of labor and a spatial distribution of world production, which once again places underdeveloped

Table 1. Differences in agriculture in North American countries.

Country	Average area of farm production units (hectares)	Farms with tractor (%)	Average corn production (ton / hectares)
Canada	273.4	92.5	9.3
USA	178.4	83.7	10.9
Mexico	41.4	4.4	3.7

Source: prepared by the authors based on AB (2020) and FAO (2014).

countries as suppliers of cheap labor and natural resources (water, soil, raw materials, mineral and oil deposits), although now on a larger scale, thus deepening their deep-rooted industrial backwardness. In addition, the economies of countries that produce raw materials, hydrocarbons, agriculture, livestock and fishing goods are highly susceptible to price fluctuations and climatological phenomena; furthermore, climate change directly harms agricultural, livestock and fishing production (López and Hernández, 2016), unlike industrial production, where the effect is marginal and very indirect.

Disadvantages of underdeveloped countries specialized in the export of primary products

The United Nations Conference on Trade and Development (UNCTAD, 2021), identified 101 underdeveloped countries that depended on the export of commodities: 38 of them, from agricultural products, 32 from mining products and 31 from fuels; and since in the world market the prices of food, fuels and raw materials are controlled and manipulated by large transnational corporations and in agricultural and metal exchanges, being subordinated to raw materials as the main export products leaves the producing countries exposed to price speculation, to swings in the weather and, also, to arbitrary provisions of buyers and governments to protect companies and domestic markets in developed countries. Furthermore, in the 1980s it was found that the instability of commodity prices has a negative impact on the growth, debt and income of underdeveloped countries (Behrman, 1987); although, naturally, the magnitude of the effect of commodity price volatility on the economies of these countries is a function of the intensity of their subordination to the export of these goods and to the concentration of exports in a small number of them.

Consequently, the economies of countries that generate raw materials, agricultural, livestock and fishing products, are extremely sensitive to price variations, which are controlled and manipulated by transnational corporations. For oil, the market is dominated by large companies called "the new seven sisters" (Della Vigna, 2016). Metal prices are mainly determined on the London Metal Exchange, where most of the world's production of steel, aluminum, cobalt, copper, zinc, tin, molybdenum, nickel, gold, palladium, silver, platinum, and lead is traded. Agrochemicals and seeds were dominated by six companies until 2015: BASF, Bayer, Dow Chemical, DuPont, Monsanto, and Syngenta; they controlled 75% of the global market for chemical inputs and seeds. Concentration increased in 2017 and 2018 with mergers between Dow Chemical with DuPont, Syngenta with ChemChina and Bayer with Monsanto (MacDonald, 2019).

The main agriculture and livestock products on the planet are commercialized on The Chicago Board of Trade, being corn, rice, wheat, soybeans, oats, palm oil, live animals, beef and pork meat, milk, cheese, butter and whey, timber, coffee, sugar, cotton and agrofuels (ethanol). Coffee, a tropical product and only grown in underdeveloped countries, is under the domain of ten transnational companies from Germany, England, Spain, Switzerland, France, the United States and Holland (López, 2014). In the case of

cocoa-chocolate, 60% of the market is controlled by companies from Switzerland and the United States (Terazono, 2014). On a planetary scale there are four large food grain trading companies, the American Archer Daniels Midland, Bunge, and Cargill, together with the Dutch Louis Dreyfus, which control "...most of the international trade of cereals and grains ... [having] great influence on the determination of international food prices" (Gómez and Granados, 2016: 1). And the more capitalist trade takes over food circuits, "... both access and quality of food deteriorate (mainly in dependent countries ...); in addition to the increasing depredation of ecosystems of primary exporting countries in these globalized economies" (Pinto, 2017: 547).

Based on the above, we agree with Van der Ploeg (2010) that, on a planetary scale, the oligopolistic networks mentioned are true "food empires" that generate food regimes of hunger and, we add, malnutrition. Since, worldwide, the population are immersed in the phenomenon called "dietary transition", which is replacing traditional food practices with harmful diets characterized by excess sugar, sodium, fat, and calories; and this pattern is accelerating among the world's rural poor (Popkin, 2012; Deaconu, 2021).

MATERIALS AND METHODS

The study started from reviewing academic papers related to the topic of food sovereignty; and the materials from which information was obtained were reports and statistics from international organizations: United Nations Development Program (UNDP), FAO, World Bank (WB), World Trade Organization (WTO). In addition, databases from the Food Security Information Network (FSIN), Agricultural Market Information System (AMIS), The International Trade Center (ITC), The Observatory of Economic Complexity (OEC), World Integrated Trade Solutions (WITS), Global Food Security Index (GFSI), Global Report on Food Crisis (GRFC), Food First Information and Action Network (FIAN), Actualitix, Index Mundi (IM), and Knoema.

The study analyzed the production and foreign trade of agriculture, livestock and fishing products during 2019 of 107 dependent countries; the other 55 underdeveloped nations could not be included in the analysis due to lack of updated data. However, the selection includes 66% of the underdeveloped countries, which are home to nearly six billion inhabitants, equivalent to almost 85% of the world's population.

Four variables that compromise food sovereignty were found: countries with negative agrifood balance of payments, countries that produce less than 75% of their food, countries whose main import is food, and countries in need of external food assistance. A simple classification was made with this information, grouping countries with the four variables, those with three, those with two and those with one. This made it possible to establish a hierarchy of underdeveloped countries in relation to the degree of absence of food sovereignty.

