COORDINATION SUD

AGRICULTURE • FOOD

RESEARCH STUDY

THE EU CAP: HOW COHERENT IS IT WITH THE DEVELOPMENT OF PEASANT AGRICULTURE IN THE SOUTH?

Coordination SUD is the national coordination platform of French international solidarity NGOs

Founded in 1994, it brings together more than 170 NGOs that carry out humanitarian relief, development assistance, environmental protection, human rights protection for disadvantaged populations, as well as educational actions in citizenship and in international solidarity and advocacy. Coordination SUD leads theme-based working commissions, composed of its members and partners, that work on major issues of international solidarity.

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The C2A brings together international solidarity NGOs that work toward achieving the right to food and increased support for family farming in policies that have an impact on global food security.
These include: ActionAid France – Peuples Solidaires, Action Contre la Faim, Agter, Artisans du Monde, AVSF, CARI, CCFD – Terre Solidaire, CFSI, Commerce Équitable France, Gret, Iram, ISF Agrista, Madera, Max Havelaar, Oxfam France, Réseau foi et Justice Afrique Europe, Secours Catholique – Caritas France, SOL – Alternatives Agroécologiques et Solidaires, Unmfreo.

C2A represents Coordination SUD in institutions dealing with agriculture and food such as the French Inter-Ministerial Group on Food Security (GISA) and the Civil Society Mechanism (MSC) for the Committee on World Food Security (CFS).

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INTRODUCTION

For nearly two decades, international solidarity organizations have been pointing out the potentially negative effects of many European Union (EU) and national policies on development and on respect for human rights in the Southern countries.[1] They have been calling on public authorities to ensure policy coherence between the policies they have implemented and the objectives of development cooperation and international commitments to respect human rights. Indeed, the EU and its Member States (including France and Luxembourg) have committed themselves to making all their policies coherent with development (sustainable development goals and human rights). Article 208 of the Treaty on the Functioning of the European Union, for example, states that: "*Union development cooperation policy shall have as its primary objective the reduction and, in the long term, the eradication of poverty. The Union shall take account of the objectives of development cooperation in the policies that it implements which are likely to affect developing countries.*"

As various studies have shown, the Common Agricultural Policy (CAP) is one of the main EU policies with impact on the Southern countries, and in particular on their peasant agriculture systems. These studies have also shown that the CAP can be inconsistent with the objectives of coherence with development and respect for human rights.[2] In fact, the CAP represents more than one-third of the EU budget,[3] and it largely determines, together with other EU policies (particularly trade and energy policies), developments in the European agricultural and food system and trade with third countries. However, the characteristics of the EU agricultural and food system and trade with third countries are not without effect for peasant agriculture in the Southern countries.

The CAP makes up 36% of the Community budget (2014-2020), thus making it the EU's foremost policy. It consists of two "pillars."
The first pillar, financed exclusively by the EU (76% of the EU CAP budget), consists mainly of direct payments to farmers (71% of the EU CAP budget). This aid is paid per unit area. The vast majority is "decoupled," which means that the amount of aid per hectare does not depend on the type of production or the level of yield. In the budget allocation of direct payments, 30% (the "green payments") are subject to environmental conditionalities. Up to 15% of the aid can be recoupled according to specific objectives, and up to 30% of the allocation can be used to increase the aid per hectare for the smallest farms. These decisions are the responsibility of each Member State. Alongside these direct payments, market measures represent only 4% of CAP expenditure.
The second pillar (24% of the EU CAP budget), is co-financed by the Member States. It includes a variety of measures dedicated to rural development.[4]

Discussions and negotiations on drawing up the new CAP for the 2021-2027 period are currently underway. This is why the Agriculture and Food Commission (C2A) of Coordination SUD and the *Meng Landwirtschaft* platform have decided to take stock of

1. See in particular Coordination SUD, *Guaranteeing Policy Coherence for the Development of Family and Peasant Farming in the South*. The Notes of SUD no. 10, January 2018.

2. See in particular Coordination SUD, *La cohérence des politiques agricoles et commerciales avec le développement*, C2A report. September 2011.

3. The annual EU budget for the CAP over the 2014-2020 period is €60 billion (including €9.1 billion for France and €48 million for Luxembourg).

4. Source information on EU budget: European Parliament (2019 figures), www.europarl.europa.eu/factsheets/fr/sheet/106/le-financement-de-la-pac

the effects and impacts of the CAP on peasant agriculture in Southern countries, with a view to clarifying and supplementing their proposals for the next CAP and to support their arguments. Their ultimate goal is to champion an EU agricultural policy that is indeed coherent with the EU's development objectives and with respect for human rights. This study was thus carried out to support the advocacy actions of the C2A and *Meng Landwirtschaft*.

The study focuses on the main types of effects and impacts of the CAP on peasant agriculture in Southern countries, namely:

- The effects and impacts that exports of agricultural and food products whose production has benefited from CAP subsidies have on the markets of Southern countries. The study concentrates on the most emblematic examples of this issue: exports of milk powder and wheat to markets in West Africa.[5]
- The effects and impacts of soy imports from Latin American countries, intended for animal feed.
- The global effects of the EU agricultural and food model with regard to greenhouse gas (GHG) emissions, bearing in mind that peasant agriculture in developing countries is particularly affected by climate change. Particular attention is paid to EU agricultural production for energy purposes.

The effects of the CAP can be indirect: they can include effects on export volumes and prices, on import volumes of soy (and hence its demand and production), and on GHG emissions). As for the impacts, they reflect the way in which peasant populations in the Southern countries are affected by these effects.

For each of the three issues, we will successively cover:
- a description of the facts, i.e. EU production and exports of milk powder and wheat (Topic 1), EU uses and imports of soy (Topic 2,) and the carbon footprint of the EU agricultural and food system and of agrofuels (Topic 3);
- an analysis of the effects and impacts on peasant agriculture in the Southern countries;
- an analysis of the responsibility of the CAP and of other EU policies;
- recommendations on how the CAP should change, that specifically address the issue dealt with.

A synthesis of the various conclusions and recommendations, incorporating the specific conclusions and proposals of each party, will then be proposed.
The study was carried out based on existing studies and reports, as well as on specific research, in particular by making good use of available statistics. The provisional conclusions were presented and discussed at a seminar attended by around 100 participants, held on April 11, 2019, in Nogent-sur-Marne, France. The main presentations of this seminar are available on the website of Coordination SUD.[6] Some excerpts from the presentations are provided in the report.

5. This report does not address the issue of low-cost exports of by-products from European agriculture and agri-food industry. In the 2000s, low-cost exports of cheap cuts of chicken meat to Southern markets had caused the destabilization or even ruin of poultry production activities in various African countries. Such dumping was strongly criticized by agricultural organizations and NGOs. Since then, several countries (Senegal, Burkina Faso, Côte d'Ivoire, etc.) have implemented policies to prohibit or restrict imports of poultry meat, but the problem of import dumping persists in several countries (e.g. Ghana, Congo, etc.).

6. www.coordinationsud.org/document-ressource/4-films-sur-le-seminaire-les-effets-de-la-pac-sur-les-paysanneries-du-sud/

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1.

EXPORTS OF AGRICULTURAL PRODUCTS BENEFITING FROM INDIRECT CAP SUBSIDIES

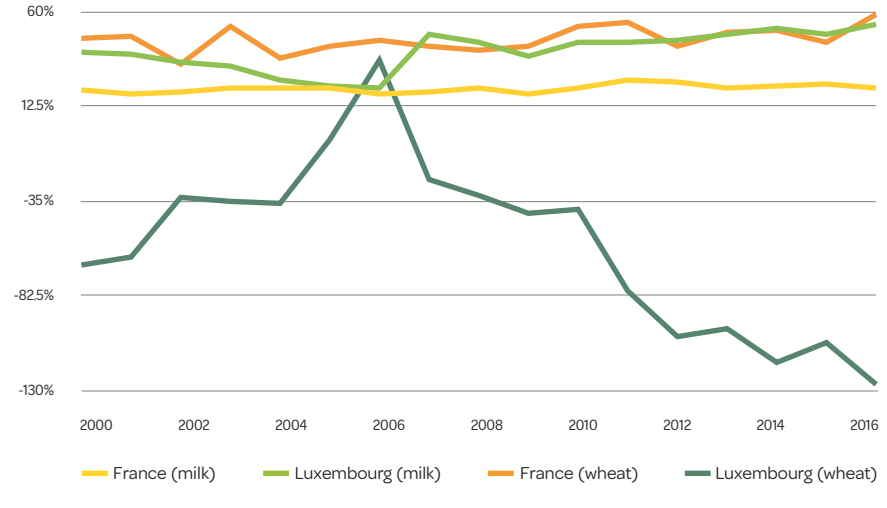
1. The facts: the case of milk powder and soft wheat exports to West Africa
2. The effects in the South: the case of West Africa
3. The CAP in question
4. Recommendations

1. THE FACTS: THE CASE OF MILK POWDER AND SOFT WHEAT EXPORTS TO WEST AFRICA

The EU is one of the world's leading producers of milk (no. 2 after India, accounting for 20.3% of global production in 2017) and soft wheat (no. 1 ahead of China, accounting for 19.5% of global production in 2017).[7] While most of Europe's milk production is intended for the domestic market, a significant share of production is exported (39% of production for milk in 2016,[8] and 29% for soft wheat in 2011[9]). The EU also imports dairy and wheat products, but it remains a net exporter for both types of products (in 2016, net exports accounted for 12% of milk production and 9% of wheat production).[10]

GRAPH 1: NET SURPLUSES OF MILK AND WHEAT FROM FRANCE AND LUXEMBOURG IN RELATION TO PRODUCTION

Source: Faostat and our calculations



France and Luxembourg have net surpluses in dairy products: in 2016, net surplus (exports minus imports in milk equivalent) represented 22% and 54% of milk production in France and Luxembourg respectively.
With regard to wheat, while France has a net surplus (59%), Luxembourg has a large deficit, as net imports represent 127% of production.

In both sectors, since the creation of the CAP in the early 1960s, Europe has long pursued a market regulation policy aimed at guaranteeing remunerative and stable prices for farmers, thereby encouraging an increase in productivity and production. This policy was based on the intervention mechanism whereby the public authorities undertook, in the event of a price decrease, to buy production at a given price, known as the "intervention price." This way, the market price never fell permanently below

7. Source: FAO.

8. Note : Taking into account all exports of dairy products.

9. According to Trade Map, FAO and Crops Market Observatory.

10. According to Trade Map, FAO and Crops Market Observatory.

the intervention price. In addition, a trade policy to protect the internal market, based on variable levies, helped avoid low-priced imports from undermining this mechanism for regulating domestic prices. When Europe attained surplus production, the cost of managing surpluses began to grow, and some was sold on the world market through export subsidies, called "restitutions." To limit this cost, Europe established production-control mechanisms (milk quotas in 1984, voluntary and then compulsory fallow in the 1990s). It subsequently liberalized its agricultural policy, gradually aligning prices with those on global markets and abandoning production-control mechanisms (successive reforms of the CAP, abandonment of milk quotas in 2015).

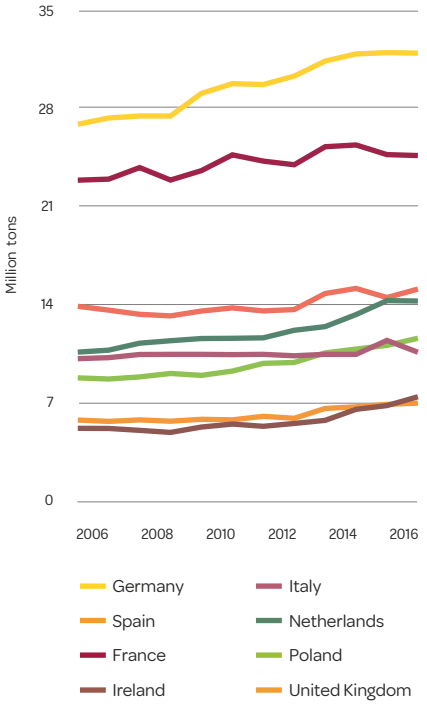
1.1. The case of milk

Over the last ten years, EU milk production has been steadily increasing. It began accelerating from 2014, with the prospect of the end of milk quotas, and it continued to do when these latter finally came to an end. Surpluses relative to domestic needs then increased sharply.

Within the EU, the main milk-producing countries are Germany (21% of EU production), France (16%), the United Kingdom (10%), the Netherlands (9%), Poland (8%), Italy (7%), Ireland (5%), and Spain (5%). The strongest growth in production in recent years has been in Germany, the Netherlands, and Poland.

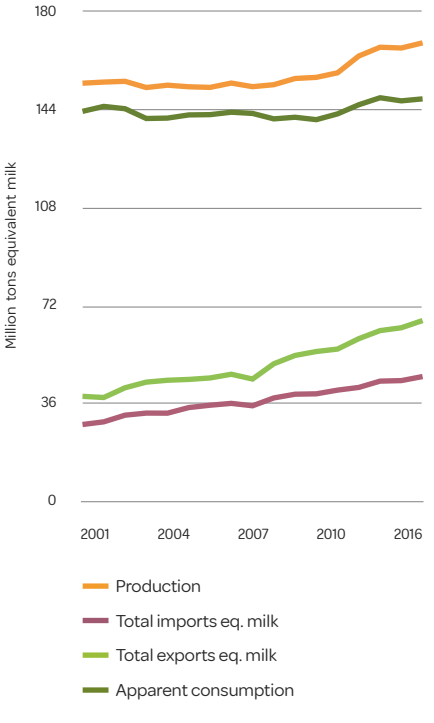
GRAPH 2: COLLECT OF COW'S MILK: MAIN EU-28 COUNTRIES

Source: Eurostat



GRAPH 3: EU-28 MILK BALANCE

Source: Faostat, Trade Map and our calculations



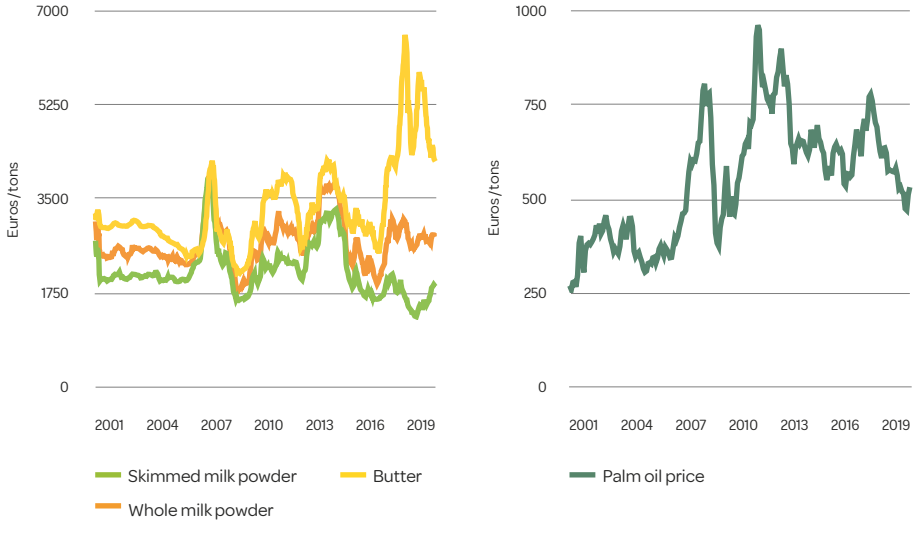
The EU exports different types of dairy products. These mainly include the following:

- firstly, a variety of high-value-added dairy products, particularly cheese, but also butter (which was a relatively untapped product until a few years ago) and infant milk powders;
- secondly, whole or skimmed milk powder, in the form of finished products (packaged powder) or in bulk (intended for processing or repackaging in third countries). However, an increasing proportion of the milk powder exported is in the form of powder resulting from the drying of a blend of skimmed milk and vegetable fat (mainly palm

oil), referred to hereinafter as "powdered blends of skimmed milk and vegetable fat" and which are commonly and improperly called "fat-filled milk powder." This trend is due to the increase in the price of butter (milk fat) on the world market, linked in particular to increased demand in the United States and China, as well as to the low price of palm oil. Over the last three years, the price of butter (4,000 to 6,000 euros per ton) has been on average eight times higher than that of palm oil (500 to 800 euros per ton). The price of powdered blends of skimmed milk and vegetable fat on the world market is thus about one-third lower than the price of whole-milk powder. By substituting animal fat with palm oil and exporting this type of blend, the dairy industry not only benefits from the high price of butter, but also produces very comfortable margins and increases its competitiveness in a certain number of third markets. EU exports of powdered blends of skimmed milk and vegetable fat currently represent nearly half of total exports of powder (milk powder + powdered blends of skimmed milk and vegetable fat).

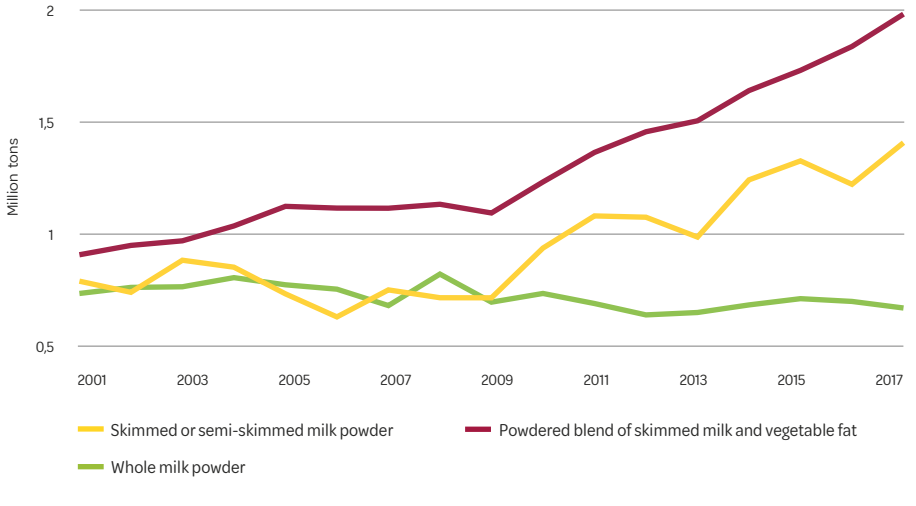
GRAPH 4: PRICES OF BUTTER, SKIMMED MILK POWDER AND WHOLE MILK POWDER (LEFT) AND OF PALM OIL (RIGHT)

Source: European Milk Observatory (left), Index Mundi (right)



GRAPH 5: EU-28 EXPORTS OF MILK POWDER AND POWDERED BLENDS OF SKIMMED MILK AND VEGETABLE FAT

Source: Trade Map



> Most of these exports consist of powder for processing.

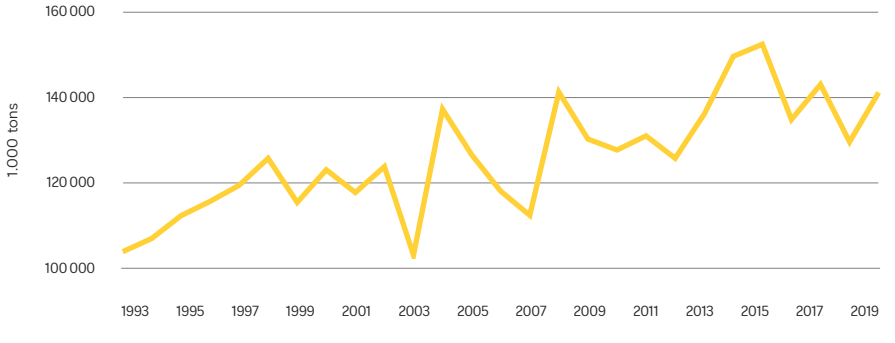
It should be noted that, as with many agricultural markets, the world market for dairy products concerns only a small share of production. In 2016, 14% of world dairy production was exported; the EU was the largest exporter with 41% of world exports.[11]
Within the EU, the main exporting countries of powdered blends of skimmed milk and vegetable fat are Germany (20%), Ireland (16%), the Netherlands (13%), Belgium (11%), and France (10%).[12]
The West African market is a significant market for the EU dairy industry. It was the destination of 6% of total skimmed milk powder exports in 2017, as well as 14% of whole milk powder and 30% of powdered blends of skimmed milk and vegetable fat.[13]
Most of these exports consist of powder for processing (for reconstituted liquid milk or yogurt production) or for repackaging in containers to be sold to consumers. European dairy companies are increasingly investing in the countries of the region, in particular by opening subsidiaries to process imported powder.[14] Imports benefit from a very low level of protection, with customs duty of only 5% for bulk powder (in bags of 25+ kg for whole milk powder and 12.5+ kg for powdered blends of skimmed milk and vegetable fat). This strategy also enables EU companies to access distribution networks through which they can then distribute higher value-added consumer products manufactured in the EU (infant milk, etc.)

