

Eating well for a fuller future

It's time to reduce the meat in our diet!

Proposals and alternatives towards
a diet more respectful to animals,
the climate and our health



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Introduction:

from low-cost meat industry to sustainable quality food

Eating is not just a physiological act by an individual, it is also an action that carries great social and environmental weight. Today, our protein-rich diet, which is sustained by animals fed within an intensive, low-cost meat and fish industry, has significant impacts on the planet, our health, other countries and animal welfare.

The data is clear: if we want to have a healthy, sustainable diet, we do not need to consume more than 20 kg of meat.¹ Considering that the average person in Spain eats about 50 kg of meat every year, we ought to cut our meat intake by more than half.

What would be the consequences of not cutting down on meat?

Poor health. The correlation between the consumption of red and processed meats with cases of diabetes, cardiovascular diseases and different types of cancers is well known.² But there is more to it. The meat industry stuffs animals with antibiotics, which causes antibiotic-resistant bacteria to develop. These bacteria, in turn, get passed onto humans. This abusive practice and its inherent risks to public health is so great that the World Health Organisation has called for it to be banned for animals destined for human consumption. It is a huge challenge given that 84% of antibiotics used in Spain end up being fed to livestock.

Diminished animal welfare and rights. Only in Spain can you find more pigs slaughtered than there are people living in the country, and more poultry butchered than there are inhabitants of the European Union. This mass use of animals by an industry dominated by

large corporations prevents animals from receiving minimal care during their rearing, transport and slaughter as set out under European law. From the abattoir to the supermarket, these animals are not recognised as sentient beings with rights but as mere objects and merchandise.

More climate change and deforestation. According to the UN Food and Agriculture Organization (FAO), the livestock industry has one of the largest impacts on climate change: 15% of greenhouse gases emitted throughout the world comes from this sector. Moreover, animal protein requires ten times more hectares for its production than plant protein, leading to serious deforestation, as in the Amazon, and a loss of biodiversity overall. This goes against all logic: if the food crops used to feed the animals were in fact redirected for human consumption, four billion more people in the world could be fed.

Fewer labour rights and jobs. The working conditions in the slaughterhouses, which are mostly operated on a subcontracted basis, are horrendous; there is little job security but plenty of psychological stress. As if that were not enough, the unregulated development of mechanised industrial farming has been destroying employment in the rural world. There are four times fewer jobs in these intensive farming complexes than on small farms! While our meat products are exported, the social toll remains on us.

Continuing along this low-cost food path places people at jeopardy and causes irreparable harm to living beings. The

alternative to this trajectory is a **transition towards a new farming model** that prioritises the environmentally friendly production of plant proteins and, by halving meat consumption, extensive, organic stockbreeding that is local. This means fighting industrial farming in earnest, a key piece in the dominant agricultural complex which is destroying the rural world, and thoroughly revising the Common Agricultural Policy in order to transform it into a tool directed towards environmentally friendly agriculture and small farming.

In addition, let's use our influence **as consumers and favour our Mediterranean diet**, which is much better for the climate³ and places plant proteins over animal proteins. In this sense, we can and should, both socially and financially, incentivise the consumption of vegetables, the use of urban gardens, buyer groups, the labelling of plant proteins, local restaurants guides offering plant protein-based menus and even healthy and sustainable food for our children in school canteens.

Beyond the necessary changes to everyday personal habits, these actions should be performed collectively. The increasing number of citizens **who want to eat better and more responsibly** have in their grasp a way to set aside low-cost food and opt for quality nourishment.

¹ http://www.eldiario.es/caballodenietzsche/consumo-carne-calienta-planeta_6_455714432.html

² <https://www.who.int/features/qa/cancer-red-meat/en/>

In order to reach these cross-sectional goals, we need the strategic and practical coordination of a broad, pluralist and multidisciplinary network that also includes a wide swathe of society in favour of climate stability, a healthy diet, global justice and animal welfare. In this report, we have combined the analyses and complementary proposals of various people and organisations from the social, agricultural and institutional fields: ecologists, animal welfare advocates, nutritionists, veterinarians, as well as consumer bodies, development agencies and extensive, environmental stockbreeders. Within this mutual vision, the authors contribute their perspectives and criticisms of today's agri-food system, as well as genuine proposals for reducing meat consumption and supporting the 'eating well for a fuller life' concept.

We hope this cross-sectional, pluralist and multidisciplinary network provides a common, inspirational base for improving the climate, human health, global solidarity and animal welfare.

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³ <http://www.ehjournal.net/content/12/1/118>

The problem

Less meat and
dairy to fight
climate change¹

What we eat is killing the planet and ourselves.

Meat and dairy: effects on climate

Our planet is currently changing and our diet is intimately connected with that change. The year 2017 was the hottest on record without the El Niño effect, and scientists are warning that the 'climate tide is quickly rising'. The food system, including changes in the use of land related to farming, is currently responsible for a quarter of all greenhouse gas (GHG) emissions which cause climate change. **If we do nothing, the gas emissions from the food industry in 2050 will count for over half of all global gases emitted by human activities. The repercussions of what we eat and how we produce our food will have an ever-increasing impact and represent a major threat to our survival on Earth.**

Animal-source products are accountable for around 60% of greenhouse gas emissions connected to food production. Meat and dairy products are the components in our diet which cause the greatest harm to the climate and the environment in general.

Likewise, the food system is responsible for 80% of the current deforestation affecting some of the world's most biodiverse forests. This destruction is mainly caused by the expansion of animal husbandry and the production of animal fodder. Furthermore, the pollution inherent in livestock and crop farming is responsible for the massive, and growing, number of dead zones in the oceans and the deterioration of many rivers, lakes and coastal areas.

Species are going extinct at such a rate that some scientists have classified this moment in history as the 'Earth's sixth mass extinction event'. Farming, especially stockbreeding, is one of the principal causes of the loss of the world's biodiversity. Essentially, what we eat is killing the planet and ourselves.

How to reduce the impact of meat and dairy on the climate according to Greenpeace

To achieve the objectives set out in the Paris Agreement on climate change and guarantee a stable climate for 2050, the way in which the world produces its food has to be revolutionised, while the use of carbon in all sectors must be eliminated and carbon capture technology expanded.

Limiting the world's temperature rise to 1.5°C requires a change in how we produce meat, given that such production is one of the largest sources of greenhouse gases, and is expected to be an even larger polluter in the future.

Based on the latest greenhouse gas scenarios, it is estimated that emissions from the food sector will reach a yearly rate of 20.2 billion tonnes of equivalent carbon dioxide (CO₂eq) by 2050,² including the changes to land use assumed in the baseline scenario.³

Essentially, the greenhouse gases emitted exclusively by the agricultural sector will cover almost the entire emissions quota allocated to all sectors (e.g. energy, industry, transport, etc.) as part of the 1.5°C target for 2050 (21 ± 3 billion tonnes of CO₂eq per year). This fact on its own underpins the need, and

the opportunity provided, in tackling emissions originating from food production, especially from meat and dairy production.

Today, the greenhouse gases emitted directly by the agricultural sector represent 24% of global emissions, while stockbreeding emissions (including land use changes) count for 14%, which is equivalent to the emissions originating from the entire transport sector.

Greenhouse gas emissions from farming are expected to continue rising in both absolute and relative terms. By 2050, the sector could represent 52% of global emissions as population increases and economic growth are expected to increase food production and waste and the adoption of more meat-rich diets.

The potential for technological mitigation within the agricultural sector seems less effective than in other sectors. Therefore, there is a need to confront the food system's emissions in a holistic manner, including the production and consumption of animal-based products due to their significance in greenhouse gas emissions.

Many international institutions and authors, including scientists from the University of Oxford, the Swedish University for Agricultural Sciences, the University of Cambridge, the University of Aberdeen, the University of Minnesota, the University of California, the Research Institute of Organic Agriculture (FiBL), and the UN Food and Agriculture Organization, have emphasised the climatic, environmental, economic and health benefits of drastically reducing the production and consumption of animal products.

On this basis, Greenpeace calls for a 50% reduction in the production and consumption of animal-sourced products by 2050. This goal is possible under the conditions of organic farming, that is, a level of production that ensures food security while also protecting the climate and biodiversity. This objective is

based on a series of scientific models developed over recent years by experts.

Food system emissions under Greenpeace's vision

Under the organic stockbreeding model, GHG emissions can be cut by reducing the number of animals and the production of animal feed. In addition, there may be more reduction possible through the capture of carbon in the soil, and the land mass that could be freed up by a 50% drop in current livestock (farmland and pastures that would no longer be required to produce feed or grazing for animals).

In decreasing the demand for meat, the pressure on woodlands would be reduced with a possible drop in the emissions caused by deforestation. The emissions from deforestation⁴ can be significant: scientific models estimate that agricultural emissions from changes in land use can reach approximately 7 billion tonnes of CO₂e per year in the baseline scenario, mainly in sub-Saharan Africa and South-East Asia. Currently, there is no specific estimate on the percentage of deforestation-attributed emissions that could be avoided if meat and dairy production were reduced 50% by 2050. Nevertheless, livestock farming is one of the main causes of land-use change and deforestation.

Livestock farming is one of the main causes of land-use change and deforestation.

What would a 50% drop in meat and dairy by 2050 require?

With a 50% decrease in meat and dairy products (as proposed by Greenpeace), the organic food system would reduce current livestock levels by 50%. This would mean the amount of meat and dairy available per person in 2050 would be very different compared to today's levels and even the world average expected for 2050.

The Greenpeace target is estimated to equal a global meat consumption rate of 16 kg per capita per year. This would be approximately 300 g per individual a week, including all meat products (at carcass weight, i.e. raw unprocessed products at retail). Likewise, we estimate a global 50% reduction in dairy products to represent 33 kg of dairy consumed per capita in 2050, or 630 g per individual every week (a glass of milk is approximately 200 g).

This reduction matches the weekly amount recommended by the World Cancer Research Fund for a healthy diet, which entails a maximum of 300 g of red meat per week.

If meat consumption is gradually reduced, it is estimated that such consumption in 2030 will be 24 kg per person per year, compared with the current annual world average of 43 kg per capita or, in the case of Western Europe, 85 kg. As for dairy products, the objective for 2030 would be 57 kg of dairy per capita per year. This would allow China, Africa and South-East Asia to slightly increase their consumption; the

rest of the world would have to significantly reduce average consumption levels.

Fighting climate change through less meat

Greenpeace calls for a 50% reduction on current animal production and consumption by 2050. This would induce a significant decrease of emissions into the atmosphere. By 2050, our proposals will have reduced **greenhouse gases by 64% compared with a future following current trends**. In absolute numbers, our proposal would remove 7 billion tonnes of CO₂eq entering the atmosphere every year by the target year.

This reduction represents 35% of all GHG that all sectors can emit into the atmosphere by 2050 in compliance with the Paris Agreement target of avoiding a dangerous increase in temperature. It would greatly contribute to achieving the emission targets that would ensure a stable climate.

What Greenpeace demands

The food revolution called for by Greenpeace requires wholesale changes by governments, businesses and society. It will require a comprehensive change to the food system, from farm to home, in order to steadily deconstruct industrial farming and cut in half current meat and dairy production and consumption by 2050.

Greenpeace calls on politicians to:

1. End subsidies and policies that support industrial meat and dairy farming. Instead, subsidies and policies should be directed to healthy fruit and vegetable production on organic farms as well as better meat and dairy production from ecological livestock.⁵
2. Adopt policies that reduce public expenditure in industrial meat and dairy production, increase financial support for those options producing plant-based foods from local, organic farms, and replace all other meat and dairy products with ecological livestock produce. In particular, public authorities are urged to quickly adopt a procurement policy supporting this model for public canteens.
3. Adopt policies that stimulate a change in dietary habits and patterns, including the establishment of targets for the reduced consumption of meat and dairy products.

¹ All statistics cited and their original sources can be found in the report: 'Less is more. Reducing meat and dairy for a healthier life and planet', available at <https://www.greenpeace.org/international/publication/15093/less-is-more/>

² Billion tonnes or gigatonnes (Gt) of equivalent carbon dioxide (CO₂eq) is a unit that combines the emissions of the different greenhouse gases in a single unit to allow comparisons to be drawn since the effect of the different greenhouse gases on the atmosphere is not the same. Methane (CH₄) is 25 times more potent than CO₂; nitrous oxide is 298 times as potent as CO₂. All scenarios are expressed in terms of billions of tonnes of global annual CO₂-equivalent emissions per year (Gt CO₂eq yr⁻¹).

4. Include decision-makers from the health and environment sectors in the design of agricultural policies, since livestock farming has a broad impact on human health and the environment.