The method was comparative and deductive, since it used the procedure of quantitative comparison to find common characteristics to identify trends and based on the review and analysis of sources of information: specialized bibliography, documents, statistics

and databases. The framework of the variables of the causes of the breakdown in food self-sufficiency in underdeveloped countries, which leads to vulnerability, dependence, insecurity, and lack of food sovereignty, was elaborated. Likewise, the historical-logical method was used to approach the antecedents related to the subject under study, together with its analysis through time, since the development of the nature of the object of research is studied dialectically with this method, in order to understand its general features and the nexuses of its development (Torres-Miranda, 2020). The method of information analysis was quantitative comparison.

RESULTS AND DISCUSSION

From self-sufficiency to vulnerability and food insecurity

Most of the world's population subsists by consuming twelve plant species and five animal species, which provide more than 70% of the world's foods (Delgado, n/d). The concentration of food production in only seventeen products makes humanity very vulnerable. In addition, many of the traditional varieties of plants have gradually disappeared, to the point that FAO estimates that in the last one hundred years, 75% of the genetic diversity of plants cultivated and consumed by humans has been reduced due to the loss of local varieties that had adapted to different agroecological situations (UN, 2022).

A little more than six thousand plants have been cultivated for food (FAO, 2019b), and of these, less than two hundred have significant production levels on a global scale; and nine crops provide more than three quarters of the calories and vegetable proteins consumed by humanity: wheat, rice, corn, barley, millet, potatoes, sweet potatoes, sugarcane and soybeans; likewise, only three cereals (wheat, rice and corn) provide more than 60 % of the nutrients of plant origin consumed by humans (FAO, 2017). Of the 8,803 livestock breeds (FAO, 2017), global livestock production is based on 38 animal species and only a few of them provide most of the world's meat, milk, and egg production (FAO, 2019b).

In addition to the fragile world food situation mentioned above, until the end of the 1970s most underdeveloped countries had surplus agricultural production, which allowed them to feed their populations and even to have exportable surpluses and, therefore, a surplus agrifood trade balance. This situation reached its peak in 1977, when it reached US$17.5 billion dollars (FAO, 2003). From that date onwards, it began to decline with the trend towards a faster growth of imports than exports and, consequently, the opposite situation: negative agricultural trade balances in most of the underdeveloped countries from the 1990s onward (FAO, 2004). This trajectory is neither linear nor homogeneous and shows a very complex situation that varies from one country to another and from one product to another; however, no matter the differences present, forecasts for the year 2030 indicate that the agricultural trade deficit of dependent countries will increase even more, with imports of livestock products and cereals being especially accentuated, and it is estimated that they could import 14% of the grains they consume (FAO, 2021).

The COVID-19 pandemic and the inflation in food prices have become direct threats to food security and poverty reduction. As of March 2022, the FAO Food Price Index reached its highest level since its inception in 1990. The increase is due to new record highs in the price of vegetable oils, cereals, and meat, while the cost of sugar and dairy products also increased sharply (FAO, 2022a). Facing the World Bank's expectations that between 88 and 115 million people will be added to extreme poverty in the world, as a result of the pandemic, the increase in food prices will exacerbate the risks to food security (WB, 2020). Furthermore, if the interruption of world trade is prolonged, due to the Russian invasion of Ukraine, it could lead to a further increase in food prices and fertilizer prices in 2022 (FAO, 2022c), which could trigger a global food crisis.

The FAO, in its Food Security Indicators (2021), states that 66% of underdeveloped countries present food insecurity and estimates that, on average, 55.6% of the value of imports made by these countries is used to purchase food, while in rich countries it barely reaches 6.4% of their imports. In other words, on average more than half of the food supply of dependent countries must be obtained outside their borders. FAO (2017) also mentions that for a country to have food security, it must produce more than 75% of its food, in order not to be vulnerable to price fluctuations, economic crises, shortages in the international market and political pressures from the great economic powerhouses; which have become the largest producers and exporters of food on a global scale, among other causes, due to their higher productivity derived from superior technological development and the protectionist policies they apply in their agrifood sectors.

Food insecurity generates food vulnerability, which is the case where countries, social sectors, groups, or individuals are at risk of suffering hunger, malnutrition, or disease because they do not have physical, economic, and sustainable access to sufficient, nutritious food in accordance with their preferences, or because they consume unhealthy or contaminated products (González and Macías, 2007).

Two threats loom over food production. The first is climate change, with the rise in the planet's average temperature (global warming) and the resulting meteorological changes, characterized by colder winters and hotter summers, unprecedented forest fires, unusual pests, droughts, floods, and atypical rains which, among other phenomena, have a negative impact on agriculture and livestock production, particularly in the poorest countries that have limited infrastructure and production resources. The second is the increase in food prices, due to the irreversible trend that, in view of the decrease in oil production, increasingly more farming lands will be used to produce agrofuels, fibers, rubber and bioplastics. This will be explained below.

Oil production is expected to peak around the year 2070 and thereafter begin to decline and, as hydrocarbons become scarcer, their prices will tend to increase progressively (IEA, 2019); therefore, they are gradually being replaced by other sources, one of them being bioenergy. This type of energy can come from different natural sources: crops, agricultural byproducts, agribusiness residues, organic remains from forests and agricultural fields, and livestock waste (Islas, 2010).

