# FACT-CHECKS

# METHANE, FARMING AND AIR POLLUTION

16 June 2015

As part of its strategy to improve air quality, the European Commission recently proposed a revised National Emissions Ceilings (NEC) Directive.[1] The proposal sets limits for 2030 for several pollutants including methane. Compared to business as usual, the Commission proposal is estimated to avoid 58,000 premature deaths annually and save society €40-140 billion per year in health-related costs.

Air pollution limits for methane have come under fire both in the European Parliament and the Council. There are concerns related to the farming sector and the possibility of double regulation.

It's time to put the record straight and separate fact from fiction.

## Fact #1: Methane emissions affect both climate change and air quality

Methane is a very potent greenhouse gas which contributes to climate change. But it is also an air pollutant which contributes to the formation of ground-level ozone.[2] Ozone has adverse effects on human health such as causing inflammation of the respiratory tract, which increases the risk of mortality.[3] It also causes crop losses and limits forest growth. The NEC Directive is the principal instrument to prevent ozone formation in the European Union. It does so by putting a cap on emissions of methane ($CH_4$), nitrogen oxides ($NO_x$) and volatile organic compounds (VOCs), all of which contribute to ozone formation.

## Fact #2: Introducing a cap for methane in the NEC Directive is not double regulation, it is important and necessary

There is currently no legislation which specifically targets methane emissions in the EU.

[1] http://ec.europa.eu/environment/air/clean_air_policy.htm

[2] Air quality in Europe - European Environment Agency, 2014

[3] European Environment Agency, 2015

Methane is one of the "basket of six" greenhouse gases covered by the Kyoto Protocol at international level and by the Effort Sharing Decision (ESD) at EU level.[4] Under the ESD, Member States are required to meet an overall reduction target for greenhouse gases, not for methane. In practice, Member States could meet their ESD requirements by reducing their $CO_2$ emissions only, but doing nothing on methane.

In order to reduce ozone formation, methane must be tackled in its own right, as proposed by the European Commission in the revised NEC Directive.

## Fact #3: Methane emissions can be reduced without threatening the agriculture sector's production

Methane emissions from agriculture account for 40% of the EU's total methane emissions.[5] Methane from agriculture has two types of sources: enteric fermentation and manure. There are various cost-effective ways of addressing both sources without affecting meat/milk consumption. This includes the three following types of measures.

- **Manure management** offers huge emissions reduction potential, through the adoption of simple and cost-efficient measures from storage to spreading techniques.[6]

- **Changing feeding strategies** (e.g adding leguminous such as alfalfa and flax) would significantly reduce enteric methane emissions while improving animal welfare.[7]

- **Anaerobic digestion** is based on natural biological processes whereby organic waste material – known as feedstock – is broken down by micro-organisms and converted into energy, known as biogas. The material remaining after the anaerobic digestion is rich in nutrients and can be used as a natural fertilizer. Anaerobic digestion plants require significant upfront investment but are profitable due to the electricity sale resulting from the production of biogas. This investment should be supported through public funding available at national level and/or in the CAP Rural Development Programme (Pillar 2) from the EU.

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[4] Decision No 406/2009/EC

[5] Greenhouse gas emission statistics, Eurostat, http://ec.europa.eu/eurostat/statistics-explained/index.php/Greenhouse_gas_emission_statistics

[6] Mitigating the impact of agriculture on air quality and climate change: Solutions for improved nitrogen management, IFOAM & FiBL, 2014
Agriculture et Gaz à effet de serre : Dix actions pour réduire les emissions, INRA, 2015

[7] Alfalfa Grazing management. In C.G. Summers and D.H. Putnam, eds., Irrigated alfafa management in Mediterranean and desert zones. Chapter 18. Oakland: University of California Agriculture and Natural Resources Publication 8304. http://alfalfa.ucdavis.edu/IrrigatedAlfalfa/pdfs/UCAlfalfa8304GrazingMgmt_free.pdf
Agriculture et Gaz à effet de serre : Dix actions pour réduire les emissions, INRA, 2015

Finally, there are ways of reducing methane without having any impact on the agricultural sector since methane is also emitted by waste and the energy sectors. Several EU countries have already taken measures in these sectors (e.g. ban on non-pretreated waste landfill and energy recovery from coal mining gas releases).[8]

## Fact #4: Methane emission caps will not kill small farms

The NEC proposal leaves Member States entirely free in deciding which measures they will adopt and for which size and type of farm. They can decide to focus their efforts on big farms which would lead to the greatest emission reductions, or focus on more farms, including small or medium ones.

When calculating its proposed emission reduction commitments, the European Commission actually made a distinction between small or medium farms and large industrial cattle feedlots:

- Farms with less than 15 livestock units (LSUs) were excluded from the ammonia emission reductions calculations;[9]
- As far as methane emission reductions are concerned, only negative cost or cost free measures have been considered for the calculations.[10]

By doing so, the Commission ensured that the proposed emission reduction commitments can be met by Member States without any efforts being asked to small farms.

## Fact #5: Capping methane would not compromise animal welfare

A large share of the methane emissions from agriculture comes from manure management. Changes in this process (e.g. manure storage and spreading) do not have negative consequences on animal housing and can even have a positive influence on animal welfare because of frequent manure removal.

Turning away from large, industrial farms and moving towards more traditional and sustainable farming (extensive grazing) as well as to a “lower performance” model would considerably reduce the emissions produced by each animal. Extensive grazing systems have positive effects for animal welfare while at the same time improving the quality of animal products. With the increasing demand for organic and high quality products, it is possible to combine the needs of farm production with environmental, animal health and welfare challenges.

**For more information, please contact:**

[8] Impact Assessment accompanying the NEC revision, December 2013, page 278
[9] Impact Assessment accompanying the NEC revision, December 2013, pages 268
[10] Impact Assessment accompanying the NEC revision, December 2013, 280

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