



# EUROPE EATS THE WORLD

HOW THE EU'S FOOD PRODUCTION AND  
CONSUMPTION IMPACT THE PLANET

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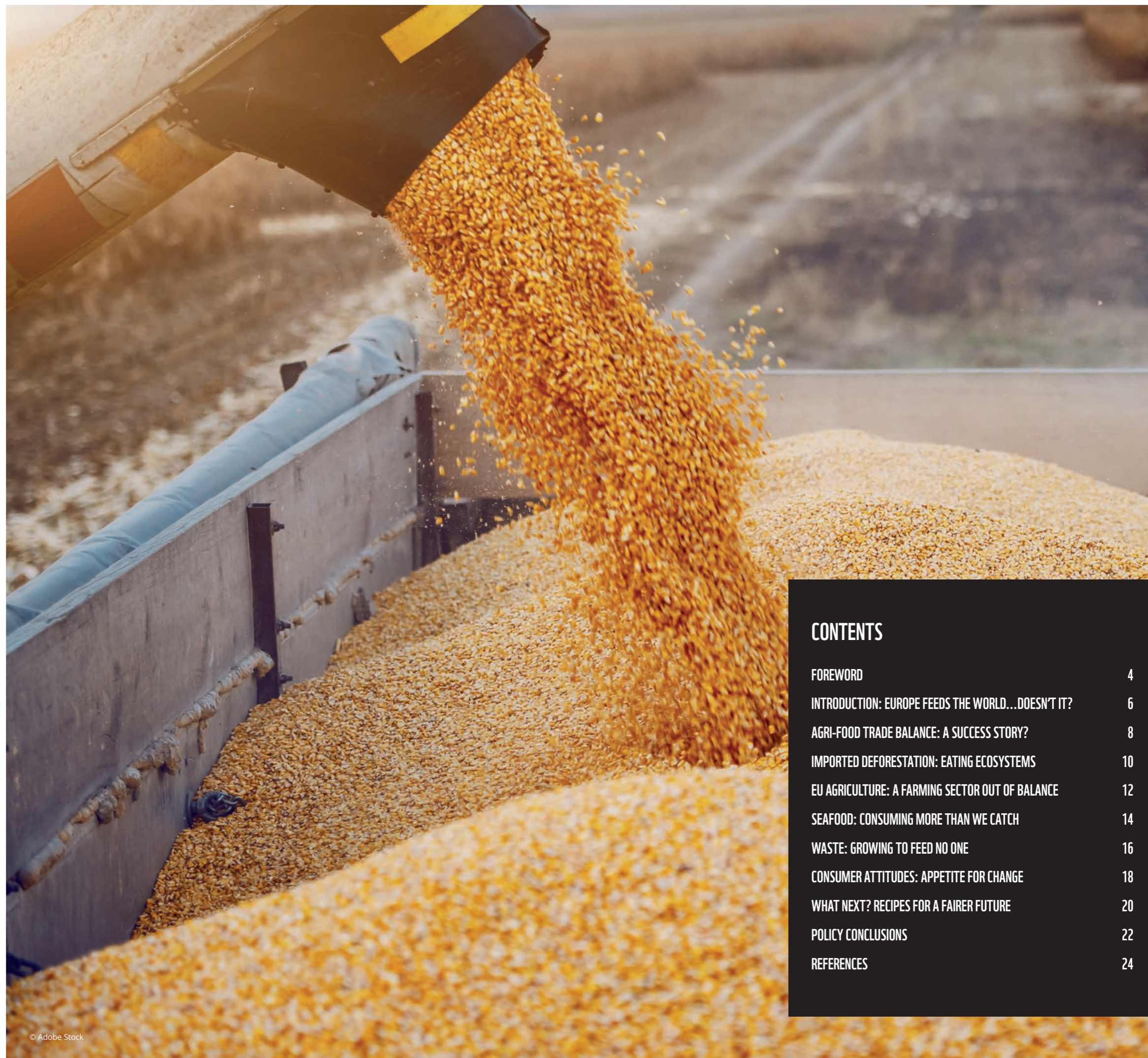
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# FOREWORD



ESTER ASIN  
DIRECTOR  
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Much has changed in the world of food and agriculture since we began writing this report – yet its messages are now more relevant than ever.

In addition to creating a catastrophic humanitarian crisis, the war in Ukraine has sent shockwaves through the global food system, leading to rising food prices and shortages of key agricultural inputs. Ukraine is one of the world’s most important food exporters, particularly of staple foods like grain crops, and a major supplier of food aid through the World Food Programme. Russia, too, is an exporter of grains, as well as fertilisers and whitefish.

In response to these shortages, some have suggested that the EU needs to water down its environmental standards in order to increase its own production and stay true to its mission of “feeding the world”. But this kind of rhetoric is flawed and misleading.

In fact, as the research compiled in this report clearly shows, far from feeding the world, the EU imports vastly more calories and protein than it exports and our domestic production is heavily dependent on imports of grains and oil crops, as well as fertilisers (and the gas used to manufacture them). Trying to increase production will likely lead to only higher imports and further environmental degradation at home and abroad.

To strengthen food security, the EU should not focus on producing more, but on producing and consuming differently. We need to curb our excessive consumption of animal products, which depends on feeding vast quantities of imported and domestically produced crops to livestock. This would not only reduce our dependence on imports and our environmental footprint, but also improve human health through more balanced diets.

We also need to tackle the scandal of food waste – including food loss on farms. Some 145 million tonnes of food fails to make it off European farms each year. While efforts to increase outputs on our farms yield only marginal gains, there is vast potential to increase the food supply by rescuing a portion of this wasted production.

Rebalancing our diets and reducing waste – goals which an ever-growing number of European citizens actively support – can prepare the ground for more sustainable farming practices. This includes supporting more diverse, nature-friendly agroecological practices within the EU, and ensuring that EU consumption doesn’t lead to the loss of natural ecosystems overseas.

The importance of transforming our food system is recognised in a wide range of recent EU initiatives, including the Farm to Fork and Biodiversity strategies, and upcoming legislation on deforestation, nature restoration and pesticides. Rather than making us question this transition, the war in Ukraine should serve as a reminder of how vulnerable our current food system is, and how vital it is that we build a resilient, sustainable food system to ensure long-term food security for all.



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# INTRODUCTION



# EUROPE FEEDS THE WORLD... DOESN'T IT?

Evidence shows that, far from feeding the world, Europe consumes more than its fair share

“Europe feeds the world” is a line often heard from agricultural interest groups, and echoed in policy debates and the media. But is it really true?

**Over the last century, global trade has become a major part of our food system.** As a result of geography and population dynamics, as well as inequalities in power relations and agricultural development, some countries struggle to be self-sufficient while others produce a surplus. Trade has enabled many millions of people around the world to enjoy more diverse food choices all year round, and it can improve access to a wider range of nutrients. But the effects of international trade are not always positive.

**In economic terms, the EU is the world’s largest exporter of agri-food products.** However, this simple fact hides some uncomfortable truths. If we measure what actually matters in nutritional terms, the picture changes drastically. When it comes to protein and calories, the EU has a significant trade deficit. Our high levels of food production, consumption and exports are largely dependent on high imports of agricultural inputs such as animal feed or fertilisers. Transforming imported commodities like cocoa into high-value food products like chocolate may make economic sense, but does nothing to contribute to nutritional or food security.