As the production of fossil fuels decreases, more agricultural areas in underdeveloped countries will be used to grow crops for agrofuel production, since they have suitable land and the ideal climate (mostly located in the intertropical region) to grow at least twenty commercially important raw materials that can be used to produce plant fuels (FAO, 2014), including sugarcane (*Saccharum officinarum*), rapeseed (*Brassica napus*), sorghum, sunflower, palm, coconut, soybean, taro (*Colocasia esculenta*), beet, castor-oil plant, (*Ricinus communis*) and jatropha, to produce ethanol, methanol and biodiesel. These countries also have extensive areas that can be used to obtain vegetable fibers: abaca (*Musa textilis*), cotton, coir (coconut fiber), hemp (*Cannabis sativa*), flax or linen, ramie (*Boehmeria nivea*), jute (*Corchorus capsularis*), in addition to natural rubber and bioplastics, derived from pectin, cereals, potatoes, cassava (*Manihot esculenta*) and soybeans, among others. A few examples will serve to illustrate the above: practically all coconut is produced in underdeveloped nations, as is 97% of sugarcane, 95% of rubber and 83% of cotton (Atlas Big, 2021).

The foreseeable result will be a decrease in land sown with products for human consumption or livestock feed and, consequently, these underdeveloped countries will have to import an even greater amount of food than they currently do and at increasingly higher prices. Agrofuels, the rise of natural fibers and organic plastics, by gradually demanding greater quantities of agricultural raw materials, are reshaping the role of agriculture, causing an increasing challenge for natural resources (Lapegna and Otero, 2016); therefore, promoting these monocultures without considering the shock on food prices and their implications on food self-sufficiency, is a threat to the right to food and to biodiversity (FAO, 2014).

Food security and food, productive and territorial sovereignty

For FAO, food security is when all people, households and nations always have "... physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and preferences, with the aim of leading an active and healthy life" (World Food Summit, 1996). This definition is very limited, since it only refers to the population having the monetary resources to acquire essential foods (obviously nutritious and safe) and to guarantee their permanent supply, without distinguishing the source where they are produced (in the country or outside of it), how they are produced (for example, with intensive use of agrochemicals and water or with genetically modified organisms), who produces them (agribusinesses or peasants), nor the consequences of not considering the sources of supply (transnational agribusinesses, international supermarket chains). Food sovereignty, on the other hand, is about people's control over their food, based on self-sufficient, sustainable, supportable, and affordable domestic production for the entire population, generated mainly by small-scale and medium-scale producers, using agroecological techniques. The World Forum on Food Sovereignty, promoted by *La Via Campesina* (an international network of 182 producer organizations from 81 countries), defined it as the right of peoples to:

> "...define their own sustainable policies and strategies for food production, distribution, and consumption; that guarantee the right to food for the entire population, based

> on small and medium production; respecting their own cultures and the diversity of peasant, fishing and indigenous ways of agricultural production, commercialization, and management of rural spaces, in which (...) women play a fundamental role" (World Forum on Food Sovereignty-WFSF, 2001: 4-5).

Over time, the concept of food sovereignty has been refined, so that more than a concept under construction (Van der Ploeg, 2014) and multidimensional (Macano, 2017) or a category in the process of consolidation, it constitutes the expression or theoretical and dynamic manifestation of a popular movement to assert the human right to food; simultaneously, of peasants' resistance against capital, who struggle to preserve their means of production (including also soils, bodies of water, native seeds, forests), their way of life and their territory. That is why the original conception has been in constant improvement, by being subjected to continuous redefinition by the organizations that promote it (Medina, Ortega and Martínez, 2021); and it has also been enriched with diverse contributions from academics, by adding that it can only be erected on an agroecological basis, in local productive systems (Llanes, Iglesias and Colín, 2019), with environmental justice (Hervé, 2010), in the fight against climate change and the neoliberal food pattern (Pinto, 2017).
The asymmetries and inequities originated by capitalism in the economic and social spheres are also repeated in the environmental sphere, where the socio-spatial segregation of different social groups and classes, the monopoly of the most productive areas and the private appropriation of indispensable means for the reproduction of human life (water, land, genetic resources, biomass), in addition to the unequal negative effects of the production of goods on the population (Pinto, 2017), give rise to environmental injustices, which are suffered mostly by the poorest and most vulnerable sectors of society.
The struggle for food sovereignty and the resistance against dispossession and environmental injustices constitute peasant and popular responses to subsist and confront the dominant predatory extractivist and agro-productive pattern, the "food regimes of hunger" (McMichael, 2015), and the need to change the current industrialized agriculture towards sustainable and supportable production, controlled by the peasants themselves and which does not devastate ecosystems and is for the democratization of production and access to food (Pinto, 2017). This can happen through productive alternatives supported by the ancestral knowledge of peasants, which are enriched or complemented by current agroecological advances (Van Der Ploeg, 2010; McMichael, 2015; Pinto, 2017). All this based on endogenous local development (with each place's own resources), where local spheres are "... spaces of resistance against globalized agents and processes that generate negative effects on the territory" (González and Micheletti, 2021: 5).
It is necessary to distinguish agroecology practiced by peasants from organic production, which is aimed - due to its high prices - at a limited sector of consumers who opt for healthy foods and have the capacity to pay for them. Organic agriculture, although based on a change of inputs and a reduced use of chemical compounds, generally follows the same guidelines as agribusiness: monocultures, land concentration, massive use of water,

seeds, and biological inputs; because it is also an intensive production and only oriented to a specific market niche, that is, it does not constitute a social movement of producers, even if peasants do participate in it. While agroecology defends a different agrifood system based on social and environmental justice, "...not just being an individual way to increase agricultural income or to consume healthy food ... but a proposal for a popular and democratic agrifood system" (Pinto, 2020: 113).