Greenpeace also requests **business and corporations** to place the health of the planet ahead of profits and publicly commit to a transition towards plant-based diets and organically farmed meat and dairy, by establishing a road map for the necessary transformation of the food system.

Finally, Greenpeace calls on everyone, young and old alike, to use our collective willpower and creativity to reimagine how we eat.

Greenpeace

³ The baseline scenario is the Business-as-Usual (BAU) scenario which assumes no major changes in trends, so that normal circumstances can be expected to continue unchanged.

⁴ Deforestation may cause the carbon stored in vegetation or soil to be released into the atmosphere.

⁵ The criteria for 'ecological livestock' set out by Greenpeace can be found in the appendix to 'Less is more. Reducing meat and dairy for a healthier life and planet', available at <https://www.greenpeace.org/international/publication/15093/less-is-more/>

A better future for
the animals
(and people) in
Europe

Any move towards reducing the suffering of as many animals as possible is a goal worth defending.

Is our current meat production and consumption compatible with animal rights and welfare? Is the CAP a successful instrument in this sense? Do the livestock industry's methods of overcrowding, transport and slaughter avoid animal suffering? Every year in Europe, 360 million land animals and no fewer than 1.17 billion marine animals are killed for human consumption. This harsh reality is very far from what we should expect of an animal-centric policy in the 21st century.

The agrarian image of green meadows dotted with peaceful, harmonious animals has been fed to us over many decades, but people are becoming increasingly better informed and more attentive to reality. Our relationship with the animals that we eat is not only an environmental, health or social issue, but also a question of empathy and respect for the life of those sentient beings that are destined for our plate.

Common Agricultural Policy and animal cruelty

The Common Agricultural Policy (CAP) began as a strategy to guarantee EU food supply as well as a farm's income through subsidies. Almost since its enactment, it has strongly fostered the industrialisation of livestock farming throughout the entire European Union, which has provoked profound problems for the environment, society and the welfare of the animals themselves. Despite its gradual improvement with regard to animal welfare standards –one of the highest in the world – it will never be enough from the point of view of animals.

The current norm states that some rights of farm animals must be respected: they must be

free from hunger and thirst, free from discomfort, pain, injury and disease, free from fear and distress and free to express normal behaviour. This declaration of principles is very difficult to successfully enforce when millions are reared, force-fed, handled, transported and slaughtered under conditions prioritising profit above all else. On top of this, there is widespread ignorance of an animal's basic needs as well as accidental or deliberate carelessness.

Although consumers are increasingly concerned about the way animals are reared,¹ the industry has still not invested sufficiently to satisfy this demand. In 2003, animal welfare was included for the first time in the CAP;² it offered incentives to stockbreeders who would take on commitments beyond the mandatory requirements. However, between 2007 and 2013, only 0.1% of the CAP budget was earmarked for animal welfare.³ This figure clearly reveals the extent to which the CAP is concerned with the life of animals. Rather than demonstrating animal welfare as a European value worthy to be defended, the CAP has intensified the exploitation of those that the Treaty of Lisbon recognised as 'sentient beings'.⁴

From our perspective, any move towards reducing the suffering of as many animals as possible is a goal worth defending. For this reason, our attention falls on those areas where animals suffer the greatest affliction, besides the pursuit of profit, which engenders such treatment. We believe it is incredibly important to reform how animals are housed on top of each other and transported, and urgently review the conditions under which they are slaughtered.

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Encaged peace

The industry has developed creative methods to keep animals crammed into meat, milk and egg production centres as quietly and healthily as possible. Under such conditions, animals practising cannibalism or attacking each other is a common sight; therefore, standard practice is to cut beaks and tails, as well as castration without anaesthesia. Although there are reports and recommendations on the best way to carry out these actions in the EU, such a procedure cannot but be painful for the animals.

The size of the animals' cages prioritises full use of space and never the idea that they should be able to express anything approaching normal behaviour. Laying hens are afforded a space smaller than a sheet of paper, the same with rabbits. The industry standard, especially in intensive cattle farming, entails the placement into stalls, restriction of movement, concentration of animals within confined spaces and limitation of the animals' freedom for the sole purpose of making them easier to handle and maximising profits.

To manage slurry and other waste more easily, the animals are generally prevented from living in fields. Sheds are fitted with gratings to facilitate the cleaning and treatment of waste. However, the measures taken have not avoided the environmental consequences of the farms, especially in relation to underground water which is tapped by many communities.⁵

The enclosure is absolute and insulated from the natural environment. Even light and temperature conditions are modified to force greater production, as is the case with laying hens.

Such conditions are as far from natural as can be imagined. Accordingly, the health of the animals is an issue. As they have to survive a couple of weeks before slaughter, they are pumped with large quantities of antibiotics, which also help them to be fattened quickly. Even though the WHO has recommended the immediate cessation of these medications in livestock,⁶ up to 80% of all antibiotics in some countries are destined for food animals, especially in intensive farming.

Animal transportation

Every year, over 360 million animals (excluding fish), along with more than 4 trillion poultry, are transported live through Europe. At least six million of them have to travel long distances. Some journeys often last over 40 or 50 hours and it can take several days before the animals arrive at their destination, where they suffer overcrowding, hunger, thirst and exhaustion. In a March 2002 report by the European Commission's Scientific Committee on Animal Health and Animal Welfare, it was recommended that 'since loading and transport are stressful to animals unaccustomed to them, for these animals transport should be avoided wherever possible and journeys should be as short as possible.'⁷

Of course, the stated reason for recommendation is that animals stocked in stressful conditions can develop and spread infectious diseases which may be a danger to consumers. However, reducing or eliminating such journeys would also lead to less suffering for the animals.

Humane death

In recent years, the abattoirs of some EU countries have undergone considerable modernisation, which allows them to slaughter more animals at increasingly faster rates. Such slaughterhouses are designed as meat factories and many inspections have revealed a poor application of the law. The most frequent problem is the inadequate stunning of the animal because slaughterhouse staff do not know how to use the equipment or maintain it in working condition.⁸

The slaughter without suffering of farm animals was mentioned in the European Convention for the Protection of Animals for Slaughter approved by the Council of Europe in 1979, which entered into force in 1982. In 1991, the Convention was updated and included further recommendations on animal welfare. However, this treaty has only been ratified by a handful of countries such as France, Spain, the United Kingdom and Austria.

While these measures could represent a more humane death for the animals, the majority of them have actually been conceived as sanitary improvements to the meat. The growing interest in the proper welfare of animals and the advancements in technology should bring about another review of this area.

Many animal rights organisations consider the best way to avoid animal suffering is to adopt a vegetable-based diet, but billions of animals will still die before eschewing meat becomes a generalised social norm. For this reason, we believe that the animals that lose their lives in slaughterhouses should have at least the right to a pain-free death.

Proposals for a better future

We are certain that, in the coming years, the animal welfare measures that will be implemented in Europe will continue to be ahead of the curve, but we also believe this to be insufficient. The paradigm must be changed; we have to search for methods of food production that are more sustainable, respectful, ethical, humane and hygienic.

As for the medium term, we should lobby the EU to establish measures like an overall limit on the amount of journey time animals should endure, a significant increase of European Commission inspectors, control the maximum amount of animals that can be killed in a day at slaughterhouses so that prior stunning can be correctly carried out, and prohibit the exemptions granted for killing animals on the basis of religious rituals and personal consumption.

Intensive farming is accountable for severe environmental loss, it breeds deep social crises in rural areas and is truly a hell for animals. Like other areas where profits have placed the well-being of people and animals in peril, we believe it is necessary to control, regulate and reduce these types of facilities. We do not see how industrial farms can be sustainable in the long term: their future should be thoroughly reviewed as part of a common policy in the EU.

We also believe a significant portion of the CAP budget that is currently funnelled to livestock ought to be earmarked for producers of plant protein and innovative businesses researching alternatives. It is an increasingly urgent necessity since many studies point to the profound environmental cost in the continued rearing of animals for their meat.⁹ In the United States, companies like Beyond the Meat¹⁰ and Impossible Foods¹¹ have converted into important alternatives to eating meat, by combining quality, nutritional needs and respect for the environment and animals.

Although the topic still inspires a lot of debate, wealthy individuals like Bill Gates and Richard

Branson have invested in so-called clean meat.¹² Lab-grown meat promises to be a viable alternative to animals for slaughter in the future, as it does not involve hormones, antibiotics or environmental and ethical considerations. However, it remains an expensive solution as it requires high energy costs and, like many other modified foods, is produced under patents.

The EU should lead in tomorrow's innovation instead of encouraging production systems that result in environmental, social and animal

¹ The 2007 Eurobarometer survey revealed 62% of European citizens would pay more for products that respected animal welfare. http://ec.europa.eu/food/animal/welfare/survey/sp_barometer_fa_en.pdf

² Regulation (EU) No 1305/2013 of the European Parliament and of the Council of 17 December 2013 on support for rural development by the European Agricultural Fund for Rural Development (EAFRD) and repealing Council Regulation (EC) No 1698/2005. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32013R1305>

³ Eurogroup for Animals. 'Common Agricultural Policy Post 2020', 2017. http://www.eurogroupforanimals.org/wp-content/uploads/Position-Paper_CAP-2020.pdf.

⁴ Treaty of Lisbon amending the Treaty on European Union and the Treaty establishing the European Community, signed at Lisbon, 13 December 2007. Title II, Article 13. <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:12007L/TXT>

⁵ Harvey, Fiona (The Guardian). "Farming is 'single biggest cause' of worst air pollution in Europe", 2016. <https://www.theguardian.com/environment/2016/may/17/farming-is-singlebiggest-cause-of-worst-air-pollution-in-europe>

⁶ WHO. 'Stop using antibiotics in healthy animals to prevent the spread of antibiotic resistance', 2017. (Press release). <http://www.who.int/news-room/detail/07-11-2017-stop-using-antibiotics-in-healthy-animals-to-prevent-the-spread-of-antibiotic-resistance>

welfare tragedies. We need a healthy society, fed on a sustainable, balanced diet that does not involve animal cruelty and suffering.

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⁷ Scientific Committee on Animal Health and Animal Welfare, European Commission. 'The welfare of animals during transport (details for horses, pigs, sheep and cattle)', 2002; https://ec.europa.eu/food/sites/food/files/safety/docs/sci-com_scah_out71_en.pdf

⁸ Eurogroup for Animals. 'Areas of Concern: Analysis of Animal Welfare Issues in the European Union', 2010. <http://www.animalwelfareintergroup.eu/wp-content/uploads/2011/10/EurogroupForAnimals-AreasOfConcern2010.pdf>

⁹ Walsh, Bryan (Time). 'The Triple Whopper Environmental Impact of Global Meat Production', 2013. <http://science.time.com/2013/12/16/the-triple-whopper-environmental-impact-of-global-meat-production/>

¹⁰ Garfield, Leanna (Business Insider). 'I tried the Bill Gates-backed vegetarian burger that 'bleeds' and sizzles like beef', 2016. <http://www.businessinsider.com/review-of-beyond-meat-veggie-burger-that-bleeds-2016-5>

¹¹ Wang, Uccia (The Guardian). 'Can Impossible Foods and its plant burgers take on the meat industry?', 2017. <https://www.theguardian.com/sustainable-business/blog/2017/mar/02/impossible-foods-plant-burger-vegetarian-meat>

¹² Friedman, Zack (Forbes). 'Why Bill Gates And Richard Branson Invested In 'Clean' Meat', 2017. <https://www.forbes.com/sites/zackfriedman/2017/08/25/why-bill-gates-richard-branson-clean-meat>

Towards a healthy sustainable diet

Reducing the consumption of meat, especially red meat, is good for your health.

A healthy diet¹ allows your body to reach and maintain its optimal functioning levels. It preserves or regains your health, reduces the risk of contracting diseases, ensures reproduction, a smooth pregnancy and sufficient milk for nursing. Essentially, it promotes optimal growth and development. The diet should be satisfying, sufficient, well-rounded, balanced, safe, adapted, sustainable and affordable. Therefore, general recommendations can and should be given to the general public but the final goal is the health of each and every individual. The nutritional recommendations for individuals can differ and even contradict general pointers. For example, can a person be a strict vegetarian and still remain healthy? The answer is yes. Can a person who is allergic to vegetables stay healthy? No. The general recommendations should always be taken into account, but at the same time the particular individual should talk to a nutritionist or dietician.