**The EU’s food system has severe environmental and social impacts, at home and abroad.** Over the years, EU consumption has driven the loss of millions of hectares of forests and other natural ecosystems, fuelling climate change, biodiversity loss and social injustices; the EU remains the second-largest importer of products linked to tropical deforestation. It is also the world’s largest seafood importer, importing more than half of what it consumes. Some of this seafood comes from tropical regions where local communities rely on these fish stocks for protein, but are facing declining catches due to overfishing and climate change.

**We produce more animal products than we consume, and we consume more than is good for us.** To sustain this oversized livestock sector, we feed half the grain crops we grow to animals, while our intensive agricultural practices damage biodiversity, soil health, and the climate. Vast quantities of food are also wasted, including on farms – which, contrary to popular belief, is a greater problem in Europe than in low-income countries.

**The good news is that there is an appetite for change.** EU citizens want to eat more sustainable, healthy diets – but are often prevented from doing so because of a lack of accessibility and choice, or are discouraged because of higher prices and unhelpful food marketing.

**On the following pages, we draw on a range of recently published research to show how the EU is eating the world, not feeding it.** We take a closer look at the EU’s trade balance to see what food products we are really importing and exporting; examine the impacts of EU imports on ecosystems overseas; explore the EU’s agricultural production model; take a deep dive into seafood; and highlight the issue of food loss and waste. We shine a light on consumer attitudes and initiatives, and set out some possible ways forward.

**Providing a growing global population with food that is both healthy and environmentally sustainable is one of the great challenges of the 21st century.** Even today, up to 811 million people do not have enough food,<sup>1</sup> and in the next 20 years, our planet will be home to an extra 2 billion people, most of them in lower-income countries. At the same time, the global food system causes around 30% of greenhouse gas emissions, is responsible for 70% of freshwater withdrawals, and is the leading cause of biodiversity loss.<sup>2</sup> All of this undermines our ability to feed ourselves in the future, while food-related social and economic inequalities continue unresolved.

**There is a growing consensus that our food system needs to change if we are to achieve the Sustainable Development Goals, tackle the climate crisis, reverse the catastrophic loss of nature, and build a fairer and healthier future for all.** It is time for the EU to leave behind spurious “feed the world” narratives. The fact is, the EU consumes more than its fair share. We urgently need to address this if we are to build a food system fit for the future.

# AGRI-FOOD TRADE BALANCE: A SUCCESS STORY?

## AN ECONOMIC SURPLUS DISGUISES A NUTRITIONAL DEFICIT

In economic terms, the EU is the world's largest exporter of agri-food products, and the third-largest importer after the US and China. In 2020, the EU exported food and agricultural products worth €184 billion, with imports valued at €122 billion. These values represent about 9% of our total exported goods and 7% of imports – not insignificant, although less important than other product groups such as machinery and vehicles, chemicals and other manufactured goods.<sup>3</sup>

But the claim that Europe “feeds the world” – if it was ever true – no longer holds. Rather, this €62 billion trade surplus reflects a model of importing low-value raw products and exporting high-value ones – making a positive contribution to the EU economy, but not necessarily to the global food supply. We import cocoa and export chocolate, import soy for feed and export dairy products. Rather than the world's granary, the EU is the world's high-end grocery store, selling products aimed primarily at wealthier consumers.

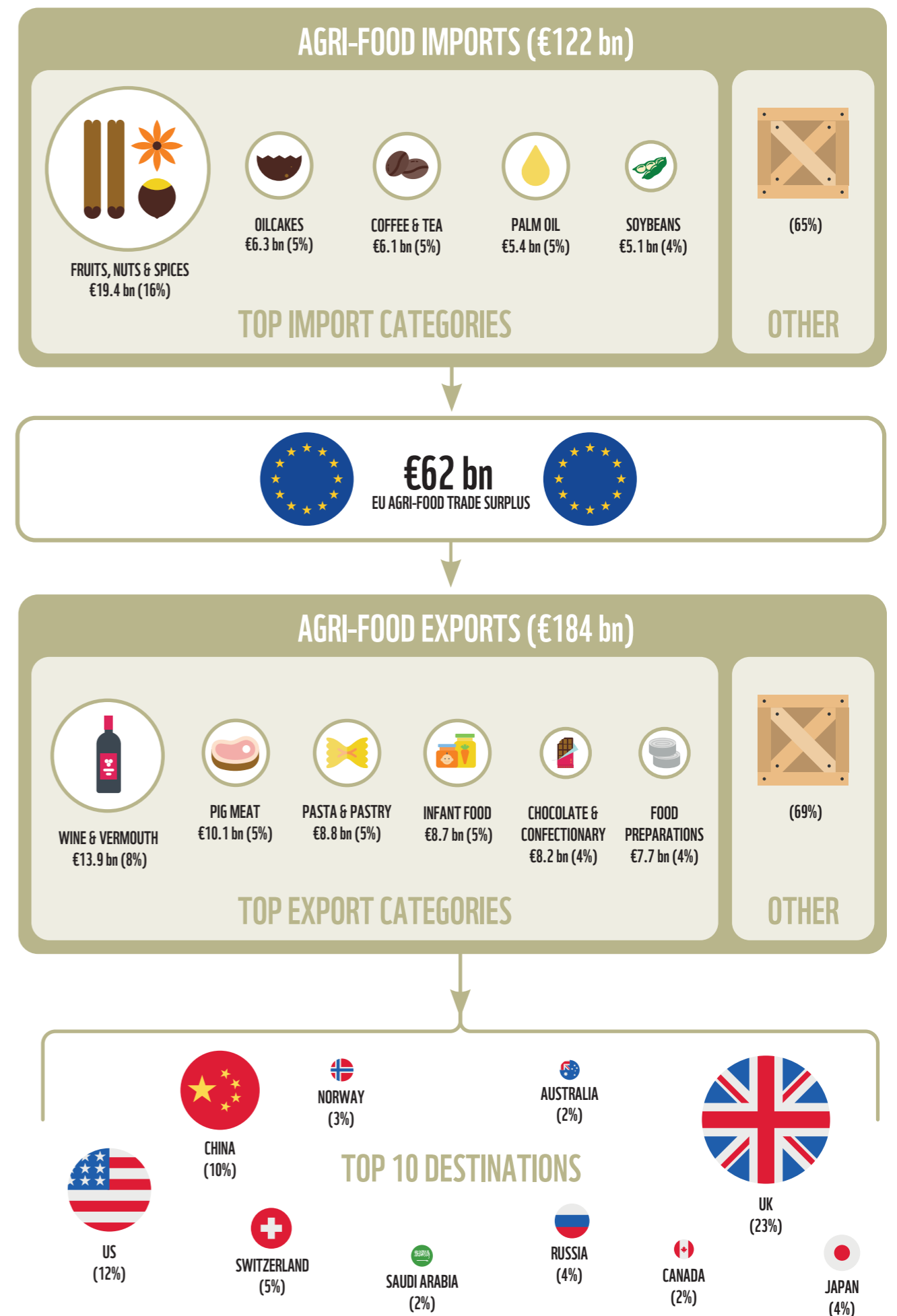
Some of our leading exports do little to contribute to global nutritional security: wine, spirits and liquors, for example, are top-ranking EU exports by value.<sup>4</sup> But even exporting staple foods such as wheat or certain animal products, where the EU also excels, can become a double-edged sword. Selling surplus cereal, chicken and dairy products to developing countries can support their short-term nutritional security, but has also been widely criticised for undercutting domestic producers and undermining the longer-term capacity of these countries to feed themselves.<sup>5,6</sup>

When agri-food trade is measured not in economic terms but according to what actually feeds the world, then our surplus becomes a large deficit. The EU is a net importer of both calories and proteins, relying on imports for the equivalent of 11% of the calories we consume and 26% of proteins.<sup>7</sup>

This is a symptom of the model of food production and consumption that the EU has adopted over recent decades. The high share of animal products, stimulants and processed foods in our diets relies on imports of several commodities. We are highly dependent on imports of oilseed meal – especially soy – to feed to livestock: less than a quarter of our oilseed protein demand is domestically produced. Importing human-edible crops to feed to animals allows the EU to export animal products, but a large share of the calories and proteins are wasted in the process. As the global population grows, we have to question whether this inefficient and inequitable distribution of the world's resources can continue.