Traditional peasant agriculture, which FAO calls Globally Important Agricultural Heritage Systems or GIAHS[4] (for example the Mesoamerican *milpa*, Andean chacra or Southeast Asian rice farming), is more efficient than conventional industrial agriculture in aspects such as productive diversity, environmental impact and energy consumption. The ancestral Mexican milpa, based on the triad of corn, beans, squash and supplemented with up to sixty different plant species or varieties, is efficient, resilient, of low entropy (Collin, 2021), sustainable and supportable. It is efficient and sustainable, given that with its own resources and in a reduced area, it produces food and other goods (firewood, fodder, flowers, medicinal plants) during different periods of the year to satisfy the reproduction needs of the domestic unit and, when there are surpluses or some monetary urgency, for exchange and commercialization; it is resilient because the variety of crops allows facing various adverse climatic conditions and the presence of pests, diseases and weeds, and if a certain product is not attained, another will survive; it is of low entropy, as it recycles its own byproducts, in many cases continues to use animal traction and requires little external energy, to the extent that it can be eleven times more efficient in terms of energy invested per energy obtained than the agribusiness system of monocultures (Delgado, 2013); and it is sustainable as there is a reduced and, sometimes, even null use of agrochemicals.

The basis of food sovereignty is food self-sufficiency, but not at the cost of destroying nature or obtained by agribusiness, but rather based on the reorientation of agriculture towards resources located in local ecosystems and controlled by the farmers themselves. The idea is that nations should be able to generate internally, on small and medium-sized farms, most of their foods and that they purchase on the foreign market the foods that they do not produce (those that their agroecological conditions and geographical location do not allow) and that, therefore, they enrich their diet and do not devalue it. The aim is to complement national agriculture, not to replace it, and thus preserve local production systems and resources while improving the diet.

Because of the aforementioned, countries that are not food self-sufficient are far from having food sovereignty; what they do have is food insecurity and vulnerability, to the extent that some of them import mainly food, all of them show agrifood balance of payments deficits and, in extreme cases, there are nations that are not capable of producing or importing enough food and, in the presence of famine, require food assistance consisting of donations from abroad by governments, public and private institutions, churches, businesses and non-governmental organizations, all of them with very particular interests (political, economic, religious) that motivate them to "donate" food.

Food assistance can be in the form of monetary support, "vouchers" or coupons (redeemable for certain foods in certain establishments) or directly with products (World Food Program-WFP, 2022). In the latter case, since the most important part of these items are usually grains, the mechanism hides an escape valve to the overproduction of grains in developed countries. To a great extent, food aid is a business, as it is monopolized by four companies that control more than 80% of its transport and distribution; in addition, 50 to 90% of global food aid is conditioned by bilateral trade agreements, where the United States, for example, forces countries receiving food to accept genetically modified grains (ES, 2008).

In its most general meaning, the principle of sovereignty refers to the exercise of power and authority by the people, in a certain exclusive territory; therefore, it also implies independence (Sistema de Información Legislativa-SIL, 2021). In turn, sovereignty comprises the self-determination of peoples "... both in the political, economic and cultural spheres" (Becerra, Povedano and Téllez, 2010: 63). Based on the above, the struggle for food sovereignty, based on small-scale and medium-scale family production (non-capitalist) attempts to exercise power for the self-determination of agrarian peoples, in rural territories, to preserve, develop or transform their forms of production and peasant life with economic, political, and cultural independence. Therefore, being sovereign means guaranteeing nations and their peoples the exercise of rights over their fields and forests (Macano, 2017).

Given that peasants not only produce food but also agriculte and livestock raw materials, in a broad sense the struggle is necessarily for Productive Sovereignty and not only food. Moreover, in rural territories there are several natural resources (minerals, construction materials, water, etc.) that suffer the onslaught of capital to appropriate them (neo-extractivism), so the scenario of confrontation is even more extensive, since - strictly speaking - it is a resistance movement for Productive and Territorial Sovereignty; and the latter involves and integrates other rural dwellers into the movement, who are not necessarily peasants but who resent the effects of the plundering of natural resources.

From what has been argued in the preceding paragraphs, there is no relationship between food security and food sovereignty, since each of them corresponds to a different vision of reality, of the way of producing food and facing the problem of hunger. For FAO, what is essential is to guarantee physical (availability) and economic (purchasing power) access to food for all people, without giving greater importance to its origin and environmental conservation. In other words, the concern is that people should eat and for that food should be available, and that people should have the money to buy it, without considering that hunger is the result of the economic system in which we live. On the other hand, food sovereignty stems from the consideration that food is a fundamental human right, and that hunger and malnutrition are the result of exploitation and poverty generated by capitalism. Likewise, that peoples and not agribusinesses should be the ones to establish their own sustainable and supportable policies and strategies for production and participation in commodity trade on their own terms, instead of being the object of

speculation in international markets, based on self-sufficient production, generated by small-scale and medium-scale producers with agroecological techniques.

