



**HUMANE SOCIETY
INTERNATIONAL**
EUROPE

ADDRESSING UNSUSTAINABLE ANIMAL PRODUCT CONSUMPTION

in the European Union

Introduction

Humane Society International/Europe envisions a sustainable European food system that **protects the environment, respects animal welfare, and provides all EU citizens with reliable access to healthy, nutritious foods** for generations to come. To realise this vision, we are calling for a 30 percent reduction in animal source foods in the European Union by 2030.

More than 77 billion land animals were raised for food across the globe in 2013 –over 8.6 billion in the EU alone in 2014. In this report, we describe the damage that such high levels of farm animal production cause to the environment, animal welfare, and humane health, and the ways in which reductions in the production and consumption of animal products can mitigate this harm. We also offer specific policy solutions to help promote a shift towards more sustainable, plant-based food systems throughout the EU.

For far too long, governments have failed to actively address the overconsumption of animal products in the EU. It is time now for the European Parliament, European Commission, EU Member States and citizens to act. We hope this report provides you with some food for thought, and we look forward to exploring and implementing the best options to reduce consumption of meat, dairy and eggs in the EU.

Background on Consumption and Production in the EU

Meat, Egg and Dairy Consumption

Using data from the Food and Agriculture Organisation (FAO) of the United Nations, a report published by the Netherlands Environmental Assessment Agency projected a more than 50 percent increase in global consumption of animal products between 2000 and 2030.¹ While this increase is largely driven by changing dietary patterns in developing and emerging economies like China, per capita consumption in these countries remains well below developed country averages.² Compared to the EU, less wealthy regions consume four to five times less animal products.³

While EU citizens account for approximately seven percent of the world's population,⁴ they are responsible for sixteen percent of the world's meat consumption.⁵

Therefore, due to the serious negative impacts of such high levels of consumption, the EU must take the lead in developing and implementing programmes and policies aimed at reducing meat, egg and dairy consumption.

However, the current outlook for EU agriculture is, overall, to maintain and increase animal production for the internal and external markets.⁶

While it appears that the overall consumption of meat (as measured in kg/capita) is not expected to rise in the coming years, the overall number of animals killed for food may increase, primarily due to a shift in preference for poultry. The 2014 European Commission report, "Prospects for EU Agricultural Markets and Income," summarises the trends:

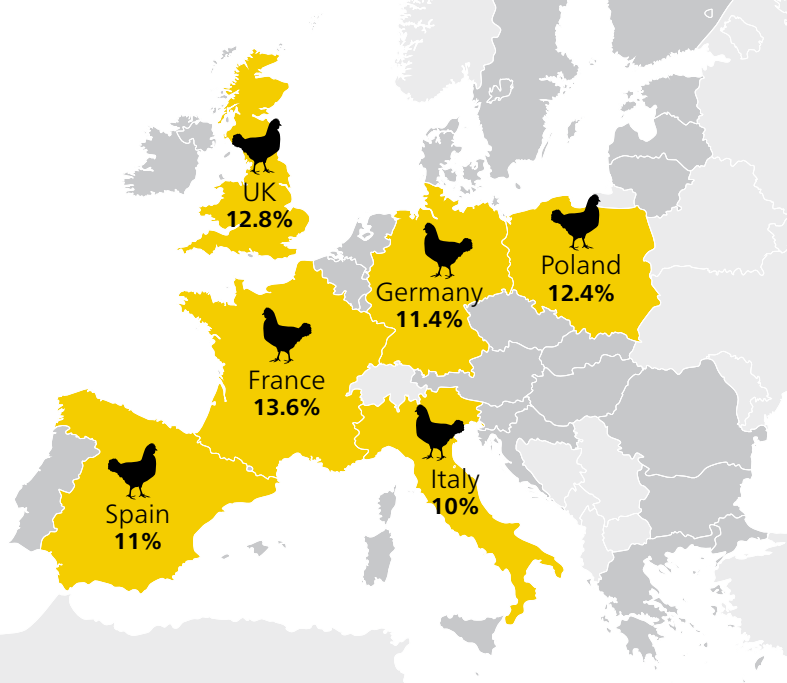
In line with trends seen over the last decade, consumption of meat products is not expected to rise over the coming years, due to the growing importance of social concerns (animal welfare and carbon footprints), health concerns and an ageing European population (who will be eating less meat per capita). Some of these factors serve to favour poultry over the other meats, adding to the effect of increasing poultry consumption as a proportion of total meat consumption.⁷