1.2. The case of soft wheat

EU production of soft wheat has been growing at a relatively low rate of 1% per year over the past 20 years or so. Both cultivated areas and yields are on a slight increase (+0.34% and +0.7% per year respectively). With regard to yields, the slight increase, after decades of much more considerable growth, shows both the limits of the model based on high productivity and the first effects of climate change.

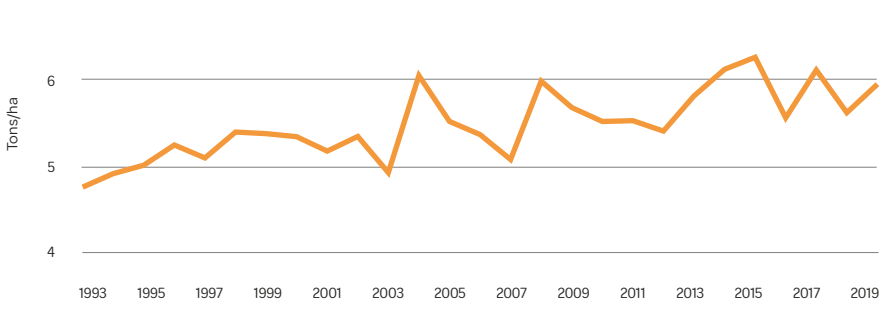
GRAPH 6: SOFT WHEAT PRODUCTION IN THE EU-28

Source: EU Crops Market Observatory



GRAPH 7: SOFT WHEAT YIELDS IN THE EU-28

Source: EU Crops Market Observatory



11. Source: Trade Map and Faostat.

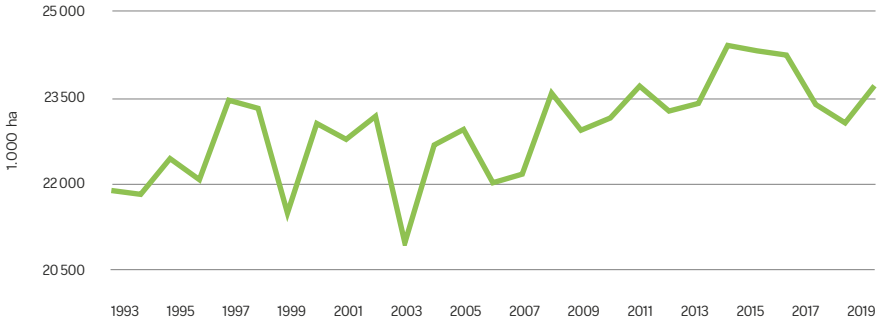
12. *Idem.*

13. According to European Commission figures.

14. Duteurtre, Guillaume and C. Corniaux. *Le commerce de « poudre de lait réengraissée » - Situation et enjeux pour les relations commerciales Europe – Afrique de l'Ouest.* Study produced at the request of SOS Faim and Oxfam, CIRAD Montpellier, October 2018.

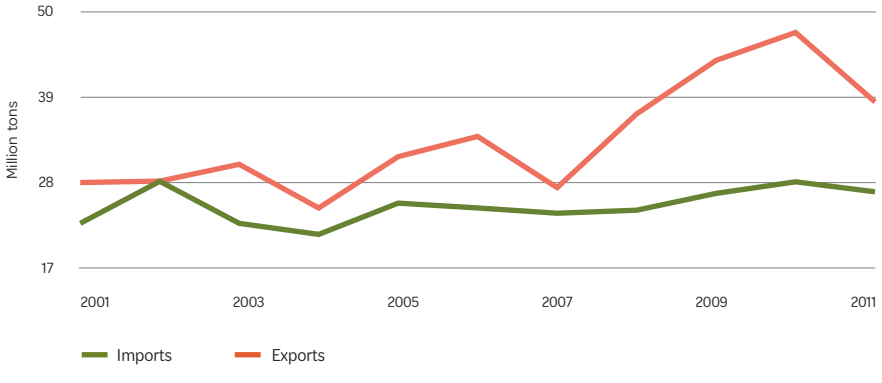
GRAPH 8: CULTIVATED AREA OF SOFT WHEAT IN THE EU-28

Source: EU Crops Market Observatory



GRAPH 9: EU-28 SOFT WHEAT IMPORTS AND EXPORTS

Source: Trade Map



The EU exports some of its production, even though at the same time it imports wheat, in particular feed wheat.

As in the case of milk, the world market for soft wheat concerns only a small share of world production. In this market, the EU is one of the main exporters (28% in 2011[15]), in particular with exports of wheat for making bread.
West Africa represents a secondary market for EU wheat exports (8% of EU exports were intended for West Africa in 2011[16]); however, there is significant growth potential there.

15. According to Trade Map figures.

16. According to European Commission figures.

2. THE EFFECTS IN THE SOUTH: THE CASE OF WEST AFRICA

With the exception of certain specific products intended for export markets (coffee, cocoa, etc.), West African agricultural production is above all intended for the domestic market (self-consumption by farming families; sales on local, national, and regional markets). This is especially the case for the production of cereals and other food products grown to provide food calories (roots, tubers, bananas) and of livestock, which provides both meat and milk. This orientation of agricultural production toward the domestic market is particularly strong in the Sahel and Sahelo-Sudanese areas, where cereals (mainly sorghum, millet, and rice, as well as maize in the Sahel-Sudanese area) and livestock (cattle, sheep, goats, camelids, and poultry) make up the largest share of agricultural production. Grain legumes (beans), fruits, and vegetables also exist there. In the more humid areas of the coastal countries of southern West Africa, raising ruminant livestock is less prevalent, and maize, rice, manioc, various tubers and plantain bananas tend to replace sorghum and millet. All these food crops are therefore essential for supplying food to the region's population. Indeed, local production covered 85% of cereal consumption there during the 2011-2014 period (92% if all cereals and other starchy foods are taken into account in the same period) and 61% of milk and dairy product consumption during the 2013-2017 period. Such production also plays a crucial role in the employment, income, and food security of the peasant and rural population of the subregions concerned. Taking into consideration the value chains of these products, these latter contribute to the economic and social development of the countries of the region as a whole.[17]

In a context of weak protection of the domestic market, there is competition between low-priced imports of milk powder, blends of skimmed milk and vegetable fat in powdered form, and wheat on the one hand and local production on the other. This competition has negative impact on the incomes and development opportunities of the stakeholders of local value chains, especially those of peasant agriculture (farmers and stockbreeders). These imports do of course seem to be needed currently, to supplement regional agricultural production that is insufficient to feed the entire population of the region. However, the supply of low-cost imported products encourages political and economic decision-makers to take the "easy solution" of using them massively and does not incite them to give priority to developing local supply chains.

Beyond the fact that the growth in imports contributes to increasing the rate of food dependency of the countries in the region, it also tends to shift people's eating habits toward types of products not produced locally (bread, powdered milk, etc.), thus curbing future development of a domestic market for peasant-farming production.[18] This change in eating habits can potentially lead to a deterioration in the nutritional quality of the diet.

2.1. Imports of powdered milk and of powdered blends of skimmed milk and vegetable fat

Growth in dairy product consumption in West Africa is mainly due to population growth. At the same time, *per-capita* apparent consumption (25 kg of milk equivalent per year over the 2013-2017 period) has tended to decline slightly since the mid-2000s, after having increased in the early 2000s.[19] Despite a significant increase in regional production, the self-sufficiency rate is down compared to the early 2000s (61% over the 2013-2017 period compared to 68% over the 2001-2004 period; see Graph 10). As the vast majority of milk production is self-consumed by producer families or marketed in rural areas, the self-sufficiency rate is extremely low in urban areas and particularly in large cities, where almost all dairy product consumption is of imported origin.

17. Broutin, Christine; L. Levard, M.-C. Goudiaby. *Quelles politiques commerciales pour la promotion de la filière « lait local » en Afrique de l'Ouest*. Gret, January 2018.

18. Broutin, Christine; L. Levard, M.-C. Goudiaby. *Quelles politiques commerciales pour la promotion de la filière « lait local » en Afrique de l'Ouest*. Gret, January 2018.

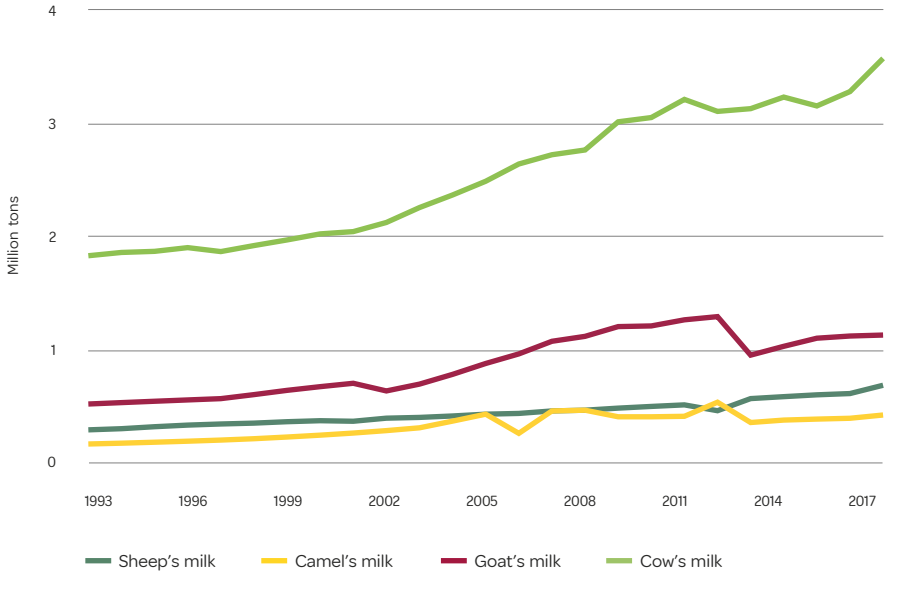
19. Apparent consumption is deducted from production, import, and export volumes. The import peaks in 2006-2007 and 2009 can be explained by an increase in estimated apparent consumption.

GRAPH 10: *PER-CAPITA* APPARENT CONSUMPTION AND SELF-SUFFICIENCY RATE OF DAIRY PRODUCTS IN WEST AFRICA

Source: Faostat, Trade Map and our calculations

GRAPH 11: MILK PRODUCTION IN WEST AFRICA

Source: Faostat



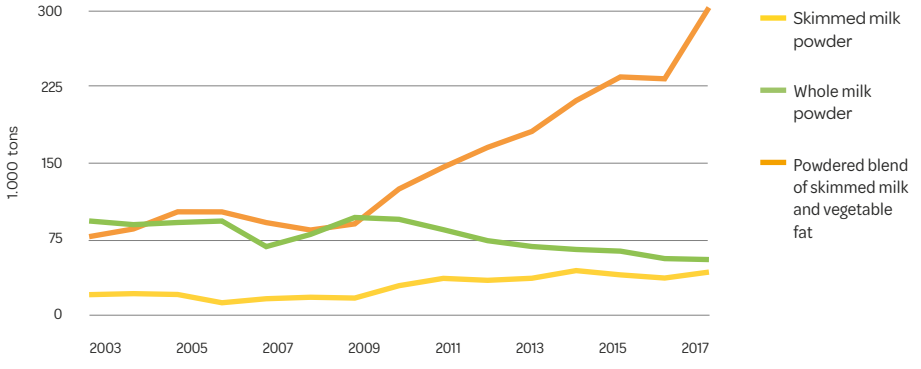
Over the 2014-2017 period, an annual average of 68% of West African imports of milk powder and powdered blends of skimmed milk and vegetable fat originated in the EU. Over the past 15 years, West African imports of powder from the EU have increased significantly. While imports of powdered blends of skimmed milk and vegetable fat soared (+289% between 2003 and 2017), imports of whole milk powder dropped (-41%). At the same time, imports of skimmed milk powder increased by 109%. The rise in imports of powdered blends of skimmed milk and vegetable fat thus partly corresponds to whole milk powder being replaced by this type of blend.[20]

20. According to European Commission figures.

> The competition between imports of milk powder and powdered blends of skimmed milk and vegetable fat on the one hand and local production on the other is to be found mainly in the processing business

GRAPH 12: WEST AFRICAN IMPORTS OF POWDERED BLENDS OF SKIMMED MILK AND VEGETABLE FAT FROM THE EU-28

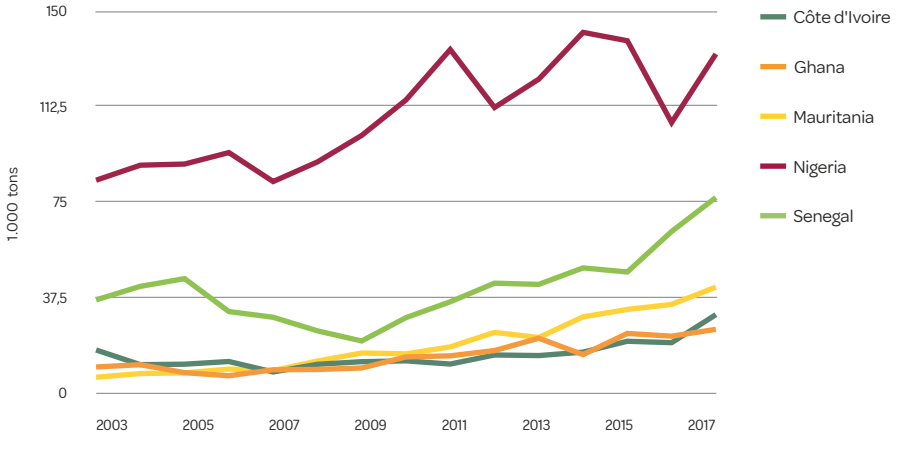
Source: Trade Map



The main importers of these EU-produced powders are Nigeria (33% of imports), Senegal (19%), Mauritania (10%), Côte d'Ivoire (8%) and Ghana (6%).[21]

GRAPH 13: MAIN WEST AFRICAN COUNTRIES IMPORTING POWDERED BLENDS OF SKIMMED MILK AND VEGETABLE FAT FROM THE EU-28

Source: European Commission and our calculations



The competition between imports of milk powder and powdered blends of skimmed milk and vegetable fat on the one hand and local production on the other is to be found mainly in the processing business and to a lesser extent in consumption.

When it comes to dairy product processing, imported milk powder seems more competitive for processors than liquid milk from local production. For example, a recent study carried out in four countries of the region (Burkina Faso, Mali, Niger, Senegal), indicates an average of 300 CFA francs/eq. liters for whole milk powder (0.46 euros), compared to 350 CFA francs/liter for local milk (0.53 euros). The competitiveness differential is even more pronounced for powdered blends of skimmed milk and vegetable fat, which cost only 200 CFA francs/eq. liters (0.30 euros).[22] It is true that the low level of milk production in some areas and its seasonal differences do not incite milk processors to develop value chains based on local milk. But, at the same time, the existence of such competitive differentials between local milk and imported powder does not encourage them to set up a strategy to develop local supply (collection systems, services to livestock farmers, supply of inputs) and thus to promote the development of the local dairy value chain.

21. According to European Commission figures.

22. Levard, Laurent. *Politique commerciale, politiques fiscales et filière lait en Afrique de l'Ouest*. Gret – Campagne Mon lait est local, March 2019.

In terms of consumption, the low cost of imported powder has resulted in an increase in volumes. In urban areas, repackaged whole milk powder, and even more so powdered blends of skimmed milk and vegetable fat, are the cheapest dairy or related products: on average, 550 and 350 CFA francs/eq. liters (0.84 and 0.53 euros) respectively. Liquid milk of local origin is sold on average at 600 CFA francs/liter for raw milk (0.91 euros) and at 825 CFA francs/liter (1.26 euros) for pasteurized milk. It should also be noted that prices of consumer products manufactured locally using imported powder are lower than those of equivalent products manufactured from local milk. For example, a liter of yogurt or curdled milk (highly consumed in the Sahelian zone) made from powdered blends of skimmed milk and vegetable fat is sold at 1,060 CFA francs/liter (1.62 euros), compared to 1,300 CFA francs/liter (1.98 euros) for a liter of yogurt from local milk.[23] While products from the local dairy value chain generally have no difficulty in being sold (their higher price even shows that there is a preference among some consumers for these products) the existence of cheaper products from imported raw materials does not help to boost the local dairy value chain.

The development of local milk production and processing in West Africa faces various constraints, especially weak and seasonal fodder production, inadequate collection and processing networks, and the costs associated with these operations. A low level of regional production can therefore not be attributed just to competition from low-priced imported powders. Nevertheless, because powders exist on the market, processors are not encouraged to develop the local milk value chain or to invest in it, consumers not motivated to give preference to products from the local value chain, and political authorities not incited to give the latter priority in terms of development.

> “It has been shown that West Africa has the potential to produce enough and to meet the demand for local milk. […] Only 2% of local milk production is processed by the dairy industries.”
> “We have very strong population growth, so there is a potential market for industries, which are increasingly setting up in the West African market.”
> [concerning powdered blends of skimmed milk and vegetable fat] “It’s very difficult for our producers to deal with this unfair competition.” […]
> Why isn’t this quality of milk consumed in Europe if it’s so good? This quality of milk is not available in Europe. In Africa, this fattened milk powder is not known as a milk substitute but as whole milk. So the lack of information is very crucial […] We told the European Union that it is not milk, and they agree!”
>
> Hindatou Amadou, Association for the Promotion of Livestock in the Sahel and Savanna (APESS), seminar of April 11, 2019.

23. *Ibid.*

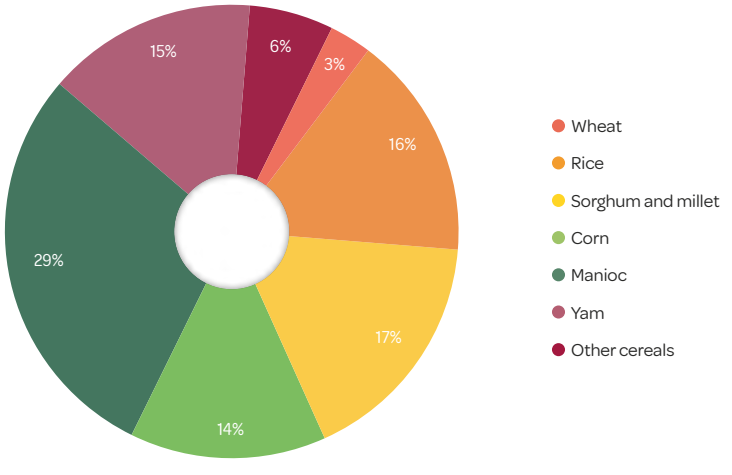
2.2. Soft wheat imports

Historically, growth in wheat consumption in West Africa has been driven both by population growth and by changing eating habits (greater bread consumption at the expense of local cereals and other starchy foods).

Wheat accounts for 6% of cereal consumption in West Africa and 3% of cereals and other starch products as a whole (in wheat equivalents). (See Graph 14.) It should be noted that, while all wheat is imported, West Africa produces three-quarters of the rice it consumes, as well as almost all of the maize, sorghum, millet and various starchy crops (manioc, yams and others).