With regard to a diet being sustainable as well as being healthy, such food sustainability is usually focused on the stages prior to the act of eating or immediately afterwards, i.e., production systems, distribution, manipulation and then finally waste. However, this is a somewhat reductionist view of sustainability because the way all these processes are developed can be, in and of themselves, beneficial or harmful to health. It has been shown that a poor diet, such as the excessive consumption of animal protein, increases the chances of a health disorder and, as a result, health and labour costs, among other expenditures, thereby causing the food system to become unsustainable.

Production methods affect health, for example, through the presence of toxic or potentially toxic substances (i.e. herbicides or antibiotics). Distribution methods also affect health. The food produced thousands of miles away or food not native to the locale may not be so beneficial because it does not grow in the same environment as the person eating it, or the person is not physiologically adapted to metabolise such food – certain algae for example. Obviously, the industrial manipulation of foodstuff directly affects health through additives, excessive saturated fats, simple sugars, salt, trans fats, or the loss of vitamins, phytochemicals, fibre, etc.

How does diet affect our health?

According to the 2015 Global Burden of Disease Study,² the five greatest risk factors measured in years lost due to disease, disability or premature death are, in descending order: diet, high blood pressure, child and mother malnourishment, tobacco consumption and air pollution. Basically, the main risk factor for the loss of years in a person's life is directly related to the eating habits of unhealthy food. Risk factors relating to diet significantly contribute to the increase of cardiovascular and circulatory system diseases, cancer, diabetes, as well as genitourinary, blood and endocrine diseases.

Studies on dietary habits have also confirmed that poor diets are dominated by excess salt, saturated fats, sugars added mainly in processed products, and excessive alcohol intake, as well as the near absence of fruit and vegetables, which have been scientifically

proven to be the types of food that can prevent cancer, among other prevalent diseases.

What is curious is that despite all the evidence, the population appears to be unaware of the risks inherent in their dietary habits. In an opinion poll taken among Spanish people in 2010,³ 88% considered a poor diet, in general terms, to have a substantial impact on health; while 91% thought a good diet, again in general terms, had an influence on good health. However, the percentages dropped to 60% and 67% respectively when they were asked about specific factors that have positive or negative effects on health.

In the last two to three decades, Spain has moved away from the Mediterranean diet. It is now second to Greece in divergence from this dietary model⁴—a dietary model scientifically proven to have a high correlation with good health.

The American Institute for Cancer Research has revealed that the frequent eating of red meat could raise the risk of cancer by 12%. Elsewhere, the World Health Organization has spoken of an 18% increase in such a risk. The dietary factors relating to the onset of cancer are various, with the main risk factor being alcohol intake, but they also include saturated fats, burnt food, industrial baked goods, soft drinks and smoked meats. Another factor is the low consumption of foods that can prevent cancer, such as fruit, vegetables, legumes and water. In conclusion, it is important to highlight that reducing the consumption of meat, especially red meat, can be good for health but what really leads to a healthy life is maintaining a balanced diet on the whole.

In this sense, it should be noted that when a food group is pointed out as being potentially carcinogenic, there is a great drawing of battle lines in our country, and the world itself, between those for and those against the food in question. Accordingly, we should consider the information that comes from bodies without any economic or other conflict of interest to be more credible. Such bodies may

be the World Health Organization or scientific centres that have declared themselves not to have any conflict of interest⁵ or eliminated any economic or contractual ties to the food and pharmaceutical industries, such as the *Academia Española de Nutrición y Dietética* [Spanish Nutrition and Dietary Academy] which is the scientific voice of the *Consejo General de Dietistas-Nutricionistas de España* [Spanish General Council of Dieticians and Nutritionists].

As nutritionists and dieticians, we look at the health of people through wholesome eating that is also sustainable. Nevertheless, what everyone brings to their lips is the final link in a chain that traverses production, manipulation, distribution, sale and final consumption. As a result, the consumer wields a large amount of power and the dietician or nutritionist has a great opportunity to influence the consumer with a sustainable diet plan. Yet, the ultimate responsibility does not fall solely on the consumer, nor should it. The consumer is completely conditioned by, among other things, the availability of food, the power of advertisement and the price.

Recommendations for a healthy sustainable diet

Confronted with this situation, dieticians and nutritionists advocate for a diet that is as naturally balanced as possible and smartly adapts to the different stages of life, even considering genetic predispositions. Such a diet can help the body overcome health crises and prevent non-infectious diseases.

The human diet ought to be plant-based: that is, based on vegetables, legumes, whole cereals, dried fruits and nuts, olive oil and fruit. These provide the largest number of substances that promote good health⁶ such as fibre, phytochemicals, antioxidants and low-density calories, in addition to vitamins and minerals. With this foundation, meat, fish, eggs and dairy products can be added but in a much smaller proportion and less frequently. As for a

strict vegetarian diet, the inclusion of vitamin B12, calcium, vitamin D and other micronutrients must be monitored.

Overall, we recommend eating more fresh produce and fewer processed foods, less meat and more vegetables. We also encourage the regular intake of organic, biological, environmentally friendly foods that are in season and local, and forming part of a sustainable supply chain that promotes healthy living.

We share the viewpoint that sustainable food systems need to be urgently developed in order to supply dense urban areas (which continue to grow incessantly), thereby ensuring nutritional security. On this aspect, we make the following proposals.

Firstly, work on food education programmes involving parents and teachers in schools, as well as at university and community groups. Take action with canteens, which serve thousands of citizens every day, and include policies on sustainable food in procurement

tenders. Furthermore, use the expertise of dieticians and nutritionists during community actions (education, health, markets, etc.) so that local authorities can develop food education programmes and nutritional campaigns. Eating is a very intimate act so any action and education on it must be at a grassroots level.

The regulation on vending machines in public places also needs to be revised in order for healthier products to be offered, and similarly, to promote the consumption of local produce.

Neither overpopulation nor the lack of food are the causes of a dietary imbalance, rather, it is the result of a system more focused on profits than on people. So, let each one of us be the person who starts to change, starts to act.

Alma María Palau Ferré
President of the Consejo General de
Dietistas-Nutricionistas de España

¹ Revision and Position Group of the *Asociación Española de Dietistas-Nutricionistas*: Definición y características de una alimentación saludable. 2013

² A systematic analysis for the Global Burden of Disease Study 2015. *The Lancet*, Vol 388 October 8, 2016.

³ 'Knowledge and belief on diet and cancer' Study, n=202 interviews conducted, field work 5-14 October 2010, performed by Ipsos Institute.

⁴ *Public Health Nutr.* 2010 Oct 29-17.

⁵ Position paper and 'Free of economic conflict of interests body' declaration by the Academia Española de Nutrición y Dietética. Protocol on total transparency, integrity and fairness in health policies, research and scientific positioning. 2017.

⁶ American Diet Association. 2009 Dec 109 (12) 2073-85.

Antibiotic use in
livestock and its
risks to human
health

Spain administers 402 mg of antibiotics for every kg of meat produced—four times the amount used in Germany and almost six times the quantity used in France.

A significant proportion of antibiotics sold around the world is administered to animals to be slaughtered and not to human patients. This is one factor in the increase of antibiotic resistance putting the public at risk. In the United States, the percentage is 70%. In 26 European countries, around two thirds of antibiotics are used for farm animals.¹

Spain is the EU member state with the highest use of antibiotics in animal husbandry.² The most recently available data, from 2015, shows that 3,209 tonnes of antimicrobial agents were sold for use on animals. Of this amount, 99.9% ended up being administered on cows, pigs, sheep, goats, chickens and other species to be eaten. The remaining 0.1% was used for pets. A report by the European Medicines Agency published in October 2017³ revealed that Spain administers 402 mg of antibiotics for every kg of meat produced—four times the amount used in Germany and almost six times the quantity used in France. Moreover, the *Organización española de Consumidores y Usuarios* (Spanish Consumers' Agency) considers antibiotic resistance to be one of the main challenges facing public health in Europe and has established a campaign to raise awareness of the need to prevent the loss of drug effectiveness and has collected signatures for a petition calling on the restricted use of antibiotics on livestock.⁴

Antibiotic resistance and the arrival of 'superbugs'

Bacteria are evolving to battle many common antibiotics and this adaptation has led to the appearance of bacterial strains that are resistant to such drugs. Within a given

mutation, the bacterium's genes providing resistance have been found not only in parts of the DNA that are not easily shared between bacteria (resistance properties cannot be easily spread in this way), but also in structures called plasmids that the microbes commonly exchange between one another, thus creating a horizontal transmission of genetic material that does provide resistance. In turn, a single bacterium can collect various plasmids with different genes that apportion resistance to different types of antibiotics.⁵

Since antibiotics were introduced into modern medicine in the 1940s, their effectiveness has steadily declined. It is expected that, in the coming two decades, there will be a noticeable increase in the amount of infections proving extremely difficult to treat due to antibiotic resistance.

A study published in *Genome Research*⁶ confirmed the existence of a new pool of antibiotic resistance in the gut flora of hundreds of people. It also showed that Spain has one of the highest levels of antibiotic resistance potential compared with other countries like the United States or Denmark.

Administration of antimicrobial agents to animals for slaughter

Until 1995, no prescription was required to administer medication for diseases in domesticated animals. It was frequently the farmer who, using his/her experience or on the advice of a veterinarian, decided the antibiotic

Antibiotic resistance has reached such alarming levels that it should now be considered a global threat on a par with climate change.

to be used for therapeutic or prophylactic purposes. This could be one of the factors that led to the abuse of these drugs and, as a result, the appearance of resistance among bacteria.⁷

Researchers and international institutions agree that the principal cause for the loss of effectiveness in antibiotics has been and continues to be the large-scale use of such drugs in intensive livestock farming. Because of this issue, the European Union prohibited the use of antibiotics as a growth promoter in 2006⁸ and urged Member States to only distribute antibiotics under prescription as well as to implement monitoring systems to detect cases of super-resistant bacteria. With regard to treatment by prescribed antibiotics, farmers must observe a certain length of time between the ending of the treatment and the slaughter of the animal for human consumption or even the use of the animal's produce (milk and eggs). They must also adhere to the correct waste management of unused or expired medication and its packaging.⁹

Opinion of society, the FAO, OIE and WHO on antibiotic use and antibiotic resistance

Based on all of the above, the Alliance To Save Our Antibiotics¹⁰ recommends cutting the use of antimicrobial agents by up to 80% by 2025, which includes the prohibition of the wide-scale use of medication in food and water except for the specific cases in which a disease has been diagnosed.

The Food and Agriculture Organization of the United Nations (FAO)¹¹, the World

Organisation for Animal Health (OIE) and the World Health Organization (WHO)¹² have stated that antibiotic resistance, in humans and animals, has reached such alarming levels that it should now be considered a global threat on a par with climate change.

Additionally, the WHO has plainly declared itself against the use of any type of antibiotics in animals through a series of guidelines. It has recommended:¹³

- (a) An overall reduction in use of all classes of medically important antimicrobials in food-producing animals.
- (b) A complete restriction of use of all classes of medically important antimicrobials in food-producing animals for growth promotion.
- (c) A complete restriction of use of all classes of medically important antimicrobials in food-producing animals for prevention of infectious diseases that have not yet been clinically diagnosed.

Following the publication of the reports by these three institutions, both the extent of the problem posed by antibiotic resistance and the need to fight it comprehensively is patently clear.

AVATMA

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The effects of
factory farming
and the
alternatives for
the South

Almost two-thirds of overweight people in the world come from low and middle-income countries.

Over the last fifty years we have grown accustomed to hearing about the famous green revolution that has turned out to be nothing but industrialisation based on the corporate control of resources. This poorly named revolution has left us with tragic consequences in terms of both the right to food and the preservation of biodiversity. It has undermined, and still is undermining, the viability of rural communities around the world. However, within this revolution, little has been mentioned about the one that has occurred to livestock. A silent upheaval impelled by neoliberal policies and deregulation, in which corporate control has grown like never before and its pernicious effects are blatant. These effects, which have touched all countries, have been far more dramatic in the countries of the global South.

Effects on health

One major effect is with regard to health. As a direct effect of this revolution, meat consumption across the world has skyrocketed over recent decades, and this upward trend is strongly expected to continue: a 76% increase by 2050. We are talking about meat from the industrial model: cheap, low-grade meat that now represents 80% of world consumption in recent years. Because of it, global diets have altered and the consumption of processed meat products has increased.

Whereas, we know from WHO data that an unhealthy diet is the leading concern for global public health, resulting from excess processed meat consumption and high levels of sugar, fat and salt; it is the very poor who are most acutely affected. Such findings are reflected in

the report elaborated by the Overseas Development Institute at the beginning of this year: over one-third of adults in the world are overweight and almost two-thirds of all overweight people in the world come from low and middle-income countries. The number of overweight or obese people in impoverished countries rose from 250 million to almost one billion in less than three decades. Such rates are increasing far more quickly than in rich countries. Accordingly, statistics show that 41% of the Colombian population is overweight, while in Namibia and Zimbabwe the percentage of women who are overweight is 21% and 23% respectively. In economic terms, the cost of malnutrition and lack of micronutrients represents between 2% and 3% of global GDP, or a yearly loss of **\$1.4-\$2.1 billion**.