Farm Animal Production

In 2014 alone, more than 8.6 billion land animals were raised for human consumption in the EU, with the United Kingdom and France accounting for more than one billion animals each.⁸ Between 1961 and 2013, EU production of meat, dairy and eggs increased by 56 percent, 23 percent, and 40 percent, respectively.⁹ The EU is also the second highest meat producer in the world, behind China and just ahead of the USA.^{10,11}

France, Germany, Italy and the UK were the main producers of beef, accounting for approximately 62% percent of total EU production. Just six Member States are responsible for 71.3 percent of poultry meat production in the EU: France (13.6 percent), UK (12.8 percent), Poland (12.4 percent), Germany (11.4 percent), Spain (11 percent) and Italy (10 percent).¹²

6 Member States are responsible for 71.3% of poultry meat production in the EU

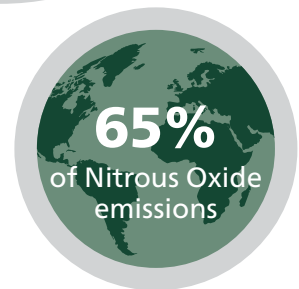
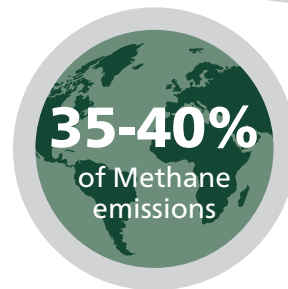
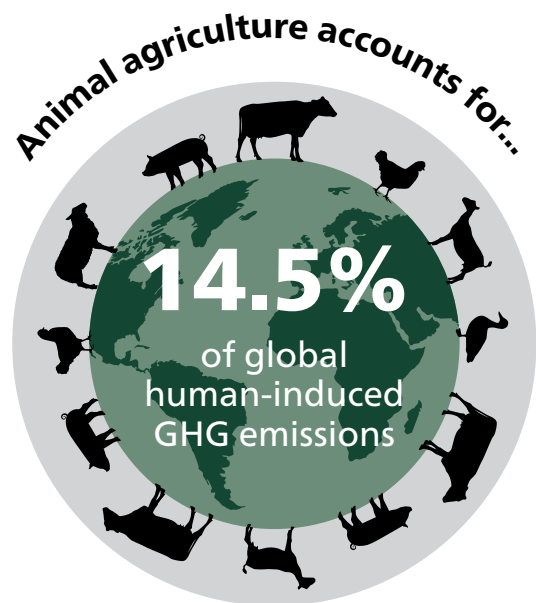


A Leading Cause of Climate Change

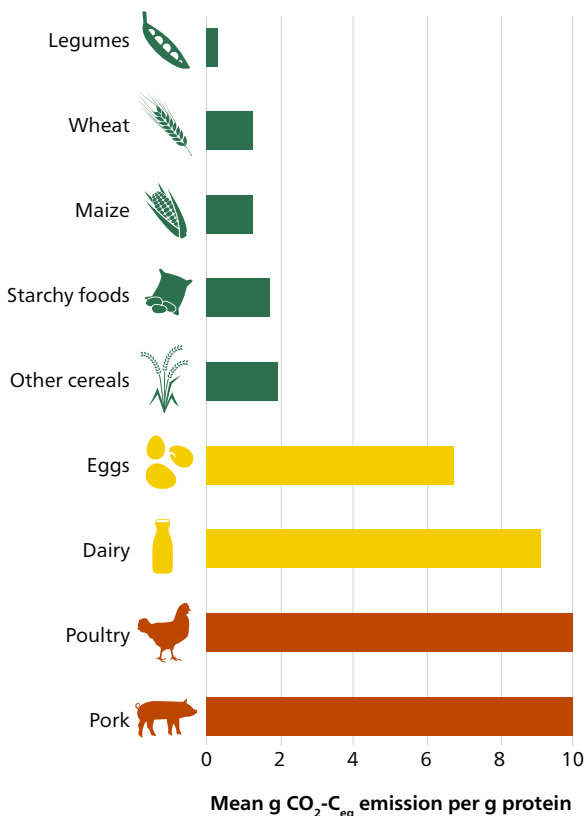
In nearly every step of meat, egg and dairy production, climate-changing gases are released into the atmosphere, potentially disrupting weather, temperature and ecosystem health.

