## Session SBI50 (2019)

Session starts: 15-03-2019 00:00:00 [GMT+1] Session ends: 08-06-2019 23:59:59 [GMT+1]



A compilation of questions to – and answers by – Denmark exported 11 June 2019 by the UNFCCC secretariat

Question by United States of America at Friday, 12 April 2019

Category: Assumptions, conditions and methodologies related to the attainment of its quantified economy-wide emission reduction target

Type: After 12 April

Title: Biogas

Some GHG reduction measures were implemented in the agriculture sector during the period 1990–2016. Denmark's new focus has recently been placed on reducing the retention time of manure prior to transfer to biogas plants to further reduce emissions. Can Denmark provide additional information on the estimated emissions mitigation potential associated with the reduced retention time of manure?

Answer by Denmark, Saturday, 08 June 2019

Methane emission from untreated cattle slurry used in biogas plants can be reduced from approximately 0.77 to 0.54 kg  ${\rm CH_4}$  per ton slurry (approximately 5.8 kg  ${\rm CO_2}^-$  equivalent/tonnes slurry) if the retention time is reduced from the current level of around 3 weeks on average to approximately one week. The total mitigation potential is related to amount of slurry which is produced in stables where it is relative simple to reduce the retention time. That is, cattle stables build with solid floor and scrapers. Currently all new Danish cattle stables for dairy cows are built this way as these systems are cheaper and have lower ammonium emission than the alternatives. As many of the existing cattle stables have slats and pumping systems, where reduced retention time is difficult to implement, the potential is expected to increase over time as older stables are replaced. I 2030 the annual reductions potential is expected to be approximately 0.1 Million tonnes  ${\rm CO_2}$ -equivalent. It is assumed that all of the manure from dairy cattle in newer stables will be used for biogas, as the manure from cattle have a higher gas potential than pig manure and is expected to be in demand by biogas producers.

It may also possible to reduce the HRT in new pig stables which are designed for it. As these systems are not commonly used, and not fully tested, the estimated mitigation potential related to retention time for manure does not include pig manure.

Question by United States of America at Friday, 12 April 2019

Category: Assumptions, conditions and methodologies related to the attainment of its quantified economy-wide emission reduction target

Type: After 12 April

Title: Danish National Forest Programme

As referenced by Denmark's NC7/BR3, the Forestry Act protects a very large part of the existing forest from other land use, and Denmark currently has the ambition to have about 25% of the country's area forested by the end of the 21st century. Also, as noted, the Danish National Forest Programme is under revision to change management approaches. Does Denmark have any update on these revisions and/or insights into how the revision may impact or change the priority of afforestation effects to increase CO<sub>2</sub> sequestration in Denmark?

Answer by Denmark, Saturday, 08 June 2019

A new National Forest Programme was launched on 11 October 2018 (https://mfvm.dk/skovprogram). Further information is expected to be included in Denmark's Fourth Biennial Report due by 1 January 2020.

\_\_\_\_\_

Question by Japan at Friday, 12 April 2019

Category: Progress towards the achievement of its quantified economy-wide emission reduction target

Type: Before 12 April

Title: Accuracy of the LULUCF credit

Denmark refers use of the LULUCF credit as an option to achieve the emission reduction target. We recognize the uncertainty of the estimations in the LULUCF sector is relatively high as referred in Box 5.1 (page 231), and so small revision of methodology of LULUCF credit may cause large change in the calculated numbers. How Denmark is planned to address this issue?

Answer by Denmark, Saturday, 08 June 2019

In April 2019 a separate project reviewing Denmark's LULUCF reporting was initiated with a view to reduce uncertainties of estimates in the LULUCF sector.

\_\_\_\_\_

Question by Japan at Friday, 12 April 2019

Category: Progress towards the achievement of its quantified economy-wide emission reduction target

Type: Before 12 April

Title: Institutional arranements for NC/BR preparation

According to p.15 of NC7/BR3, The Danish Ministry of Energy, Utilities and Climate has been in charge of coordinating the work relating to the NC7, and there are other institutions also contributing to its preparation. What are the roles of these institutions in the preparation process? Can you please provide the details of the preparation process including steps and schedule?