All this is without considering the impact of the industry's mass use of antibiotics on health. It is estimated that such use will increase 67% by 2030; according to the Proceedings of the National Academy of Scientists of the United States (PNAS), this represents a threat to public health. Elsewhere, the European Centre for Disease Prevention and Control has calculated 25,000 deaths occur due to antibiotic resistance.

Environmental impacts

Another of the major known effects originating from livestock farming is the effect it has on the environment. The growth in meat consumption and expansion of factory farming are directly accountable for over 18% of all greenhouse gas emissions. In addition to this, enormous pressure on farmland borders and

The eviction of small farmers from their lands for the monoculture of cereals or oil plants destined for animal feed, and in this way peasant cattle farming and its ways of life are disappearing. This practice is known as ‘land-grabbing’.

water resources has been exerted by the dependence on crops for animal fodder, such as genetically modified soybeans. Yet, for the so-called aforementioned revolution to have been able to take place, a radical shift in agricultural production had to occur beforehand, especially in countries of the South.

This is easy to comprehend, once we realise that the revolution’s keystone is the system’s absolute dependence on concentrated feeds based on corn, soybean and other cereals—essentially its need for large quantities of protein to increase animal growth, weight and productivity. According to the FAO, 20%-30% of animal feed, globally, comes from concentrated fodder. Looking at Spain, we can find that 92% of imported soybeans is used for industrial feeds. EU statistics point out that 75% of all agricultural imports are not for human consumption but for animals, with soybeans counting for 75% of that proportion.

The change in paradigm came at the cost of a vicious agricultural transformation mainly in southern countries, whose best lands are now used for fodder crops due to the pressure of agrarian policies of a Europe and America eager to obtain large volumes of products at the lowest price. For example, Paraguay only dedicates 4% of its land to production of food for domestic consumption. In fact, Latin America is one of the regions most afflicted by this expansion of monoculture for animal feed. The FAO has explained that livestock farming today uses 30% of the planet’s land area, the majority being pastures, but it also occupies 33% of all arable land for the farming of fodder.

The destruction of woodland to make way for grassland is one of the main causes of deforestation, especially in Latin America, where 70% of the Amazon rainforest that has been felled has now been converted into pastureland.

Impacts on small farmers

The third effect of this change in land use, which affects southern countries in particular, is the eviction of small farmers from their lands for the monoculture of cereals or oil plants destined for animal feed: in doing so, peasant cattle farming and its ways of life are disappearing. This practice is known as ‘land-grabbing’. According to the FAO, 80% of available farmland is in South America and Africa and by 2030, 130 million extra hectares will be needed to produce the necessary food. The change in land use necessitated by industrial livestock farming and its associated crops has created an additional crisis in Africa, especially among its own livestock farmers. We know that 40% of the world’s land surface is unsuitable for crops and this land is exploited by nomadic farmers as a means to feed their stock. Half of sub-Saharan Africa is made up of arid land where millions make their living from pastoralism. They are losing access to land and grazing areas as the activities of landowners and ranchers expand. According to the Food and Agriculture Organization of the United Nations (FAO), the loss of grazing lands eliminates a fundamental tool in combating climate change; pastures can store up to 9.8% of carbon emissions and act as a source of earnings that can carry millions out of poverty.

An alternative: peasant farming

This last impact, the disappearance of small-scale agriculture and animal husbandry is perhaps one of the most worrying, because it is through small farmers and not technology that we will be able to find the correct path from the crossroads we are now at. Food is not the focal point of this climate and dietary crisis. We know that the population will continue to grow in the coming years and with it, the demand for food. But we also know that there is a strong consensus in global warming forecasts that warns of the diminishment in global agricultural productivity due to climate change, especially in the South. Never before in history has there been such an urgent need to change the global food system in order to meet the current crises and create viable systems that centre on the reproduction of life and not the maximisation of profits for a handful of businesses. Yet, we are moving in the other direction towards the collapse of food systems, where governments continue to tout industrial agriculture and livestock farming with its global supply chains as the solution to the problem.

Despite this short-term inertia, societies have opened up to the necessity of a radical overhaul that endorses, on one hand, dietary changes through the drastic reduction of red and processed meats and their replacement by plant proteins, and on the other hand, a move toward a peasant farming system based on less volume and better quality. Such farming would directly contribute to stabilising the Earth's temperature, since it uses agricultural practices that cut down on CO2 emissions and energy use. It would, furthermore, be capable of supplying fresh, healthy food to the vast majority of people on this planet.

The countries in the South are suffering the worst effects of the climate and food disaster, but, ironically, it is their agricultural and livestock practices that hold the hopes of everyone.

Javier Guzmán
Director of VSF Justicia Alimentaria
Global

The danger of
industrial farms
and the
alternatives for the
countryside

Industrial farms are packed full of animals to obtain maximum meat production, disregarding any notion of quality of the meat produced or their effect on the environment, society and health.

In recent years, intensive livestock farming has proliferated in Europe and especially in Spain. Industrial farms comprise large, highly technical facilities packed full of animals to obtain maximum meat production in as little time as possible, disregarding any notion of quality of the meat produced or the effects on the environment, society and health deriving from such a business model. As these industrial farms rely principally on technical methods, very few jobs are generated (about one full-time worker for every 5,000 pigs). Moreover, the crowding of so many animals causes serious environmental hazards such as the nitrate pollution of water, soil contamination by high concentrations of purine, soil-sealing and asphaltting of arable lands, and even immense water wastage. At the same time, the rural areas that are home to these types of facilities suffer rapid population decline because of the fetid odours produced by purine and the boom in flies that put an end to cultural, hospitality and nature tourism and with it, employment.

The proliferation of industrial farming is especially acute in Catalonia, Huesca, Castile-La Mancha, and Castile and León. To demonstrate the problem, in Castile-La Mancha alone, 100 industrial livestock facilities applied for planning permission in 2016 and another 100 in 2017. The situation has impelled a strong public mobilisation against these facilities in the four mentioned areas. Some of these movements, like the communities of Villafáfila (Zamora), Yecla (Murcia) and Gamonal (Toledo), have managed to halt such construction whilst promoting a more sustainable farming model. Yet, the same developers simply turn to new locations for

their projects, where they expect less community opposition. In the quest for alliances to halt the assault on the smallest communities and promote farming models that nurture a thriving countryside, a national platform against factory farms was inaugurated in Loporzano (Huesca) in 2017. It unites the efforts of various Spanish environmental NGOs and different community platforms opposed to the industrialisation of livestock farming.

Factory farming: our source of low-quality meat

The breeds selected for intensive meat production are those that grow quickly to the detriment of their ability to adapt to the weather and environmental conditions in which they are reared. This, together with the animals' overcrowding and confinement, represents significant risks in relation to the propagation of diseases. The preventive method used is the animals' systematic medication through medicated fodder, feed that has been supplemented with broad-spectrum antibiotics and antiparasitics. This practice explains why currently in the EU 80% of antibiotics purchased is for livestock (FDA, 2012). Spain leads Europe in the consumption of veterinary antibiotics that are critical to human health: such consumption of antibiotics is three times higher than in Germany, the largest meat producer in the eurozone. One of the most alarming problems resulting from this abuse of antibiotics is the emergence of antibiotic-resistant bacteria, such that certain infections that were until recently easy to treat in humans are now without any effective cure. According to the European Food Safety

Spain leads Europe in the consumption of veterinary antibiotics that are critical to human health.

Authority and the European Centre for Disease Prevention and Control, some 25,000 people die in the EU every year from bacterial infections that are resistant to antibiotics. In addition to the gravity of the emergence of antibiotic resistance due to the mass use of medication in livestock, the meat obtained from animals reared in such a way should be questioned. Genetically selected for quick growth, fed with genetically modified soybean and corn-based fodder, systematically medicated, overcrowded, confined and, without doubt, stressed, these animals can only produce extremely substandard meat.

Why has intensive farming thrived if it has such serious impacts?

Spain is a country where 40% of its aquifers are polluted by nitrates (Hernandez-Mora et al, 2007), thereby placing aquatic ecosystems and drinking water supplies at risk. The fact that intensive farming, which has a serious problem in the management of purines with high nitrogen concentrates, has boomed in this context is plainly irrational. The growth of industrialised livestock farming in Europe and, in particular, in Spain can be explained by the pressure of a market that blindly follows profit without taking responsibility for the inherent environmental, social and medical impacts, combined with a drain of public funds through subsidies to large corporations that are encouraging a cheap-meat bubble.

The sale of large volumes of low-quality, cheap meat, coupled with the food distribution channels that leave the vast majority of profits in the hands of intermediaries and very little in those of farmers, has pushed small farms to bankruptcy. The poor profitability of farming is one of the keys to the problem; costs have increased disproportionately compared to the income that can be obtained from sales. The prices received by extensive farmers do not cover the actual costs incurred in their activity. Such farmers are paid what is deemed adequate by a market entirely under the influence of intensive farm production. According to data from Spain's National Institute for Statistics (INE), in the last decade in Spain, 420,000 family-owned livestock farms (including pigs, poultry, sheep and cows) have disappeared, while the average size of existing farms has steadily grown.

The market dynamics favouring large-scale production (regardless of product quality or of the internalisation of environmental and social costs) are supplemented by governmental authorities that are currently endorsing intensive farming. This creates a worrying flow of public money going into the pockets of large producers, and facilitates the high environmental repercussions of such an agricultural model. In fact, the Department of Agriculture, the Environment and Rural Development of Castile-La Mancha grants

Grazing helps clear hills and control fires, regulates water cycles and soil quality, and promotes biodiversity; it ensures the continued survival of rural communities [...]

subsidies of up to €127,000 to factory farms for each job created (which is usually one per facility) and finances up to 65% of required funding (Resolution 22/06/2016 of the Directorate General of Rural Development). Such public financing is encouraging a bubble that generates large profits for a handful of companies to the detriment of the environment, public health and rural life. That same body barely helps extensive farming, and even hinders it. There is an ignorance among government authorities, at regional, national and European levels, about the problems specific to extensive livestock farming. In many aspects that significantly affect it, extensive and nomadic farming is not considered separately from intensive farming. As a result, this type of farming becomes obliged to follow utterly inappropriate regulations. For example, the following aspects, among others, ought to be taken into account when regulating extensive livestock farming: the higher quality of the products, the benefits of grazing in the conservation of nature and the potential coalescing effect this activity has for rural communities.

Extensive farming and environmental sustainability

The escalating consumption of animal protein is generally considered incompatible with the Earth's capacity to feed its inhabitants. The annual one billion tonnes of wheat, barley, oats, rye, corn, sorghum and millet consumed by livestock would feed about 3.5 billion

people. However, such an argument disregards the health benefits of eating good-quality meat in moderation, the fact that animals can consume food that we humans cannot and the fundamental role of extensive farming in the sustainability of agrarian ecosystems and in biodiversity conservation. Extensive livestock farming is efficient in taking advantage of pasturelands, as animals consume resources that do not compete with human food. Thus, herds are practically self-sufficient, their diet does not depend on imported feed and the consequent high consumption of fossil fuels. In fact, 60% of the land in Spain is appropriate for direct livestock use through grazing by its hardy indigenous breeds.

Extensive stockbreeding and crop farming complement each other and the sustainability of either activity is difficult to conceive in isolation from the other. Grazing shapes the landscape, contributes to clearing boundaries, paths and farms without relying on fossil fuels or chemical herbicides; it helps clear hills and control fires, regulates water cycles and soil quality, and promotes biodiversity; it ensures the continued survival of rural communities, thereby preserving cultural heritage and local identities. For over 6,000 years, Spain has been home to nomadic cultures, which have preserved some traditional practices in animal husbandry – such as the use of sheep dogs – which have almost been forgotten in intensive farming. It all constitutes a legacy whose disappearance we should not allow. Herding cultures even retain extensive knowledge on

the natural environment, which would be lost in the annihilation of the activity. The abandonment of shepherding/cattle-herding entails the deterioration and the loss of habitats of great interest as well as environmental uniqueness. Semi-natural grasslands are rich in flora and invertebrate fauna which, in turn, are an important resource for birds. The correct management of livestock renews the vegetation because the animals spread seeds and increase organic material by fertilising the soil. In an ecosystem, the soil is the most valuable resource but also the most difficult to renew; as such, it requires very careful management. The rational use of grasslands (that is, ensuring a constant cover of vegetation) has beneficial effects in protecting the soil.