Beyond large-scale commodities, other European imports also have complex environmental and social impacts overseas. Growing high-value crops does not necessarily compete with domestic food production, and can increase household incomes<sup>8</sup>, helping overcome poverty. However, production oriented to export markets can affect local food security where communities lose access to land through corporate acquisitions or rising prices. Negative impacts on water supply, soil health, loss of traditional varieties and biodiversity can also undermine local resilience.<sup>9</sup>

Figure 1: EU agri-food trade by value in 2020



Source: Elaborated by WWF based on references<sup>10,11</sup>

# IMPORTED DEFORESTATION: EATING ECOSYSTEMS

## THROUGH ITS AGRI-FOOD IMPORTS, THE EU HAS EXPORTED ITS ENVIRONMENTAL FOOTPRINT

The EU's dependence on imported commodities comes with an oversized environmental footprint. Over the years, EU demand has driven the loss of millions of hectares of forests, savannahs and grasslands, particularly in tropical areas, destroying valuable ecosystems and contributing significantly to climate change and biodiversity loss.

The EU is the second-largest importer of agricultural commodities associated with deforestation after China.<sup>12</sup> Between 2005 and 2017, some 3.5 million hectares of forest were destroyed to produce agricultural commodities for the EU market – an area larger than the Netherlands. This released an estimated 1,807 million tonnes of CO<sub>2</sub>, equivalent to 40% of the EU's annual emissions.

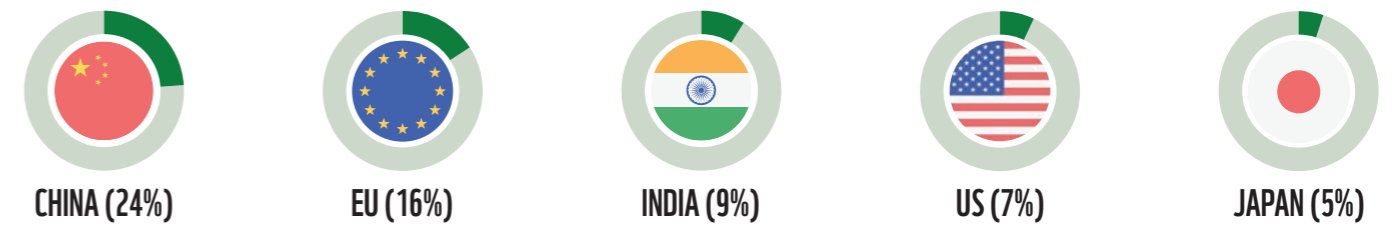
Soy is the imported agricultural commodity that drives the most deforestation. It was responsible for 31% of the tropical deforestation embedded in EU imports between 2005 and 2017 – an average of 89,000 hectares per year. And this does not include the ongoing conversion of other ecosystems such as Brazil's Cerrado, the Gran Chaco in South America and the North American Great Plains – all of which supply soy for the EU market.

The average European consumes 61 kg of soy per year, with 90% of it "hidden" in the consumption of animal products.<sup>13</sup> Most soy is crushed to produce oil, used for food or fuel, and a high-protein meal used for animal feed in intensive farming. In 2020-21, the EU used 25.2 million tonnes of imported soybean meal for feed; domestic production was just 0.9 million tonnes.<sup>14</sup>

Palm oil imports are the next largest driver of deforestation, with EU imports responsible for destroying an average of 69,000 hectares of tropical forest each year between 2005 and 2017. Clearing these biodiverse, carbon-rich rainforests does little to contribute to food production: in 2018, almost two-thirds of imported palm oil, more than 5 million tonnes, were burnt as biofuel.<sup>15</sup>

Deforestation and land conversion have devastating environmental and social impacts. From fuelling climate change and forest fires to driving catastrophic losses in biodiversity, the environmental consequences of deforestation are well documented. Agricultural expansion, including in regions the EU sources from, can also be a threat to the human rights, livelihoods and lives of Indigenous peoples and local communities. The NGO Global Witness has documented a rise in conflicts between local communities and soy and livestock farmers: between 2012 and 2020, at least 151 activists were killed for defending their rights to land and natural resources against the agribusiness sector.<sup>16</sup>

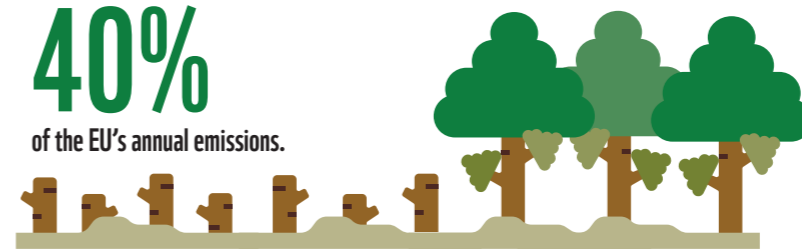
Figure 2: The EU is the second biggest importer of tropical deforestation



Between 2005 and 2017, some 3.5 million hectares of forest were destroyed to produce agricultural commodities for the EU market. This released an estimated 1,807 million tonnes of CO<sub>2</sub>, equivalent to

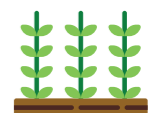
**40%**

of the EU's annual emissions.



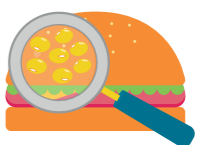
**25.2**

million tonnes of soybean meal imported into the EU to be used for animal feed in 2020-21



**0.9**

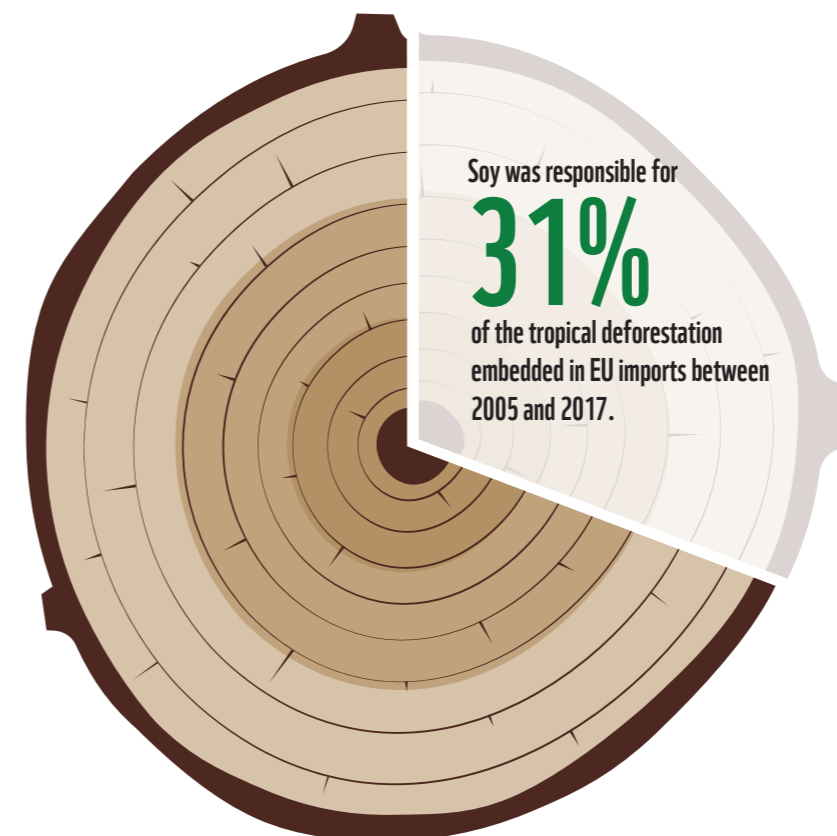
million tonnes of soybean meal produced in the EU in 2020-21



The average European consumes

**61 kg**

of soy per year, with 90% of it "hidden" in the consumption of animal products.