Foreign trade in raw materials, agriculture, livestock and fishing products from underdeveloped countries

Within international production chains, most dependent countries specialize in primary production, which is the weakest, most vulnerable and least profitable link in the chain, since these activities are subject to natural conditions, such as the extractive industries, which depend on the richness of deposits, and agricultural and livestock production, as well as fishing and forestry production, which are tied to location and climate. In addition to this, the trend in impoverished countries towards the "deindustrialization of agricultural exports", which consists of an increase in the proportion of unprocessed agriculture and livestock raw materials without transformation, compared to those exported with a higher degree of agribusiness processing (Albrieu *et al.,* 2014). In addition, it is worth to remember that the economies of countries that generate raw materials, agriculture, livestock and fishing products, are extremely sensitive to price variations, which are controlled and manipulated by transnational corporations.

For this study, information on foreign trade of 107 underdeveloped countries during the year 2019 was analyzed and the conclusion was reached that more than half of the exports of 70% from these countries are made up of raw materials (mainly minerals and oil), and agriculture, livestock, forestry and fishing products. This confirms that most of the dependent countries are non-industrialized since their economies are based on primary activities. Table 2 shows 65 underdeveloped countries with a high level of this type of sales in external markets, ranging from just over half to almost all of their exports.

There are twenty underdeveloped countries (Table 3) whose main export is an agriculture, livestock forestry or fishing product: soybean, cocoa, sugar, coffee, tea, banana, timber, nuts, vanilla, tobacco, sunflower, spices, cereals, wool, meat (beef, sheep, and goat), as well as fishing products. These countries are among the most defenseless because their goods traded on the foreign market depend entirely on climatic and natural conditions. Moreover, these countries have neglected agrifood production to the extent that, except for Argentina, Brazil, Ukraine, and Uruguay, they are all net importers of food goods. The agro-fisheries-export orientation reflects a distortion in these economies, since lands are devoted to monoculture and a set of resources are allocated to supply the external market, while domestic food production is simultaneously neglected.

Loss of food sovereignty

From FAO's point of view (2021), the risk of the population becoming food insecure, that is, being forced to import more than 25% of their food, is due to three factors: social conflicts (civil strife, political instability, and population displacements); economic causes (high food prices); and environmental phenomena (floods, unprecedented outbreaks of desert locusts in East Africa, landslides, persistent effects of drought and consecutive

Table 2. Exports of raw materials, agriculture, livestock, forestry and fishing products of underdeveloped countries (in percentages), 2019.

Country	%	Country	%	Country	%	Country	%
South Sudan	99.8	Sierra Leone	92.4	Zimbabwe	85.0	Burma	68.8
Chad	99.8	Guinea	92.0	Ivory Coast	84.6	Kyrgyzstan	67.4
Gabon	99.3	Malawi	91.6	United Arab mirates	84.4	Kenya	67.2
Eritrea	99.1	Mauritius	91.5	Namibia	83.0	Lao PDR	67.1
Burkina Faso	98.9	Kazakhstan	90.9	Uruguay	82.7	Burundi	66.9
Libya	98.9	Cuba	89.7	Tajikistan	82.5	Honduras	66.6
Ghana	98.1	Paraguay	89.3	Oman	82.2	Brazil	61.1
Nigeria	97.8	Ethiopia	89.2	Colombia	80.9	South Africa	59.9
Cameroon	97.7	Papua New Guinea	89.0	Sudan	80.6	Guatemala	59.7
Congo	97.6	Tanzania	88.8	Syria	80.5	Rwanda	56.3
Turkmenistan	97.1	Benin	88.1	Uzbekistan	79.5	Nicaragua	55.9
Venezuela	96.5	Peru	87.7	Panama	76.1	Egypt	53.6
Niger	96.0	Zambia	86.9	Senegal	75.6	Liberia	52.2
Mongolia	96.0	D. R. of the Congo	86.3	Madagascar	75.5	Dominican Rep.	51.1
Yemen	95.7	Uganda	86.1	Togo	72.6		
Ecuador	95.1	Afghanistan	85.6	Gambia	72.0		
Botswana	93.6	Somalia	85.5	Ukraine	68.9		

Source: prepared by the authors based on FAO (2019b), WTO (2020), Actualitix (2020), FSIN (2019), Index Mundi (2020), ITC (2020), OEC (2020), WITS (2020), FIAN (2019), UNDP (2019), Knoema (2020).

unfavorable rainy seasons). This position, obviously, is controverted, as it does not consider the structural roots of hunger, poverty, unemployment and the lack of food self-sufficiency and sovereignty, in addition to confusing causes with consequences.

The reality is much more complex, since all aspects of food sovereignty are impacted in underdeveloped countries (Delgado, N.A.). The first is that most of these nations lack food self-sufficiency. Second, the existing poverty due to the polarization in wealth distribution causes difficulty in gaining access to food as well as hunger for many sectors of the population. Food exporting countries such as India, Brazil, Indonesia, Mexico, Turkey, Vietnam, Argentina, Egypt, Pakistan, Colombia, and the Philippines, among others, show the paradox that they are among the world's top twenty food exporters and, at the same time, they have a considerable part of their population suffering from hunger and malnutrition. The third is that the quality of what most of the population eats is low, since food surveillance efforts are focused on exports, neglecting internal control; in addition, the products that do not meet international standards are sent to their domestic markets; and, conversely, developed countries export to dependent countries foods that they cannot sell in their own markets because they lack the minimum quality required or because they are considered waste in those countries. In addition, the difficulty of food access means that a large part of the population in impoverished countries eats in an unbalanced way.