The desirable scenario for our future must include a reduction in the consumption of meat per person while such meat must be the product of extensive livestock farming. Both elements (reduced quantity coupled with higher product quality) will guarantee greater sustainability of the environment, the economy and society as a whole. In order to do so, it is essential that extensive farming be considered completely separately from intensive farming; its context must form part of the design of policies and regulations for the support and control of this activity. Likewise, there must be a move to consolidate the specific marketing channels for extensive farming products in order to both guarantee a fair profit margin for the work of extensive farmers and provide consumers with the option to back a sustainable farming model.

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Alternatives

Livestock and the
Common
Agricultural Policy:
inseparable paths

Instead of fostering sustainable food production and consumption, it has encouraged livestock farming replete with unconscionable social and environmental effects.

Meat and CAP – an obscure relationship

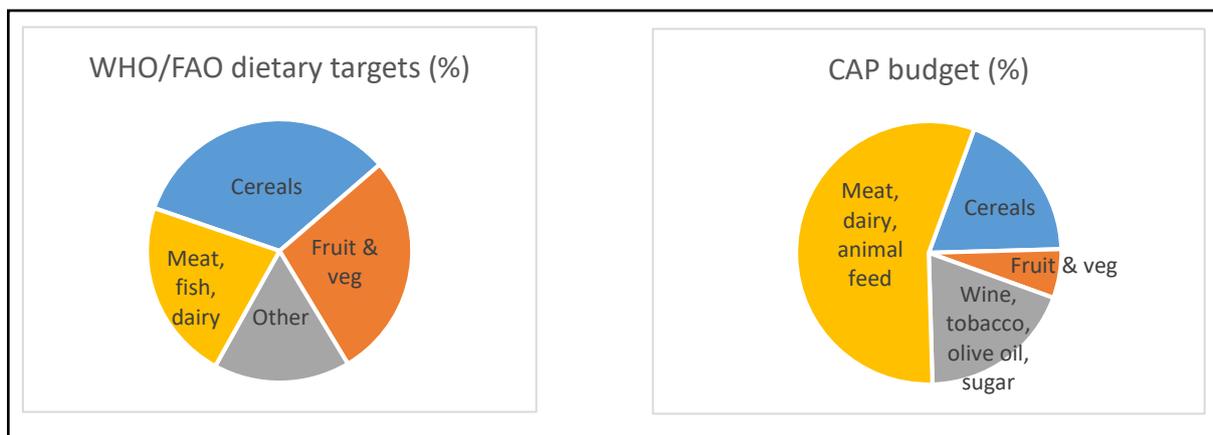
We are eating the planet to death, largely by means of the uncontrolled consumption of animal-based foods in industrialised countries and emerging economies. Almost 80% of the world's farmland is used for livestock; however, animal products only provide humans with 33% of the proteins eaten.¹ Moreover, the agricultural policies implemented, including those by the EU, are not helping. The Sustainable Development Goals (SDGs) and the Paris Agreement on the climate have attempted to delineate our path for producing and consuming food. Such an aspiration will remain elusive while a comprehensive reform of the Common Agricultural Policy (CAP) is ignored.

The CAP has the largest budget of the EU with over €50 billion earmarked to ensure viable food production, adequate quality of life in rural areas, the sustainable management of natural resources and combat climate change. The policy essentially dictates the state of nature, rural landscapes and, of course, the food put on our plates. Despite being in a quasi-permanent state of reform, the continued disappearance of small farms, lack of generational renewal in the countryside and rural flight demonstrate that its socio-economic objectives are not being obtained. Nor can it be defended from an environmental perspective: most of its funds are channelled to large-scale or intensive farms with unsustainable consequences for the soil, water, biodiversity and climate.² Animal-sourced products and their relationship with the CAP is a clear example of how public coffers, used in an

inappropriate manner, can lead to a situation diametrically opposed to the one sought. Instead of fostering sustainable food production and consumption, which is healthy for people and the planet, it has encouraged the intensification of the sector with unconscionable social and environmental effects within and without our borders.

Farms in the EU depend heavily on the CAP's public funds: up to 32% of farm income comes from CAP subsidies.³ Such subsidies are significant for meat, dairy and egg producers. Pig and poultry farms receive 22% of their total income from direct aid; this percentage increases to over 40% in the case of dairy farms, 61% in mixed farms and 70% in other livestock farms (predominantly, cow and sheep).⁴ These grants are disparate at best: some are linked directly to livestock production, others granted indirectly for forage crops, another class comes in the form of investments, and even aid for export, private storage or public purchases in the case of a drop in prices. All this can be added to campaigns to promote the consumption of animal products, such as the school milk programme. It should be remembered that there are interesting measures aimed at reducing environmental impacts (like the agri-environment and climate measures) and improving the welfare of animals; although these are hardly ever employed to support extensive farming models or improve the treatment of livestock.

It is difficult to obtain information on the total amount of aid received by livestock farms but



there are precise figures in the case of coupled payments, which are paid out only to specific types of production. Out of the annual €4.2 billion making up coupled payments, cow farms received 41% of funds. This is followed by dairy farms with 20%, and goat and sheep farms with 12%. In total, more than €3 billion per year of European public funds is allocated exclusively for animal protein production. This is particularly remarkable given that scarcely €2 million worth of coupled payments are allocated annually to directly support the production of pulses for human consumption,⁵ ignoring the dearth of plant protein consumed in the EU.

On the whole, billions of euros every year are earmarked for animal products without even distinguishing between the various production systems (intensive, semi-intensive or extensive) or receiving aggregate information on sector type (cattle, pigs, etc.), making any follow-up on the destination of the funds difficult.

This situation also has a clear effect on public health. In previous periods of the policy, when the CAP had an approximate annual budget of €55 billion, there was an incongruity between its budgetary allocations and the dietary recommendations of the World Health Organization and the FAO. **As the above chart shows,⁶ the majority of public funds went to livestock production in comparison with cereals, fruit and vegetables.**

Not all forms of livestock production are created equal

Looking into the details, a large part of the CAP's budget is made available to intensive livestock farming. Such farms are more resource-intensive and have a higher impact on nature, such as soil and water pollution by purine and high greenhouse gas emissions. In addition, the use of non-indigenous breeds reduces the ability to adapt to the effects of climate change. At the same time, extensive livestock farming, which produces meat and dairy in a more environmentally friendly way, is marginalised, nearly abandoned, by the CAP. Herding, and especially transhumance, was forced into a quandary in the latest reform of the policy. One example of this is the Pasture Eligibility Coefficient,⁷ which excludes land area with trees and shrubbery from subsidy payments, despite such land holding environmental and production value in providing food and shelter to animals. Irony, both in the social and environmental sense: the policy punishes those that conserve instead of those that pollute. It ratchets up the pressure on a key production sector that assists in the preservation of the environment and combating climate change. Properly managed grazing is essential for preserving the best carbon sinks: pastureland. The future of one of the few viable activities in mountainous areas, extensive farming, has become compromised at the very moment that the issue of rural flight entered the political agenda. Furthermore, the policy disregards the fact that herds make the

most of resources not for human consumption, such as stubble fields; they freely fertilise the land and free up land currently assigned for fodder production especially outside the EU.

Added to the above should be the sorry state of cattle trails or the excessive bureaucracy resulting from regulations, such as animal welfare, which were intended for intensive farming. Furthermore, products are not clearly labelled thereby keeping the public in the dark about the social and environmental implications of the different meat production systems. As such, we have the perfect blend of circumstances preventing extensive farmers from getting a fair price for their products. Livestock grazing is abandoned while factory farms mushroom in our countryside, supported by governmental authorities, keeping prices artificially low thereby stimulating demand for industrialised animal products. Markets are flooded with cheap meat and milk, yet the environmental and social costs of such produce is not internalised. As such, they encourage an industrialised diet in which excess consumption of animal protein puts our very health at risk.

A new CAP for sustainable livestock farming

The CAP, a policy subsidised by taxpayers, should aspire neither to convert our fields into factories, nor to produce food that is supposedly to feed the world but ends up in our bins. The cost is too high. Faced with this inappropriate use of public money, a profound change is required. Those who produce real public well-being should be supported, while the 'polluter pays' principle ought to be equitably applied. We need a CAP that allows healthy foods to be produced in healthy ecosystems and encourages a transition toward sustainable food systems.

To achieve these goals, we propose a new system of subsidies that offers measurable environmental, economic and social results for public money, through territorial contracts. A new CAP should cease to be merely agrarian in

outlook but become land and food-based, in line with the SDGs. For the topic at hand, the following are some suggestions to prioritise truly sustainable livestock farming, in keeping with public health and rural development targets:

- Support agroecology, environmentally friendly food production, as part of combating and adapting to climate change. In particular, encourage the cultivation of legumes for their agronomic and public health benefits. This would also contribute to reducing deforestation. In the case of animal production, limit support to truly sustainable products, originating from extensive farming and pay for the land area actually grazed and properly managed. Return to use of smaller farm animals (sheep and goats) and indigenous breeds.
- Prioritise aid for farms that are family-run, agro-ecological, found in Natura 2000 and/or High Natural Value Systems.
- Channel investments and agri-environmental payments to farms that commit to higher environmental and animal-welfare standards, thereby offering the entire population added value in environmental, climate and community cohesion aspects.
- Create land banks and agro-ecological pasturelands, as a means to solve one of

We need a CAP that allows healthy foods to be produced in healthy ecosystems.

the main barriers to the generational renewal of farming: access to land.

- Employ and improve the available tools for training, support and education in the entire farm food system. For livestock, improve management practices and animal welfare. Provide tools to the industry and distribution channels allowing them to move towards industrial ecology standards, eventually leading to an exclusive supply of local, seasonal and agro-ecological products sold at a fair price for producers and consumers, while also creating shared value chains. Raise awareness among consumers on the impact of specific production models – such as intensive farming – on their health and the planet; promote the consumption of fruit, vegetables, legumes and the reduction of animal protein (any meat eaten should be of good quality), and the avoidance of waste.
- Encourage direct selling and short supply chains, including aspects of responsible public procurement, thereby increasing the added value of sustainable products and forming a strong bond with consumers.

- Restore ecosystems to a healthy state; without them there would not be any food production. Change the image of extensive crop and livestock farmers into champions of a sustainable environment.
- Establish transparent monitoring and assessment systems that allow for the examination of where public funds are spent and the results obtained.

In addition to the CAP, the transition to sustainable food models has to be laid out in compliance with current environmental and employment legislation, as well as a coherent application of sectoral policies and coordinated work between the various government levels. Furthermore, a new tax regime should be established which would tax polluting production and consumption models as well as internalise the social and environmental costs in the food prices, benefitting those who conserve the environment. All this, based on complete transparency in the use of our taxes, real public participation and the commitment by all stakeholders, is required to achieve the *green revolution* that is truly green.

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An account by an
extensive organic
stockbreeder

Climate change is objectively the greatest problem threatening crop and livestock farming on the planet.

The day that my family decided to become cattle farmers, we had been isolated by heavy snowfall in the farmhouse at Mosqueruela, a small town in Teruel province—our hometown. That was 25 years ago. Over this quarter of century, the snowfall has become increasingly less intense every year, or even absent.

Climate change is objectively the greatest problem threatening crop and livestock farming on the planet. It causes particular harm to those of us involved in organic cattle grazing in the mountainous Maestrazgo area of Castellón and Teruel.

Organic cattle farming is based on the livestock's freedom to move: the cattle spend little time indoors. That, and feeding naturally, which is duly certified organic, ensure healthy, flavourful meat.

We practice transhumance, herding cattle down to Vistabella de Maestrazgo (Castellón province) in autumn and return to Mosqueruela and Linares de Mora (Teruel province) in spring. But the grazing lands are becoming increasingly scarce every year, and the prolonged droughts mean the cows do not have enough food. To produce one kilogramme of beef, it is calculated that four kilos of fodder and grain are needed. This is one of the disadvantages in industrial meat farming: it is expensive and cannot guarantee quality, while exhausting natural resources bit by bit. Extensive organic farming eliminates this problem. It encourages the environmental conservation of mountains, protects forests, and provides employment in areas where rural flight is the major enemy.

This is the second general problem hindering the development of extensive livestock farming. The population decline afflicting mountainous counties deprives the sector of

specialists, herders, and farmers accustomed to managing herds in a natural manner. As such, it tips the balance toward intensive farming in which animals are reared under disgraceful conditions.