Source: Elaborated by WWF based on references<sup>17, 18, 19, 20</sup>

# EU AGRICULTURE: A FARMING SECTOR OUT OF BALANCE

## HIGH LEVELS OF OUTPUT ARE ACHIEVED THROUGH UNSUSTAINABLE INPUTS, IMPORTS AND WASTEFUL LAND USE

**Industrial agriculture, as currently practised in the EU, is based on an extractive model that erodes the natural resource base it depends on.** Along with its heavy overseas footprint, our farming system has major impacts closer to home – from the loss of biodiversity, including pollinators, to declining soil health, to the impacts of nutrient pollution on aquatic ecosystems.<sup>21</sup> Farming subsidies under the Common Agricultural Policy have historically focused on maximising production in key sectors, including cereals, meat and dairy. This has led to a food system that is out of step with nature and human needs.

**The size of the EU's livestock sector exceeds our dietary needs.** Europeans tend to eat more food, and in particular more animal products, than is healthy for people or the planet.<sup>22</sup> Analysis by the RISE Foundation found that, on average, EU citizens eat more than twice as much meat as recommended by health authorities.<sup>23</sup>

Although national dietary guidelines focus on human health, not planetary needs, they still represent a first step toward more sustainable diets in the EU, mainly due to lower consumption of animal-sourced products. The associated shift to a higher share of fruits, vegetables and legumes in the diet, along with a lower food intake, would bring significant health benefits: in Germany, for example, reducing the share of animal products in diets could cut premature deaths by around 20%.<sup>24</sup>

**Even with current high levels of meat consumption, the EU produces more animal products than we eat.** EU production of pork, dairy, poultry and beef exceeds domestic consumption by 16%, 14%, 8% and 4% respectively<sup>25</sup> – though as we have seen, this level of production depends on importing huge quantities of soy. In total, the EU is less than 80% self-sufficient in plant protein used for feed. But it is not just imported food

that is diverted to animal feed – much of what we grow is fed to livestock too.

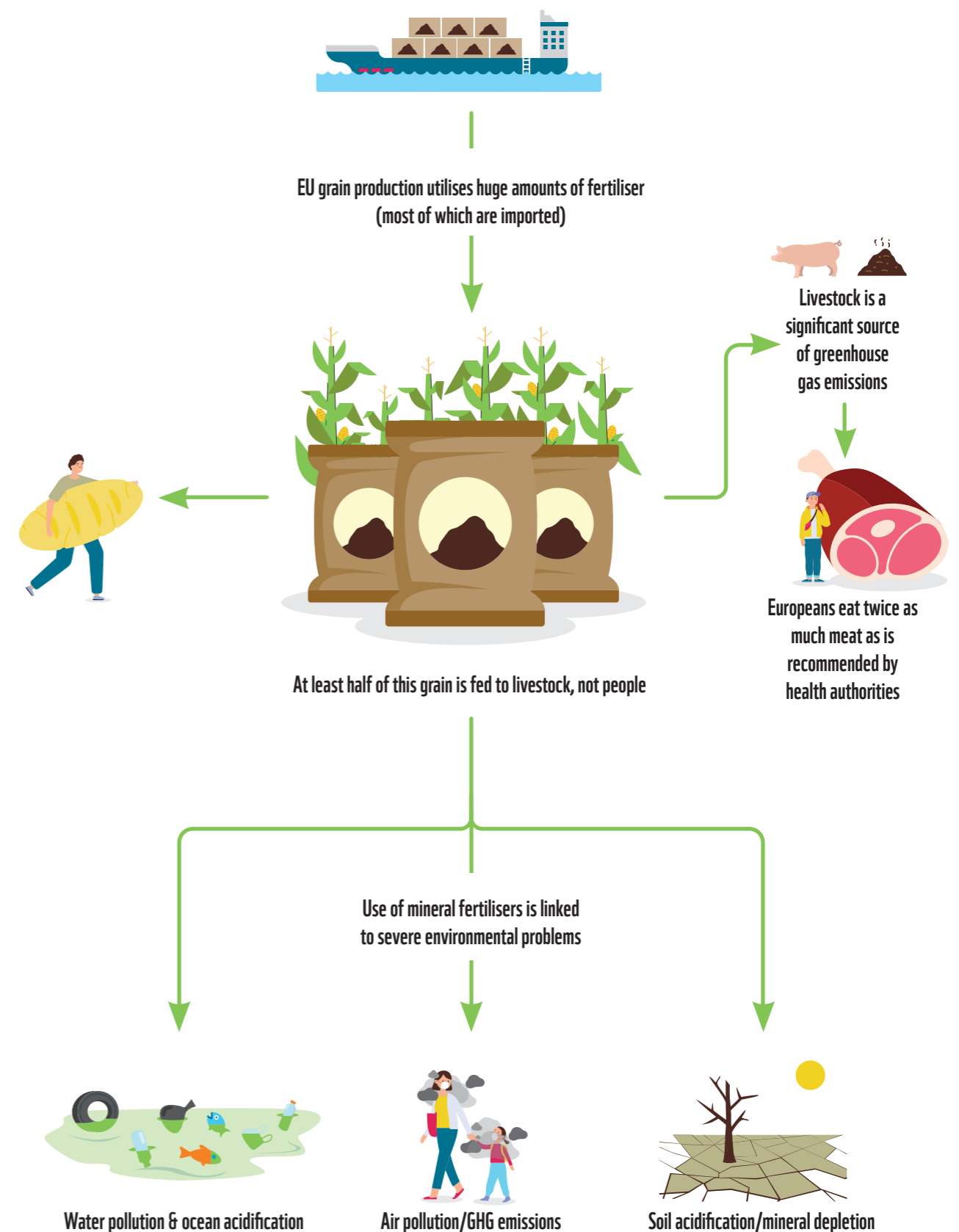
**At least half of EU cereal production is used for animal feed,** according to official statistics.<sup>26</sup> The proportion varies depending on the crop: for example, of the 65 million tonnes of maize produced in the EU in 2020-2021, 50 million tonnes was used for feed. It's a similar story when it comes to pulses and to oilseed crops such as sunflowers and rapeseed, which are used for both feed and oil – most of which is turned into biofuel. Overall, it has been estimated that 63% of the EU's arable land is directly associated with livestock production.<sup>27</sup>

**Domestic production depends on yet another import: fertiliser.** In its drive to maximise yields, the EU farming sector is heavily dependent on mineral fertilisers. Three-quarters, or 134 million out of 179 million hectares, of all agricultural land in the EU is fertilised.<sup>28</sup> Most of this fertiliser is imported, including 85% of potassium and 68% of phosphate, from regions like Western Sahara, Belarus and Russia.