GRAPH 14: CONSUMPTION OF CEREALS AND STARCHY FOODS EQUIVALENT TO WHEAT IN WEST AFRICA FROM 2010 TO 2014

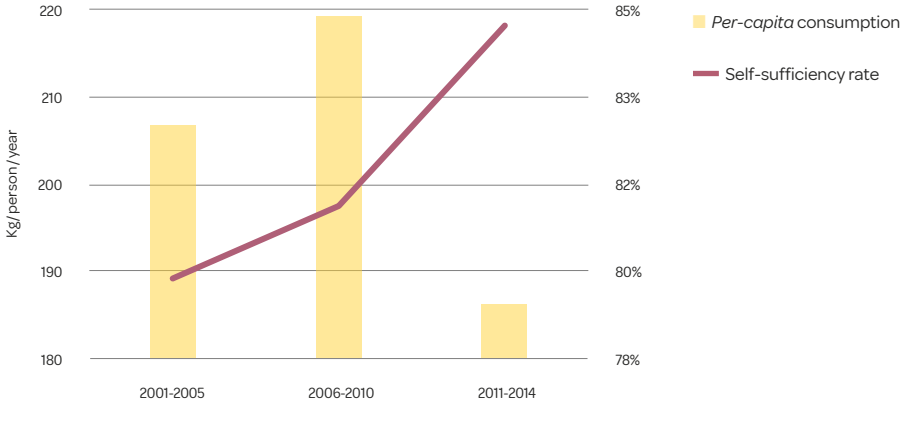
Source: Faostat, Trade Map and our calculations



Per-capita cereal consumption appears to be slightly lower than in the early 2000s, as is the case for cereals and other starch products as a whole. The rate of self-sufficiency in cereals (85% for the 2011-2014 period, see Graph 15) rose slightly compared to the early 2000s, as did the rate of self-sufficiency in cereals and other starch products as a whole (92%, see Graph 16). However, even if we do not have precise statistics on this subject, urban populations have a greater dependence on imports.

GRAPH 15: *PER-CAPITA* APPARENT CONSUMPTION AND CEREALS SELF-SUFFICIENCY RATE IN WEST AFRICA[24]

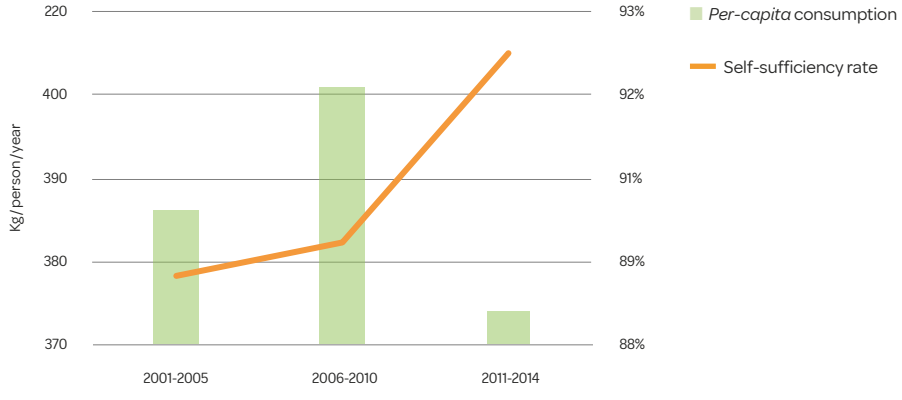
Source: Faostat, Trade Map and our calculations



24. Apparent consumption is deducted from production, import, and export volumes. It is certainly overestimated, given the existence of post-harvest losses throughout value chains.

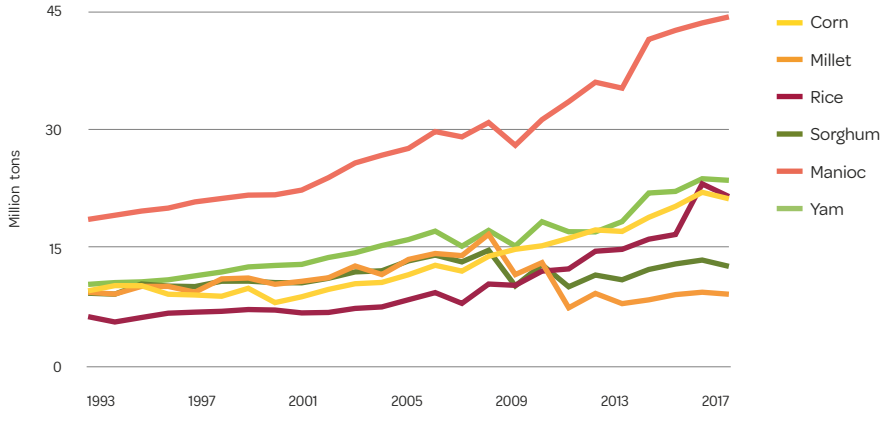
GRAPH 16: *PER-CAPITA* APPARENT CONSUMPTION AND SELF-SUFFICIENCY RATE OF CEREALS AND STARCH PRODUCTS IN WEST AFRICA[25]

Source: Faostat, Trade Map and our calculations



GRAPH 17: PRODUCTION OF MAIN CEREALS AND STARCHY PRODUCTS (IN WHEAT EQUIVALENT)

Source: Faostat

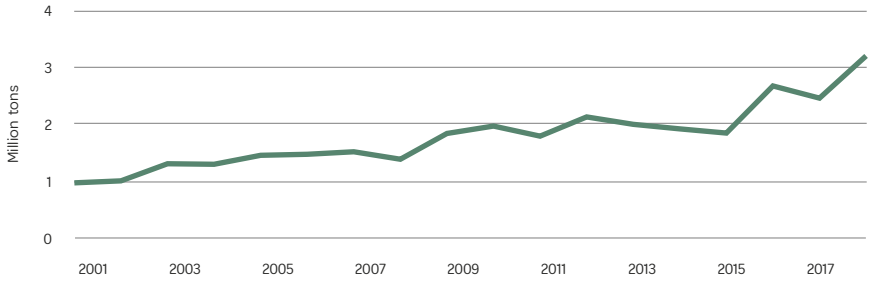


In recent decades, the West African market has been mostly open to wheat imports (and continues to be so, with customs duty of only 5%). This situation is leading to increased consumption due to changing dietary habits and population growth.

Soft wheat imported by West Africa comes mainly from the United States (an average of 41% of imports in value terms over the 2010-2014 period) and the European Union (20%).

GRAPH 18: WEST AFRICAN IMPORTS OF SOFT WHEAT AND DURUM WHEAT (NIGERIA, LIBERIA AND SIERRA LEONE EXCLUDED)

Source: Trade Map



25. *Idem.*

> Consumption of bread is a substitute for consumption of a set of products [...] whose main nutritional function is [...] to supply food calories.

Wheat is chiefly processed into flour for bread making. Its consumption is now strongly rooted in the eating habits of some of the population, particularly urban consumers. As West Africa does not produce wheat, there is no direct competition with similar local production. However, consumption of bread is a substitute for consumption of a set of products (cereals, manioc, tubers, plantain bananas), whose main nutritional function is the same, i.e. to supply food calories. It should also be noted that the overall nutritional quality (protein, mineral and fiber intake) of white bread is lower than that of many local products. The consumption of white bread is also a factor in weakening local culture.

Competition between imports and products made from regional agriculture

Competition between imports and products from regional agriculture is mainly in terms of consumption. Price competitiveness is a particularly strong factor of choice for the poorest social groups; it is less important among the more affluent categories, for whom acquired food habits are more important. In a recent study in Côte d'Ivoire, the competition between bread and manioc in Abidjan, the country's largest city, was highlighted, with bread and manioc couscous (*attiéké*) both being consumed for breakfast.[26] Bread is on average 25% less expensive than *attiéké* per kilogram: 750 CFA francs/kg (1.14 euros), compared to 1,000 CFA francs/kg (1.52 euros). But when calculating the cost per food calorie unit, bread is almost twice as expensive as *attiéké*: 0.29 CFA francs/Kcal compared to 0.54 CFA francs/Kcal.[27]

Competition between imports and products from regional agriculture can also be seen in terms of food processing. It is indeed possible to use a certain quantity (up to 20%) of flour from local products (maize, sorghum, manioc, etc.) for bread making. For cookie production, it is also possible to use flour from local value chains exclusively. Various programs and projects have supported or are aiding economic stakeholders in the region to substitute wheat flour with flour from these value chains. The West African Agricultural Productivity Program (WAAPP), promoted by ECOWAS, can be mentioned in particular.[28] As part of this regional program, a Côte d'Ivoire national program seeks, for example, to test the incorporation of manioc flour into bread.[29] In Senegal, the Federation of Non-Governmental Organizations of Senegal (FONGS) and the association SOL – Alternatives Agroécologiques et Solidaires are promoting the use of local cereal meal (maize and millet) in the manufacture of bread and cookies.[30] Considering the various constraints in the incorporation of these flours on a larger scale (technological constraints, consumption habits), the low cost of wheat flour does not prompt the use of local flours. In Côte d'Ivoire, the price of wheat flour is at the same level as that of manioc flour (320 CFA francs/kg, or 0.49 euros).

It can also be mentioned that, in addition to bread, various processed products that are imported or locally manufactured contain cereals imported from the EU (semolina, pasta, flour, food supplements for children, etc.). These products may compete directly with similar products made with cereals or other local products (semolina from local cereals, food supplements for children, etc.).

As with milk, the development of the production and processing of cereals, roots, tubers and plantains in West Africa faces various constraints (including climate conditions and the soil fertility crisis). The fact that regional production is inadequate to achieve complete self-sufficiency therefore cannot be attributed to competition from bread and flour and other products derived from imported wheat. However, the existence of this low-cost supply option does not prompt the poorest consumers, the bakeries, or the food industries to give greater priority to products from local agriculture. Nor does it incite politicians to give it greater priority for development.

26. Levard, Laurent and D. Lagandre. *Cohérence des politiques commerciales et de développement – le cas de l'APE Afrique de l'Ouest*. Gret, October 2017.

27. The energy content of bread is 255 Kcal/100g and that of *attiéké* 185 Kcal/100g.

28. www.waapp-ppaao.org/fr

29. Levard, Laurent and D. Lagandre. *Cohérence des politiques commerciales et de développement – le cas de l'APE Afrique de l'Ouest*. Gret, October 2017

30. www.sol-asso.fr/senegal-valoriser-les-cereales-locales-phase-2-2015-2018/#

2.3. Outlook

The issue of competition with imports must above all be addressed with regard to future trends. Indeed, the coming years and decades will be marked by strong population growth in the region. The UN forecasts that the population of West Africa will increase sharply between 2015 and 2050 (up to +130% according to projections). The increase in food needs will be of the same order, especially in cities that are expanding rapidly. The ability of the region's agricultural production to meet this growth in demand will be a crucial element for its food independence (and therefore for reduced vulnerability to an unstable world market). The question that arises is thus the extent to which West African agricultural and food production will be able to meet these needs.

Increasing agriculture production and enhancing it in the related value chains likewise represent crucial factors for the economic and social development of peasant-farmer populations, and especially for the strengthening of their capacity to make the investments required for the agro-ecological transition (integration of livestock and agriculture in farming systems, rehedging, reforesting, etc.), within a context of strong soil degradation. Without a proactive policy, the high levels of self-sufficiency achieved for cereals and starch products could decline. Further, while increase in agricultural production has been based above all on growth in the surface area of cultivated land, this growth has limits. Increased dependence on a highly volatile global market would increase risks to regional food security.

It is against this backdrop that competition from low-cost imports, particularly from the EU, may be an obstacle not only to the development of regional agricultural and food production, but also to the economic and social development of the region, although this development will also depend on other internal factors. This obstacle is all the more significant because the increase in imports is generating new eating habits (consumption of wheat, milk powder, etc.) that are detrimental to local production, especially among younger generations.

3. THE CAP IN QUESTION

When gradually aligning domestic agricultural prices to world prices, the EU has been able to reduce export subsidies at the same time. Such subsidies are now used only exceptionally. At the same time, financial support for farmers and direct payments per hectare have been introduced to support agricultural income. For the 2014-2020 period, direct payments represent 72% of the CAP budget. Approximately 90% of direct payments are now decoupled, i.e. they do not depend either on the productive activity implemented or on the production volume per hectare.[31] As they are not linked to the types of production or volumes produced, decoupled direct payments are supposed to not create market distortions, i.e. to not promote an artificial increase in production or influence market prices. It is for this reason that the EU obtained their classification in the green box of agricultural support, i.e. the box of "non-distortive" support, within the framework of World Trade Organization (WTO) negotiations.

But, in reality, direct payments account for a significant share of the income of EU farmers, particularly in the livestock[32] and cereals sector. Without these payments, many farmers would not be able to continue to produce. More generally, for obtaining a certain level of agricultural income, the existence of direct payments makes it possible to pay farmers at a lower price than the price they should be paid to reach the same level of income in the case of no direct payments. In highly competitive markets, and given the balance of power within value chains in which prices are set downstream and not by farmers, the existence of direct payments has an impact on market prices, but without farmers coming out a winner.[33] The existence of direct payments, even if decoupled, thus makes it possible to increase the competitiveness of EU products sold on the world market. It therefore contributes to heightening competition from imports from Europe in the markets of the South. This is particularly the case for imports of milk powder, powdered blends of skimmed milk and vegetable fat, and wheat on the West African markets. In the case of milk production, cereals produced in the EU and purchased by dairy farmers have been produced on farms benefiting from direct payments, representing a factor behind marketing at lower prices, lower production costs for livestock, and lower milk prices.

In a memo in October 2018, the agricultural economist Jacques Berthelot pointed out the legal fragility of the EU's claim that decoupled aid does not have an effect on markets.[34] In the same memo, it calculates a "dumping rate" on exports by dividing the amount of indirect subsidies (direct payments for production as well as for livestock feed production in the case of livestock) for the production of a product unit by the export price of the same product unit (2016 figures). This calculation, detailed in two other memos,[35] leads to the following results:

- for milk products, an average dumping rate of 20.8% for EU products exported to West Africa, i.e. 67 euros per ton equivalent of milk (0.067 euros per eq. liter), a quarter of which (0.017 euros per eq. liter) is linked to subsidies paid for dairy cow feed;
- for unprocessed EU-produced cereals exported to West Africa, a dumping rate of 34.7%, i.e. 60 euros per ton.

Based on these calculations and taking into account the costs of freight, insurance, unloading, transport and processing (in the case of flour and bread) of the products up to the processing units as well as customs duties,[36] it appears that the following would occur if there were to be no dumping in the above-mentioned cases:

- On average, local West African milk would regain competitiveness relative to whole milk powder imported from the EU for processors (i.e. 350 CFA francs per liter for both raw materials, instead of 300 CFA francs per liter today for imported milk powder). The competitive advantage of powdered blends of skimmed milk and vegetable

31. Platform for another CAP, Heinrich Böll-Stiftung. *Atlas de la PAC – Chiffres et enjeux de la Politique Agricole Commune*, 2019.

32. BAL (Büro für Agrarsoziologie und Landwirtschaft). *Combien coûte la production de lait ? – Calcul des coûts de production du lait sur la base du Réseau d'information comptable agricole de l'UE (RICA)*. Study produced for the European Milk Board (EMB), 2019.

33. This situation is contrary to the ideology promoted by many international bodies, in particular the WTO and the OECD, which consider that decoupling allows aid to acquire a "non-distortive" character on the markets. A study on the impact of the CAP on developing countries was carried out recently for the European Parliament's Development Committee. It acknowledges that decoupled support does have an indirect effect on the competitiveness of EU farmers on world markets (see Blanco, Maria. *The impact of the Common Agricultural Policy on developing countries*. Report produced for the European Parliament Development Committee, February 2018, p. 17).

34. Berthelot, Jacques. *Toutes les subventions agricoles de l'UE à ses exportations ont un effet de dumping*. Association SOL, October 2018.

35. Berthelot, Jacques. *The subsidies to the EU exports of cereal products to West Africa in 2015 and 2016*. Association SOL, March 2017, and Berthelot, Jacques. *L'énorme dumping des produits laitiers extra-UE et vers les APE d'AO, SADC, CEMAC et EAC en 2016*. April 2017.

36. In view of these additional cost elements to obtain the costs for processors or consumers (about +16% of the FOB price for milk powder and powdered blends of skimmed milk and vegetable fat to obtain the price at processing; +44% for the price of flour; +410% for the price of bread), the dumping rate of powder (milk or blend of milk–vegetable fat) sold to the processor is reduced to 17%, that of flour sold to bakeries to 1% and that of bread sold to consumers to 7%.

fat would be reduced, but would remain significant (cost of 235 CFA francs per liter instead of 200 CFA francs per liter currently).
- It would make Ivorian manioc flour more competitive than wheat flour (320 CFA francs per kg compared to 380 CFA francs per kg respectively, in Abidjan) and would slightly lower the competitive advantage of bread (800 CFA francs per kg instead of 750 CFA francs per kg) compared to *attiéké* (whose price is 1,000 CFA francs per kg).

The responsibility of the CAP and of EU trade policy for dumping on world markets actually ensues from a combination of three mechanisms:
- The existence of financial support for agriculture under the CAP.
- Policy choices contributing to surplus production:
  – In the dairy sector, these especially include choices concerning (a) the allocation of CAP aid (area aid for silage maize and grain cereal, which, because of historical references, are higher than aid for grassland areas; no ceiling on aid); (b) environmental rules and rules on the size of livestock farms that do not prevent the development of factory farms;[37] and (c) trade policy that authorizes imports of soy at low prices without customs duties.
  – In the cereals sector, the weakness of environmental rules on aid allocation and, more generally, of all environmental rules on the use of synthetic fertilizers and pesticides do not prompt the transition to systems that are less productive in terms of yields but that have higher added value. As the association Générations Futures points out, "*since the creation [of the NODU indicator (number of unit doses)] in 2009 as part of the Ecophyto plan, the consumption of plant protection products has tended to increase in France. Between 2014 and 2016, there was an increase of nearly 12%! And the situation is much worse in other countries, especially Spain and Portugal, which have greatly increased their absolute consumption of pesticides, at the same time opting for products whose active substances are more and more concentrated.*"[38] As for nitrogen fertilizers, there is no end to their use in France, where the doses used per unit area have increased sharply (+56% in 45 years, +1.2% between 2012-2013 and 2017-2018).[39]
- The absence of:
  – Either production-regulation mechanisms that would help limit excess production beyond domestic needs and export needs for high value-added products. What's more, existing production-control management mechanisms (e.g. compulsory fallow, milk quotas) have been dismantled, thereby encouraging the production of additional surpluses. In the case of milk, EU surpluses have strong potential to destabilize the West African market, in a context in which these surpluses represent more than three times the total milk production of West Africa.[40]
  – Or an export tax mechanism that would help compensate for the financial support received by farmers.

In the field of trade policies, the following aspects are also responsible for dumping on world markets:
- The European Commission's encouraging manufacturers, in particular within the framework of the European Milk Market Observatory, to export the milk substitute (i.e. powdered blends of skimmed milk and vegetable fat) to third countries, as it is cheaper than whole milk powder.[41]
- EU pressure on Southern countries to open their agricultural markets, in particular through Economic Partnership Agreements (EPAs). For example, the regional EPA with West Africa and the so-called interim EPAs with Côte d'Ivoire and Ghana provide for the liberalization of imports from Europe of bulk milk powder, bulk powdered blends of skimmed milk and vegetable fat, and wheat, even though the customs duties applied to these products were already very low. Furthermore, the EU formally opposed the request of the countries of the region to apply anti-dumping duties to EU imports that would have offset the dumping effect tied to support from the CAP.
- The authorization of the import and use of palm oil, a product responsible for massive deforestation in South-East Asia and which, when mixed with skimmed milk, makes it possible to produce a substitute for milk powder at a much more competitive price.