Building a large shed and filling it with twenty thousand fast-growing chickens is an investment for large companies. The shed is managed by the company. As for you, even though you are the owner of the shed, you are a worker, dependent on big business. Local wealth is not generated in this way. However, under extensive farming, we take advantage of abandoned hills, we perform a service of fire protection, we conserve the environment, and we foster the integration of people into rural life.

If you are an organic stockbreeder, you cannot live in Barcelona and have your herd in Vistabella. You have to take care of them where they are. It has been shown that the rural population grows where there is livestock. Extensive farmers do not compete with anyone, quite the opposite, we contribute to rural and social development.

This is the case in the Autonomous Community of Valencia, with its many abandoned mountains; more herders are needed to produce organic meat that will meet the high demand. Extensive farming helps tackle population decline. It lowers unemployment and helps you lead a healthier lifestyle.

This brings us to another clear problem: the lack of institutes for teaching would-be livestock farmers. This is very acute in the Valencia area. Without specialists in the care of free-roaming

Extensive livestock farming protects forests, and provides employment in areas where rural flight is the major enemy.

livestock, the easy option is to continue stuffing farms and sheds full of animals, fatten them quickly, slaughter them, and sell a chemical-laden meat.

Valencia is at risk of a shortage, nothing is being employed to stimulate livestock farming. Where are the shepherds and cattle herders? The herder used to be a country bumpkin. Today, the herder is a specialist. The bumpkin is now an engineer, architect, veterinarian and more because they have to manage a farm that requires all that knowledge. A multi-disciplinary education (like my son is receiving or what I offer to young apprentices) with courses in mechanics, agriculture, animal husbandry, management, administration and much more are indispensable.

As if that were not enough, the bureaucracy and paperwork for certification and existing subsidies make it all the more complicated. It is an obstacle race for livestock farmers and, because of this, we are very few. Along with the hassle of paperwork comes the form-filling for organically certified abattoirs, some of which are many miles from farms, so the transportation of animals requires added expense.

Subsidies for organic farms are extremely precarious. In Aragon, livestock farmers are receiving about €200 per livestock unit (one cow or six sheep). However, in Valencia, as of today, I have received nothing. I have been assured that they will pay us 70% of the certification, yet, so far, I have had to certify the slaughterhouse at Benasal myself, which I had to pay out of my own earnings. It costs me

€1,000 per year to have my animals organically slaughtered at Benasal.

Acknowledging the problems described also points toward the solutions available for extensive organic farming to prosper. Heroic resistance is neither profitable nor attractive for young people.

There is no solution for combatting climate change other than the solutions adopted by governmental agencies and political decisions. It is important that political representatives are aware of the potential disasters hanging over agriculture and livestock farming, which are the bedrock and guarantor of food supplies and social order.

Nevertheless, it should be the public who exerts pressure on the government. Awareness on sustainability has to be rooted in the rural and urban populace; they have to change their habits in recycling, composting and consumption. This would be easier if there were information campaigns and public education. It is a catch-22. Without education on the environment and changes in habits, there cannot be pressure; without pressure on the minds of people, there will be no changes in policy.

An unavoidable factor is consumer education, in other words, introducing the public to new habits, which will make our co-existence healthier and more productive.

A good way to start this public programme is through the creation of agriculture and livestock training centres. Out of these will come specialists in the many facets involved in farming. Centres for professional courses in the

It is an obstacle race for livestock farmers and because of this we are few.

counties relying on livestock activities can provide the herders and managers, all those in contact with the animals, caring for and herding them, making their lives easier.

In turn, the governmental agencies have to create efficient, rational subsidy programmes. It is not a question of simply handing out money but doing so where it can be put to more productive use, to those who have shown their ability and effectiveness.

That, of course, should be without the labyrinthine paperwork and bureaucracy. It is not uncommon for those who process the forms to have no idea about organic livestock and crop farming; they even look at it with contempt. This has to change.

Finally, the production chain has to be made shorter and more accessible. For example, organic slaughterhouses should be opened where they are needed. They are needed where the demand for healthy, savoury, organic meat is highest: in the towns closest to livestock farming areas, with butchers who prefer quality over quantity, and at the same time close to areas where the hospitality industry is more developed.

Private initiatives are making important strides. For example, tourism agencies have joined us on our yearly herd migrations by offering tourists the opportunity to accompany us on horseback. The more livestock farming takes hold in the mountainous regions, the more local, healthy, quality meat can be produced for hotels and restaurants, and the more rural tourism initiatives will sprout up.

It may be that climate change deprives us of the snow that used to coat the Maestrazgo mountain range, but if we move smartly and effectively, livestock farming will cease to be one more vector for pollution and become an ally in sustainability and rural development.

Fernando Robres
Farmer

Taxing meat to
reduce our
consumption of
animals

Given the negative impacts resulting from animal products, a tax on them is justifiable, as in the cases of sugar and tobacco.

Over a decade has passed since the United Nations published '*Livestock's long shadow*'.¹ This report compellingly explained how livestock farming is one of the most pollutant human activities, which had already irreversibly affected our planet.

Indeed, the livestock industry on a global level is responsible for almost 15% of all greenhouse gas emissions. As such, the sector is among those that contribute most to climate change.

More than ten years ago, the warning from the United Nations should have been taken seriously. Instead, the link between meat consumption and the grim climate crisis has been absent in binding governmental measures and other important international bodies. The Paris Agreement in 2015 promised to be a serious opportunity for this discussion. Yet, the exploitation of animals for human consumption was completely neglected from the talks and negotiations.

Meanwhile, the consumption of animal-source products has only increased. On a planetary level, the rich countries, such as European states, are the largest consumers of animal protein, thus the main culprits of the current climate crisis.

Climate change can be neither avoided nor mitigated without a radical restriction on greenhouse gas emissions. Furthermore, the consumption of animal products entails further significant problems, for human health and for the billions of animals exploited for food.

Given the negative impacts resulting from animal products, to tax them is justifiable, as in

the cases of sugar and tobacco. Such a tax would help to limit consumption and, consequently, dampen the negative effects on society.

Taxes on products with harmful effects are not an exceptional measure. Once the damage caused by tobacco or alcohol was recognised, countries decided to place a tax on such products: more than 180 jurisdictions in the world tax tobacco products, there are over 60 tax measures on carbon emissions and at least 25 countries have a sugar tax.² As for animal products, taxes could be deducted from the same subsidies that are currently paid out to livestock farms.³

A tax on animal-source products would not be an unfamiliar measure to the international community. In fact, a meat tax has already been discussed in Denmark, Germany and Sweden. The Chinese government, for its part, reduced the maximum recommended meat intake by 45% in 2016.⁴ As climate change has worsened, substantive measures to combat it have become unavoidable and urgent. It is very probable that governments will seriously consider placing a tax on animal products over the coming decade.

A tax on animal products may actually be welcomed by the public, to the contrary of what some governments believe. A study by Chatham House and the University of Glasgow⁵ showed that the population expects governments to lead in finding effective solutions to global issues, such as climate change. Unfortunately, the public is still not

fully aware of the serious harm caused by livestock farming.

This issue has thus to be treated with the utmost urgency in order to break the so-called 'cycle of inertia' in combatting climate change.

The current consumption levels of meat, milk and eggs are neither sustainable, nor healthy for humans, and cause great harm to animals. Taxing these products could be an important first step to countering their various negative effects; it would reduce their consumption and also contribute to a more sustainable system of public funding.⁶ In turn, it would be crucial to economically assist and prioritise the cultivation of organic plant proteins, as well as the shift from livestock to plant protein farming and the development of the latest generation of plant proteins. In all cases, local agricultural goods and their consumption as well as small

farms and innovative small and medium-sized businesses should be favoured.

The future of a large number of domesticated animals, the mitigation of climate change and the food security of humans depend greatly on the decisions we take in relation to the livestock industry. We now know the environmental impact and energy intensiveness of this activity and we have scientific evidence on the enormous suffering of animals kept captive on farms. The political measures to be taken in this regard are among the most pressing and inescapable ethical issues of our time.

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Slaughter of
animals without
prior stunning and
meat labelling

The slaughter without prior stunning, considered an exception to the law, is becoming a generalised rule.

European Union legislation dictates that all animals to be slaughtered for human consumption must be first stunned (in other words, rendered unconscious at the moment they are to be killed so as to avoid unnecessary suffering). However, there are legal exceptions to this rule, defended on the basis of the religious traditions or rites of certain communities, which can entail enormous suffering for the animals. Moreover, the products derived from such practices enter the supply chain without being properly labelled, meaning the public cannot freely decide to reject such products on ethical grounds.

EU law: exceptions in the legislation on animal welfare

The original law on the compulsory stunning of animals before slaughter was Council Directive 74/577/EEC, which defined stunning as ‘a process effected by a mechanically operated instrument, electricity, or gas anaesthesia without adverse effects on the condition of the meat or the offal, which when applied to an animal puts it into a state of insensibility which lasts until it is slaughtered, thus sparing it in any event all needless suffering.’ This directive, however, did allow for derogations in the specific cases of slaughtering animals under religious rites, in an emergency or by a farmer for personal consumption.¹

The subsequent Council Regulation (EC) No 1099/2009 of 24 September 2009 on the protection of animals at the time of killing, which entered into force on 1 January 2013, has maintained the exception for religious rites.

The slaughter of animals according to certain religious rites

For the ritual slaughter practiced by some religions,² such as by Jews, Muslims and Sikhs, the animals at the moment of killing must be in perfect health; under this requirement, a stunned animal could be considered ‘sick’ according to some interpretations of the religious dogma. As a result, the prior stunning of the animal is avoided before its slaughter.

The method generally used for ritual killing in an abattoir is, after the animal has been stunned, to slit its throat severing the blood vessels at both sides of the throat (carotid arteries and jugular veins) with a single cut avoiding damage to the spine. Furthermore, the trachea, oesophagus and nerves are cut. With the severing of the major blood vessels, the animal gradually loses consciousness but it can still feel pain, distress and suffering during this time. If the cut is properly made, the animal will begin to lose consciousness between the next 10-15 seconds, but the loss of life signs must be continuously checked for 30-40 seconds after the cut in the case of sheep and goats, and 2-2.5 minutes for cows.³ If the cut is not adequately done and only the jugular veins are severed, the time until loss of consciousness could last almost 5 minutes.⁴ If the two carotid arteries are not cut at the same time, there will be a blockage of the cut arteries (aneurysm) and pain during and after the cut. The aneurysm of the carotid artery on the edges of the cuts is common in cows.³

The products obtained from such practices should be properly labelled so the public can exercise the right to an informed choice.

Labelling and sale of meat from unstunned animals, without consumer knowledge

With regard to the marketing of meat originating from unstunned animals, unbeknownst by the consumer, it was only with the approval of Regulation (EU) No 1169/2011 of the European Parliament and of the Council of 25 October 2011 on the provision of food information to consumers that the European Commission showed the need to look into this particular issue. Subsequently, the European Commission included a study on the possibility of providing information to consumers on the stunning of animals as part of the EU strategy for the protection and welfare of animals 2012-2015. The study's conclusions, published in a report in 2015, showed that such labelling would carry 'a high risk of stigmatising religious communities especially in the present political context'. Accordingly, it is unlikely that the European Commission will propose legislation requiring the labelling of meat to specify whether the animal had been stunned or not before slaughter.¹

At a national level, various European countries have already prohibited the slaughter of animals for human consumption without their prior stunning. Those countries include Sweden, Norway, Austria, Estonia, Switzerland, Lithuania, Iceland and Denmark, as well as the two largest regions of Belgium: Wallonia and Flanders.⁵ However, in other countries like Spain, the slaughter without prior stunning, considered an exception to the law, is becoming a generalised rule due to the industrial and commercial interests of the meat sector. This

exception intended for religious minorities has been increasingly abused by slaughterhouses, unknown to consumers.⁵ For example, according to the *Federación Catalana de Industrias de la Carne* [Catalan Meat Industries Federation], about half of the beef and lamb from Mercabarna (Barcelona abattoir) is slaughtered in accordance with halal.⁶

Position of the Federation of Veterinarians of Europe

The most important European professional body working for the health and welfare of animals, the Federation of Veterinarian of Europe (FVE), issued its position in 2002 stating that as animals are sentient beings, their slaughter without prior stunning is unacceptable under any circumstances.⁷ The FVE has added that, where any exception to this is considered, such a method should only be permitted for those animals to be consumed by the members of the communities that agree with the method, and all products thus obtained should be properly labelled with a statement as to whether the animal had been stunned beforehand.

Conclusion

At AVATMA, we agree with the position of the FVE. We believe the welfare and protection of animals should always take precedence over any cultural, artistic or economic factor, and religious traditions ought to be reconciled to animal welfare so that animals do not suffer.