Globally, animal agriculture accounts for 14.5 percent of human-induced GHG emissions¹, and even greater percentages of some of the most potent greenhouse gases such as Methane (35-40 percent) and Nitrous Oxide (65 percent).¹³ Within the EU27, animal agriculture accounts for up to 17 percent of GHG emissions.¹⁴ The emission reduction linked to an EU reduction in bovine meat consumption in recent years was cancelled out by an increase in consumption of cheese and poultry.¹⁵

As illustrated in the chart below, this is because animal protein, including eggs and milk, has a greater carbon footprint than plant-based protein.



GHG emissions for different foods



The demand for animal protein is rising across the globe. Based on projected product demand, the animal agriculture sector's global GHG emissions may increase 39 percent between 2000 and 2050. This means farm animal production alone will emit over two-thirds of the amount of GHGs considered sustainable by 2050.¹⁶ According to the UN's Intergovernmental Panel on Climate Change, global methane emissions from animal agriculture are expected to increase 60 percent by 2030, if emissions grow in direct proportion to number of farm animals.¹⁷ Methane is 25 times more potent as a heat-trapping gas than carbon dioxide.¹⁸

¹ Feed production and processing account for 45 percent of emissions from the farm animal sector; enteric fermentation from ruminants accounts for 39 percent; and manure storage and processing accounts for 10 percent. Graph / 'GHG emissions' source: Tilman D and Clark M. 2014. Global diets link environmental sustainability and human health. Nature 515:518-22.



The Paris Agreement, ratified by the European Union, entered into force on 4 November 2016. The Paris Agreement's central aim is keep a global temperature rise this century well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius. A 2015 report by the UK's Chatham House, the Royal Institute of International Affairs, unequivocally stated that global meat and dairy consumption must be reduced to keep the rise in global temperatures below 2°C¹⁹ – a conclusion supported by a growing number of studies from around the world.^{20, 21, 22}

Efficiency (production-side) improvements in animal agriculture, such as changes in farm animals' feed composition or improved manure management are not nearly enough on their own to mitigate the sector's impacts.^{23, 24, 25} A 2013 review of research on food and climate change confirmed that dietary shifts are potentially far more effective than changes to production practices.²⁶ For instance, a 2016 study found the GHG mitigation potential of "plausible low-meat diets" (consisting of a daily intake of 10 g beef, 10 g pork and 46.6 g chicken meat and eggs) to be greater than the potential effects of eight different supply-side strategies combined, including improving manure management, rangeland management, animal management and feed.²⁷ Other scientists have shown the potential of demand-side measures to help meet global climate goals at potentially half the projected costs.²⁸

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The Intergovernmental Panel on Climate Change,²⁹ European Commission's 2011 Standing Committee on Agricultural Research,³⁰ and a 2014 study commissioned by the Dutch Government³¹ all recognise the significant mitigation potential of reducing the demand for animal products. This conclusion is supported by a wealth of peer reviewed studies including the following:

- With current forecasts for increases in meat, dairy and egg intake, food-related GHGs will rise 51% by 2050 over 2005/07 levels. Food-related emissions would actually decrease by 2050 if people cut out meat.

PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES (2016)³²

In the United Kingdom, the GHG emissions from a high-meat diet are 2.5 times that of one without animal products.

- **CLIMATIC CHANGE (2014)³³**

A 50% reduction in meat, dairy and egg consumption in the European Union could cut agricultural GHGs by 19% to 42%.

GLOBAL ENVIRONMENTAL CHANGE (2014)³⁴

If "healthy" diets were adopted globally (mainly lowering sugars, saturated fats and animal products in some regions), GHGs would be 54% lower by 2050 as compared to current trends. Land needed for pasture would be 32% lower.

NATURE CLIMATE CHANGE (2014)³⁵

Meeting the reductions target recommended by the UK Committee on Climate Change would require a 50 percent reduction in production of animal products by 2030, even after production-side technological improvements are made to reduce animal agriculture's emissions.

THE LANCET (2009)³⁶

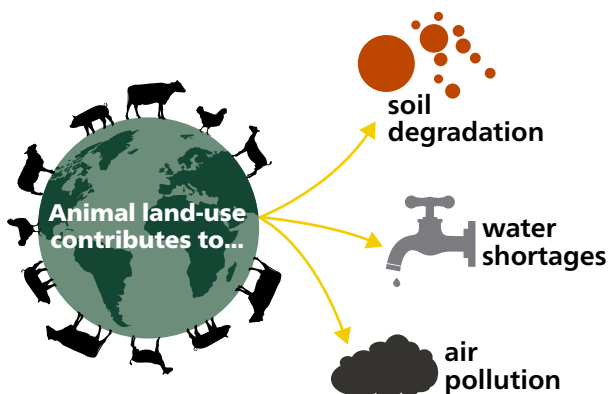
However, the Chatham House study found that governments and environmental organisations are reluctant to engage in meat reduction campaigns for fear of negative consumer response.

Yet the study also found that not only was the government fear of public backlash overestimated, but also that, while most consumers lacked adequate information on the link between meat consumption and climate change, those with a higher degree of awareness indicated greater willingness to reduce their meat and dairy consumption.³⁷

Other Environmental Impacts of Animal Agriculture

The farm animal sector has been identified by the UN's Food and Agriculture Organisation (FAO) as "...one of the top two or three most significant contributors to the most serious environmental problems, at every scale from local to global". Therefore, reducing the production of animal products should be a major policy focus when dealing with land degradation, air quality, water pollution and shortages, biodiversity loss and climate change.³⁸

Farm animal production is the single largest anthropogenic user of land, contributing to soil degradation, dwindling water supplies and air pollution.



The breadth of this sector's impacts has been largely underappreciated. Meat, egg and dairy production are not narrowly focused on the rearing and slaughtering of farm animals; they also encompass feed grain production, which requires substantial water, energy and chemical inputs, as well as energy expenditures to transport feed, live animals and animal products. All of this comes at a substantial cost to the environment.

Land Use & Biodiversity

Around the world, animal agriculture is a significant cause of land-use changes.³⁹ Farm animals, along with meat, egg and dairy production facilities, cover one third of the planet's total surface area and use more than two-thirds of its agricultural land.⁴⁰ Approximately 40 percent of Europe's land is farmed,⁴¹ and of that, two-thirds is reportedly used for livestock.⁴²

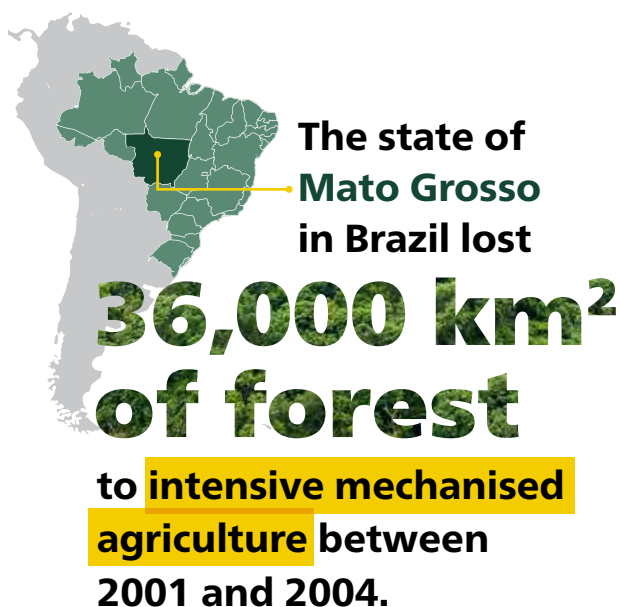
Global data on animal agriculture-related land-use changes and biodiversity loss is relevant to EU citizens because 20 percent of the land use related to meat and dairy consumption in the EU actually lies outside of its borders.⁴³