The fourth aspect is that the policies of governments of underdeveloped countries favor agribusiness and products oriented to the external market and, in parallel, the imports of

Table 3. Main agricultural and fishery product exporting countries, 2019.

Country	Main export product
Ivory Coast	Cocoa
Cuba	Sugar
Ethiopia and Honduras	Coffe
Gambia	Timber
Guatemala	Bananas
Guinea-Bissau	Tree nuts
Kenya	Tea
Madagascar	Vanilla
Malawi	Tobacco
Moldova	Sunflower seeds
Central African Republic	Wool
Senegal and Sierra Leone	Fish, seafood, and crustaceans
Syria	Spices
Somalia	Sheep and goats
Ukraine	Wheat, rye, corn
Uruguay	Beef and veal
Argentina	Soybean meal
Brazil	Soybeans

Source: prepared by the authors based on Actualitix (2020), Index Mundi (2020), ITC (2020), OEC (2020), Knoema (2019), WTO (2020), AMIS (2019).

foreign products that are available at lower prices than national ones, with the simplistic idea of keeping inflation down, which means that local production systems, traditional foods and native genetic resources have to compete without any protection against industrialized products from their own country and against imported products. The consequences have been the ruin of a significant part of traditional agriculture, uprooting, migration to cities, and harmful effects on the environment. The fifth is that the poorest countries with the greatest food insecurity (Table 4) also tend to be the least able to pay for their imports, so that the agricultural trade deficits of the impoverished countries tend to increase. The sixth, with globalization, is that governments of underdeveloped countries have abandoned farmers to their fate by drastically reducing support for the agricultural and livestock production sector, especially for small-scale producers (Economic Commission for Latin America and the Caribbean-ECLAC, 1999). The seventh aspect is that the situation is more severe if we consider that the effective demand does not represent the total need for foods, since hundreds of millions of people in dependent countries do not have the money to buy them or the means to produce them themselves.

As most underdeveloped countries lack food self-sufficiency, they are forced to import a massive amount of food or raw materials for food processing, which leads to food dependence and, to the extent that it deepens, results in the loss of decision-making capacity, power, freedom, and self-determination of the nations over the diet of their peoples, that is to say, in the loss of food sovereignty. Almost two thirds (65.6%) of the

Table 4. Percentage of inhabitants with food insecurity by country or region, 2020.

Very High	%	High	%	Medium	%
Bangladesh	87	Sierra Leone	65	El Salvador	43
Central African Republic	86	Mozambique	63	Somalia	41
Angola, South Sudan	83	Uganda	61	Yibuti	40
Yemen	78	Syria	60	Burkina Faso	39
D. R. of the Congo	77	Zambia	57	Cameroon,Liberia, Mauritania	34
Afghanistan	76	Palestine, Sudan	56	Níger, Nigeria	32
Zimbabwe	74	Pakistan, Tanzania	54	Gambia	29
Lesotho	73	Burundi, Malawi, Namibia	49	Chad	28
Madagascar	69	Guinea-Bissau	48	Togo	27
Honduras	68	Ethiopia	46	Senegal	26
Haiti	67	Kenya	45	Guinea, Mali	25
Swaziland	66				

Source: prepared by the authors based on FSIN, 2021.

107 countries studied are in a situation of a negative agrifood balance of payments; that is, they are unable to feed their populations with their own resources (Table 5).

There are 24 countries whose main imports are foods (Table 6). These are countries that stand out for exporting oil, minerals and, paradoxically, foods such as vegetables, fruits, nuts, coconuts, cocoa, olive oil, oilseeds, as well as cattle, sheep and goats, fish, mollusks, and crustaceans. Apart from Haiti[5] (which has become a garment manufacturer), all the other countries coincide in being mainly exporters of raw materials, agricultural and

Table 5. Underdeveloped countries with negative agrifood balances, 2019.

Afghanistan	Gabon	Liberia	Senegal
Angola	El Salvador	Libya	Syria, Somalia
Algeria	United Arab Emirates	Madagascar	Swaziland
Armenia	Ethiopia	Malawi	Sudan
Bangladesh	Mali	Philippines	South Sudan
Benin	Gabon	Mauritius	Tanzania
Botswana	Gambia	Mongolia	Tajikistan
Burundi	Guinea	Namibia	Togo
Burkina Faso	Guinea-Bisáu	Nepal	Tunisia
Cameroon	Haiti	Níger	Turkmenistan
Congo	Honduras	Nigeria	Uganda
Cambodia	Jamaica	Oman	Venezuela
D. R. of the Congo	Jordan	Pakistan	Vietnam
Cuba	Kenya	Panama	Yemen
Chad	Kyrgyzstan	Central African Rep.	Yibuti
Egypt	Lesotho	Dominican Republic	Zambia
Eritrea	Lebanon	Sierra Leone	Zimbabwe

Source: prepared by the authors based on FAO (2021), OMC (2020), Actualitix (2020), FSIN (2019), Index Mundi (2020), ITC (2020), OEC (2020), WITS (2020), FIAN (2019), Knoema (2019), AMIS (2019).

