



# A sustainability charge on meat

Summary of impacts on a European scale



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## A Sustainability Charge on Meat

In November 2019, CE Delft published the study ‘A Sustainability Charge on Meat’, which was commissioned by the True Animal Protein Price (TAPP) Coalition. In the study, CE Delft elaborated on the form a policy package could take, comprising a meat sustainability charge in tandem with subsidy for the farming sector and purchasing power compensation for households. The geographical scope of the study is the Netherlands, with a rough, exploratory analysis of the effects of introducing a meat sustainability charge on a European scale. In this paper, these indicative European results are summarized and elaborated on with indicative effects on meat consumption in Europe in 2030.

### Social costs and a European sustainability charge

#### Text box 1 - What is a ‘sustainability charge’?

In this study a ‘sustainability charge’ is a charge equal in value (in Euros) to the social costs, resulting from the environmental impacts of meat consumption. In this study a sustainability charge is chosen because this factors the social costs of meat into the price, allowing consumers to make sustainable choices based on prices.

To establish the required level of a sustainability charge on a pan-European scale, we value the emissions using exclusively European environmental prices, in line with the methodology set out in our study ‘De echte prijs van vlees’ (The true price of meat) (CE Delft, 2018a). The European environmental prices are lower than their Dutch equivalents, mainly because the Netherlands is more densely populated than most other regions of Europe. This means the European sustainability charge works out slightly lower than the Dutch one.

Table 1 shows the level of the European charge for the various types of meat. As in the Dutch variant, the charge is highest on beef and lowest on chicken. These estimates encompass the costs associated with greenhouse gas emissions, other pollutant emissions, land-use impacts on biodiversity and livestock diseases. The figures will need to be adjusted as understanding of the impact of meat production improves or as the sector reduces its footprint. Once again, the charge level increases over time with a view to securing the two-degrees climate target.

Table 1 - European sustainability charge for different types of meat (€/kg meat weight) - phased increase

	2021	2025	2030
Beef/veal	€ 0.42	€ 2.22	€ 4.77
Pork	€ 0.32	€ 1.69	€ 3.61
Chicken	€ 0.15	€ 0.80	€ 1.73

Source: CE Delft calculations based on the Environmental Prices Handbook, EU28 version (CE Delft, 2019); methodology according to (CE Delft, 2018a).

Note: The environmental costs of greenhouse gas emissions are based on the specific environmental price for the reference year. The charge rate gradually increases from 10% of the external costs in 2021 to full coverage in 2030.

### European meat consumption in 2030

In Table 2, the influence of a meat sustainability charge on meat consumption is summarized. Depending on the type of meat, consumption will drop between 30% and almost 70% between now and 2030.

Table 2 - Meat consumption (chicken, pork, beef/veal)

	Chicken	Pork	Beef and veal
<b>Current consumption (million tonnes)</b>			
	8.5	10.8	3.3
<b>Consumption after introduction of the Meat Sustainability Charge (million tonnes)</b>			
2021	8.5	10.6	3.3
2025	7.8	9.0	2.6
2030	5.9	4.6	1.1
<b>Change (%) relative to current consumption level</b>			
2021	-1%	-1%	-2%
2025	-8%	-16%	-21%
2030	-30%	-57%	-67%

Source current meat consumption: FAOSTAT (2012) for EU28 and CE Delft (2012); (2018a); (2019).

Substitution effects (from beef to pork to chicken) are taken into account.

## Welfare impacts on a European scale

In Table 3, the main impacts of a pan-European meat sustainability charge are summarized. Indicatively, reductions of CO<sub>2</sub>-eq. emissions amount to 2.4 Mtonnes in 2021, increasing to 34.5 and 119.6 Mtonne in 2025 and 2030 respectively. These reductions are the sum of reductions taking place inside and outside the EU. In 2030, the net welfare impacts amount to € 8.8 billion (benefits). Besides the lower greenhouse gas emissions, this is also down to reduced ammonia, NO<sub>x</sub> and particulate emissions, among other environmental benefits. European environmental prices (lower than Dutch prices) were used to quantify net welfare effects.

Government revenues amount to € 32.2 billion in 2030. These revenues can be recycled to compensate low and middle-income households for purchasing power losses and/or incentivize the livestock sector to further reduce its environmental footprint.

Table 3 - Impacts of a European meat sustainability charge

	2021	2025	2030
<b>Welfare impacts (€ bln.), of which:</b>	<b>0.3</b>	<b>2.5</b>	<b>8.8</b>
Climate	0.2	1.9	7.9
Environment	0.4	2.8	8.9
Animal diseases	0.0	0.3	0.9
External benefits	0.0	-0.1	-0.2
Consumer and producer surplus	-0.3	-2.5	-8.8
<b>Government revenues (€ bln.)</b>	<b>6.1</b>	<b>27.3</b>	<b>32.2</b>

Source: CE Delft calculations based on FAOSTAT (2012) and CE Delft (2012); (2018a); (2019).

Note: Impacts not corrected for increased CO<sub>2</sub> emissions due to greater consumption of meat substitutes.

We estimate this will offset 15-25% of the welfare gains (see Annex J of original report).

## Wrap up

A Meat Sustainability Charge puts the polluter-pays principle into practice. It leads to lower meat consumption, lowering people's environmental footprint. Integrating environmental costs into price, facilitates sustainable choices by consumers. Administrative costs will depend on existing systems and specific implementation, which deserves further research. There are benefits (governmental revenues) which can be used to subsidise sustainable agriculture and to compensate households for loss of purchasing power.