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2/3 of which is reportedly used for livestock



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In 2008, a total of 10.6 million hectares of soybeans was needed to enable the consumption of livestock products in the EU. This equates to 213 m² per EU citizen.⁴⁴ The majority of soy imported into the EU comes from South America, where expansion of pasture and arable land at the expense of forests has been the most prevalent.



Soybean and corn production for animal feed has led to the rapid clearance of tropical forests.⁴⁵ Mato Grosso, the state that has led Brazil in both deforestation and soybean production since 2001,⁴⁶ lost approximately 36,000 km² of forest to intensive mechanised agriculture between 2001 and 2004.^{47, 48} In just five months, from August through December 2007, Brazil lost more than 3,200 km² of forest in the Amazon, at least partly due to illegal farming and ranching, as high prices for cattle, soybeans and corn led farmers and ranchers to plant more crops and raise more animals.^{49, 50}

Even acknowledging reported reductions in Amazon deforestation in recent years,⁵¹ as well as the Brazilian industry-led 2006 Soy Moratorium's possible impact in stemming deforestation for soybean production,⁵² the pressure and resultant deforestation threat due to demand for animal-derived food products cannot be discounted. Addressing incentives to deforest is



essential.⁵³ Or, as one study put it in regard to impacts of consumption and global trade, “[A] shift in consumption should go hand in hand with a shift in production....”⁵⁴

A 2014 study found that a 50 percent reduction in the consumption of beef, dairy, pork, poultry and eggs in the EU would free up 75 million tonnes of cereal, and soymeal imports could be reduced by 75 percent. Furthermore, under one scenario, 23.7 million hectares of land that had been used as pasture or to grow feed would become available for other uses.⁵⁵

The conversion of energy and protein in animal feed into edible meat calories and protein is highly inefficient.⁵⁶ Most of the energy farm animals consume from grains and other sources of food is used for metabolic processes or for forming bones, cartilage, and other non-edible parts (offal), as well as faeces.⁵⁷ This suggests that, in many cases, scarce agricultural land and water are better allocated to the production of high-nutrient plant-based foods.

Water Scarcity and Pollution

In addition to its role in land use and degradation, animal agriculture uses significant amounts of the water supply available to humans globally.⁵⁸ Raising animals for food requires substantially greater quantities of water than raising plants for human consumption. According to a Twente Water Centre report on the green, blue and grey water footprint of farm animals and animal products, an average of 4,325 litres of water is required to produce 1 kg of chicken, whereas less than half of that is needed to produce 1 kg of cereals.⁵⁹ Compared to cereals or starchy roots, it takes about 20 times more water per calorie to produce beef, 6 times more to produce chicken meat, over 4 times more to produce pig meat or eggs and over 3 times more to produce milk.⁶⁰

Calorie-for-calorie (compared to cereals or starchy roots) it takes...