Table 6. Countries that mainly import food and their main export (2019).

Main export	Country
Gold	Afghanistan, Benin, Ghana, Mali, Sudan, Yemen, Zimbabwe
Copper	Eritrea
Iron	Mauritania
Crude oil	Congo, Gabon, South Sudan
Petroleum gas	Burma
Sugar	Cuba
Cocoa	Ivory Coast
Tree nuts (dried fruit)	Guinea-Bissau
Bananas	Guatemala
Vanilla	Madagascar
Crustaceans and fishes	Sierra Leone
Spices	Syria
Sheep and goats	Somalia
Tobacco	Malawi
Raw wood	Gambia

Source: prepared by the authors based on Actualitix (2020), Index Mundi (2020), ITC (2020), OEC (2020), Knoema (2019), WTO (2020), AMIS (2019).

livestock products and fish. The fact that 42% of these countries export agricultural products clearly shows the distortion of their agriculture and livestock production systems and the disastrous consequences of the specialization in very few products and even in monocultures (coffee, cotton, sugarcane, vanilla, cocoa, tobacco, nuts), which totally contradicts the idea of comparative advantages.

There are 22 countries in extreme cases of food dependence, each with millions of people lacking the minimum of food; these nations, not having the conditions to feed their population, require, according to the World Food Program, urgent external aid. These countries are Afghanistan, Angola, Burkina-Faso, El Salvador, Ethiopia, Guatemala, Honduras, Liberia, Mali, Madagascar, Mozambique, Niger, Nigeria, Central African Republic, Democratic Republic of Congo, Sierra Leone, Syria, Sudan and South Sudan, Venezuela, Yemen, and Zimbabwe (WFP, 2021).

The analysis concludes with the determination of the participation of various underdeveloped countries in the variables studied that have to do with the loss of food sovereignty: agrifood trade balance deficits, food imports exceeding 25% of the total, the need for external food aid, and the main imports constituted by foods. The result is that 10.8% of these countries are simultaneously in the four situations mentioned above; 29.2% are in three of the variables; 9.2% have two; and 46.1% show at least one of the shortcomings to achieve food sovereignty (Table 7). Adding up the numbers, the result is that 95% of these countries do not have food sovereignty. By the year 2020, FAO established that 66% of underdeveloped countries lacked food security and the calculation made in this study shows that only about five percent of these countries have food sovereignty.

Table 7. Underdeveloped countries by food dependency status.

Country	Deficit agri-food balance	Food imports >25%	With food assistance need	Food as main import
Angola	✓	✓	✓	✓
Burkina Faso	✓	✓	✓	✓
Ethiopia	✓	✓	✓	✓
Liberia	✓	✓	✓	✓
Niger	✓	✓	✓	✓
Nigeria	✓	✓	✓	✓
D. R. of the Congo	✓	✓	✓	✓
Afghanistan	✓	✓	✓	
El Salvador	✓	✓	✓	
Honduras	✓	✓	✓	
Madagascar	✓	✓	✓	
Mali	✓	✓	✓	
Syria	✓	✓	✓	
Sudan	✓	✓	✓	
South Sudan	✓	✓	✓	
Zimbabwe	✓	✓	✓	
Somalia	✓	✓		✓
Gambia	✓	✓		✓
Guinea-Bissau	✓	✓		✓
Haiti	✓	✓		✓
Mauritania	✓	✓		✓
Mozambique		✓	✓	✓
Guatemala	✓		✓	✓
Central African Rep.	✓		✓	✓
Malawi	✓			✓
Chad	✓	✓		
Guinea	✓	✓		
Yemen	✓	✓		
Kenya	✓	✓		
Lesotho	✓	✓		
Sierra Leone	✓		✓	
Venezuela	✓		✓	
Bangladesh	✓			
Burundi	✓			
Cameroon	✓			
Armenia	✓			
Benin	✓			
Botswana	✓			
Cuba	✓			
Djibouti		✓		
Egypt	✓			
Eritrea	✓			
Gabon	✓			
United Arab Emirates	✓			
Philippines	✓			
Jamaica	✓			
Jordan	✓			
Kyrgyzstan	✓			

Table 7. Continuation.

Country	Deficit agri-food balance	Food imports >25%	With food assistance need	Food as main import
Lebanon	✓			
Libya	✓			
Namibia	✓			
Nepal	✓			
Oman	✓			
Pakistan	✓			
Mongolia	✓			
Dominican Republic	✓			
Tajikistan	✓			
Tunisia	✓			
Turkmenistan	✓			
Vietnam	✓			
Zambia	✓			

Source: prepared by the authors based on Actualitix (2020), WTO (2020), FAO (2021), FIAN (2019), FSIN (2020), Index Mundi (2020), ITC (2020), Knoema (2019), OEC (2020), WITS (2020), AMIS (2019).

CONCLUSIONS

Food insecurity is mainly a problem in underdeveloped countries, where almost 98% of the world's population inhabits and has difficulty accessing an adequate diet. FAO states that social conflicts, climate variability, extreme weather events, and economic slowdown undermine the efforts to end hunger, food insecurity and malnutrition. Although the above is true and obvious, the analysis is limited, since the phenomenon is the result of structural causes prevalent in underdeveloped countries, which, in addition, far from improving, tend to persist. Thus, there is no relationship between food security and food sovereignty, since each corresponds to a different vision of reality, of the way of producing food, and of facing the problem of hunger.