The EU should eliminate all exceptions to the law. The products obtained through these practices should be properly labelled so that the

public can make a free choice and not find themselves obligated to eat them due to a lack of awareness of how the animal has been slaughtered.

AVATMA

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The way forward:
Spanish case
studies

Local policies and reducing meat consumption

Local bodies hold considerable potential in the publicising and development of specific activities relating to education and awareness raising.

While the animal welfare movement and environmentalists have joined forces in advocating for a reduction in meat consumption, we need a similar convergence between the protester and the public official. An activist in the environmental or animal welfare movement has a specific job and clear work objectives: unveiling the horror behind a meat platter and its impact on our environment. Such effort gradually achieves its objectives and brings new followers into the fold. However, once one moves from social activism into political administration and runs a city, the methodology changes along with the resources, even though the aims remain the same. The following exposition is a true account of a local government project based on political ecology and animal welfare, which is actively working toward the reduction of meat consumption. It demonstrates the opportunities and difficulties encountered.

What margin of manoeuvrability does a local council have in encouraging alternatives to meat?

When the goal is to remove incentives from the meat industry and discourage the implantation of large meat factories and the high consumption of meat by the public, you need to analyse how this can be accomplished by a local authority. Public administration is built on the principle of no discretion and it meticulously regulates the competences and procedures in the authorisation of the establishment and development of any livestock and industrial activity. A local political project that seeks to be viable cannot disregard this. It must define the

facilities (town planning, zoning, financial, fiscal, etc.) it has available to grant or not, and in what capacity (environmental impact monitoring, ordinances on a specific activity, inspections, etc.) it can act in the authorised planning and supervision of the activity. Thus, a political programme aimed at reducing the consumption of meat cannot obstruct, at the administrative level, the pursuit of the industrial activity and sale of meat; but, it does have room to discourage and withdraw favourable conditions under the argument that its economic and social development strategy requires that such resources and incentives be offered to an alternative cultural and production model.

In addition to a positive commitment to industrial and commercial activities alternative to the consumption of meat, local bodies hold considerable potential in the publicising and development of specific activities relating to education and awareness raising. Here the challenge is breaking down the departmental fragmentation in which the public authorities are usually hierarchically structured. Below are examples of how generic actions can be undertaken by the different departments usually run by a city council.

- The departments of health and social welfare can carry out activities linked to human health, providing incentives for vegetarian/vegan diets in order to improve health indicators and consequently the well-being of the public.
- The sports department can partake in initiatives to break the myth that meat is

the best way to obtain positive results in sport. More and more athletes are going vegan and exemplify another standpoint through their success.

- The environmental department understands the impact caused by the reliance on a monoculture for animal fodder and the pollution generated from livestock as well as the cost of water and its overexploitation.
- The economic development, commerce and market departments should back a new growing economic sector. In two years, the country has seen a 40% rise in demand for organic products and this has generated an increase in industry, commerce and catering to satisfy the demand.
- For tourism, targeted offers are essential to attract tourists who choose their travel destinations on the basis of health, ethics or sustainability.
- The department of agriculture has to pay special attention to the potential of organic farming and urban gardens, as well as offer incentives for small farmers to establish cooperatives and the consolidation of the sector. Agriculture must be sustainable and be a means to renew lost space.
- In the areas of education and culture, initiatives can be organised to encourage a return to traditional eating habits. Education can be used to bring people back into contact with the land and food and show the repercussions of heavily meat-based diets.

- The department for equality can also establish actions targeted at reducing meat consumption. The average Spanish vegetarian or vegan, broadly speaking, is a woman concerned for her health, animals and sustainability. It is necessary to recognise that there are stereotypical behaviours in relation to food that can be used as a focal point.

Environmental and animal welfare ideas for your local authority to act on

To show how the previous ideas can be put into practice, below are real examples of actions taken by the City Council of Villena (Alicante) and coordinated by the Department for Animal Welfare Policies between 2015 and 2017, as well as some other successful programmes by other local authorities that would be worth replicating.

GUIDEBOOK ON VEGETARIAN/VEGAN FRIENDLY RESTAURANTS. This initiative is an example of a collaboration between the city council and a local network. It emerged from a local animal rights group that had surveyed the city's restaurants and pubs following attempts to find a place to eat after meetings. They established a ratings scheme with benchmarks and visited local restaurants and bars. They did not assess the food, but rather the options available for vegetarians and vegans. The extent of the catering industry's lack of knowledge about vegetarian and vegan concepts was certainly a great surprise. Both the quality and price varied wildly. The restaurants that agreed to participate in the guidebook have witnessed an increase in clientele by offering better quality and service. It is a great lure for tourists and the very process of questioning restaurants has led to changes among them.

The city council, by offering its resources and encouraging participation, created a period of discussion and reflection.

TRADITIONAL COOKING RECIPE BOOK – VEGETARIAN VERSION. Although in traditional Mediterranean cooking meat does not hold an important place, being able to visualise a typical local dish without meat or with a substitute allows you to enjoy both the local culture and an unconventional meal. It is a very positive way of bringing our land closer to a tourism model that is respectful of different lifestyles, while also showing a part of the population that is divorced from environmental ideas a way to understand their home and the value of it, just another way to see the world. The city council, by offering its resources and encouraging participation, created a period of discussion and reflection that transcended the mere publication of the recipe book.

VEGETARIAN/VEGAN COOKING CLASSES. There is never a poor excuse for offering free vegetarian or vegan cooking classes. The city council usually runs classes as part of the Villena Trade Fair, a commerce and recreation fair, whose origins go back to the agriculture fair. As a result, the land and environment are of great importance at the fair. Classes are also held at the Villena City Market where we have a kitchen-workshop. The departments of health, environment, equality, education, commerce and others can run projects where the workshop is made available for traders to promote their local, homemade, fresh products; the encouragement of extra-curricular or holiday activities for primary school pupils; and even the training of professionals for the local hospitality sector.

VEGETARIAN OPTIONS IN PUBLIC CANTEENS/CATERING. The city holds many events in which we offer banquets for

VEGETARIAN OPTIONS IN PUBLIC CANTEENS. Business meetings or seminars, cultural and public festival events and many more, which occur during the entire year, fall under the responsibility of all departments. The inclusion of vegetarian/vegan options on the menu, as well as introducing local or zero-kilometre products, is a great way to demonstrate a different type of diet is available and provide support to the local economy.

VEGAN FEST/VEGGIE WORLD. Vegan Fest is a relatively new festival (running for 4 years) but it has attracted many visitors and is being introduced extensively. It started in Alicante through a group of conscientious people and is being replicated in other towns and cities. It revolves around veganism in all its aspects as a lifestyle, rather than just as a diet. During its slow-paced days, thousands can attend conferences, cookery courses and exhibitions; there are also children's games, story-telling, music, dances and flea markets. Thanks to its numerous events, it creates a climate of acceptance that integrates teaching through talks. A similar event is Veggie World in Barcelona, promoted by Proveg. Such initiatives should be supported by local authorities.

VEGAN/VEGETARIAN TAPAS ROUTE. A tapas route is often run as both a commercial promotion and a tourist attraction. It allows bars and restaurants to show off their creativity at a reasonable price, while also attracting locals and people from nearby cities, thereby energising the city. The inclusion of a vegetarian/vegan tapas section or making the event exclusively vegetarian is a commercial and tourist attraction that focuses the attention on healthy eating. Furthermore,

where the city council gets fully involved and encourages the participation of bars through best tapa awards, among other ways, gastronomic creativity without meat is not only promoted, but also involves the public in vegetarianism/veganism in a fun and entertaining way.

VEGAN BISTRO. This project will be carried out in Villena next June at the base of Atalaya Castle (the city's iconic monument). Although it is being promoted by the commerce department, it also involves the departments of tourism, health, consumption and the environment. With the collaboration of local associations (environmental, animal welfare, cancer research, etc.) along with businesses specialising in organic products, a meal will be held serving organic, traditional, local and zero-kilometre products as a way to showcase unknown, diverse products and how they can form part of a healthy diet. The diners will be handed a menu stating its environmental footprint, in terms of local jobs, combatting pollution and climate change, and animal welfare standards.

SCHOOL MENUS. Although school menus fall under the remit of the regional government, local authorities can promote and endorse decisions to create school meals with organic products or even removing meat or animal-based products. Supporting school vegetable gardening, as well as holding informational talks and workshops for parent associations are very constructive options for our children.

INFORMATIONAL TALKS. Talks, workshops, seminars, etc. can be used to initiate debate and reflection. Organising talks on the vegetarian/vegan diet and nutrition with experts, the unknown reality of the meat industry and its real costs can be an opportunity to discover the effects of excess meat on our health and the environment, as well as the life of anguish faced by animals in factory farms.

TOWN MARKETS. Town Markets are where fresh products have great relevance. It is a

good time to reinvent such marketplaces and consider them as the place where local vegetables and organic products should take pride of place. The Villena City Market is undergoing a transformation in this sense. The work done by the department of agriculture in encouraging urban gardens and promoting local producers and organic farming will have its own space in the market. Likewise, marketing strategies will be carried out to highlight the value in these products. The promotion of craftwork and of traders creating a different business line, and the implementation of internal rules dictating food stalls should mostly stock these products are initiatives that can help reduce the consumption of meat and its replacement by vegetables and healthier products.

INNOVATION. Traditional economic sectors should include innovation criteria in their processes or products. A local authority should pursue strategies that can develop the industrial fabric with standards on ethics and sustainability. For example, footwear production is a major industry for Villena and the city council is supporting and promoting the manufacture of children's vegan shoes.

These are simple examples of local policies enacted to reduce the negative impacts created by our excessive consumption of meat and its derivatives. Such actions show that there is room in local policies for a governmental project that integrates the objectives of uniting awareness of animal welfare with environmentalism. Given that local authorities are possibly the most restricted level of government in regulatory and financial terms, it demonstrates that there is considerable political room at the regional, national and European levels to develop equivalent initiatives that we believe should be fostered.

Esther Esquembre
Villena City Councillor

Good local
practice: Veg-
friendly cities

It is estimated that 4% of the Spanish population is vegetarian or vegan, and people are increasingly choosing to eat less meat.

In Spain, cities like Barcelona and Vitoria-Gasteiz have declared themselves to be Veg-Friendly, i.e. they are cities friendly to vegetarian and vegan culture. The goal is to locally promote healthier habits, which are environmentally friendly and respectful of animal welfare, raise awareness among the public while also having a positive impact on the economic, social and cultural development of the city.

It is estimated that 4% of the Spanish population is vegetarian or vegan, and people are increasingly choosing to eat less meat. These people not only have changed their choices when shopping but also those related to choosing restaurants and even cities to visit. This community is more extensive still when considering tourists from all over Europe. They are obviously choosing places where they can easily find options matching their dietary choices.

The declaration of being a veg-friendly city entails concrete measures to promote and spread those practices in agreement with the WHO and FAO recommendations and with studies showing such habits are a key in combating climate change and inequality in access to food.

Several NGOs, like ProVeg and Libera, encourage and support the use of this type of initiative. The following is a copy of the motion adopted by the City Council of Vitoria-Gasteiz:¹

1. Undertake to promote, publicise and inform about vegetarian and vegan meal options, particularly coming up to 1 October, World Vegetarian Day.

2. Within the economic development department, create a VGvegPoint, managed by the council and associations, as a place for providing general information and a meeting space for businesses, associations, NGOs and consumers so as to encourage local small and medium-sized businesses involved in vegetarian and vegan food.
3. Publish a vegetarian guidebook in print and digital formats, which will be available in tourist offices and civic centres to tourists and the public. Establishments in the guidebook will receive a VegFriendly sticker to display in their window.
4. Work, in coordination with the tourism department, to increase recognition of the Veg-Friendly image throughout the city's catering and food sectors.
5. Study the possibility of organising cookery workshops on vegetarian/vegan food, in association with animal rights bodies, health organisations and other stakeholders.
6. Commit to ensuring that all catering directly contracted by the city council will offer vegetarian/vegan options. There should be a further undertaking to discuss the importance of such an alternative with other organisations that contract a catering company with city funds.
7. Disseminate this agreement to those public and private bodies concerned.

¹ Proposed by Councillor Oscar Fernández of the Irabazi-Ganar coalition and member of EQUO.

School canteens: a starting point for health, climate stability and animal welfare

There is no better place to begin this change than in the schools.

Earth needs us human beings to be more conscientious of our place and our role on her. We have progressed from being a part of an extensive planetary ecosystem to domesticating, controlling and now abusing it to unsustainable levels. Balance is the sole criterion under which life can develop and prosper. However, humans have spent several centuries pushing our magnificent ecosystem, our home, into systemic imbalance.