20x

more water to produce **beef**



6x

more to produce **chicken meat**



4x more to produce **pig meat or eggs**



3x more to produce **milk**



Not only are water supplies shrinking, the farm animal sector is increasingly polluting the available water. According to the FAO, “The livestock sector... is probably the largest sectoral source of water pollution, contributing to eutrophication, ‘dead’ zones in coastal areas, degradation of coral reefs, human health problems, emergence of antibiotic resistance and many others.”⁶¹

Studies conducted within the EU have shown that vegetarian diets have a much lower water footprint than diets that include meat^{62,63} and that soy-based products (including soy milk) require less water than beef or cow milk.⁶⁴ A study comparing the water footprints of three different diets in the EU (actual current food consumption patterns, food consumption conforming to local dietary guidelines, and a vegetarian diet) found that the greatest reduction in water footprints was achieved by a vegetarian diet.⁶⁵ Another study found significant reductions in the water footprint on European river basins based on a low-meat healthy diet, with even further reductions (up to 46 percent) possible through vegetarian diets.⁶⁶

Health Benefits of Plant-Based Eating

With each passing year, more people around the world suffer from obesity, heart disease, cancer, diabetes, stroke and high blood pressure. Choosing more plant-based options over meat, eggs and dairy products not only helps animals and the environment—it helps our health, too. Many of the chronic diseases plaguing the world can be prevented, treated and, in some cases, even reversed with a plant-based diet.

Nearly
2 billion
adults worldwide
are overweight

37%-57%
of adult woman in the EU were
overweight or obese in 2008

51%-69%
of adult men in the EU were
overweight or obese in 2008

Worldwide, the number of overweight adults is nearing 2 billion. The incidence of childhood obesity is growing at an alarming rate as well.⁶⁷

In the EU, between 37 and 56.7 percent of adult women were overweight or obese in 2008. In the same year, between 51 and 69.3 percent of adult men were overweight or obese.⁶⁸

Using data from the World Health Organisation (WHO), the Food and Agriculture Organisation (FAO) and the World Bank, a study recently published in BMC Nutrition found that high meat availability is directly correlated with, and in fact the most significant predictor of, increased obesity rates. Not only can obesity affect quality of life, it can cut life expectancy substantially. In contrast, the study found a growing body of evidence which suggests that consuming plant protein is protective against weight gain and reduces the risk of obesity.⁶⁹

Like obesity rates, noncommunicable diseases (NCDs) have also risen dramatically, now accounting for 80 percent of deaths in the EU.⁷⁰ Circulatory system diseases are the leading causes of premature death before the age of 65, with cancer coming in second at nearly 20 percent of deaths.⁷¹ Yet studies show that many chronic diseases can be prevented, and in some cases reversed, with plant-based diets.^{72, 73, 74} In fact, individuals who eat a plant-based diet are likely to have a lower body weight and a decreased risk of diabetes, cardiovascular disease and some cancers.^{75, 76, 77}





A 2007 report recommends limiting intake of red meat and avoiding processed meat altogether to decrease the risk of getting cancer.⁷⁸ In late 2015, the WHO went so far as to classify processed meat, such as bacon, chicken nuggets and pâté, as a carcinogen, in the same category as tobacco.⁷⁹ The World Health Organisation (WHO) recommends that people eat more fruits, vegetables, nuts and whole grains.⁸⁰

Under the current EU Common Agricultural Policy, meat and dairy are heavily subsidised relative to fruits and vegetables, making the latter more affordable to low-income families and the plant-based foods too expensive. This incentivises an unhealthy and unsustainable level of animal product consumption, and insufficient consumption of fruits, vegetables, and whole grains, to the detriment of human health.⁸¹

A 2008 study published in the Bulletin of the World Health Organisation (WHO) calculated that turning off the tap with respect to CAP subsidies for dairy and meat would avoid 12,844 deaths from stroke and heart disease, assuming saturated fat consumption dropped just 1 percent. This is a conservative estimate. If halting such subsidies affected consumption more, as was observed in Finland (5%) and Poland (7%), the life savings could be many times higher.⁸²

Individuals who eat a plant-based diet are likely to have a lower body weight and a decreased risk of diabetes, cardiovascular disease and some cancers. ^{75, 76, 77}



Farm Animal Welfare in the EU

Animal welfare has gradually been introduced into the Treaties of the European Union. To date, the most progress was made when the Lisbon Treaty came into force in 2009. It amended the core 'Treaty on the Functioning of the European Union' (TFEU) and introduced the recognition that animals are sentient beings, under European law.⁸³