37. There is no consensus in the definition of a "factory farm." Factory farms are basically big farms producing on a large scale, largely based on the use of specialized salaried labor and the automation of a great number of tasks, particularly in livestock farming. This system pushes dependence on external inputs to the extreme and is characterized by poor integration into ecosystems. They are designed to produce uniform products at the lowest possible cost and in line with the logic of profit maximization. In livestock farming, this logic translates into off-land systems in which animals are confined in small spaces. In the case of crop production, the emblematic example is the huge greenhouse holding that grows vegetable crops in what are practically "soil-less" conditions.

38. Générations Futures. *Pesticides, qui sont les plus gros consommateurs en Europe ?*. February 2019.

39. Unifa. *Les livraisons d'engrais minéraux en France métropolitaine – campagne 2017-2018*, 2018.

40. based on Trade Map and Faostat figures.

41. As attested to by Philippe Collin.

Hence, when combined with other types of policies, particularly in the field of trade, the CAP has a responsibility in the dumping on the markets of the South, and this dumping has immediate and negative structural consequences for the development of peasant agriculture and the processing and distribution of local products.

4. RECOMMANDATIONS

To ensure that surpluses do not weigh on the situation of the EU internal market, **mechanisms for market management and production control** should be provided for under the CAP where necessary. This problem arises in particular for milk production, for which voluntary or mandatory reduction measures could be set up depending on the level of market prices. In addition, **reorienting the CAP toward support for the agro-ecological transition** of agriculture would contribute *de facto* to limiting surpluses, as yields are on average lower in agro-ecological systems[42] (although this does not mean that the objective of the agro-ecological transition is to limit production).

ADDITIONAL MEASURES

In addition to the measures concerning the CAP, the following are recommended:

- Set up an **export tax equivalent to the amount of subsidies received** by farmers, reduced to each product unit. This would put an end to dumping on world markets without excluding the possibilities for the EU to export its agricultural products to those markets. In the context of solidarity-based cooperation relations with the Southern countries, the revenue from this tax could be transferred to the importing countries for programs to support the development of their agriculture and their value chains.
- **Put the EPAs into question** and instead propose support to countries and regions wishing to **protect and support local value chains**. The figures shown above indicate that, given the differences in competitiveness and the fact that not all imports come from the EU, the mere end of European dumping of agricultural exports would not by itself solve the problem of competition from agricultural imports on local markets.
- **Put an end to palm oil imports** and therefore their use in the preparation of dairy product substitutes.
- **Enlarge the functions of the EU milk, meat and crops market observatories**, in order to provide, more thorough, detailed, and transparent information on trade and export prices to developing countries (in particular for powdered blends of skimmed milk and vegetable fat, soft wheat and poultry), production costs and subsidies received by Member State, the composition of exported products, and the labeling of the country of origin. This would facilitate public access to reliable information.

42. See for example Levard, Laurent and F. Apollin. *Agroecology: A Response to the Agricultural and Food Challenges of the 21st Century*. Report by the C2A of Coordination SUD, January 2013.

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2.

IMPORTS OF SOY FOR ANIMAL FEED

1. THE FACTS: EU IMPORTS OF SOY FOR ANIMAL FEED

1.1. Soy imports

Each year, the EU imports nearly 40 million tons of soy (in soy meal equivalent), in the form of both soybeans and soy meal.[43] These imports, intended for animal feed, chiefly provide a protein supplement to feed intake.

VEGETABLE PROTEIN SOURCES IN ANIMAL FEED

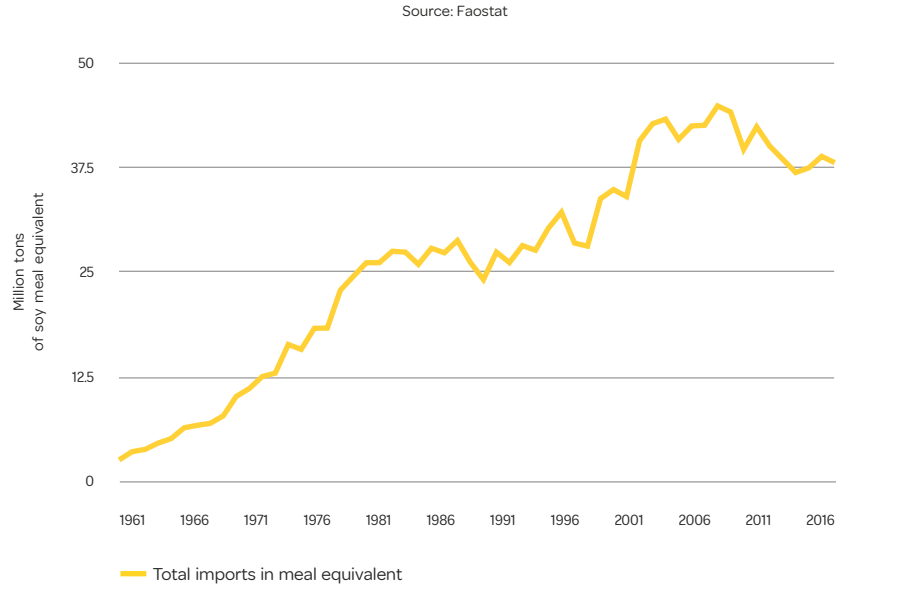
Vegetable protein supply comes mainly from three sources:

- Coarse fodder known as "roughage" (containing a high cellulose content) from grassland: fresh fodder (pasture, grass clippings) or dried fodder (hay). Protein supply depends on grassland characteristics, such as the proportion of legumes, which have the ability to synthesize protein from the nitrogen supply in the atmosphere, or the grassland stage: young grassland, before flowering, is richer in protein. Roughage also provides cellulose (fiber), which is essential for ruminant digestion.
- Concentrated feeds:
  – cereal seeds (low cellulose, high nutritional value in relation to the volume of feed), whose primary function is to provide energy, but which also provide a by no means insignificant proportion of protein. This category can include types of concentrated feeds (in particular by-products from the agri-food industry such as brewery draff), which provide mainly energy but can also provide proteins.
  – high-protein feeds (HPF), whose main function is to provide protein (but that also contribute to caloric intake): mainly oilseed and oilseed meal, as well as other products such as dehydrated legume fodder (especially alfalfa); protein crops, which are also legumes (peas, faba beans, lupins); corn gluten feed (a by-product of industrial maize processing); and fish meal.
- Industrial amino acids that can be added as a supplement to cereals, as well as urea, which provides nitrogen directly.

It should be noted that maize silage plays a special role. It is not a concentrated feed strictly speaking, but a fodder. It is very rich in energy and cellulose and as such is a mainstay of the diet at intensive cattle farms that use little or no grass. Furthermore, its protein intake is relatively low. This is the reason why its use in great quantities "calls for" the use of soy.
Soy, with its much higher protein content than peas or faba beans, is one of the only foods that provides a balanced feed intake rich in maize (grain maize and, for ruminants, silage maize).
In addition, some of the concentrated animal feed is used as manufactured compound feed, whereas the rest is either produced on the farm or purchased by farmers in the form of unmixed products. Taking into account only the HPF (whether or not in the form of compound feed) consumed in the EU, 92% comes from meal and oilseeds, of which 61% soy, 20% rapeseed, and 9% sunflower.

43. Soybeans are processed by pressing into soy meal (78% protein component) and oil.

GRAPH 19: EU SOY IMPORTS IN SOY MEAL EQUIVALENT TONS



Between the 1960s and the late 2000s, EU soy imports increased thirteenfold (see Graph 19).

Several factors can explain the growth in soy imports:

- Firstly, livestock activities in Europe have grown. This growth is due to increase in the consumption of animal products by the EU population and, to a lesser extent, to exports of animal products. From among the animal value chains, the development of pig and poultry production, which has been greater than for cattle production, has significantly contributed to the increase in the consumption of concentrated feed, particularly HPF and therefore to the increase in soy imports.
- Secondly, livestock production has intensified. The importance of concentrated feed (cereals, meal, etc.) in animal feed has grown to the detriment of fresh roughage (grassland pastures) or dried roughage (hay and straw). In the case of cattle farming, for example, we have seen the development of feeding models based mainly on the consumption of silage maize (providing the bulk of the animals' energy intake) and soy meal (providing most of the protein needs). Being able to import soy at low cost has thus strengthened the intensification process. It has also heightened the specialization of some regions located near import ports (and within these regions, the farms themselves) in intensive livestock farming, notably the Netherlands, Denmark, Brittany, and Catalonia.
- Finally, another factor is the lack of development of EU HPF production to meet the increased demand in the livestock sector. This shortage is largely due to livestock producers being able to obtain a supply of low-cost soy on the world market, due to the absence of customs duties. Thus, EU production of vegetable proteins has never been able to take off, on the one hand because the market price of soy determines the price of feed protein, and on the other because of the conditions of productivity and low support (or lack of support) for such production.

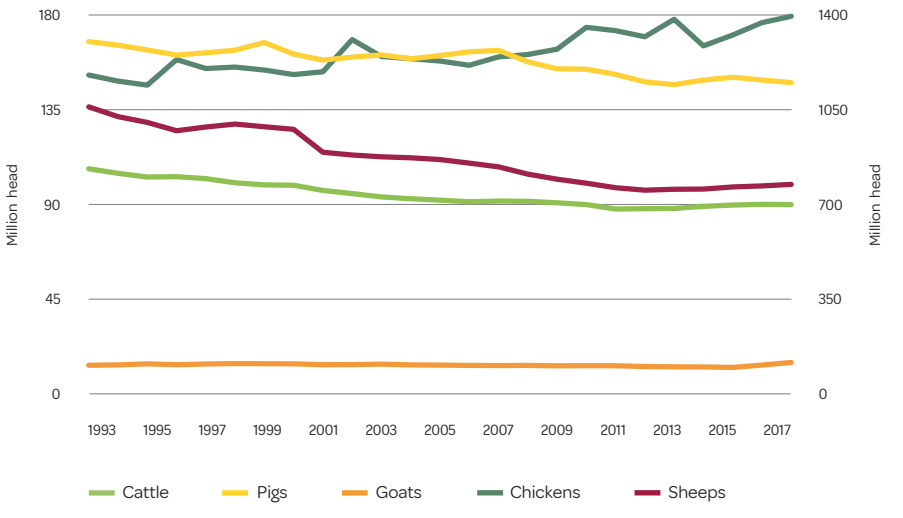
After peaking in 2007, EU soy imports have since then tended to decline (38 million tons in soy meal equivalent in 2016, or -15% compared to the 44.8 million tons in 2007 – see Graph 19). This trend is mainly due to the following:

- Stabilization in EU consumption of HPF, itself linked to a slower increase in livestock farming activity. This can be explained by the downward trend in meat consumption, which has fallen by 12% over the past 10 years.[44] This decline is due to a change in food habits.

44. Tavoularis, Gabriel and E. Sauvage. *Les nouvelles générations transforment la génération de viande*, 2018.

GRAPH 20: LIVESTOCK POPULATION TRENDS IN THE EU-28

Source: Faostat

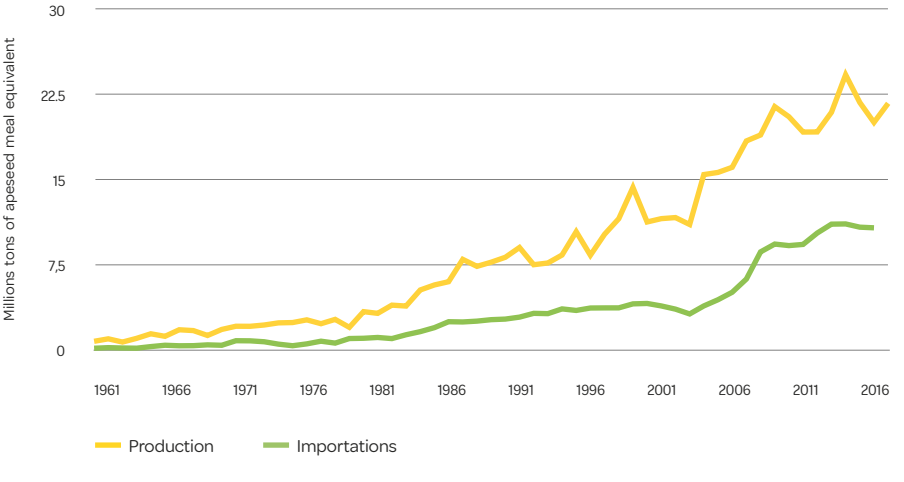


It should be noted that the numbers of cattle, goats, sheep and pigs have been declining since the early 1990s, while the number of poultry has increased. Beef, goat and sheep meat production fell by 14%, 20%, and 29% respectively between 1996 and 2017. However, white meat production increased by 12% for pigmeat and 34% for poultry.[45]

- An increase in the consumption of rapeseed meal, which has partly replaced soy meal. The increase in rapeseed meal consumption is mainly due to increased EU rapeseed production, but also to a rise in imports. In fact, these imports have risen sharply since the early 2000s. The main countries of origin are Australia (42% of imports in 2017), Ukraine (34%), and Canada (16%).[46]

GRAPH 21: RAPESEED IMPORT AND PRODUCTION IN THE EU-28, IN RAPESEED MEAL EQUIVALENT

Source: Faostat



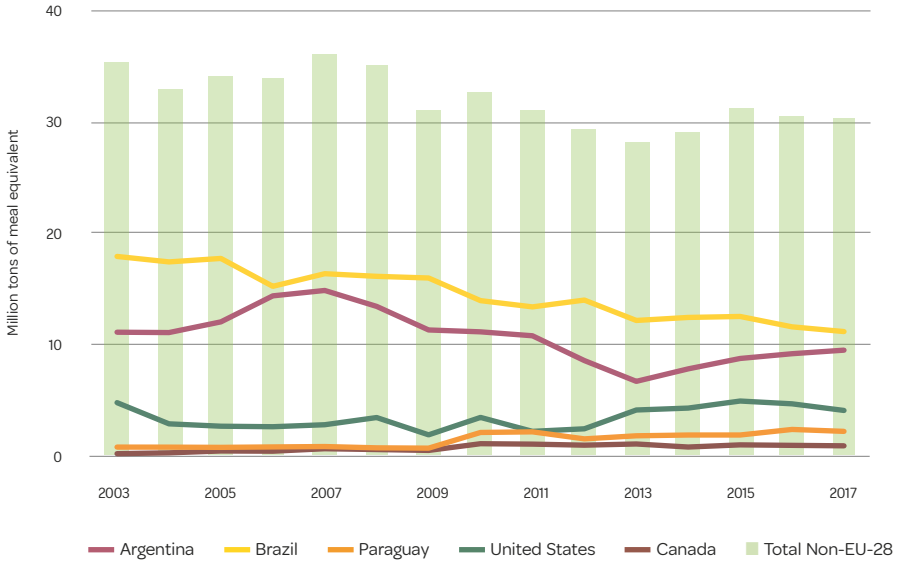
Today, soy imports continue to make up the majority of imported vegetable proteins. They come mainly from South American countries: Brazil (37% of imports in 2017), Argentina (31%), Paraguay (7%), and Uruguay (1%). Imports from the United States, which dominated in the 1960s, now account for only 14% of imports (see Graph 22).

45. According to FAO data.

46. According to European Commission figures.

GRAPH 22: EU-28 SOY IMPORTS (IN SOY MEAL EQUIVALENT TONS)[47]

Source: European Commission



The EU's protein independence rate for animal feed can be calculated in three ways:

- First, by taking into account only HPF. In this case, the independence rate is very low (36%), mainly due to soy imports.
- Secondly, by taking into account all concentrated feeds, including cereals. Here, independence rate is much higher (66%), with cereals providing a significant proportion of protein and being grown in the EU.
- Thirdly, by taking into account all fodder, i.e. including roughage, which comes exclusively from the EU. In this way, the independence rate climbs to 84%.

TABLE 1: USE OF PROTEIN FOR ANIMAL FEED IN THE EU-28 (MAIN PROTEIN SOURCES, MILLIONS OF TONS) AND PROTEIN INDEPENDENCE RATES[48]

	Production	Net imports
Roughage	39.2	0
Cereals	15.6	-0.6
Oilseeds	6.2	12.4
Protein crops	0.9	0.1
Total	61.9	11.9
Total animal feed use	73.7	
Concentrated feed use (cereals, oilseeds, protein crops)	34.3	
HPF use for animal feed (oilseeds, protein crops)	19.5	
EU independence rate for total animal feed proteins	84% (61.9 / 73.7)	
EU independence rate for concentrated feed	66% (22.7 / 34.3)	
EU independence rate for HPF	36% (7.1 / 19.5)	

47. Here, we do not take into account the upheavals in global flows that have occurred in the past year due to the trade war between the US and China. In any event, the fact that Brazilian soy is replacing US soy in Chinese imports and that, at the same time, US soy is replacing Brazilian soy in EU imports, does not change either the role or the global responsibility of the EU in global imports of soy.

48. Based on data from Dronne Yves, "Les matières premières agricoles pour l'alimentation humaine et animale : l'UE et la France". La revue *INRA Productions animales*, 2018-3; FAOSTAT data; data from Poux Xavier and P.-M. Aubert. *Une Europe agroécologique en 2050 : une agriculture multifonctionnelle pour une alimentation saine – Enseignements d'une modélisation du système alimentaire européen.* Iddri-AScA, 2018; and our calculations. We have considered only the main types of fodder (roughage, cereals, oilseeds, protein crops). Taking into account other types of feed (brewery draff, beet pulp, fish meal, etc.) would change the results only marginally. pulpes de betterave, farines de poisson etc.) ne changerait les résultats qu'à la marge.

1.2. Imports from South America

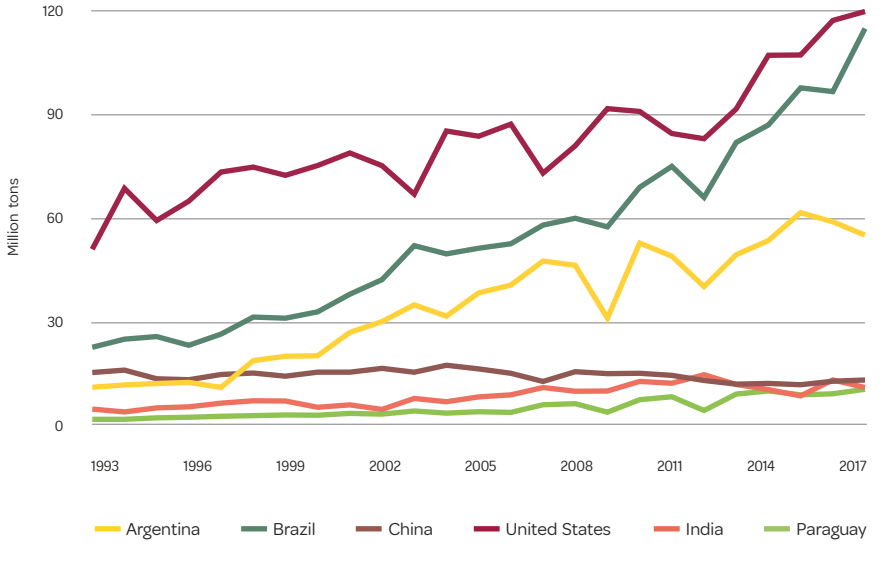
Until the 1980s, most of the soy imported into Europe came from the United States. Since then, it has mainly been imports from South America, particularly Brazil and Argentina, that have developed. Latin American imports have thus partially replaced imports from the United States.

The international soy market

Brazil, the United States, and Argentina dominate world soy production (82% of world production in 2017, see Graph 23). Over the last twenty years, it is in the countries of South America that production has increased the most. Brazil, the United States, and Argentina are also the main soy exporting countries (See Graph 24).