Nevertheless, we do have the ability to reverse course and our food system is one area with a huge impact on the life of animals and humans, as well as on the life and equilibrium of the planet. As stated by Dr Rajendra K. Pachauri, president of the International Panel of Experts on Climate Change (IPCC) for thirteen years, in order to help curb global warming, we should not eat meat, and should cycle to our destinations and be discerning consumers.

With this in mind, we must consider the need to start the education of the public from the principle of responsible, healthy consumption that ensures the welfare of animals. And there is no better place to begin this change than in the schools.

The context to our starting point is worrisome. Looking at the health of children in Spain, there is a high prevalence among them toward being overweight or obese: 15.38% of the 5-9 age group are obese and another 21.49% are considered overweight (Spanish Nationwide Health Survey 2006). Clearly an unbalanced diet skewed by high animal protein intake is one of the causes of this situation. Despite this, the majority of school canteen guides still recommend menus be based on the consumption of animal products. These recommendations state that animal-sourced products (meat, fish, eggs, dairy) should be

eaten every day and, on many days, twice or more.¹

School canteens overuse animal products which are often processed or frozen and carry the heaviest impact on the climate and health. A report on the transition to more sustainable, healthier models in the school canteens of Madrid² found that primary school children attending were not receiving a healthy, balanced diet as per the nutritional recommendations. Over 90% of 4-year-olds were eating protein at levels above recommendations to the detriment of carbohydrates. The consumption of fats was also higher than recommended in 80% of this same age group; as for saturated fats, the percentage rose to 90%.

Looking at current data on the consumption of animal protein and fat and its effects on children's health, vegetables have to be prioritised over red or white meat, while also remembering that the fundamentals of a balanced diet entail eating vegetables, pulses, cereals and fruit first and foremost.³

There is, moreover, complete silence in the information available on the quality and origin of the products eaten in school canteens.⁴ No data exists in relation to the food procurement and costs undertaken by public companies and bodies, nor on the origin, quality and environmental impact of the food consumed in school canteens. For example, thanks alone to VSF-Global Food Justice, we know that the mass catering sector purchases only 22.7% of its meat, 8.8% of vegetables and 2.4% of fruit directly from the producer, while purchases from wholesalers are 61.8%, 74.4% and 78.2% respectively. Again, there is no real data on school canteens. In any case, protein production is outsourced to large farms and multinationals, which threaten the sustainable

To address this situation with a view to improving the health of future generations, school canteen menus have to be turned upside down and refitted for purpose.

development of small farms that cannot hope to compete against such industrial giants, despite the fact that those small farms can offer better quality, proper animal welfare and care for the Earth.

To address this situation with a view to improving the health of future generations, school canteen menus have to be turned upside down and be refitted for purpose. Taking, among other elements, the above-mentioned report on the transition to more sustainable, healthier models in school canteens as a starting point, we propose:

- A reduction in meat used in school menus: two-thirds of the menu should be vegetable products. In practice, this would mean no more than two portions of red or white meat per week.
- The meat used should be varied, organic, of good quality, fresh (no more than 4 days since packaging) and with a Protected Geographical Indication.
- In moving toward smaller portions, inaugurate one meat-less day every week for all pupils.⁵

¹ For an example, see the School canteen guide of the Autonomous Community of Madrid.
http://www.madrid.org/cs/Satellite?blobcol=urldata&blobheader=application%2Fpdf&blobheadername1=Content-Disposition&blobheadervalue1=filename%3DGuia_comedores_escolares+Programa+Perseo.pdf&blobkey=id&blobtable=MungoBlobs&blobwhere=1352904401752&ssbinary=true

² 'Diagnóstico sobre los comedores escolares de la Comunidad de Madrid y su transición hacia modelos más saludables y sostenibles'. Garúa S. Coop Madrid, 2017.

- Provide quality, balanced, affordable vegetarian options in all school canteens for those who want it. Portugal has enacted a law that obliges public canteens to include a vegetarian dish.
- In general, use fresh, seasonal, local foods, not just concerning vegetables but also all others (this will support the local agricultural and business communities).
- Carry out information campaigns to raise awareness among the student body, teachers and parents (together with parent boards) on how the mass production and consumption of animal proteins impact health, animals and the planet.

For the benefit of the planet, our health and animals, as well as the local economy and sustainability of our countryside, let's bring the food revolution to school canteens and future generations.

EQUO Animal Rights Network

³ L. Martínez, A. Sánchez (2017): '¿Por qué se sigue recomendando carne a los niños si no es una prioridad de salud pública?'
https://elpais.com/elpais/2017/11/09/ciencia/1510229356_746417.html

⁴ http://www.eldiario.es/desalambre/detras-alimentacion-escolar-Espana_0_524598077.html

⁵ For example, a non-binding proposal for 'meat-free Mondays' in schools was submitted to the regional Valencian parliament:
<https://www.efe.com/efe/comunitat->

valenciana/politica/compromis-proponeque-los-
comedores-escolares-se-sumen-a-lunes-sin-
carne/50000879-3475572

Conclusion:

There is another
menu!

We must eat less meat, at least half of what we now eat on average.

We are clearly at a crucial moment. The system is collapsing. There are those who understand the need to revise the Western lifestyle that has extended and prevailed through the 20th century, but there are also those who want to milk it for all it is worth. We have to find a way to curb the many perils now appearing: climate change and its direct consequences; intensive farming with its reliance on chemicals and effects on health; the use of fossil and nuclear fuels; transport; the enormous waste produced that cannot be treated due to its volume and composition, and the scarcity of water.

Within this context, there is an unavoidable assertion: we must eat less meat, at least half of what we now eat on average. This statement makes us run for the door, or look the other way, because it is a very complicated road to go down, it involves a complex unravelling of a mindset woven over many years. However, based on consumerism and the partners with whom we search for the 'common denominator', there is another menu. Let's take a look.

A food system tailor-made by large corporations

The fundamentals of our meat-hungry mind-set come from the large corporations that have shaped our food and economic system, lifestyle and menu. Today, the majority of land for farming is used to feed livestock: it is where corn and soybean are mass produced, with no care for quality. To this we can add the excessive energy and water used throughout the entire process. We are talking about business and commodities in the hands of multinationals, not about food in the hands of people.

At the same time, advertising—the militant wing of capitalism and trade—is supporting this system. Instead of offering us products, it is injecting us with a particular way of life. If you eat this cereal, drive this car, use this laundry detergent or smoke this brand, you will get closer to that ideal image transmitted by the advert. In addition, advertisement, at the behest of lobby groups, is telling us that protein is ingested at barbecues with jolly neighbours and happy families enjoying large slabs of meat. As such, our local, traditional food is abandoned for a daily dose of meat into our diets. We have given up our gastronomic wealth for an ethereal projection of betterment.

The next turn of the screw tenaciously arrives in the form of trade and investment treaties such as the (let's hope, defunct) TTIP, CETA and many others. They are not only to bolster business. They are constructed to mould our daily lives, change our shopping and consumer habits to fit into a perfect model for the interests of big business. In fact, the agro-industrial lobby for US meat saw the TTIP negotiations as a way to negate European standards on animal welfare. This would have resulted in the greater commodification of animals and a danger to the health of consumers.¹

What can we do as consumers?

As responsible, conscientious consumers looking to transform the system, we can and should ask ourselves the following questions in relation to any product, starting with meat and its derivatives: 'Where does it come from? How many stops from farm to fork? What impact has it had on the people and places through which it passed? What impact does it have on health? And on other living beings? How does it affect

In politics, we can get back onto the path toward a healthy planet, population and future. [...] We have seen it with the ban on smoking in workplaces and public areas.

climate change? Who is benefiting from its system? And especially, what can we do as consumers?’

The CECU [Spanish Consumers’ Confederation] is a consumer-rights organisation that works together with many other groups in different sectors. We act as a hub, learning from the opportunities and challenges of various organisations and informing the public in simple terms how we can encapsulate supply and demand within sustainability and accountability. We provide our members with rationales and tools for the daily running of a group, but we stress the need and duty to involve the public at large because only in that way will the priorities of our society be transformed.

We have also learnt that it is far easier to act on what is local, what is close to us and affects us directly. The consumption of local products is one particular change that has taken root in our communities in recent years. It has spread by direct contact, which has reinforced the idea that we should work for change through what is readily visible and at hand. The increase in consumer cooperatives has been spectacular. The fact that the products are local by nature gives them an image of being ‘our own’, with connotations of literary images or of our childhood and thus an emotional attachment: the driving force of human beings. In this way, food sovereignty can be an idea very easily explained because it appeals to our past, when food was very important, associated with home and the major expense for the family.

And we can go further. **In politics, we can get back onto the path toward a healthy planet,**

population and future. We have seen this in the positive impacts of reducing speed limits on roads as well as drinking alcohol in moderation and with consumption of other substances. We have seen it with the ban on smoking in workplaces and public areas. It was only possible when enacted into law, enforced and prosecuted. These political decisions were made in fields where the industry mustered great pressure in order for them to be impeded. We must do the same to reduce the consumption of animal protein and increase that of plant protein, whether through supporting good agricultural and food practices, or penalising bad practices.

Searching for the common denominator

Over the course of just a few years, our food culture changed. Meat was incorporated into our diet and became a buying habit: quick and convenient to prepare and with undertones of high social standing. It was also associated with health, a way to maintain a figure and encourage the development and improvement of intellect. Now, we have to reset our purchasing and cooking habits, as well as our menus. The culture change we are confronted with is that of a group whose purchasing and consumption habits are not conducive to that change. What can help is to take the concept of **Food Sovereignty** to the mainstream. The concept will assist in reclaiming our culture and ancestral wisdom, reclaiming ‘our own’, our grandmother’s recipes...

For this purpose, we have to look at it from a multidisciplinary perspective: not necessarily in

order to be progressive, humanitarian, environmental, alternative, etc., but because we are all in the same predicament. The great challenge is that, for every person who believes curbing climate change is urgent (and even still possible, though increasingly less so), we must apply our collective intellect and show our piece of the jigsaw. We should only focus on the common denominator of the proposals made by participants (all of us who feel responsible). Someone said to me: 'we have to give up....' No! It is not about giving things up, it is about constructing a lifestyle that is conducive to the common good. We will enjoy the moment of the agreement, we will celebrate it. We are taking steps in the right direction! The quest for the common denominator may be thrilling, it may be controversial, but it will be our most beautiful edifice to humanity.

This is the reason for my interest in political ecology: it encompasses all systems within the (one and only) setting that all species share, but which is starting to come apart at the seams. On the one hand, the social leg of the change has to incorporate all those people and organisations involved and fighting against injustices, unemployment, depopulation or poverty. It is essential that they see the fight for social justice as indistinguishable from the fight for the environment, clean rivers, lakes and countryside. The overexploitation of the environment by large multinationals entails climate change, decade-long wars, millions of refugees, forced migrations and the unnecessary suffering of millions of animals.

At the same time, animal welfare activists and organisations spearhead another important leg

of this journey. I encourage them to have patience with the speed of the public as it gradually discovers this other aspect to the flawed development inherent in our economic system. I also encourage them to observe, learn and work together with those of the rural community who, in many cases, have continued supplying us with food despite the pressures exerted by intensive farming, the markets, and the many absurd diktats emanating from city offices. Let's not seek confrontation that stops our advance but seek our commonly held points of view.

Let's urgently find that common denominator, that perfectly sized multidisciplinary piece of the jigsaw, that argument brilliantly prepared by the heart and science to explain, for example, that the diet of the few impact the life of all. We have to listen to our farmers, animal rights groups, foresters and herders, chefs and educators, doctors and dieticians, young and old... and with all and as one, we must make that first, firm, responsible step forward for the future.

In the case of energy, transport, water use, taxation and other areas, we are slowly but surely arriving at a common destination: the design of **a new model** that guarantees the quality of life for future generations. By producing and consuming less meat, we could get there on time.

*My thoughts to Mateo, Juana, Tomás and Leo—
my representatives of the future generations.*

Ana Etchenique
Vice-president of CECU

¹ Source:
https://www.eldiario.es/caballodenietzsche/TTIP-peligro-animales_6_345125507.html

equo

EQUO is a Spanish green political party that stands for environmental sustainability, social equity and democratic regeneration.
www.partidoequo.es

The Greens/European Free Alliance is a political group in the European Parliament. Its project is to build a society respectful of fundamental human rights and environmental justice.

www.greens-efa.eu

Both are fighting for the rights and welfare of animals.

This report has been prepared thanks to the collaboration of the authors and the organisations that they represent.