Article 13 of Title II of TFEU states that:

"In formulating and implementing the Union's agriculture, fisheries, transport, internal market, research and technological development and space policies, the Union and the Member States shall, since animals are sentient beings, pay full regard to the welfare requirements of animals,

while respecting the legislative or administrative provisions and customs of the Member States relating in particular to religious rites, cultural traditions and regional heritage."⁸⁴

The EU has made noteworthy progress in the area of farm animal welfare over the past decade, particularly with regard to reducing extreme confinement. Council Directive 1999/74/EC of 19 July 1999 lays down minimum standards for the protection of laying hens and bans the barren battery cage in the EU from 2012; and Council Directive 2001/88/EC on minimum standards for the protection of pigs outlaws the individual sow stall for most of a sow's pregnancy from 2013. However, although a diversity of farming practices still exist throughout the EU, the farm animal production sector has been moving towards larger farms and greater intensification.⁸⁵

Farm animals - sentient, complex, and capable of feeling pain and frustration, joy and excitement - are viewed by industrialised agriculture as commodities and suffer a myriad of assaults to their physical, mental and emotional well-being, typically denied the space and other environmental enrichments required to meet in their species-specific behavioural needs. The treatment of farm animals and the conditions in which they are raised, transported and slaughtered within industrialised agriculture are incompatible with providing adequate levels of welfare.

By reducing the total number of animals raised for food, more space, care, and resources can be allocated to each individual animal, and we place greater value on humane sustainable agriculture. Rural economies can prosper with consumer spending distributed more to individuals who exhibit strong husbandry skills and a respect for animals. The result will be more farmers on the land and a proportional decrease in factory-style farms.

Humane Society International advocates compassionate eating – or the Three Rs: “reducing” or “replacing” consumption of animal products with plant-based foods, and “refining” our diets by avoiding products from farms with abusive practices, such as the confinement of hens in cages and choosing products from sources that adhere to higher animal welfare standards.

Recommendations for Policymakers

HSI/Europe recommends the following supportive policy actions to create a healthier, more sustainable and more humane food system within the EU:

- 1 Place **health and sustainability** at the forefront of the EU Common Agricultural Policy. Specifically,
 - » Reorient subsidies away from meat and dairy production, towards the production of fruits, vegetables, pulses, nuts and whole grains in order to incentivize healthier food choices.
 - » Utilise funds allocated for promotional campaigns to raise awareness about the health and environmental benefits of plant-based diets.
 - » Support the marketing efforts of farmers and food innovators currently producing healthy plant-based foods.
 - » Provide financial support to help meat and dairy farmers diversify their production away from animal production, and towards more sustainable crops.
- 2 Adopt an **EU-wide target to reduce animal product consumption 30 percent by 2030.** This could mean 2.5 billion fewer land animals raised for food in the EU each year, leading to a decrease in the negative environmental impacts caused by animal farming, including up to a 25% reduction in EU agricultural GHG emissions.
- 3 Ask the European Commission to develop a strategy towards a **sustainable European food and farming system,** which includes strategies for reducing meat, dairy and egg consumption.
- 4 Encourage the European Commission to **promote programs such as Meat Free Mondays or 'Veggie-Days'** in schools and other institutions in order to promote healthy eating patterns.
- 5 Ensure that the revised **EU Green Public Procurement guidelines** include mandatory criteria to dramatically reduce procurement of meat, dairy and eggs, replacing them with healthy plant-based options;
- 6 Call on the European Commission to **produce guidelines for healthy and sustainable diets** low in animal products and high in fruits, vegetables, pulses and wholegrains, and for the adoption of those recommendations at a Member State level.
- 7 Adopt the goal of providing **100 percent of children in the EU with food and nutrition education by 2030,** including on the benefits of plant-based eating by the time they have completed primary school. This training, which should continue through secondary school, must provide students with both the knowledge and practical skills necessary to prepare and choose healthy and sustainable foods, especially plant-based meals.

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