Answer by Denmark, Saturday, 08 June 2019

Different ministries and institutions contributed to Denmark's NC7/BR3 within the relevant areas of reporting cf. the guidelines for NC's and BR's where these ministries and institutions have particular responsibilities, competences or knowledge.

The preparation of Denmark's NC7/BR3 started about one year before the due date. The information on policies and measures was collected within the first two months of 2017 in order to also serve an internal EU reporting requirement. Information for the other chapters was collected during 2017 – including updated GHG projections available in April 2017, updated GHG inventory information available in May 2017 (a resubmission) and updated information on support for developing countries available in November 2017.

A full draft was circulated among contributors for collecting comments and updated information on policies and measures (changes since the beginning of 2017) by the end of November 2017.

After incorporating comments and new information a final draft was approved within the Danish Ministry of Energy, Utilities and Climate followed by submission on 1 January 2018. A version with a few editorial corrections and a reduction in file size was resubmitted on 21 January 2018.

\_\_\_\_\_

Question by Australia at Friday, 12 April 2019

Category: Assumptions, conditions and methodologies related to the attainment of its quantified economy-wide emission reduction target

Type: Before 12 April

Title: Manual for quality assurance

Has Denmark completed its manual for quality assurance and control of its emission inventories? What does the manual cover?

Answer by Denmark, Saturday, 08 June 2019

As indicated in the 2018 National Inventory Report, the updated QA/QC manual will be published in 2019 towards the end of the year. The scope of the manual will be the same as for the version published in 2013 (https://www.dmu.dk/Pub/SR47.pdf).

\_\_\_\_\_

Question by Australia at Friday, 12 April 2019

Category: Progress towards the achievement of its quantified economy-wide emission reduction target

Type: Before 12 April

Title: National green climate fund

The national green climate fund provided allocated spending on "Climate friendly road surfaces" - can you please provide some more information on this initiative, including how it is expected to affect emissions?

Answer by Denmark, Saturday, 08 June 2019

In 2018, the total reduction effect of implementing climate friendly road surfaces over the period 2021-2030 was estimated at approximately 0.6 million tonnes CO2 equivalents (accumulated annual reductions) if the expected effects and durability of the asphalt could be confirmed.

\_\_\_\_\_

Question by Thailand at Thursday, 11 April 2019

Category: All emissions and removals related to its quantified economy-wide emission reduction target

Type: Before 12 April
Title: GHG emission

Could Denmark explain a little more on the main reason of the emission from manure management why the emission has been increased by 20%? Is it because of the population of annimal has been increased or because of the changing of manual management system and how this effect the total emission in this sector?

Answer by Denmark, Saturday, 08 June 2019

As described in "Denmark's National Inventory Report 2019" (https://dce2.au.dk/pub/SR318.pdf), structural changes in the agricultural sector have led to a move towards the use of slurry-based housing systems, which have a higher emission factor than systems with solid manure, which is the main reason for the increasing emissions. The development in animal numbers for various species and subspecies of animals is available from the Common Reporting Format tables available for download at the UNFCCC webpage (CRF, Sheet "Table3.As1").

\_\_\_\_\_

Question by Thailand at Wednesday, 10 April 2019

Category: All emissions and removals related to its quantified economy-wide emission reduction target

Type: Before 12 April
Title: GHG emission

Denmark's BR reported the f-gases (HFCs, PFCs) have been decreased since 2008, could Denmark clarify more on the policy which reduces the emission of HFCs and PFCs, however SF<sub>6</sub> has not been reduced?

Answer by Denmark, Saturday, 08 June 2019

In Denmark, the f-gases (HFCs, PFCs and SF6) are used for several purposes including as refrigerants and blowing agents, etc. (HFCs) and insulator gas in high voltage switchgear (SF6). Since there is no production of these gases in Denmark, all emissions are related to the import of the substances. The development in imports of chemical mixtures containing HFCs has showed a decreasing trend since 2000.

The Danish regulation of emissions of the industrial greenhouse gases (HFCs, PFCs, and SF6) is 2-phased, since there is a consumer tax on the use of the substances and also a statutory order on the phasing out use of the gases in new facilities and products. Both measures are further described in Denmark's Seventh National Communication.