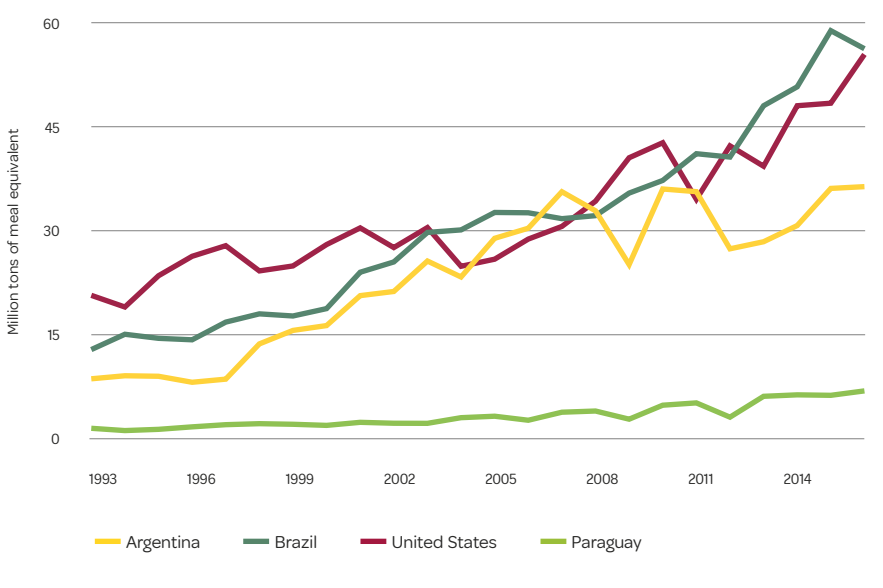
GRAPH 23: TOP SIX SOY PRODUCERS GLOBALLY

Source: Faostat



GRAPH 24: MAIN SOY EXPORTERS GLOBALLY

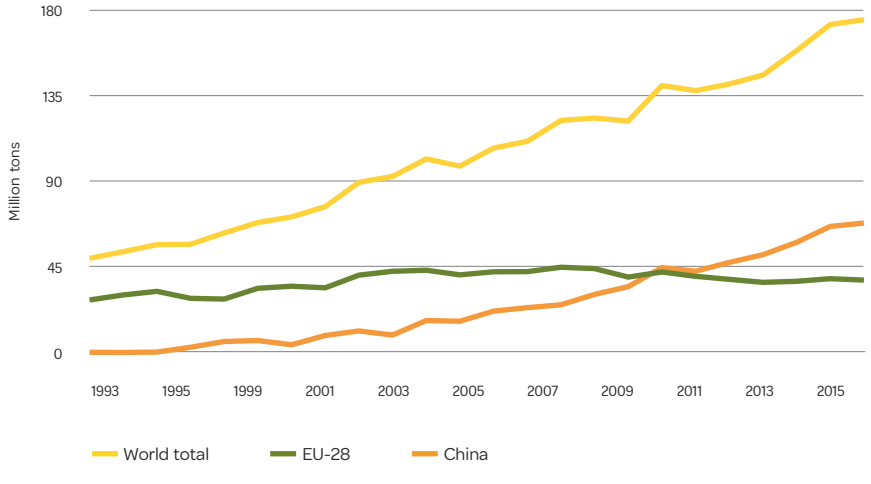
Source: Faostat



The growth in soy production has been spurred on by the rise in demand for soy meal for animal feed and, to a lesser extent, for oils (food and non-food uses). Growth in the demand for meal over the past five decades has been observed in the various regions of the world, with the EU, the United States, and China dominating. With the United States having surplus production, the EU and China are the main importers of soy on the world market and have increased their import volumes the most. Over the last decade, however, EU imports have declined, and most of the increase in world trade is due to the growth in imports by China (currently 39% of world imports) and by other emerging countries, such as Indonesia, Thailand, Vietnam, and Mexico (these four countries representing 12% of world imports).[49]

GRAPH 25: MAIN SOY IMPORTERS GLOBALLY

Source: Faostat



The EU's increasing dependence on soy imports has thus contributed significantly to the development of soy cultivation in South America in recent decades. Continued massive imports of soy from this region are helping to expand and strengthen the "soy model."

49. According to FAO data.

2. THE EFFECTS IN THE SOUTH[50]

> Soy cultivation is one of the main drivers of agro-industry and export growth in these countries.

Soy cultivation has developed with meteoric speed in recent decades in Brazil, Argentina, Paraguay, and—more recently—in Uruguay. It is one of the main drivers of agro-industry and export growth in these countries. This growth has been boosted by increased demand for soy meal for intensive (or industrial) livestock production in the global market as well as in the domestic market. Since the 2000s, the number of head of livestock has increased in the Southern Cone (+10% in Argentina between 2000 and 2017, +27% in Brazil, and +42% in Paraguay).[51] An increasing proportion of the oil from soy is also used for the production of agrofuels.

Over the past ten years, the cultivated area for soy in Brazil has continued to grow at a rapid pace. Growth remains strong in Paraguay, while the cultivated area is tending to stabilize in Argentina after a strong increase in the 1990s and 2000s. In Uruguay, while the presence of soy was previously relatively marginal, its cultivation has been expanding over the past 10 years or so.

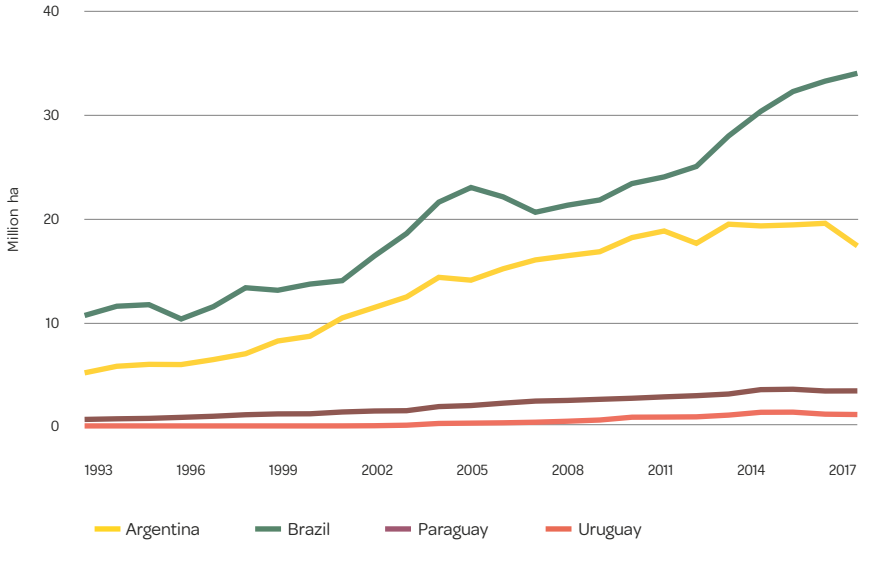
Soy has been grown on a large scale for some 40 years in Brazil. It first appeared in the southern regions, before spreading further north to the *cerrados* (wooded savanna) of Mato Grosso and, increasingly, to the Amazon region, on the edge of the forest and along road and river transport zones. In Argentina, soy cultivation first developed in the traditional agricultural regions of the pampa before spreading to the less affluent regions of the north and northwest of the country (notably the Chaco plain). In Paraguay, the crop has spread from the Brazilian border and is now grown in most of the country.

In 2003, the Swiss multinational Syngenta, dedicated to the production of chemical pesticides and seeds, gave the name "United Republic of Soy" ("*República Unida de la Soja*") to the region comprising Paraguay, northern Argentina, southern Brazil and eastern Bolivia.

Since the 1990s, the area dedicated to this crop has grown hugely: between 1993 and 2017, it increased by 219% in Brazil, 239% in Argentina, 432% in Paraguay and 10,960% in Uruguay, where soy production had been marginal until the early 1990s.[52]

GRAPH 26: TRENDS IN AREA DEDICATED TO SOY PRODUCTION

Source : Faostat



50. The information in this section is derived primarily from: Solanet, Guillaume; L. Levard; C. Castellanet. *L'impact des importations de soja sur le développement des pays producteurs du Sud*. Gret – CFSI, February 2011; Grain. "La République unie du soja, version 2.0". *À contre-courant*, June 2013; Grain. *20 ans de soja transgénique dans le Cône sud de l'Amérique latine, 20 raisons de l'interdire définitivement*, May 2017; and Palau, Marielle (Coordinator). Con la soja al cuello 2018 – Informe sobre agronegocios en Paraguay. BASE IS, November 2018.

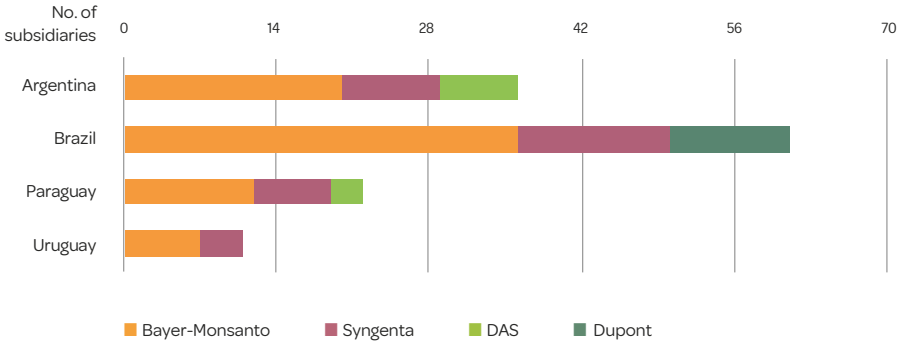
51. Source: Faostat.

52. According to FAO data.

The expansion of the soy model is mainly the result of capitalist agriculture (private entrepreneurs and financial companies), although in some regions family farming is also involved (see insert below).
The soy model is based on the intensive use of fertilizers, pesticides, and genetically modified seeds (GMOs). These techniques are designed to maximize the yields and profits of soy producers. In this way, soy yields have practically doubled in Latin America in the past 25 years. This growth is accompanied by a continuous increase in the quantities of pesticides used per hectare.
There are currently 173 varieties of GMO seeds in Latin America, 39 of which are for soy. Bayer-Monsanto, with 76 subsidiaries in the region,[53] controls 47% of GMO production, followed by Syngenta (21%), Dupont (7%), and DAS (6%).[54]

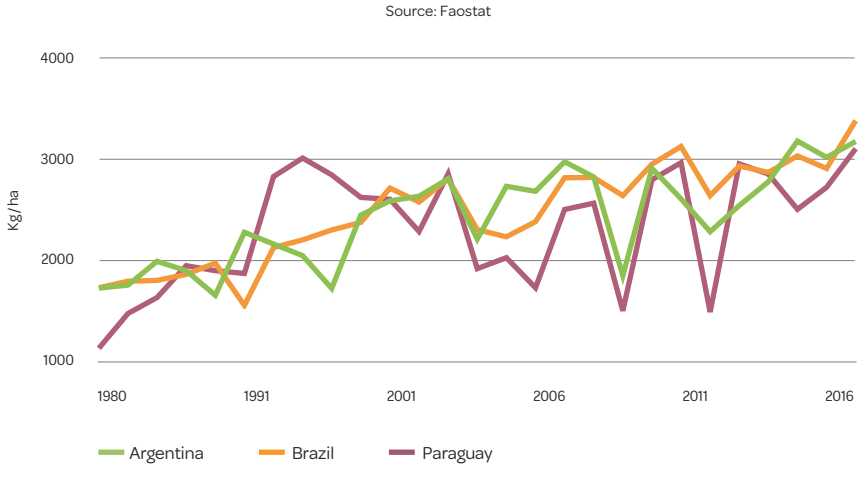
GRAPH 27: BUSINESS PRESENCE IN LATIN AMERICA

Source: Con la Soja al Cuello (2018)



GRAPH 28: YIELDS FROM AREAS CULTIVATED WITH SOY IN THE REGION

Source: Faostat



This expansion has harmful consequences:

- First, in social terms, peasant agriculture in particular must confront land grabbing, expropriation and criminalization of peasant agriculture, and health effects related to fumigations and environmental contamination.
- Second, in environmental terms, it results in deforestation, soil degradation, loss of biodiversity, and contamination of water resources.

Beyond specific consequences for peasant agriculture, the expansion of the soy model also has social and environmental consequences for rural populations as a whole, and even urban populations.

53. The company also has a subsidiary in Bolivia.

54. Palau, Marielle (Coordinator). *Con la soja al cuello 2018 – Informe sobre agronegocios en Paraguay*. BASE IS, November 2018, p. 31.

In addition to the impacts on population and natural resources, the expansion of the soy model also implies an increase in the dependence of agricultural regions on the external market for obtaining food. For example, in Paraguay, because the vast majority of the country is owned by soy and meat producers, the country has become a big importer of food products such as fruits and vegetables, which had previously been produced in the country.

WHEN FAMILY FARMING ADOPTS THE SOY MODEL...

In some regions of Brazil and Argentina, soy cultivation has also developed within family farming. There is naturally a difference in the consequences of the expansion of the soy model for family farming between regions where soy is grown by this type of agriculture and regions where it is mainly practiced by agribusiness.

In the southern states of Brazil (Rio Grande do Sul and Parana) and to a lesser extent in the Argentinian pampa, peasant agriculture has benefited from the soy boom, thanks in particular to a high level of organization. Soy contributes to an economic dynamism there that benefits peasant populations to some extent. However, this benefit is fragile, as seen by the following:

- Peasant agriculture has practically lost all its autonomy within a system completely controlled by agribusiness upstream and downstream of the value chain.
- Dependence on a single crop represents a risk in the event of a market downturn.
- Health problems related to the increasing use of pesticides (and their cocktail effects) are constantly increasing.
- Even in these states where family farms account for the majority of farms, agribusiness produces most of the soy production. The development of soy production brings greater benefits to large farms than to family farms. For example, family farms have to pay more for their inputs and services because they purchase in smaller quantities. For their own harvests, they often have to use harvesters rented from large landowners, but these latter rent them only after they have completed their own harvest, and thus at less favorable days for the harvest.

In addition, in many regions, specialization in soy has weakened the peasant farmers who have decided to grow this crop but who are unable to remain competitive with the large highly mechanized and motorized farms that have developed there (center and center-west of Brazil: Mato Grosso, Goiás, Rondônia, Mato Grosso do Sul; Argentinian pampa). Similarly, in the diversified agricultural areas of the Nordeste region of Brazil (Maranhão, Piauí), the prospect of large soy profits is leading to unprecedented land concentration, carried out with the complicity of local elites to the detriment of small farmers. These latter are routinely threatened and sometimes expelled from their lands. They find themselves forced into either an ever-faster migration to segregated urban areas, or departure to frontier areas where conditions of employment are often precarious or even criminal in the case of slave labor.

2.1. Social consequences of the expansion of the soy model

Land grabbing, expropriation, and criminalization of peasant agriculture

The expansion of the "soy model" is often based on massive land grabbing and the expulsion of peasant and indigenous communities from their lands, leading to the criminalization of peasant agriculture as soon as they seek to resist and to waves of violence against them.[55]

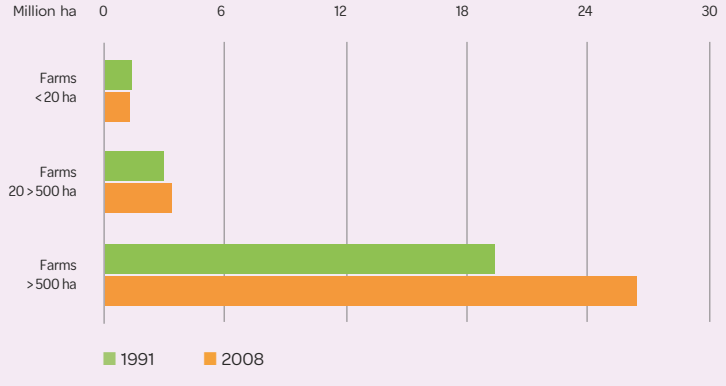
55. See in particular Solanet Guillaume; L. Levard; C. Castellanet. *L'impact des importations de soja sur le développement des pays producteurs du Sud*. Gret – CFSI, February 2011, and Palau Marielle (Coordinator). *Con la soja al cuello 2018 – Informe sobre agronegocios en Paraguay*. BASE IS, November 2018.

LAND CONCENTRATION IN PARAGUAY

The case of land concentration in Paraguay for soy production is emblematic. In 2016, Paraguay was the country with the most inequitable land distribution in the world: between 1991 and 2008, the area devoted to family farming (i.e., less than 20 hectares, according to the authors of the study) decreased by 8.8%, while the area of medium- and large-scale farms increased by 33.1%.[56] Today, only 6% of the land is in the hands of peasant agriculture, while 94% is controlled by agribusiness.

GRAPH 29: SURFACE AREA HELD BY THE DIFFERENT SIZES OF FARMS IN PARAGUAY

Source: Oxfam (2016)



As in most countries of the Southern Cone, land concentration is also linked to land grabbing by foreign companies with the complicity of governments. Today, 35% of the country's land is in the hands of foreign companies, particularly with regard to the 239 Brazilian companies present there. Marielle Palau explains that "agribusiness has made great progress because of the favorable policies of progressive governments, which used some of the income thus generated to finance public services, such as health and education. However, support for agribusiness was later strengthened under the impetus of conservative regimes, such as that of Horacio Cartes in Paraguay [...]." Alceu Castilho reports that the country's former president told Brazilian owners in 2017 (when he was still head of state): "Use and abuse Paraguay!".[57]

Each time soy farming expanded, it was accompanied by large-scale economic and social upheavals. The peasant-farmer populations are affected in different ways.

- Pressure to give up land: Although soy expansion is partially carried out on land that was previously forest or pasture land, it also represents pressure on peasant families. These latter are not supported in their development; they can find themselves in situations of great poverty and come under pressure to sell their land. In addition, the increase in land prices, linked to the expansion of soy, makes land practically inaccessible to farmers wanting to rent land or expand their farms, and to the children of farmers wishing to set up there.
- Expulsions: In many cases, particularly in Argentina and Paraguay, peasant communities do not possess deeds to the land they farm. In this case, large farms can then negotiate for deeds to be made out for their own benefit and request the expulsion of communities living there, who become "illegal occupants." In Argentina, 200,000 families were evicted from their lands between 1990 and 2010.

56. Guerena and Rojas Villagra, 2016.

57. Castilho, 2017.

Expansion of soy as a crop leads to land concentration, increased inequalities in income distribution, and agrarian violence.

- Detentions, convictions, and assassinations: Expulsions sometimes lead to violence and greater criminalization of peasant agriculture. In the frontier areas of the Amazon (Tocantins, northern Mato Grosso, Pará), of Argentina and of Paraguay, in addition to illegal deforestation—most of which is linked to the expansion of soy—many cases of conflict with traditional populations and Amerindian communities have been identified. In Paraguay, between 2013 and 2017, there was a wave of criminalization of peasant agriculture communities fighting for their land and against the expansion of agribusiness. During those years, there was a total of 26 cases of violent evictions and repression, 479 detentions, 50 convictions and 7 peasants killed.[58] Since 1989, 122 peasants have been killed by private armed groups (*sicarios*), with the killers generally going unpunished. This was the case of María Esther Riveros, killed in April 2018 because of her membership in the *Asentamiento San Juan de Puente Khyja*, a group of peasant-farmers who occupy land in Canindeyú, to avoid the sale of this land to soy producers. To date, the perpetrators of her assassination have not been identified, as in the case of most of the other murders.[59]

Women are often the foremost victims of the expansion of the soy model: in addition to facing evictions, they must also deal with other consequences related to the expansion of agribusiness and the traditional system of subordination. When expelled from the fields and forced to migrate to the cities, women often suffer from precarious jobs and from sexual abuse and violence. Elizabeth Duré explains that they are exposed to *"situations of unwanted pregnancy, murder, gender-based violence, death stemming from abortions, the commodification of their bodies, and sexual exploitation."*[60] The "soy model" also contributes to the worsening of the human trafficking system linked to the extensive transport needed for soy.

Thus, expansion of soy as a crop leads to land concentration, increased inequalities in income distribution, and agrarian violence. It has catastrophic effects on peasant populations and rural communities, especially indigenous communities.