Currently, two thirds of the dependent countries do not have food self-sufficiency, which has led them to lose the capacity and autonomy to feed their population. The basis of food sovereignty is self-sufficiency in food production, but not the one achieved by agribusiness or by depredating ecosystems, but rather one that nations manage to generate internally, from agroecological techniques and based on small and medium family farms, most of their foods and those that they acquire in the foreign market are the ones that they do not produce and which serve to enrich their diet, not to deteriorate it.

The absence of food sovereignty is a new characteristic of underdeveloped countries which deepens their dependency, being one more element that supports the hypothesis that we are in the presence of underdevelopment with new peculiarities, or neo-underdevelopment, because the loss of food sovereignty does not constitute a transitory phenomenon; it has become a structural and permanent condition in these nations, since the growing trend for more than forty years is heading towards the increase of trade flows of agriculture and

livestock products from developed countries to dependent countries. Proof of this is that while in the rich countries 6.4% of their food is imported, in the impoverished countries 56% of their food supply must be obtained outside their borders.

In underdeveloped countries, seven aspects related to food sovereignty are affected. First, there is no food self-sufficiency. Second, there is poverty and polarization in the distribution of wealth, which causes impediments to gain access to food and hunger for many of their inhabitants. Third, the quality of food is deficient, since the focus is on products for export, neglecting those of the domestic market, which, in addition, is supplied with products that do not meet the quality standards of developed countries. Fourth, the policies of the governments of dependent countries favor agribusinesses and goods oriented to the external market, simultaneously with the import of foods that can be obtained at lower prices than national ones, with the idea of keeping inflation low; this has caused local production systems, ancestral foods, and native genetic resources to compete, disadvantageously and without any protection, with the products of national and foreign agribusinesses. The consequences have been the ruin of an important part of traditional agriculture, migration, and harmful effects on the environment. Fifth, the poorest countries with the least food self-sufficiency are often the least able to afford their imports, so their agricultural trade deficits increase. Sixth, with globalization, the governments of underdeveloped nations have abandoned farmers to their fate by reducing support for the agricultural and livestock sector, especially for small-scale farmers. Seventh, the situation is aggravated by the fact that effective demand does not represent the total need for foods, since millions of people in impoverished countries do not have the money to buy them or the resources to produce them on their own.

The food problems of dependent countries are set to worsen with the inevitable reduction in oil production, which will tend to increase food costs, due to the progressive demand for larger areas of land in these countries for the production of agrofuels, bioplastics, vegetable fibers and natural rubber, which will lead (if the agricultural frontier is not expanded or productivity is not increased) to a reduction in the areas under cultivation for human and animal consumption; this will make it necessary to import more food at rising prices, which will increase underdevelopment in these countries. Hence, the promotion of intensive planting of products to obtain fibers, fuels, and plastics, without considering the impact of these monocultures on food prices and their implications on self-sufficiency and food sovereignty, is a threat to the right to food of the peoples, to the biodiversity of the planet, and to environmental justice.

In many regions of the underdeveloped countries, peasant family farming is the main producer of foods for the daily consumption of their inhabitants and, by supplying a wide range of local and, sometimes, regional and even national markets, it constitutes the basis for food self-sufficiency. However, its importance has not been recognized in public policies. Reversing this situation requires a total change in government programs to help small-scale farmers who, with truly little support and facing competition from agribusiness and large transnational corporations, continue to be the fundamental pillar of the diet by

providing more than 80% of the world's food in terms of value. The alternative is to reorient agriculture towards resources located in local ecosystems and, being controlled by the farmers themselves, to move towards food sovereignty.

Peasants produce not only foods but also agriculture and livestock raw materials, hence the struggle is for Productive Sovereignty and not only food. Likewise, in rural areas there are several natural resources (minerals, construction materials, water, etc.) that are being harassed by capital to appropriate them (neo-extractivism), so the framework of the confrontation is broader, since -in essence- it is a resistance movement for Productive and Territorial Sovereignty; and the latter involves and integrates other inhabitants of rural areas into the movement who are not necessarily peasants, but who suffer the effects of the plundering of natural resources.

NOTES

[1]In this study, and only for the purpose of not being repetitive, they are also identified with the synonyms: dependent or impoverished.

[2]The only exception is Japan, since it is the developed country that imports the most food (WTO, 2021).

[3]Dumping is considered an unfair or unjust practice, since it consists of giving a good a lower price in the exporting market than in the producing market; and it is persistent when a product is systematically sold at a lower price in one market than in another (González, 2021).

[4]The 77 GIAHS present in thirty countries around the world (although there are certainly more) are agroecosystems inhabited by communities living in an intrinsic relationship with their territory. These constantly evolving sites are resilient systems characterized by remarkable agricultural biodiversity, traditional knowledge, invaluable cultures and landscapes, sustainably managed by farmers, shepherds, fisherfolk and forest populations in a way that contributes to their livelihoods and food security (FAO, 2022d).

[5]In Haiti, recently foreign assembly plants have been established with a small degree of complexity, which make mainly t-shirts, which is why currently its main export is this garment; then, plant oils, tropical fruits and coffee follow (OIC, 2021).

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