\_\_\_\_\_

Question by China at Wednesday, 10 April 2019

Category: Progress towards the achievement of its quantified economy-wide emission reduction target

Type: Before 12 April
Title: PROJECTION

According to the projections, GHG emissions under WEM and WOM scenario are higher in 2030 than in 2020. Since a decreasing trend of Denmark's GHG emission has been observed since 1990, what are the major divers for the increase in GHG emissions after 2020?

Answer by Denmark, Saturday, 08 June 2019

The WEM scenario in BR3 is the so-called frozen policy scenario from 2017. At that point in time many of the existing and adopted policies and measures would look like they would expire after 2020 as decisions on extension or replacement were pending. Without such decisions on extension or replacement GHG emissions were projected to increase again after 2020, i.e. the major driver for the increase in GHG emissions after 2020 was the pending decisions on additional policies and measures after 2020. In the newest WEM scenario from 2018 the emissions in 2030 are expected to decrease.

The WOM scenario is a scenario without the effects of policies and measures implemented since 1990. An important element in the WOM scenario is the assumption that GHG emissions will increase with the economic development if no policies and measures are implemented. As the economic growth is projected to increase after 2020 also GHG emissions are projected to increase after 2020 in the WOM(since1990) scenario.

\_\_\_\_\_

Question by China at Wednesday, 10 April 2019

Category: Progress towards the achievement of its quantified economy-wide emission reduction target

Type: Before 12 April
Title: ENERGY TAX

1. Could Denmark provide information regarding the social and health impacts of the energy tax? How has the energy tax influence consumers' behavior?

In Denmark, energy products have a long history of being subject to energy taxes. With higher prices on energy products – compared to a theoretically situation without energy taxes – the energy taxes have influenced consumers' behavior by reducing the consumption of these energy products and thereby reducing emissions of GHGs and air pollutants – with the latter also affecting air quality and health.

\_\_\_\_\_

Question by China at Wednesday, 10 April 2019

Category: All emissions and removals related to its quantified economy-wide emission reduction target

Type: Before 12 April

Title: conditional target

As a member state of European Union whose conditional 2020 target is 30% emission reduction comparing with 1990 level, what is the plan to further strength your mitigation actions and to enhance its pre-2020 ambition?

Answer by Denmark, Saturday, 08 June 2019

In addition to its unilateral 20% reduction commitment, the EU made a conditional offer to move to a 30% reduction by 2020 compared to 1990 levels, as part of a global and comprehensive agreement for the period beyond 2012, provided that other developed countries commit themselves to comparable emission reductions and developing countries contribute adequately according to their responsibilities and respective capabilities.

While the conditions for the EU to move to a 30% reduction by 2020 compared to 1990 levels have not been met, the EU remains on track to reach its target of reducing GHG emissions by 20 % from 1990 levels by 2020 under the Convention (including aviation as covered by EU legislation, excluding LULUCF) as well as its commitment for the Kyoto Protocol second commitment period (average emissions between 2013-2020 below 80% of base year emissions, jointly with Iceland).

In 2017, EU GHG emissions were down by 21,9 % from 1990 levels, according to preliminary data (covering emissions from international aviation, but not emissions and removals from land use, land use change and forestry (LULUCF)). According to projections from 2017/2018, the domestic greenhouse gas reductions in 2020 compared to 1990 would be around 26%

with existing measures and without the use of international credits (JI and CDM).

The European Commission and Member States are in continuous process of climate policy review and design, further strengthened by the development of integrated national climate and energy plans (NECPs) under the recently adopted Governance Regulation. Progress towards targets is monitored annually on the basis of greenhouse gas inventory information and projections (updated at least biennially) to inform policy development (more information at: https://ec.europa.eu/clima/policies/strategies/progress\_en).

According to Denmark's WEM scenario from 2017 shown in Denmark's NC7/BR3, Denmark's total GHG emissions (without LULUCF) in 2020 were projected to be 36% below the 1990 level. In the 2018 WEM scenario a reduction of 38% from 1990 to 2020 was projected.

Page 9 of 10

## Session SBI50 (2019)

Session closes at 08-06-2019
UNFCCC - LAST PAGE OF EXPORT