While the EU produces 70% of the nitrogen it uses, the production process depends on yet another major import – natural gas.<sup>29</sup> Recent gas and mineral fertiliser price spikes and shortages have triggered requests for public support from the farming sector, underlining the high dependence of EU agriculture on these critical inputs.

**Imports of feed and fertiliser disrupt nutrient cycles, causing severe pollution problems.** When we import feed crops, we are also importing the nutrients that went into growing them – which become concentrated in areas where livestock are farmed. Excess nitrogen and phosphorus from livestock manure, as well as fertiliser runoff, is a leading threat to aquatic ecosystems and biodiversity adapted to lower nutrient levels.<sup>30</sup>

Figure 3: The EU livestock sector exceeds our dietary needs and has huge environmental implications



Source: Elaborated by WWF based on references<sup>31, 32, 33, 34, 35, 36, 37, 38</sup>

# SEAFOOD: CONSUMING MORE THAN WE CATCH

## THE EU'S DEPENDENCE ON IMPORTS IS PARTICULARLY PRONOUNCED WHEN IT COMES TO SEAFOOD

**Europe imports nearly twice as much seafood as it produces.** In 2019, total fisheries and aquaculture production in the EU amounted to 5.1 million tonnes, while 9.5 million tonnes were imported.<sup>39</sup> The EU is the world's largest seafood market in terms of value. The average EU citizen consumes 24 kg of seafood per year and the EU is the world's largest seafood market in terms of value, but the EU self-sufficiency rate for seafood, which measures Member States' capacity to meet demand with their own production, is only around 41%.<sup>40</sup> This figure has been declining over the last few years, reflecting both reduced production within the EU and, especially, increased imports.

**Europe's seafood consumption has environmental and social impacts worldwide.** More than a third of global fish stocks are exploited beyond sustainable levels.<sup>41</sup> Overfishing is a major threat to marine ecosystems – where vertebrate populations have fallen by half since 1970<sup>42</sup> – and the millions of people who depend on them for their livelihoods and as a primary source of protein.

**Most EU stocks remain overfished,**<sup>43</sup> as is the case in many lower-income regions: in North, North West and West Africa, for example, more than 50% of fish stocks are overexploited, largely by foreign fleets.<sup>44</sup> Human rights abuses, including forced labour and trafficking, are all too common in the fishing sector.<sup>45</sup>

**Climate change will have profound impacts on seafood production both within the EU and in regions it imports from.** As the ocean warms, marine species are shifting to higher latitudes and deeper waters. Climate change is

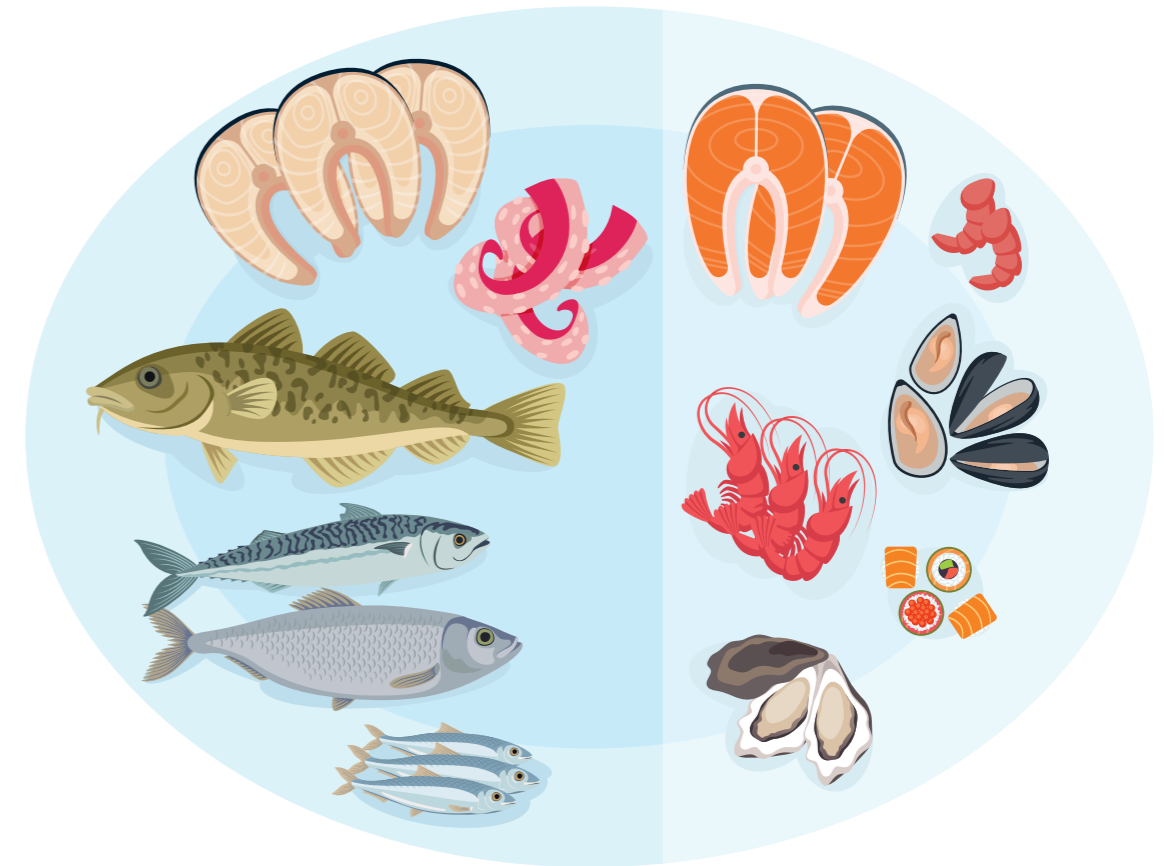
expected to lead to an overall decrease<sup>46</sup> and large-scale redistribution of catch potential:<sup>47</sup> losses could be particularly high in tropical countries that are highly dependent on fish protein, potentially triggering increased migration and conflict over resources. The combination of climate change and unsustainable exploitation levels increases the risk of irreversible fish stock collapses.<sup>48</sup>

**The growing importance of aquaculture also brings sustainability challenges at sea and on land.** In 2019, global seafood production reached a new peak of 214 million tonnes. But production from wild-capture fisheries has remained relatively static since the late 1980s: the continuing growth in seafood consumption has been made possible by aquaculture. Fish farming produced 120 million tonnes of seafood in 2019, compared to 94 million tonnes harvested from the wild.<sup>49</sup>

The EU produced only a little over 1% of the global aquaculture output, at 1.37 million tonnes, although this represents a growth of 11% over the last decade.<sup>50</sup> Aquaculture, however, brings its own sustainability challenges, both at home and abroad, including energy use, pollution, disease outbreaks and, as with livestock farming, the need to produce feed.<sup>51</sup> Alongside fish meal and fish oil from capture fisheries, which can exacerbate problems of overfishing, fish feed now increasingly includes land-based sources such as soybean meal, which may contribute to deforestation habitat conversion and other negative impacts.

