Session SECONDMA2021 (2021)

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A compilation of questions to - and answers by - Iceland [exported on 30-10-2021] by the UNFCCC secretariat Question by Canada at Tuesday, 31 August 2021 Category: Progress towards the achievement of its quantified economy-wide emission reduction target Type: Before 31 August Title: Mainstreaming gender considerations

Canada commends Iceland's efforts to undertake gender-responsive climate action through capacity building internationally. Can Iceland share more details about how it is mainstreaming gender considerations in domestic climate policy?

Answer by Iceland, Monday, 25 October 2021

Gender mainstreaming is one of the main objectives of the Act on Equal Status and Equal Rights Irrespective on Gender, No 150/2020 and referred to in art. 2, para. 7, as obligatory in organizing, improving, developing and evaluating the policy -making process in such a way that gender equality perspectives are incorporated in all spheres in the policy-making and decisions of those who are generally involved in policy-making in society. This is supported further through various canals, such as setting a 40% minimum participation of women in government and municipal committees, councils and boards. Gender equality representatives are employed in each ministry with expert knowledge on gender equality issues and are instrumental in implementing gender mainstreaming. Working methods and quality control structures behind policy-making and development in the Government Offices require a gender impact assessment in the work process. This process is still being developed and implemented as well as capacity building on gender perspectives among those working on policy-making.

Question by European Union at Tuesday, 31 August 2021 Category: Progress towards the achievement of its quantified economy-wide emission reduction target Type: Before 31 August Title: Electric vehicles

According to Iceland's Fourth Biennial Report, the share of electric vehicles in newly registered passenger vehicles showed important increases between 2016 and 2019. Which specific policies and measures contributed to this development?

Answer by Iceland, Monday, 25 October 2021

The increase in the share of electric vehicles cannot easily be attributed to one specific

measure, as there have been various measures in place to encourage energy transition in land transport for almost a decade, as described in Iceland's BR4.

But it is though fair to assume that a key factor in Iceland's success regarding this development is the tax incentives for clean cars and fuel, which has been in place since 2012. Another important measure is the substantial official support to build infrastructure, especially charging station for electric cars, which has led to the establishment of a good network of charging stations along the main roads, giving motorists assurance that they can travel all around Iceland without problems. Some grants have been specifically offered to hotels and main tourist sites, reflecting the importance of tourism in road transport in Iceland.

In 2020, the share of clean vehicles was over 55% af the total registration for new vehicles and the numbers for the first half of 2021 show a continuing trend in the favour of low- and zero-emissions cars.

Question by European Union at Tuesday, 31 August 2021 Category: Progress towards the achievement of its quantified economy-wide emission reduction target Type: Before 31 August

Title: Addressing greenhouse gas emissions in the aluminium industry

The aluminium industry constitutes an important emission source in Iceland. While emissions of PFCs decreased between 1990 and 2017, emissions of CO_2 increased due to a strong growth in aluminium production. Which policies and measures proved effective in reducing PFC emissions, and which policies and measures could be strengthened or introduced in order to address the current high level of CO_2 emissions?

Answer by Iceland, Monday, 25 October 2021

The aluminium industry in Iceland falls under the EU-ETS system where the overall volume of greenhouse gases that can be emitted from industry covered by the system is limited by a cap on the number of emission allowances. The cap is lowered every year, ensuring that total emissions fall.

In June 2019 the Government and heads of heavy industry operators in Iceland signed a declaration of intent to explore possibilities for carbon capture and mineralization of industrial emissions, using the Carbfix method. This effort is described as one of the measures set forth in the Climate action plan but is still in the planning phase.

The overall increasing trend of GHG emissions until 2005 was counteracted to some extent by decreased emissions of PFCs, caused by improved technology and process control in the aluminium industry. Increased emissions due to an increase in production capacity of the aluminium industry (since 2006) led to a trend of overall increase in GHG emissions between 2006 and 2008, when emissions from the aluminium sector peaked.

By 2019, aluminium production in Iceland had increased almost tenfold compared to 1990. In 2019 total emissions from the aluminium sector were 13% lower than in 2008 due to improved technology and process control.

Aluminium production is the main source within the metal production category, accounting for the majority of total Industrial Processes emissions across the time series. Aluminium is produced at three plants. The production technology in all aluminium plants is based on using centre worked prebaked anode cells. The main energy source is electricity, and industrial process CO2 emissions are mainly due to the anodes that are consumed during electrolysis. In addition, the production of aluminium gives rise to emissions of PFCs. Due to the expansion of the existing aluminium plant in 1997 and the establishment of a second aluminium plant in 1998, emissions increased from 1997 to 1999. From 2000, the emissions showed a steady downward trend until 2005. The PFC reduction was achieved through improved technology and process control and led to a 98% decrease in the amount of PFC emitted per tonne of aluminium produced during the period of 1990 to 2005. In 2006, the PFC emissions rose significantly due to an expansion of one smelter, but PFC emissions per tonne of aluminium decreased from 2007 to 2011 through improved process technology. The third aluminium plant was established in 2007 and reached full production capacity in 2008. PFC emissions per tonne of aluminium are generally high during start up and usually rise during expansion. PFC emission declined in 2009 and 2010 through improved process technology until December 2010 at the third smelter, when a rectifier was damaged in fire. This led to increased PFC emissions leading to higher emissions at the plant in 2010 than in 2009. Since 2010 the average PFC emissions for all three aluminium smelters is around 0.1 t CO2e/t Al produced.