In addition, as the soy model is very low in labor intensity, the expansion of soy cultivation in rural areas usually results in fewer jobs and in migration to cities. Cases of slavery of members of communities driven into a corner by the progress of the soy model have also been documented.

Health impacts

Farmers living close to soy plantations are often the main victims of pesticide applications (which are often aerial) and of contamination of soil and water used for consumption and for watering animals.

Numerous cases of poisoning have been reported in areas dominated by intensive soy monoculture. Dead animals are found in or near riverbeds after heavy rains. This pollution often plays a decisive role in the departure of peasant populations. This is particularly the case when communities are isolated within huge expanses of soy monoculture. Peasant populations are particularly affected by the effects on their crops. In Brazil, food crops such as beans are gradually disappearing from some areas due to this pollution. Producers of organic farming are finding their products contaminated, whether by the presence of pesticides in water or by aerial spraying by neighboring farms.

58. Palau, Marielle (Coordinator). *Con la soja al cuello 2018 – Informe sobre agronegocios en Paraguay*. BASE IS, November 2018, p. 98.

59. The criminalization of peasant agriculture and the impunity that accompanies the crimes against it are generally carried out with the complicity of the governments of the region. For example, in January 2019, the new Brazilian government stated that it would *"deal with"* the Landless Workers Movement, using the word "terrorism" in reference to the activities of this organization (Europa Press, 2019).

60. Palau, Marielle (Coordinator), *Con la soja al cuello 2018 – Informe sobre agronegocios en Paraguay*. BASE IS, November 2018.

It has taken many years for the effects of these sprays to have been recognized internationally. Even today, after multiple complaints from the rural population and studies by health centers and universities, the current President of Argentina, Mauricio Macri, stated in April 2019 that there was no conclusive evidence on the danger of pesticides and that stopping fumigations would be "irresponsible" and "absurd."[61] Nevertheless, it has been proven that these sprays have caused an increase in diseases in the rural population.[62] Pesticides used for soy production can cause immediate effects, such as skin and bone illnesses, but they also have medium- to long-term effects due to the accumulation of toxic products. For example, cancer, miscarriages, and genetic or morphological malformations are becoming increasingly frequent in rural and peri-urban areas of the Southern Cone.

2.2. Environmental consequences of the expansion of the soy model

Deforestation

Generally speaking, the expansion of agriculture in these three countries has largely been based on massive deforestation, to the detriment of the Brazilian *cerrados* (savannas), the Amazon rain forest, and other forests in Paraguay and Argentina (Chaco Forest). In Brazil, the impact is often indirect, with soy shifting pasture land and consequently pushing herders to clear more forests to create new pastures there. At the same time, soy cultivation can also be carried out directly on virgin forest land after burning. In all, since the 1990s, Amazonia has lost a fifth of its forests, mainly due to livestock expansion and soy production.[63]

IMAGE 1: EXAMPLE OF THE EVOLUTION OF DEFORESTATION IN THE BRAZILIAN AMAZON FROM 2000 TO 2012 (RONDÔNIA STATE)

Source: *NASA Earth Observatory* 2012

Deforestation in the Amazon and the *cerrados* generally leads to decline in soil fertility and in particular in levels of organic matter. In addition, during the often unfavorable conditions in tropical areas (wind, rain, runoff due to slopes), erosion can be severe, all the more so because soy cultivation leaves the soil bare for part of the year and therefore very sensitive to erosive processes.

The expansion of soy therefore now seems to be the main cause behind the spread of deforestation in several regions of the Amazon and behind the effects of global warming. Therefore:

- In Brazil, the increase in agricultural area corresponds to 73% of area deforested between 1993 and 2016. Looking at the increase in agricultural area itself over the same period, its growth of 66% is mainly due to the increase in soy cultivation. These figures thus suggest that nearly half (49%) of deforestation is due to the expansion of soy.[64]
- In Argentina, on the other hand, the expansion of agricultural area is three times higher than the country's deforested area, because the expansion has mostly occurred on the pampa. Expansion of soy cultivation represents 69% of the increase in agricultural area.[65]

61. Foglia, Valeria. *Macri a favor de que fumiguen con agrotóxicos las escuelas de Entre Ríos*. La Izquierda Diario, 2019.

62. Palau, Marielle (Coordinator), *Con la soja al cuello 2018 – Informe sobre agronegocios en Paraguay*. BASE IS, November 2018.

63. ROMERO Teresa. *La deforestación del Amazonas*, 2019.

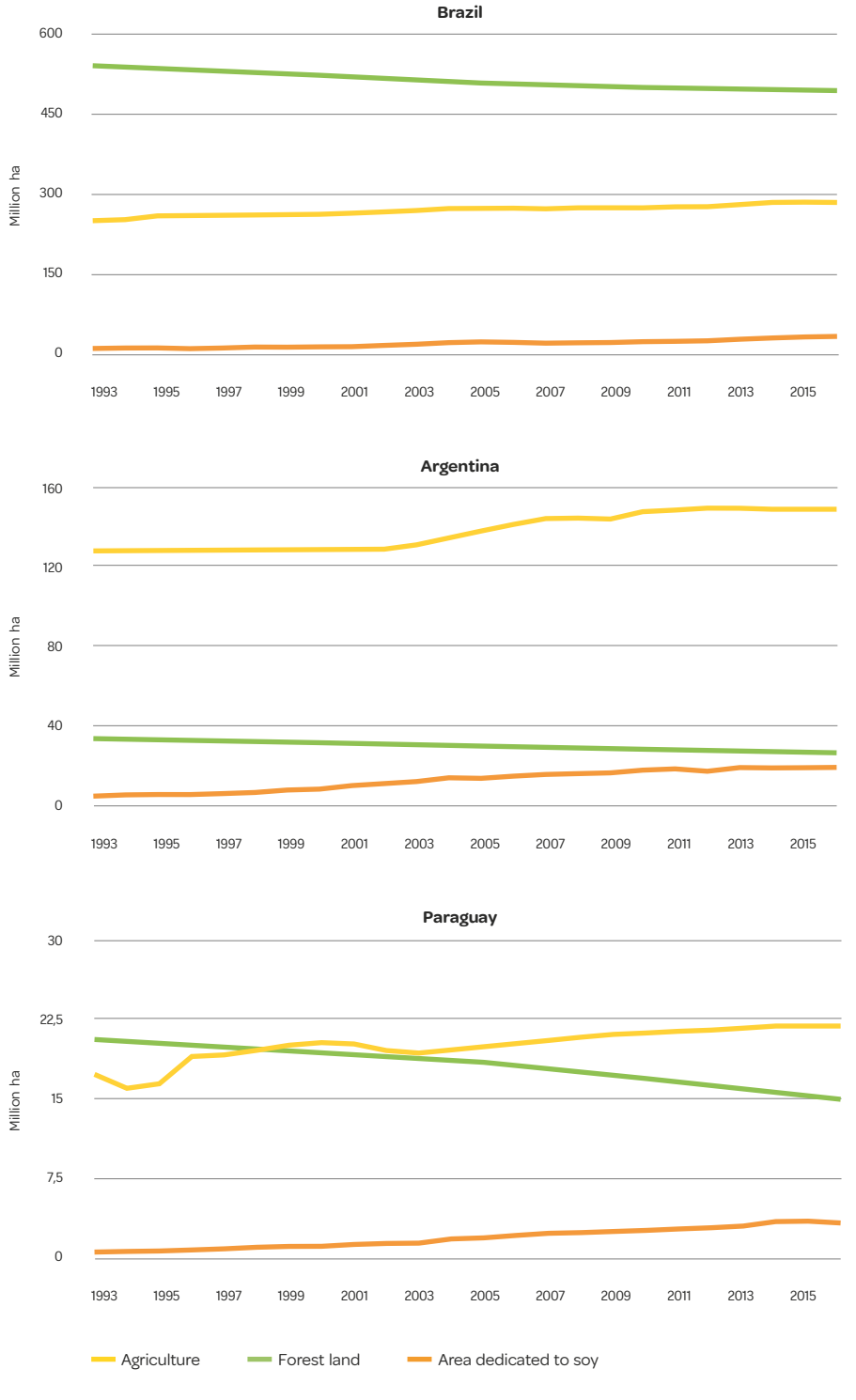
64. According to FAO data.

65. *Idem*.

- In Paraguay, the increase in agricultural area corresponds to 80% of the area deforested between 1993 and 2016. Looking at the increase in agricultural area itself over the same period, its growth is mainly (60%) due to the increase in soy cultivation. These figures thus suggest that nearly half (49%) of deforestation is due to the expansion of soy.[66]

GRAPH 30: TRENDS IN AGRICULTURAL AREAS, FOREST LAND, AND AREAS DEVOTED TO SOY CULTIVATION IN BRAZIL, ARGENTINA, AND PARAGUAY

Source: Faostat



66. *Idem.*

Soil degradation, loss of biodiversity and contamination of water resources

The expansion of the soy model leads to soil degradation, decline in biodiversity, and contamination of water resources.

According to the United Nations, between 1993 and 2013 Latin America lost 30% of its biodiversity. The felling of trees in the heart of the Southern Cone has led to the disappearance or imperilment of many animal and plant species. According to a 2015 study by *Science Advances*,[67] more than half of the 15,000 plant species could disappear in the Amazon rainforest by 2050 if the destruction of its ecosystems continues at the current rate. In Paraguay, if deforestation there continues at the current rate, more than half of the birds and more than 30% of the mammals in the forest will have disappeared within 10 to 25 years.

Loss of vegetation cover and the intensive use of pesticides lead to contamination of water resources. Despite the existence of national environmental protection legislation, producers tend to cultivate soy all the way to riverbanks, resulting in the contamination of many watercourses (nitrates, phosphates, and pesticides).[68]

This destruction of ecosystems has other types of consequences for the quality of life and health of local populations. In the northwestern region of Argentina, for example, the disappearance of predators such as birds and toads has led to the proliferation of mosquitoes and dengue fever.

> "There is a direct relationship between soy and livestock: soy cultivation is increasing because there is a growing demand for meat."
> "We can say there is ecocide in the Southern Cone."
> "A direct consequence [of the expansion of soy] is a decrease in peasant-farming production. As a result, we are increasingly dependent on hyper-processed food sold in supermarkets."
>
> Marielle Palau, researcher at the Base social research center (Paraguay), seminar on April 11, 2019.

67. Ter Steege, Hans; *et al.*, *Estimating the global conservation status of more than 15,000 Amazonian tree species*, 2015.

68. The Paraná River, which flows through southern Brazil, Paraguay, and northern Argentina, is an example of how far the destruction associated with the soy model can reach. As pollution from glysophates and other herbicides as well as heavy metals can be found at its source and at its mouth, it can be supposed that the entire river is contaminated.

3. THE CAP IN QUESTION

Combined with instruments of trade policy and environmental regulation, the CAP is a powerful tool for guiding production according to economic, social, and environmental objectives.

The association of several policy choices has furthered the expansion of livestock-production models based on high consumption of imported soy. In particular, these were the following choices:

- Devoting 80% of the CAP budget to Pillar I. This Pillar I consists of per-hectare aid (see below) and market management measures.
- Dedicating the bulk (approx. 90%) of aid within this pillar in the form of decoupled area payments, i.e. aid whose amount is independent of the type of production carried out by the farmer and of the agricultural yield.
- Making this aid subject to only very lax environmental rules.
- Accompanying this policy with a total opening up of trade to soy imports (lack of customs protection, not taking into account the imported environmental impact).

These choices have three key implications for the relative cost of food for breeders as well as for the technical choices of these latter.

- The cost of production of maize silage by livestock farmers is considerably offset by the per-hectare aid received for the areas devoted to it. Given the energy and fiber yield of this crop, the cost of production net of aid received per feed unit is very attractive. As maize silage is low in protein, its use must be accompanied by protein-rich complementary feeds, particularly soy. Similarly, the cost of production of feed grain cereals (wheat, barley, maize and especially irrigated maize) by breeders is offset by the aid per hectare received for the areas devoted to them.
- When the breeder buys the feed grains on the market (by direct purchase or in the form of mixed feed), the fact that their production has benefited from CAP aid (area aid) helps improve their competitiveness (lower market price). The breeder is then encouraged to look for protein-rich complementary foods.
- The cost of soy protein material is very low given the productivity conditions in producer countries (in terms of yields and production costs), the absence of regulations limiting the negative effects of the soy model or of payment mechanisms to offset negative externalities, the low cost of international sea transport, and the absence of import taxation. The price of other protein-rich materials—mainly rapeseed and sunflower meal, protein crops (peas, faba beans, and lupin) and dehydrated alfalfa—tends to be in line with the price of soy (according to protein equivalence). However, the availability of these products in the EU does not cover total protein demand. This is due to the productivity conditions and the system of per-hectare aid, which make these crops generally unattractive compared to cereal crops. This lack of attractiveness can be seen by the fact that growth in cultivated areas has experienced relative stagnation (despite the existence of coupled aid for protein crops). However, rapeseed cultivation and, to a lesser extent, sunflower cultivation are exceptions, as they have been stimulated by the agrofuel support policy. As regards the production of protein crops and soy (which is exclusively for the former and mainly for soy intended for animal consumption), it certainly benefits from additional aid that comes as a complement to the decoupled aid. However, this complement is not sufficient to allow for more significant development of these crops.

Finally, in recent decades, breeders have tended to implement livestock systems based on a diet relying mainly on:

- maize silage (energy and fiber supply) and soy meal (protein supply) in the case of cattle farming;

- grain cereals (energy inputs) and soy meal (protein inputs) for the breeding of non-ruminant animals (pigs and poultry).

This type of system has expanded to the detriment of grassland systems, particularly those that integrate the production of fodder from grassland legumes (protein sources). At the same time, **the whole range of breeding systems has evolved according to this type of feeding**. A number of trends in particular can be observed.

- There is an increased presence of dairy breed cows with very high milk potential (Holstein breed) and capable of consuming large quantities of concentrated feed (silage, seeds, and soy). However, in return, the full expression of the genetic potential of these animals requires a diet very rich in concentrated fodder. Consequently, the genetic orientation of livestock animals supports the feeding model dependent on these concentrated feeds.
- Intensive livestock farming has become concentrated in the vicinity of soy import ports (in the Netherlands, Denmark, Brittany, Catalonia, etc.). This trend in turn makes the system more dependent on soy imports, given the scarcity of forage areas in these regions in relation to needs.

The recoupling of protein crop aid by a certain number of EU Member States within the framework of the 2014-2020 CAP has led to an improvement in the production of protein crops in the EU over the last five years. However, this increase has not yet made it possible to return to the production levels of the 1990s, when Europe introduced specific aid for protein crops. It should be noted that, between 1978 and 1992, support specific to oilseed and protein crops enabled their development; subsequently, the policy of decoupled aid led to a decline in these crops. The weight of protein crops in HPF used in the EU remains low (2% of the total protein intake of HPF).

Furthermore, the policy of encouraging the use in the EU of agrofuels has prompted the development of oilseed crops (rapeseed and sunflower) over the past 15 years and therefore the production of meal, this following a period of decline in the second half of the 1990s (see above). The growth in consumption of such meal partly explains the stabilization of soy imports in the 2000s and their slight decline over the past decade. However, the increase in the area devoted to the use of agrofuels poses other problems in terms of substitution of areas for food use (see Part 3).

We could consider that, today, the EU no longer contributes to the increase in soy surfaces. Indeed, it has been observed that EU imports had been slightly declining and that the increase in world demand for soy is now mainly due to China and, to a lesser extent, other emerging countries. Nevertheless, the EU does have a responsibility for the past development of soy cultivation and thus for the expansion achieved today. EU demand for soy continues to be the second largest on the world market and as such contributes to the expansion of the soy model.
The current rate of protein independence of the EU for animal feed, all fodder combined, is 84%. The EU could thus achieve its protein independence if it gave itself the means to do so. Protein independence would mean the end of EU soy imports.

“the EU does have a responsibility for the past development of soy cultivation and thus for the expansion achieved today.”

4. RECOMMENDATIONS

The reduction and subsequent elimination of soy imports would involve:

- **Strengthen CAP coupled support for protein crop production** in order to stimulate its production. Increasing the availability of protein crops would help replace some imported soy with other protein-rich materials of EU origin.
- **Replace current decoupled support with transfers that target objectives in the agro-ecological transition for agriculture**,[69] in particular by making farms and local areas self-sufficient in terms of plant nutrients and fodder. This self-sufficiency is a crucial element of the agro-ecological transition, as it contributes to two of the agro-ecology objectives, namely the fight against climate change (GHG emissions and the carbon footprint of imported synthetic fertilizers and livestock feed) and the absence of environmental contamination (release of nitrogen and phosphorus compounds). Self-sufficiency requires maximizing the use of resources available in unlimited quantities (atmospheric carbon and solar energy for the production of organic matter, atmospheric nitrogen for the production of protein) and recycling of as many chemical elements (organic matter, mineral elements) as possible on the farm or in the local area.[70] It involves:
  - increased use of grassland and fodder legumes included in crop rotations (in particular as a substitute for imported soy);
  - a reduction in the size of some farms, facilitating a lower level of dependence on imported feed (in particular soy);
  - a shift in the breeds used, toward more hardy ones that can be raised with a poorer feed intake (thereby reducing dependency on soy).

It should be noted that the modeling of various agro-ecological transition scenarios for French or EU agriculture has been carried out, in particular by Solagro (Afterres 2050[71]), IDDRI and AScA (TYFA project[72]). This modeling involves an extensification of livestock systems in addition to a reduction in the consumption of animal products. In these scenarios, individual animal protein requirements would be lower due to lower animal productivity. This is especially the case of dairy cows, which, in intensive farming systems, require a feed intake strong in protein, which can only be provided by high-protein feed. In cattle breeding, mixed milk and meat breeds should be favored. Generally speaking, the energy-protein balance of feed intake would be rebalanced in favor of the energy component. A significant proportion of protein requirements, if not all, would be provided by permanent grassland, temporary grassland, cereal crops and leguminous crops (protein crops, alfalfa, clover, etc.) inserted into crop rotations. In the case of ruminants, the even the smallest intensification would also help increase the weight of cereals compared to protein-rich feed. The transfers that target objectives related to the ecological transition for agriculture would go to financing the investments and changes necessary for this transition, in a context of rises in certain costs (e.g. labor, specific equipment) and of lower yields.

- **Provide payment for environmental services** supplied by farmers beyond the phase of transition to ecological systems, to help make these systems attractive and profitable.
- **Ensure remunerative agricultural prices**, so as to restore the key role of product remuneration and reduce dependence on public transfers. This implies regulating markets and even agricultural production volumes. As regards the price of protein material (which is a factor in the pricing of all protein and oilseeds), the taxation of soy imports (see below) would encourage its increase.

69. Agro-ecology meets a variety of objectives: obtaining diversified and good-quality agricultural and food products, reproduction (or improvement) of the productive potential of ecosystems, self-sufficiency with regard to non-renewable resources, absence of contamination, fight against climate change. In terms of agricultural production, it is based in particular on mobilizing the potentials of natural ecosystems for the use of external natural resources and on taking advantage of the interrelationships between the components of cultivated ecosystems and of biodiversity.

70. The recycling of mineral elements also contributes to another objective of the agro-ecological transition, that of self-sufficiency with regard to non-renewable resources (phosphorus and potassium).

71. Couturier, Christian; M. Charru; S. Doublet; P. Pointereau. *Le scénario Afterres 2050*. Association Solagro [2016 version].

72. Poux, Xavier and P.-M. Aubert. *Une Europe agroécologique en 2050 : une agriculture multifonctionnelle pour une alimentation saine – Enseignements d'une modélisation du système alimentaire européen*. Iddri-AScA, 2018.