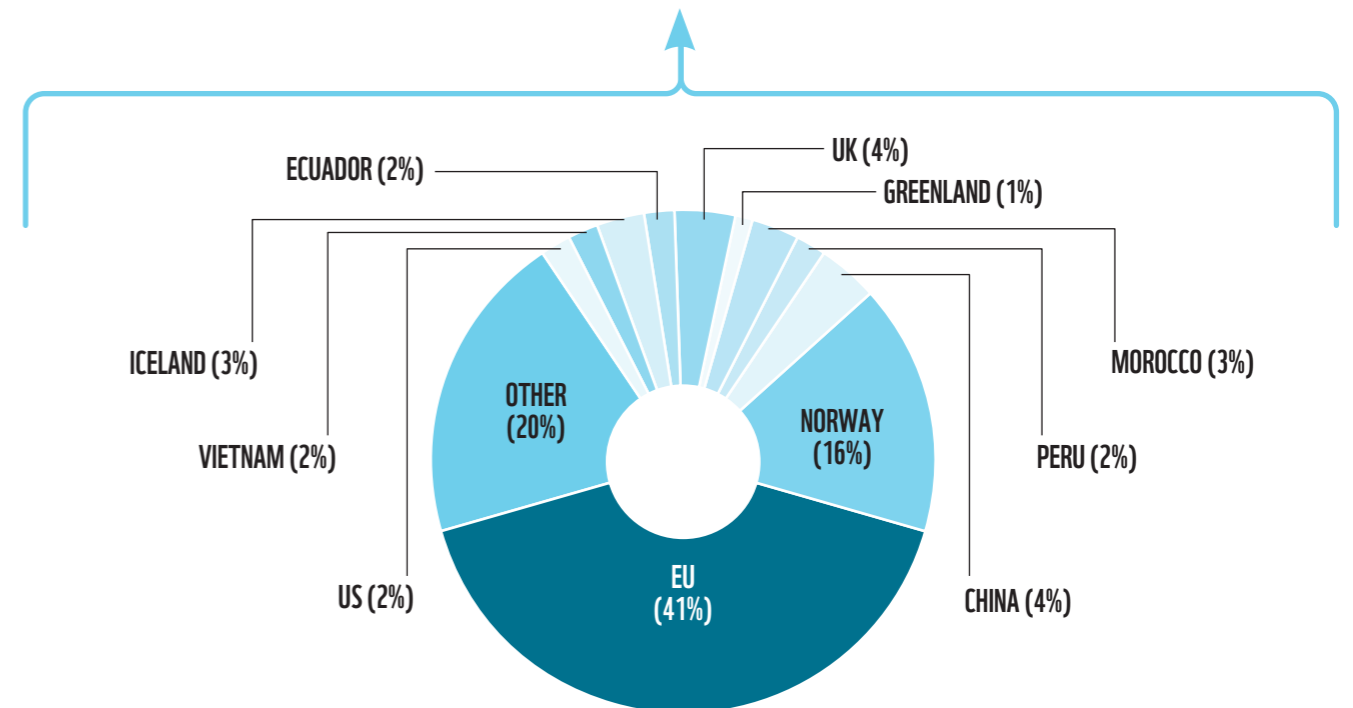
Figure 4: Where does our seafood come from?

THE AVERAGE EU CITIZEN CONSUMES **24 KG** OF SEAFOOD EACH YEAR



**9.41 MILLION TONNES**  
FROM WILD CAPTURE FISHERIES, 10% OF THE GLOBAL TOTAL

**2.89 MILLION TONNES**  
FROM AQUACULTURE, 2.4% OF THE GLOBAL TOTAL



Source: Elaborated by WWF based on references<sup>52, 53, 54, 55</sup>



# WASTE: GROWING FOOD TO FEED NO ONE

## EUROPE WASTES SCANDALOUS QUANTITIES OF FOOD – EVEN BEFORE IT’S HARVESTED

**The EU wastes tens of millions of tonnes of food every year.** Up to 40% of all food produced worldwide is never eaten.<sup>56</sup> UNEP’s Food Waste Index suggests that, globally, 931 million tonnes of food is thrown away by consumers, retailers and the food service industry each year. This wasted food is responsible for 8-10% of global greenhouse emissions.<sup>57</sup> At the EU level, the best estimates indicate that some 88 million tonnes of food is wasted annually<sup>58</sup> – which is equivalent to 173 kg of food per person, every year.

**Food waste on farms is an underestimated problem.** While there is a growing drive to address food waste at the retail and consumer level, food loss on farms is often overlooked. Yet recent research by WWF shows that food waste at the farm level is an even greater problem. An estimated 1.2 billion tonnes of food intended for human consumption is lost during or shortly after harvest each year – that equates to about 15% of total food production.<sup>59</sup>

**Contrary to popular belief, most farm-stage food loss happens in industrialised regions.** Europe, North America, China, Japan and Korea are responsible for 58% of all food wasted on farms, despite having just 37% of the global population and enjoying higher rates of mechanisation, better infrastructure and more advanced agronomic practices.

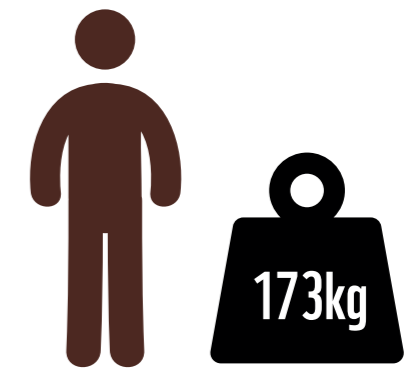
Some drivers of food loss, such as extreme weather, are hard to control. But others arise from structural problems within the food system, such as agricultural overproduction, market demand and contractual arrangements. Farm-stage waste may occur because produce does not meet retailers’ specifications, because farmers lack the capital to invest in new equipment or techniques, or because low prices and cancelled orders mean it is not even economically viable to harvest the crop.<sup>60</sup>

**Waste is also a major issue in the seafood industry.** Along with food waste further down the value chain and in the processing of fish products, vast quantities of seafood are wasted through discards and bycatch of unwanted species in fisheries. Globally, an estimated 9.1 million tonnes of fish catch is discarded at sea each year.<sup>61</sup> Fish may be discarded because they are too small, have little market value, or fall outside quotas or licence agreements. The EU landing obligation, fully in force since 2019 after a phasing-in period from 2015, attempts to eliminate this waste by making fishers land all the fish they catch. However, implementation and enforcement remain challenging; a first study, released in 2021, concluded that significant unreported discarding still occurs.<sup>62</sup>

**1.2 BILLION TONNES**  
OF FOOD IS LOST DURING OR SHORTLY AFTER HARVEST EACH YEAR



of all food produced worldwide is never eaten.



In the EU, **173 kg** of food per person is lost every year.

Figure 5: The main causes of food waste on farm



Source: Elaborated by WWF based on references<sup>63, 64, 65</sup>

# CONSUMER ATTITUDES: APPETITE FOR CHANGE

## EUROPEAN CITIZENS WANT A MORE SUSTAINABLE FOOD SYSTEM

**Europeans want to eat more sustainably, but face barriers in doing so.** In a survey of more than 11,000 adults in nine European countries by the WWF-led initiative Eat4Change,<sup>66</sup> three out of five people (61%) said they tried to choose foods that are less damaging to the environment, but only 46% are confident in doing so.<sup>67</sup> Most find sustainable options are usually more expensive, unavailable, unappealing or unclearly labelled. A recent report by the World Health Organization confirms the influence food marketing has on consumer choice, frequently contributing to unhealthy diets.<sup>68</sup>

These results are supported by another survey by the European Consumer Organisation, which found that most consumers across Europe are willing to change their eating habits but need sustainable food choices to become easier.<sup>69</sup> Two out of five people surveyed said they had reduced their red meat consumption for environmental reasons, although a third would not be prepared to do so.

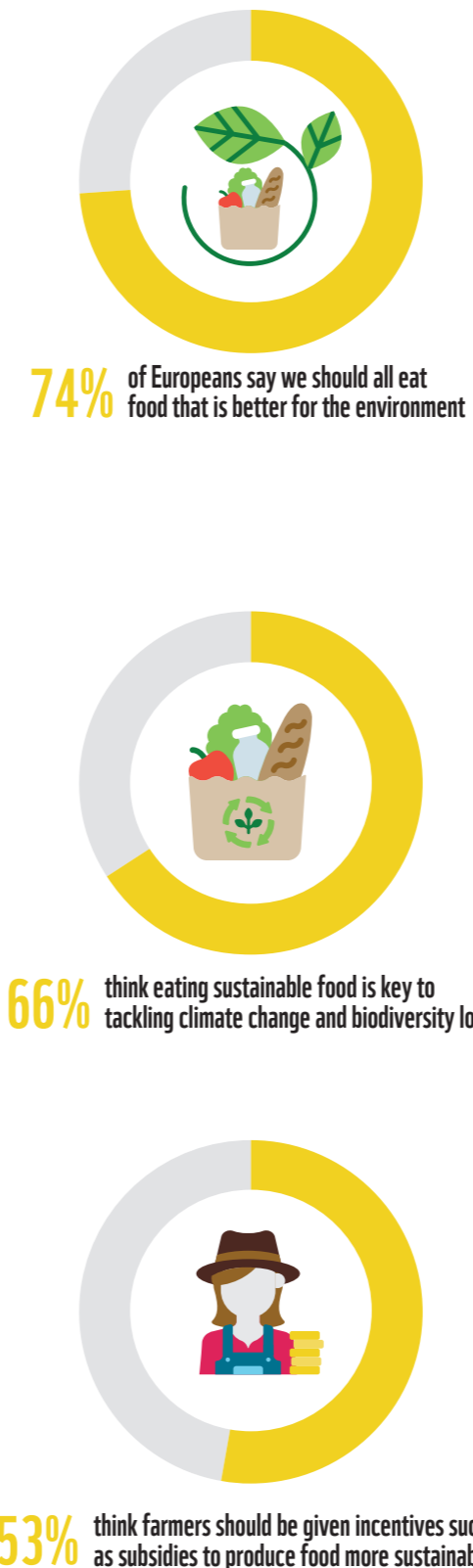
**Europeans want deforestation off the EU market, and do not want to be complicit in the destruction of nature.** In the same Eat4Change survey, three-quarters of respondents (73%) thought EU legislation should ensure that all products sold in the EU are sustainable and do not lead to biodiversity loss.<sup>70</sup> They want the EU to step up its commitment to protecting forests and other ecosystems and set its own criteria for food imports. Half of European adults think national governments and manufacturers should be responsible for reducing the environmental impact of food production.

**The market for plant-based foods is growing rapidly.** The EU's plant-based food industry grew by 49% between 2018 and 2020, with total sales reaching €3.6 billion. In Germany, sales of plant-based meat substitutes increased by 226%.<sup>71</sup> Global sales of plant-based dairy and meat alternatives reached USD 29.4 billion in 2020, and are set to increase to USD 162 billion by 2030.<sup>72</sup>

**Europe's organic food market doubled over the last decade,** reflecting the growing demand for sustainable, quality produce. Between 2010 and 2019, the value of the organic market in the EU and the UK grew year on year, reaching €41.5 billion. Some 14.6 million hectares of land in the EU and the UK – 8.1% of the total agricultural area – is farmed organically by nearly 350,000 producers.<sup>73</sup> Health considerations are among the primary drivers of the growth in organic food sales in Europe,<sup>74</sup> and demand has surged since the beginning of the Covid-19 pandemic. Well aware of these market trends, food businesses are increasingly engaging with nature-positive food production, regenerative agriculture and higher animal-welfare standards.<sup>75</sup>

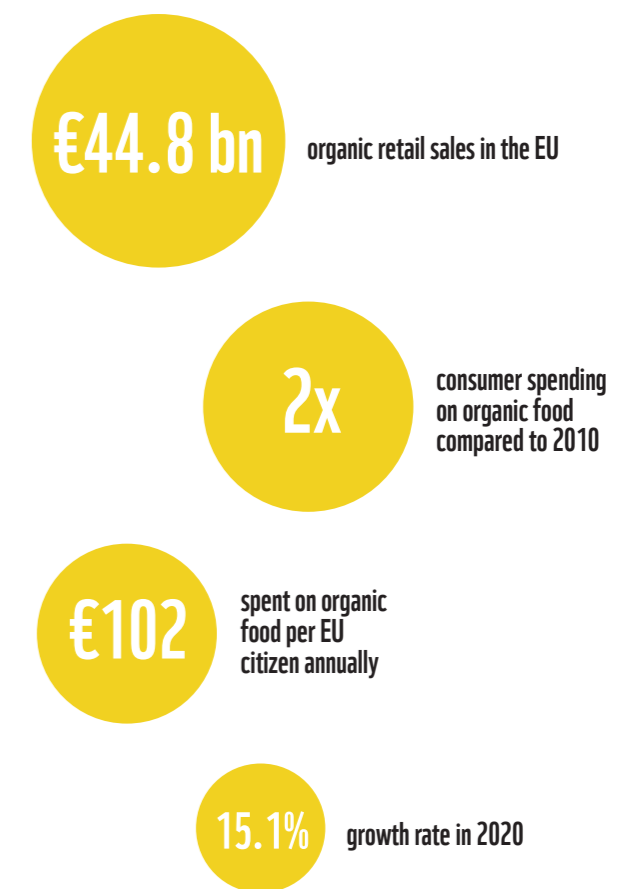
**The Covid-19 pandemic has shifted the food behaviours of Europeans.** Financial hardship, lockdown measures and an appreciation of the importance of healthy lifestyles have all led to substantial shifts in shopping patterns, meal preparation and eating habits.<sup>76</sup> While not all changes will last, cooking more at home and shopping from local producers are trends developed during the pandemic that could remain in the future.

**Figure 6: Europeans want a more sustainable and fair food system**

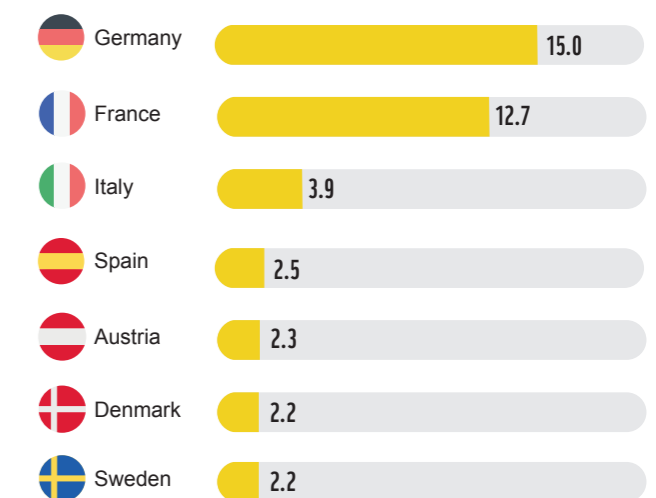


Source: Elaborated by WWF based on reference<sup>77</sup>

**Figure 7: The EU's organic food market reaches record highs**



**The EU countries with the largest markets for organic food in 2020 (in billion euros)**



Source: Elaborated by WWF based on reference<sup>78</sup>

# WHAT NEXT? RECIPES FOR A FAIRER FUTURE

## EUROPE COULD MAKE A POSITIVE CONTRIBUTION TO FEEDING THE WORLD, BUT IT ALL STARTS WITH CHANGING OUR FOOD CONSUMPTION



**The world already produces enough food to nourish everybody.** Research has shown that current crop production is sufficient to feed not just today's global population, but the projected 9.7 billion people in 2050.<sup>79</sup> However, radical changes are needed in the food system for this to be feasible, from cutting waste to improving production and the socioeconomic conditions that enable people to access the global food market. But the most drastic transformation lies with shifting diets, with intensively raised meat and dairy being replaced with plant-based foods.<sup>80</sup> The EU needs to play its part in this process, notably by reducing the disproportionate share of global resources it consumes to feed itself.