ADDITIONAL MEASURES

In addition to measures concerning the CAP, the following are recommended:

- **Tax soy imports**, in order to facilitate the process of agricultural transition and self-sufficiency in this product. Such a measure would be in contradiction with WTO commitments. Behind this question is the issue of the hierarchy of norms at the international level.
- **Do not ratify the free trade agreement with Mercosur**, which would imply an additional legal commitment in contradiction with the taxation of soy imports.
- **Ban palm oil imports**. Continued EU production of rapeseed and sunflower meal, and especially its growth, would be threatened if the EU policy of subsidizing agrofuels were to be terminated as recommended in this report (see Part 3). However, a ban on palm oil imports, which would primarily meet an objective of ecological responsibility, would also help in having rapeseed and sunflower oil replace a large proportion of its current food uses. This substitution would stimulate EU production of rapeseed and sunflower—and consequently meal made from them—thereby possibly helping to reduce soy imports.
- **Regulate the size of livestock holdings more strictly and review environmental rules**, so as to facilitate the ecological transition process.
- **Give impetus for both reducing consumption of animal products and improving their quality.** This can be done through appropriate food policies (e.g. collective catering, consumer awareness).

3.

THE EFFECTS OF THE EU AGRICULTURAL AND FOOD SYSTEM ON CLIMATE CHANGE

1. THE FACTS: THE CONTRIBUTION OF THE EU AGRICULTURAL AND FOOD SYSTEM TO GREENHOUSE GAS EMISSIONS

The EU food system, and in particular its agricultural production, contributes significantly to the EU's GHG emissions. Several studies, which we will discuss below, have recently evaluated and analyzed this contribution, at the French or EU level. The approaches can differ from one study to another.

- The "consumption" approach consists of assessing, based on a life cycle analysis, emissions corresponding to the consumption of French/EU households regardless of the origin of food products (domestic or imported production).
- The "territory" approach consists in evaluating the "French farm" or the "EU farm" (thus including exported productions, but not imported agricultural and food products).

The results of the different studies are broadly the same, but there are some differences between studies.

1.1. Studies carried out at the French level

The association Solagro based its "Afterres 2050" scenario on a modeling of GHG emissions from agriculture and food in France.[73]
This report indicated the following:

- Of France's 496 million tons of eq. CO_2 of GHG emissions, agriculture and food (including waste treatment) contribute 170 Mt of eq. CO_2, representing 36% of total emissions.
- Within the food system as a whole, agriculture is the top source of emissions (108 Mt eq. CO_2, 64%), of which 51% (86 Mt eq. CO_2) is direct emissions (from agricultural production) and 12% (21 Mt eq. CO_2) is indirect (manufacture of fertilizer, nitrogen, pesticides and feed, including imports).
- With regard to emissions from agriculture (direct and indirect effects), the distribution of emissions is as follows:
  - 31% for methane (CH_4) from enteric fermentation by ruminants and livestock manure;
  - 30% for nitrogen inputs on agricultural soil, leaching, and volatilization of NH_3;
  - 13% for the manufacture of nitrogen fertilizers;
  - 11% for livestock manure;
  - 8% for energy consumption.

In addition, in a study published in January 2019, the Cecam project analyzed the energy and carbon footprint of food in France.[74] The approach taken is that of household consumption in mainland France, by taking into account the consumption and emissions contained in imports of intermediate or final products and excluding French production that is exported. This approach takes into account direct emissions from agriculture, as well as indirect emissions related to the supply of agricultural inputs (manufacture of nitrogen fertilizers and plant protection products, manufacture of equipment, construction of farm buildings, emissions from the energy sector resulting from final agricultural consumption). On the other hand, it does not include the effects of land-use change and forestry (LULUCF), which implies an underestimation of the carbon footprint of agricultural production from deforestation. At the level of the food system as a whole, packaging and waste treatment are also not taken into account. This is why this study tends to underestimate the carbon footprint of the food system.

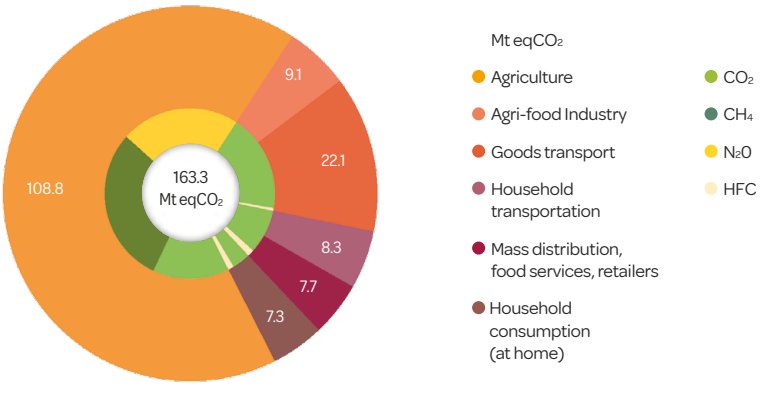
> "The EU food system, and in particular its agricultural production, contributes significantly to the EU's GHG emissions."

73. Couturier, Christian; M. Charru; S. Doublet; P. Pointereau. *Le scénario Afterres 2050*. Association Solagro [2016 version].

74. Barbier, Carine; C. Couturier; P. Pourouchottamin; J.-M. Cayla; M. Sylvestre; I. Pharabod. *L'empreinte énergétique et carbone de l'alimentation en France de la production à la consommation*. Iddri, 2019.

GRAPH 31: GREENHOUSE GAS BALANCE BY SECTOR

Source: BARBIER Carine *et al., L'empreinte énergétique et carbone de l'alimentation en France – de la production à la consommation*, Iddri, 2019



The results of the study indicate the following:
- The food system emits 163 Mt eq. CO_2, or 24% of the carbon footprint of households.
- The main source of emissions is agriculture (67%). Next come freight transport (13.5%) and industrial processing of agricultural products (5.5%).

The breakdown of emissions from agriculture is as follows:
- 44% for methane (CH_4) from enteric fermentation by ruminants and livestock manure (29% of the total balance of the food system);
- 34% for nitrous oxide (N_2O), mainly from the manufacture and use of nitrogen fertilizers on agricultural soils (23% of the total balance of the food system);
- 22% for CO_2 from the direct energy consumption of farms (equipment and buildings) and indirect emissions from the provision and use of other means of production (other fertilizers, pesticides, equipment manufacture and building construction), representing 15% of the food system balance.

Concerning the transport of food products, road transport is the origin of most emissions (83%). While food produced in France accounts for 23% of total transport volume of food products in France, it accounts for 47% of the transport emissions of the food system, because most of the food produced in France is transported by road, which emits more carbon per ton than sea or river transport. The main products concerned are fruit and vegetables, whose transport accounts for 31% of transport-related emissions, and animal feed (mostly meal), with 19%.

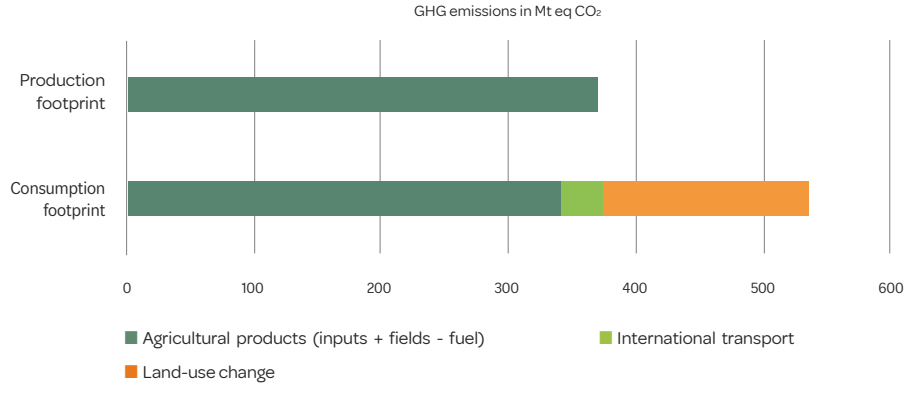
1.2. Studies carried out at the EU level

Based on national GHG emission inventories developed under the United Nations Framework Convention on Climate Change (UNFCCC), the *Institute for Climate Economics* (I4CE) has calculated that, for the EU as a whole (using the "territory" approach), emissions related exclusively to agricultural production (i.e. direct emissions from agriculture, excluding upstream of production but including the effect of land-use change – LULUCF) contributed 11% of the EU's total emissions (430 Mt eq. CO_2). Adding emissions from other sources related to agriculture and food gives a range of 16% to 31% (670 to 1230 Mt eq. CO_2 equivalent).[75]
This same I4CE report refers to the Sandström *et al.* study (2018), in which a "consumption" approach is applied at the EU level (but based only on agricultural production, including indirect upstream effects). According to this study, the food consumption of the inhabitants of the EU-28 generated 540 Mt eq. CO_2 in 2010, making for a "net food import" effect of 160 Mt eq. CO_2. Meanwhile, the footprint of EU agricultural production is estimated at 380 Mt eq. CO_2. The import balance is largely explained by the land-use change (LULUCF) effect in foreign food-producing countries.

75.Rogissart, Lucile; C. Foucherot; V. Ballasen. *Estimer les émissions de gaz à effet de serre de la consommation alimentaire : méthodes et résultats*. Institute for Climate Economics – I4CE, February 2019.

GRAPH 32: EU GHG EMISSIONS, 2010

Source: Sandström *et al.* (2018), quoted in Rogissart *et al.*, 2019



IDDRI and AScA published modeling work on the EU food system in 2018. It is based on an assessment of the contributions of EU agriculture (i.e. excluding downstream of agricultural production) to GHG emissions (Climagri model with the "territory" approach). However, it also includes indirect effects related to feed imports (mainly soy, including land-use change effects).[76] In this modeling, it appears that the total emissions of EU agriculture ("EU farms") in 2010 amounted to 754 Mt eq. CO_2, with the following breakdown:

- 80% direct emissions, including 30% for enteric fermentation of ruminants; 23% for soil emissions (linked in particular to nitrogen fertilization) and leaching; 15% for energy consumption in agricultural production; and 11% for manure storage;
- 20% indirect emissions, including 11% for the manufacture of nitrogen fertilizers and other inputs; 5% for food imports (with per-kg emissions of soy production having been estimated on the basis of low assumptions); 2% for equipment manufacture; and 2% for energy costs upstream of agricultural production.

1.3. Conclusion:

Despite the fact that results from one study to another differ slightly[77] due to the diversity of approaches used and to the sometimes diverging hypotheses, the studies carried out at the French or EU level help shed light on the contribution to GHG emissions from several sources:

- intensive livestock systems, in which are included the production, processing and transport of animal feed;
- intensive use of synthetic nitrogen fertilizers (soil emissions and fertilizer manufacturing);
- energy consumption from agricultural production;
- road transport of agricultural and food products.

The characteristics of the current EU agricultural and food system are the result of various historical developments that contribute to this high carbon footprint. More specifically, these developments are the following:

- increase in consumption of animal products, even though the trend in Europe has been slightly declining in recent years;
- development of activities for (over-)processing and (over-)packaging of agricultural products;
- geographical specialization of different types of agricultural production according to their comparative advantages, entailing growth in transport activities for provisioning farms (especially in feed, but also in fertilizers and other inputs) as well as for the marketing and distribution of agricultural products to consumers;
- development of intensive agricultural production systems based in particular on intensive use of nitrogen fertilizers, and animal feed consisting mainly of cereals and meal, this to the detriment of grassland use and high energy costs.

76. Poux, Xavier and P.-M. Aubert. *Une Europe agroécologique en 2050 : une agriculture multifonctionnelle pour une alimentation saine – Enseignements d'une modélisation du système alimentaire européen*. Iddri-AScA, 2018.

77. Couturier, Christian; M. Charru; S. Doublet; P. Pointereau. *Le scénario Afterres 2050*. Association Solagro [2016 version]; Barbier, Carine; C. Couturier; P. Pourouchottamin; J.-M. Cayla; M. Sylvestre; I. Pharabod. *L'empreinte énergétique et carbone de l'alimentation en France de la production à la consommation*. Iddri, 2019, Poux, Xavier and P.-M. Aubert. *Une Europe agroécologique en 2050 : une agriculture multifonctionnelle pour une alimentation saine – Enseignements d'une modélisation du système alimentaire européen*. Iddri-AScA, 2018.

As a result of the increase in the consumption and production of animal products on the one hand and the strengthening of the development of intensive livestock systems on the other, in the EU 58% of cereals and 67% of meal available were devoted in 2010 to animal feed.[78]

AGRICULTURAL PRODUCTION FOR ENERGY PURPOSES

The manufacture of agricultural energy products developed in Europe from the 1990s with the stated objective of helping to replace some hydrocarbon use by fuels and energies that would contribute less to GHG emissions.
This manufacturing process has developed in two ways: agrofuels from the 1990s and biogas production through methanization.[79]

First-generation agrofuels, i.e. agrofuels from crops whose main purpose is energy, include:

- biodiesel, for incorporation into diesel fuel and derived from rapeseed, sunflower, soy or palm oil esters; and
- ethanol, for incorporation into gasoline and derived from sugars (glucose and sucrose) from sugarcane, maize, beet, or wheat.

In Europe, the biodiesel value chain is the more developed of the two, representing about 80% of agrofuels produced there.[80] It is based either on rapeseed oil (and some sunflower oil) produced in Europe (representing just over half of the biodiesel value chain[81]) or on oil from other countries (mainly palm oil from Indonesia and Malaysia; rapeseed oil from Australia, Canada, and Ukraine; and soybean oil from Argentina).
As for the ethanol sector, in Europe it is mainly based on the use of wheat and beet produced there.[82]
As a result of the policy to encourage the use of agrofuels, demand for agricultural products for their manufacture has increased since the early 1990s and 2000s. Thus, in 2009, the EU Member States undertook to ensure that, by 2020, 10% of energies used in transport would be of so-called renewable origin; almost all of which would be first-generation agrofuels, i.e. the main product of the crop concerned. In 2015, the EU capped the level of incorporation of first-generation agrofuels into fuels at 7%, following widespread criticism of their relevance, particularly with regard to their impact on climate change. This 7% ceiling applies to all energy crops and not just to crops that can be used for food purposes.[83] States also have the option of applying lower ceilings.

In France, the tax exemption for agrofuels was gradually reduced from 2008 and ended in 2015. Fuel distributors who do not comply with the incorporation objectives must pay the General Tax on Polluting Activities (TGAP), which helps further achievement of the objective.
According to an IDDRI study, EU cultivated area dedicated to agrofuel production has reached a total of 6% of the agricultural area used. The area devoted to these crops has been generally stable since 2010.

With regard to **methanization**, in some EU countries, there has also been expansion since the 2000s of systems based on energy crops specifically dedicated to this use (mainly maize). This is particularly the case in Germany where, with 6,300 biogas plants operating on agricultural substrate, agricultural production dedicated to methanization (mainly of maize) represented nearly 7% of the agricultural area used in Germany in 2011.[84]

78. Poux, Xavier and P.-M. Aubert. *Une Europe agroécologique en 2050 : une agriculture multifonctionnelle pour une alimentation saine – Enseignements d'une modélisation du système alimentaire européen*. Iddri-AScA, 2018.

79. *Ibid.*

80. *Ibid.*

81. *Ibid.*

82. Ministry for the Ecological and Inclusive Transition (France). *Biocarburants*, 2019.

83. Climate Action Network (CAR) France. *Réforme européenne des agrocarburants*, April 2014.

84. Poux, Xavier and P.-M. Aubert. *Une Europe agroécologique en 2050 : une agriculture multifonctionnelle pour une alimentation saine – Enseignements d'une modélisation du système alimentaire européen*. Iddri-AScA, 2018.

In fact, the carbon impact of agrofuels appears to be extremely mixed. In 2010, a study on agrofuels was commissioned by the French Environment & Energy Management Agency (Ademe). It is based on an analysis of the life cycle of agrofuels, which takes into account all the stages necessary for their production (agricultural production itself, processing, and transport). This study gave rise to heated discussions, and its results were not validated by the NGOs present within the steering committee. In particular, it should be noted that, given the available research, nitrous oxide (N_2O) emissions linked to the use of nitrogen fertilizers appear to be very underestimated. Nonetheless, the results of the study do provide a number of significant indications, provided that we look at assessments that take into account land-use change (LULUCF), be they direct or indirect (i.e., indirect land-use change—ILUC) effects. While with fossil fuels (gasoline or diesel) emissions amount to 90 g or 91 g eq. CO_2 per megajoule (energy unit) produced, it is possible for emissions to reach up to 160 g eq. CO_2 for palm oil ester (compared to 30 g eq. CO_2 if the effect of land-use change is not taken into account). The integration of the land-use change effect has not been simulated for rapeseed ester (59 g eq. CO_2 without taking into account the land-use change effect) or wheat ethanol (74 g eq. CO_2 without taking into account the land-use change effect) .[85]

Furthermore, in a study commissioned by the European Commission in 2015, only the effects of land-use change were assessed. It gave estimates of 65 g eq. CO_2 for rapeseed oil ester and 34 g eq. CO_2 for wheat ethanol.[86]

Based on the results of these two studies, it appears that, from a climate-change perspective, and taking into account the ILUC effect, the production of agrofuels from agricultural raw materials produced in Europe (rapeseed, sunflower, wheat) emits more GHG emissions than the use of fossil fuels (124 g eq. CO_2 for rapeseed and 108 g eq. CO_2 for wheat ethanol, compared to 91 g and 90 g eq. CO_2 for diesel and gasoline).[87] In another study carried out in 2011 by Atlass Consortium, the assessment appears less negative for rapeseed ester (95 g eq. CO_2) and positive for wheat ethanol (47 g eq. CO_2).[88]

To our knowledge, there are no detailed studies on the global-warming impacts of the methanization of crops dedicated to agrofuel production. However, with regard to both first-generation agrofuels and methanization of dedicated crops, the principle of substituting food crops (for food or feed) with energy crops is a dangerous path from the point of view of combating global warming and food insecurity.

Indeed, the question must be analyzed in a context in which:
- global food needs are expected to increase sharply in the coming decades;
- there are very strong concerns about future trends in agricultural yields (due in particular to climate change);
- some agricultural land will be lost as a result of urbanization or other factors;
- areas that are unused or that can reasonably be converted into agricultural land are relatively limited (land not covered by forests, excluding protected areas, etc., estimated by the FAO at 500 million hectares);
- expansion of agricultural land is now the main cause of deforestation.

Against this backdrop, any shift from agricultural land use to energy use tends, at the global level, to indirectly result in an expansion of agricultural land and thus a process of deforestation. Yet, combating deforestation and forest degradation should be a global priority in the context of combating climate change, and also because of the crucial role of forests in ecological balance of varied kinds. Several scenarios must be distinguished, as shown below.

85. Ademe. *Analyses de Cycles de Vie appliquées aux biocarburants de première génération consommés en France*. Final report, 2010. Moreover, the figures indicated correspond to calculations made using the avoided burden approach.

86. ECOFYS, IIASA, E4Tech. *The land use change impact on biofuels consumed in the EU – Quantification of area and greenhouse gas impacts*. Study produced by the European Commission, August 2015.

87. Beet ethanol production, on the other hand, would result in lower emissions than gasoline.

88. Laborde David. *Assessing the Land Use Change Consequences of European Biofuel Policies*. ATLASS Consortium, October 2011.

- Palm oil imports have direct and indirect effects in terms of deforestation, particularly in Malaysia and Indonesia.
- Rapeseed and sunflower oil are special cases:
  –When use for agrofuel production replaces food use, it indirectly results in an increase in the cultivation of palm or annual oilseed crops in other parts of the world.
  – When rapeseed and sunflower crops replace cereal crops, there is a problem of displacement of this type of crop.
- As for wheat or beet crops grown for ethanol production, there is a similar situation of food crop displacement.
- And for methane produced from maize cultivation or from grasslands, there is a displacement effect on forage surfaces.