**The EU should reorient its agricultural sector and its role as a major food trader.** Europe can become a net exporter of calories and proteins to truly contribute to global food security, but this requires profound changes in agronomic research and practices, alongside a transition towards healthier and less calorie-dense diets with fewer animal products.<sup>81</sup>

A sustainable agro-ecological transition would imply shifting away from a model of livestock production that relies on feeding massive amounts of human-edible crops to animals, including imported agricultural commodities that drive the destruction of natural ecosystems, to one of

integrating grazing livestock with the growth of a diverse range of crops. It would also drastically lower the dependence on nitrogen fertilisers by reintroducing legumes in crop rotations, and help close nutrient cycles by integrating grazing ruminants and other farm animals that help recycle food waste streams.<sup>82</sup>



**Europe must bring its oversized livestock sector within limits that are safe for people and the planet.** Analysis by the RISE

Foundation<sup>83</sup> drew on the planetary boundaries concept to explore what a sustainable livestock sector in Europe would look like. The research shows that greenhouse gas emissions and nutrient flows from the livestock sector are far beyond the upper limits of a "safe operating space". Consumption of animal products is also well beyond national dietary recommendations and, in many European regions, the number of farm animals is out of balance with the land available to sustain them. While certain improvements in management could lower the environmental impacts, other concerns including animal welfare and excessive antibiotic use also need to be addressed.



**"Planet-based diets" can be a win-win, high on human health benefits and low on environmental impacts.** At a

global level, shifting to healthier diets that can be produced within planetary boundaries could reduce greenhouse gas emissions from food by at least 30%, wildlife loss by 46%, agricultural land use by 41% and premature deaths by 20%.<sup>84</sup> In Europe and other developed regions, where unhealthy diets have become an important risk factor for several non-communicable diseases,<sup>85</sup> a planet-based diet implies cutting meat and dairy consumption and increasing consumption of fruits, vegetables, legumes and nuts,<sup>86</sup> but also lowering general intake of energy, sugar, salt and fats.



**Better management can make fisheries more productive.** There

are signs of recovery in some fishing areas in Europe, notably in the North-East Atlantic and the Baltic Sea, following the adoption of better fisheries management since the early 2000s.<sup>87</sup> Unfortunately, good management is not the norm; the situation remains critical in the Mediterranean and the Black Sea, as well as in other regions that the EU imports its seafood from. Improving the way fisheries are managed in European waters and other parts of the world is an urgent task to protect oceans and restore their productive capacity. As the largest seafood market worldwide, the EU needs to take its share of responsibility.



**The EU has the potential to develop more sustainable aquaculture and seafood consumption.** As with farming,

the environmental impacts of aquaculture vary greatly, although in general it offers a lower-impact source of animal protein compared to livestock farming. The science is clear that the best way to produce more seafood is to concentrate on species at lower trophic levels – including herbivores such as carp and filter-feeding molluscs – rather than carnivorous species such as salmon.<sup>88</sup> Cultivation of molluscs and bivalves

already accounts for around half of the EU's aquaculture production, and a report from the scientific advisors to the European Commission identifies this type of marine aquaculture as having the greatest potential for expansion.<sup>89</sup> Cultivated algae can also provide an ecologically efficient source of feed for other farmed fish species, provided that risks such as carrying heavy metals into the food chain are controlled.



**Halving food waste is within reach if we adopt the right measures.** There is huge potential

to improve the efficiency of our food system by focusing on the food that we waste or that is lost before or during harvest. Under the Agenda 2030 for Sustainable Development, EU countries are committed to halving food loss and waste this decade. Better measurement and reporting, including food wasted at farm level, along with legislation and voluntary agreements, are important parts of the solution.



**Dietary changes and waste reduction can unlock opportunities to restore our natural capital.** Reducing

consumption and production of animal products and minimizing food waste would massively reduce Europe's agricultural footprint, at home and overseas. This could bring huge benefits for climate, biodiversity and people's well-being which are otherwise beyond reach. It's also an opportunity to move away from our current extractive agricultural and fisheries paradigm, based on maximising economic output while externalising environmental and societal costs, toward a regenerative, nature-positive food production model focused on meeting people's nutritional needs.

# POLICY CONCLUSIONS

## TIME FOR STRONGER AND MORE INCLUSIVE EU FOOD POLICIES

**A profound transformation of the European food system is urgently needed.** The way we produce and consume food is putting an impossible strain on the planet. There are huge opportunities to feed the world in a way that works with nature, not against it. We can stop turning forests and grasslands into fields, ensure fisheries and ocean ecosystems are productive and resilient, restore soil fertility and reverse the loss of life on Earth – all the while ensuring there's enough nutritious food for every person, now and in the future.

**Change is happening, but not at the required speed and scale.** EU policies have a key role to play in accelerating this transformation while leaving no-one behind. The European Green Deal and the Farm to Fork Strategy are putting the transition to sustainability as a central political priority and show the way forward, with a series of new food-related policy initiatives, such as the new EU law on deforestation-free products, already making progress in the right direction.

Following in these footsteps, the European Commission's recent response to the impacts of the war in Ukraine on rising food prices and global food security acknowledges the EU's dependence on imported agricultural inputs, as highlighted in this report, and confirms the necessity to fundamentally reorient EU food and farming toward sustainability.

Knowing the extent to which Europe is eating the world, **only a large-scale shift in food consumption can make this reorientation possible.** While the EU has historically focused on supporting food production and regulating markets, it can no longer shy away from taking decisive action to accelerate positive dietary changes and lower the impacts of our food consumption.

**The upcoming new legislative framework for a sustainable food system must be a turning point.** This framework should establish clear objectives for healthy and sustainable diets, and serve as a basis to launch new EU policies in this area, and to revise existing ones to ensure consistency. These policy initiatives cannot be focused only on a sustainability assessment of food products, designed to inform food businesses and consumers through labels, although this would be welcome. Neither can they rely solely on the limited agency of informed consumers to make better choices and drive demand for sustainable food.

**Instead, food consumption policies must prioritise strategic interventions to reshape the context in which food choices are made.** Policies can help create the conditions for faster and far-reaching changes in food consumption by targeting changes in factors such as food prices, promotions and advertising, food characteristics and labelling, or retail and restaurant offers.

**Additionally, this new law is an opportunity to establish more inclusive and participatory policymaking processes.** Involving all food system actors, particularly those with less voice, can create the more adaptable, reactive policy framework that the complexity of food systems requires. With action needed at multiple scales and governance levels, the EU's legislative framework for sustainable food systems must also guide and support local, regional and national initiatives and decision-makers, helping create pathways for a just transition.



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