2. THE EFFECTS IN THE SOUTH

Peasant agriculture, often one of the poorest and most vulnerable sectors in the Southern countries, is also one of the sectors most directly affected and threatened by climate change.[89] The effects vary depending on the region under consideration, the climatic hazards, the more or less significant exposure of peasant agriculture to these hazards, and its more or less significant vulnerability. Overall, these changes manifest themselves by:

- An increase in the random nature of climate parameters. We know that there are variations from one year to another in precipitation level, the beginning and end of rainy seasons, and temperatures. Climate change can increase this randomness, leading to greater unpredictability for peasant farming.
- A growth in the frequency and intensity of extreme events and accidents. These include droughts, heavy and/or violent precipitation and cyclones, as well as extreme and/or prolonged heat or cold waves.
- Changes in average climate conditions. These can lead to changes in water availability (average level of rivers and groundwater) and in the characteristics of flora, fauna, and micro-organism populations. In addition, coastal regions must deal with the gradual rise in sea level, which is linked to more global phenomena.

> "Peasant agriculture in the Southern countries is one of the sectors most directly affected and threatened by climate change."

The effects of climate change on peasant agriculture in Southern countries

Climate change has a direct impact on the production of peasant agriculture (lower crop yields, diminished availability and quality of fodder, less productive herds due to this decline and, and water stress and stress related to excessive temperature). It likewise directly affects the production capital of farms (loss of land due to rising sea levels; destruction of infrastructure, plantations, animals, and soils).

Climate change also has indirect effects on peasant agriculture in developing countries, in terms of both economic results and production capital. For example, the number and physiological state of animals, soils, and trees can decline due to a change in production conditions (from a decrease in surface or groundwater reserves, loss of forest cover, loss of biodiversity, development of new parasites and expansion of their dissemination areas, or degradation of soil fertility). Further, soil fertility may be reduced due to lower biomass production due to drought or excessive temperatures, overgrazing due to lower biomass production, erosion, coarse constituents, and salinization in coastal or delta areas. In addition, the lower soil cover furthers desertification and soil degradation through water and wind erosion, and thus soil fertility.

In turn, deterioration in production, income, and capital can result in other types of indirect effects that amplify the insecurity and vulnerability of families: decline in families' ability to maintain food stocks and savings (livestock or currency, etc.) that can be mobilized in the event of unforeseen events (climate shock, market accident, illness of a family member, etc.), and a degradation in food and nutritional security (loss of nutrients due to strong heat, etc.).

Moreover, the modification of production conditions and the increase in the insecurity of families can generate tensions and conflicts with regard to the management of scarce resources (land, water) and, more generally, a breakdown of traditional collective strategies and solidarity. Climate change can also be a factor in the development of diseases, such as malaria.
Africa seems to be one of the continents most vulnerable to climate change, as much due to the current climate and the forecasts for climate change, as to its relatively low capacity to adapt to these changes.

89. Levard, Laurent. *Which Public Policies to Promote Adaptation of Family Farming to Climate Changes?*. Report by the C2A of Coordination Sud, October 2017.

THE OTHER EFFECTS OF AGROFUELS ON PEASANT AGRICULTURE IN THE SOUTH

We have pointed out that the increase in the use of agrofuels is detrimental to peasant agriculture because of their impact on global warming and deforestation (including for agrofuels from EU agricultural production due to indirect effects). However, this growth has additional negative consequences for peasant agriculture in the Southern countries. For example:

- Agricultural commodity prices become more volatile. The price of agricultural products with a possible energy purpose tends to be aligned to world-market oil prices, which are highly volatile.
- There is also a problem of land grabbing.

Generally speaking, the expansion of agricultural land around the world often results in land grabbing, including both land used for agriculture by peasant populations and land that performs other economic functions for rural communities (hunting, fishing, timber reserves, temporary grazing, etc.). Such phenomena are then accompanied by expulsion and sometimes criminalization of populations. The example of soy in South America, described in Part 2 of this report, is an emblematic example. But this type of situation also concerns other agricultural production in various regions of the world.

3. THE CAP IN QUESTION

As we describe below, the trends in the EU agricultural and food system leading to its current high carbon footprint cannot be blamed solely on the CAP, but **its own contribution can be assessed at two levels:**

- The CAP does not have tools making it possible to give guidance to the geographical location of the different types of production. This leads to the following situations:
  – On the one hand, there is geographical separation of livestock and crop production activities, resulting from specialization on the basis of comparative advantages. This separation means on the one hand that the production of concentrated fodder (cereals, meal, protein crops) is carried out far from livestock production, and on the other that organic fertilizers (animal manure) are produced far from crops requiring soil conditioners.
  – Likewise, the areas of agricultural production are far from the places of consumption. The few policies (e.g. milk quotas) that could contribute to such an orientation have been abandoned.
- The policy of decoupled aid per hectare without any real conditionalities in terms of agricultural practices or of diversity of production within production systems and without aid ceilings has encouraged the following:
  – firstly, geographical specialization of production according comparative advantages;
  – secondly, expansion of intensive agriculture models with a high carbon footprint.

Other EU or national policies have therefore also contributed to these developments. These include:

- Market liberalization policies combined with the absence of mechanisms for the taxation or prohibition of certain products on the basis of their carbon footprint and the environmental impacts related to how they were produced. This situation has enabled large-scale growth of both soy imports and long-distance road transport of fruit and vegetables.
- Competition policies that do not formally allow public procurement to be prioritized on the basis of the location of production sites.
- Priority given to road transport over rail transport.

CAP AND AGROFUELS

The CAP is not a core aspect of EU policy on agrofuels; however, its effect on the development of agrofuels sectors is not neutral.
Before addressing the issue of the CAP itself, it is important to bring up the incoherence of EU agrofuel policy. After long asserting that agrofuels were a renewable energy that had to be supported, the EU continues to assert the same and to set an incorporation target for first-generation agrofuels, while now setting a ceiling on the level of their incorporation. In short, the EU acknowledges that agrofuels are not the solution to the energy issue, but on the contrary a problem!
As far as the CAP itself is concerned, aid for non-food use of arable land contributed to the implementation of the rapeseed ester production chain in the 1990s. Today, the existence of decoupled payments, which as such are independent of the crops grown, contributes to the profitability of energy crops for farmers.

4. RECOMMENDATIONS

Various models of agricultural and food systems carried out at the French or EU levels show the potential for a significant reduction in GHG emissions from agriculture, particularly through an agro-ecological transition for these systems. In France, Solagro's Afterres scenario provides for a 54% reduction in GHG emissions from agriculture between 2010 and 2050.[90] At the EU level, the scenario developed by IDDRI and AScA shows a 40% reduction in agricultural emissions.[91]

The analysis of the food system's contributions to global warming clearly indicates that public policies should focus on the following goals:

- Reduce consumption of animal products and especially products from production systems not likely to evolve toward grassland systems, i.e. those structurally dependent on cereal crop areas and protein-rich materials (pig and poultry farms).
- Encourage an agricultural transition toward agro-ecological production methods with low net GHG emissions (systems self-sufficient in nitrogen and fodder, grassland and agroforestry systems, low-energy consumption systems, improved animal waste management).[92]
- Encourage the consumption of products that do not have to be transported over long distances (especially by road and air transport).
- Relocate production as close as possible to where the products are consumed or used (including relocating fodder production near livestock farms and relocating livestock production to cereal regions).
- Prohibit the use of products that have a direct or indirect impact in terms of deforestation.
- Develop modes of transport with a low-carbon footprint (rail transport).

The scenarios mentioned above generally reflect these orientations. From them, specific recommendations for public policy can be made. **With regard to the CAP, the current mechanism of decoupled aid per hectare** should be **replaced by financial transfers that directly meet these objectives**. At the same time, other environmental objectives as well as economic, social, public health, and land-use planning objectives should be integrated into the CAP. To achieve this, it would be useful to identify, in each region, the types of agro-ecological production systems with low GHG footprints as well as the transitions from current systems required. When determining the criteria for identifying these systems, five aspects should be taken into account, in particular from the point of view of combating climate change:

- **Diversification of agricultural activities** according to consumption needs in the territories concerned (relocation of production). The objective here is to lower the transport costs for agricultural products.
- **Farm self-sufficiency:**
  – **nitrogen self-sufficiency**, in order to eliminate the use of synthetic nitrogen fertilizers for crop fertilization, in particular through the use of legumes;
  – **self-sufficiency in fodder** and especially in **protein fodder**, in order to 1) replace soy with protein sources that emit less GHG, 2) reduce the costs of transporting livestock feed, and, 3) contribute to nitrogen self-sufficiency;
- Priority to **grassland and agroforestry forage**, in order to reduce the use of dedicated forage crops and promote carbon sequestration in the soil;
- **Reduction of energy expenditures**;
- **Improved management of animal manure**.

90. Couturier, Christian; M. Charru; S. Doublet; P. Pointereau. *Le scénario Afterres 2050*. Association Solagro [2016 version].

91. Poux, Xavier and P.-M. Aubert. *Une Europe agroécologique en 2050 : une agriculture multifonctionnelle pour une alimentation saine – Enseignements d'une modélisation du système alimentaire européen*. Iddri-AScA, 2018.

92. In this context, the question of closing the nitrogen cycle at the farm or local level would seem to be essential.

ADDITIONAL MEASURES

In addition to the measures concerning the CAP,

- **Promote a food policy** based on awareness-raising and guidance for consumers, institutions, and businesses, as well as on the establishment of more demanding standards aimed at:
  - **reducing consumption of products of animal origin**, and especially those stemming from production systems not likely to evolve toward grassland systems, i.e. those structurally dependent on cereal crop areas and protein-rich materials (pig and poultry farms).
  - **reducing over-packaging and waste**;
  - encouraging the consumption of seasonal products.
- **Strengthen environmental regulations** in particular with regard to the use of synthetic fertilizers and the size of livestock farms.
- **Tax soy imports** in order to end the availability of low-cost soy purchased on the world market and whose use is greatly responsible for the expansion and strengthening of the intensive livestock model based on maize silage, cereals, and soy meal. The increase in the price of feed protein (which depends on the price of soy) would also encourage EU production of high-protein fodder such as protein crops. The **EU meat market should also be protected** so that farmers can pass on the increase in production costs to product prices without being threatened by low-priced imports.
- **The Mercosur free trade agreement should not be ratified**. This agreement would involve, among other things, an additional legal commitment in contradiction with the taxation of soy imports, and it would lead to increased competition from low-priced meat imports.
- **Give priority to rail transport** at the expense of road transport.
- **Put an end to policies that support first-generation agrofuels and methanization from dedicated crops**.

"Our agricultural model would not be what it is today if there were not also an industrial food model behind it."
"Priority must be given to working on the CAP to provide much more ambitious environmental conditions than have been achieved so far."
"If we want to change our production system, we'll have to change what we eat. What we eat [...] will have to include less meat; be less processed; be made of more fruits, vegetables, and leguminous plants; [...] more whole-grain cereals; and be more seasonal, with less packaging."

Cyrielle Denhartigh (Climate Action Network), seminar on April 11, 2019.

Paul Grecaud © 123RF.COM

4.

OVERALL CONCLUSIONS AND RECOMMENDATIONS

1. Conclusions
2. Recommendations

1. CONCLUSIONS

In this study we have analyzed three types of effects and impacts of the CAP on peasant agriculture in Southern countries. These effects and impacts are:

- exports to the markets of these countries of agricultural and food products whose production has benefited from CAP subsidies;
- imports of soy from Latin American countries for animal feed;
- the EU agricultural and food model in terms of GHG emissions.

Analysis of the three themes shows that the CAP has a number of negative impacts on the economic and social development of peasant agriculture in the Southern countries. There is thus a real contradiction between the CAP and the objective of ensuring coherence between EU policies and development and respect for human rights.

“There is thus a real contradiction between the CAP and the objective of ensuring coherence between EU policies and development and respect for human rights.”

The consequences of the CAP on peasant agriculture in the Southern countries are indirect in nature. This is because the CAP greatly affects the EU agricultural and food system, which in turn has a negative impact on peasant agriculture in the South. Moreover, the CAP is not the only cause for these negative impacts. It is in fact the combination of the CAP and other EU and national policies that is responsible for the trends in the EU agricultural and food system and that generates negative impacts on peasant agriculture in the South. These other policies include those regarding trade, energy, environment, food, transport, competition laws, and development cooperation.

Given the roles that these different policies play, it is not possible to quantify the share of responsibility of each one in the effects and impacts highlighted here. On the other hand, it is possible to clearly identify the **specific CAP tools** that **influence the transformations of agriculture and that thus contribute to these effects and impacts**. These include the **mechanism of decoupled support** for agricultural production. This mechanism absorbs most of the CAP budget and does not by definition include specific objectives aimed at, among others, avoiding the negative effects and impacts of the agricultural and food model on peasant agriculture in the Southern countries. Moreover, the environmental conditions for allocating such aid are not very demanding, thereby encouraging 1) an acceleration in the development of intensive livestock farming, 2) a growing split between plant and animal production activities, and 3) the expansion of energy crops. Yet much of the negative effects and impacts are linked to these trends. Meanwhile, the rare coupled support (i.e. aid designed with particular objectives in mind) and the various aids coming under the second pillar of the CAP are neither adequately targeted nor ambitious enough to significantly counterbalance the decoupled support under the first pillar. Furthermore, the **mechanisms for regulating agricultural markets**, which made it possible to limit surpluses and maintain prices at a certain level, particularly in the case of milk, have been abandoned. And the current safety nets intervene only exceptionally, in extreme crisis situations. The giving up of these mechanisms tends to increase the EU's capacity to export agricultural products at low prices to markets in the South.

With regard to other policies that contribute to these negative effects and impacts, particular mention should be made of the **EU's trade policy** and especially the access to the EU market for soy and palm oil (this latter being used among other things for manufacturing a blended powder of skimmed milk and palm oil that acts as a milk substitute), with among other things no customs duty for soy and without any social or environmental conditionalities. At the same time, the European Commission is encouraging manufacturers to export this milk powder substitute in the form of a powdered blend of skimmed milk and vegetable fat. Furthermore, the pressure exerted by

the EU for the signing of the Economic Partnership Agreements (EPAs) contributes to the abolition of customs duties in the Southern countries concerned, and consequently to increased competition with imports of agricultural and food products from the EU in the markets of the Southern countries. In addition, the EU has always refused to allow the Southern countries to introduce, within the framework of these agreements, import taxes to offset the dumping practiced by the EU (thanks to CAP subsidies given for the production of these products).

As far as **energy policy** is concerned, it favors the production of agrofuels, which have an overall negative carbon footprint when we take into account their indirect effects on land use. **Environmental policy** has not prevented either the increasing use of synthetic nitrogen fertilizers or the growth in intensive livestock farming and factory farms. These outcomes have thus contributed to intensifying the carbon footprint of the agricultural system. **Transport policy** has resulted in the development of road transport of agricultural products and inputs at the expense of rail transport, thus contributing to increasing the carbon footprint of the EU agricultural and food system. **Food policies** hardly take into account the impacts of the food system on global warming. **EU competition law** severely limits the possibilities of giving priority to local purchasing in public tenders. In this way, it hinders both relocation of production as close as possible to where consumption takes place and reduction in GHG emissions linked to product transport. **EU development cooperation policy** does not support the policies of the Southern countries to protect their agricultural markets.

2. RECOMMENDATIONS

The aim of these recommendations for EU and national policies is to promote the development of an EU agricultural and food system that would meet **three objectives**:
- put an **end to dumping** on the markets of the Southern countries;
- **gradually reduce and then eliminate soy imports**;
- **drastically reduce the carbon footprint** of the EU agricultural and food system (the Afterres scenario provides for a 50% reduction by 2050).

It should be noted that some of the recommendations presented below may also contribute to other political, economic, social, environmental and public-health objectives. Moreover, these recommendations **specifically** address the **objective of the CAP's coherence with development objectives and human rights** and ensue from the analysis of the effects and impacts of the CAP on peasant agriculture in the Southern countries. However, they do not exclude other recommendations (such as those made by the "Platform for another CAP") that meet other objectives.

Coordination SUD's first recommendation regarding the CAP is to **replace the current decoupled support mechanism with targeted subsidies based on agro-ecological transition objectives for agriculture**. This recommendation chiefly corresponds to the objectives of reducing and eliminating soy imports and reducing carbon footprint, but its implementation would also help reduce agricultural surpluses. This transition, the precise form of which must be determined for each local area and each type of farm, implies diversification and relocation of production; closer links between animal and plant production; fodder, protein, and nitrogen self-sufficiency of farms or local areas; development of grassland fodder at the expense of other types of food; de-intensification of livestock systems; an overall decrease in animal production (especially of ruminants); reduction of energy consumption; and improved animal waste management. Such a transition also implies changes in national policies, particularly in agricultural

research, advice, and education. In addition, some of the public transfers could pay for environmental services provided by farmers beyond the transition phase toward ecological systems, to help make these systems attractive and profitable.

The second recommendation is the **establishment of mechanisms to regulate agricultural markets** in order to avoid, in particular in the case of milk, the production of surpluses and drops in prices (i.e. objective of eliminating dumping practices), which are moreover harmful both to European producers and to producers in Southern countries.

ADDITIONAL MEASURES

In addition to the recommendations concerning the CAP, other recommendations concern **various other policies:**

- Through a renewed **trade policy**, the EU should:
  – Include a tax on exports of agricultural products that is equal to the subsidy amount collected for the production of such products. The public revenues obtained from the proceeds of this anti-dumping export tax could be reallocated to support the Southern countries in developing their domestic markets (i.e. objective of eliminating dumping practices).
  – Tax soy imports and ban GMO soy imports (i.e. objective of reducing and then eliminating soy imports). Taxation of soy imports would result in an increase in the price of feed protein on the EU market. This increase would be a lever to promote the EU's independence from soy imports. More generally, it would encourage the transition of EU livestock farming toward predominantly grassland systems, to the detriment of systems based on intensive consumption of protein-rich materials and cereals (including silage maize).
  – Prohibit palm oil imports (i.e. objective of end to the practice of substituting milk powder with low-cost palm oil-based substitutes, and thus of abandoning dumping practices on external markets, and the objective of reducing carbon footprint).
  – Stop exerting pressure on the Southern countries to sign free trade agreements (i.e. development objectives that go beyond the elimination of dumping practices, as seen below regarding development cooperation policy).
  – Put an end to the policy of engaging in free trade agreements all over the place (and in particular not ratifying the Mercosur free trade agreement), as they create additional legal constraints to the objectives of combating the carbon footprint of soy and eliminating soy imports.
- **Energy policy** should put an end to support for the production of first-generation agrofuels and crops specifically dedicated to methanization (i.e., objective of reducing carbon footprint).
- **Environmental regulations** should contribute to reducing synthetic nitrogen fertilizers and to decreasing the size of livestock farms (objectives of reducing carbon footprint and eliminating soy imports).
- **Transport policy** should give priority to rail transport at the expense of road transport (objective of reducing carbon footprint).
- **Food policies** should promote reduction in two areas. First, reduction in consumption of products of animal origin—and as a priority those from farm systems not likely to evolve toward grassland systems, i.e. those structurally dependent on cereal crop areas and protein-rich materials (pig and poultry farms). Second, reduction in over-packaging and waste (i.e. objective of reducing carbon footprint and, in terms of reducing the consumption of products of animal origin, the objective of eliminating soy imports).

- **EU competition law** should allow public calls for tenders to take into account criteria concerning the location of production (i.e. objective of reducing carbon footprint).
- **Development cooperation policy** should offer support to Southern countries wishing to protect and develop their national and regional agricultural markets, in particular by using revenues from an anti-dumping export tax (i.e. an objective of supporting food independence in the South that goes beyond elimination of dumping on foreign markets). It should also offer support to countries wishing to move away from agricultural models based on single-crop exports such as soy and palm, etc. (objective of reducing carbon footprint and dependence on these crops).
- Within the framework of the cross-cutting objective of policy coherence with development, an effective **complaints mechanism** should be established. Through it, EU delegations in the various countries would be responsible for receiving complaints from the agricultural communities affected by negative impacts linked to EU agricultural and trade policies. Such a mechanism would also contribute to the implementation of the Declaration on the Rights of Peasants and Other People Working in Rural Areas, adopted by the UN Human Rights Council in 2018.

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