See more detailed information in Iceland's GHG Inventory report: https://ust.is/library/Skrar/NIR%202021_15%20april_UNFCCC_submission_FINAL.pdf

Question by United States of America at Tuesday, 31 August 2021 Category: Progress towards the achievement of its quantified economy-wide emission reduction target Type: Before 31 August Title: Lesson learned: EU LULUCF Regulation

Can Iceland outline some of the lessons learned in the legal implementation of your joint fulfilment with the EU member States and Norway of the EU LULUCF regulation (regulation 2018/841)?

Answer by Iceland, Monday, 25 October 2021

The implementation underlined the importance of enhanced quality of monitoring and reporting of emissions and removals in the land use, land use change and the forestry sector as well as coordinated accounting for emissions and sequestration. There is more uncertainty in the estimation of emissions and carbon uptake for the LULUCF sector than in any other sector, in addition to uncertainty to determine the role of human actions, past and present, in emissions and carbon uptake. To minimize uncertainty and improve accuracy lceland has prioritized measures to improve the monitoring and reporting data. The measures aim to improve scientific knowledge and provide a more accurate estimate of the situation but also to help identify and prioritize measures that curb emissions and stimulate carbon uptake from the atmosphere.

Question by United States of America at Tuesday, 31 August 2021 Category: Progress towards the achievement of its quantified economy-wide emission reduction target Type: Before 31 August Title: Lessons Learned: intensifying climate cooperation with the EU

Can Iceland outline some of the lessons learned in intensifying climate cooperation with the EU?

Answer by Iceland, Monday, 25 October 2021

The European Economic Area (EEA) unites the EU Member States and the three EEA EFTA States (Iceland, Liechtenstein, and Norway) into an Internal Market governed by the same basic rules. These rules aim to enable goods, services, capital, and persons to move freely about the EEA in an open and competitive environment, a concept referred to as the four freedoms.

EU Acts that are identified as part of the Internal Market in accordance to the EEA agreement are implemented in Iceland. (More on the EEA agreement: https://www.efta.int/eea/eea-agreement).

The legislation on the EU Emission Trading System is part of the EEA legislation and was therefore implemented in Iceland in 2012.

In 2015, The European Union, its Member States and Iceland signed an agreement for joint fulfilment of the second commitment period of the Kyoto Protocol. The commitment was for the European Union, its Member States and Iceland to jointly achieve a 20% reduction in their combined greenhouse gas emissions for the period 2013-2020 compared to the level in 1990 or their chosen base year. This agreement was laid down in a separate international agreement.

It was seen as a good arrangement for Iceland to fulfil its targets with cooperation with the EU and its member states, specifically as the ETS-system was already part of the EEAagreement, and without the cooperation on the emission reduction outside the ETS system it might have complicated things for the emissions inventory, perhaps calling for some kind of double inventory, one specifically related to emissions under the ETS system and then the National inventory.

Enhanced climate cooperation between EU and Iceland (and Norway) in relation to joint fulfilment of commitments under the Paris Agreement has been formalized with specific arrangements under EEA-agreement with Joint Committee Decision nr. 269/2019.

The EU climate regulations are seen as ambitious and clear and Iceland sees it as beneficial to be part of the fulfilment of the climate target together with the EU and its Member states. Iceland is a part of a common market with Norway, Liechtenstein and the EU, and this arrangement ensures that Icelandic industries face comparable climate rules and regulations as industries in most European countries.

Reduction targets for emission reduction outside the ETS-system are set in a transparent and uniform manner with a clear focus on cost-effectiveness. It is beneficial for a small economy like Iceland to have common and easily comparable targets and regulatory environment in climate mitigation as its neighbouring countries and main trading partners.

Question by United States of America at Tuesday, 31 August 2021

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

Type: Before 31 August

Title: Lessons learned: Icelandic Climate Council

Can Iceland outline some of the lessons learned in the design and implementation of the Icelandic Climate Council? How is it expected to adequately hold governmental authorities accountable for the implementation of climate policy? What authority is given to the Council that will ensure the Government will respect and listen to the Council's annual advice?

Answer by Iceland, Monday, 25 October 2021

The Climate Council was established in 2018 and was given a legal basis with amendment to the Icelandic Climate Act in 2019. Members of the Climate Council are appointed for four years at a time.

The Icelandic Climate Council is an independent body whose role is to hold authorities accountable and provide advice on policy objectives and specific measures related to climate change.

The Council has the following tasks:

- provide advice on the reduction of greenhouse gas emissions and on measures for carbon sequestration,

- provide advice on climate change adaptation,

- review climate policies and plans of the government during the preparation phases.

- have an overview of educational initiatives and dissemination of information on climate issues to the public, businesses, institutions, and municipalities, areview proposals from government agencies about monitoring and climate related research,

- work on other tasks the Minister assigns to the Council at any given time.

Members of the Council represent the business community, academia, municipalities, and environmental NGOs. Additionally, representatives from other stakeholders can be asked to participate as considered necessary at any given point in time. The Minister for the Environment and Natural Resources appoints the chair and the vice chair of the Council and has also appointed representatives of youth.

The Climate Council shall be impartial and independent in its work.

The Icelandic Climate Council is a multi-stakeholder council with representatives from across the Icelandic society.

A priority of the council has been to establish a platform of interest and knowledge on the broad topic of climate change and get the various actors to engage in the common goal of climate action. This has proved to be a success as it has been pivotal in increasing the awareness across the main sectors of the society. It has furthermore addressed issues such as the governance of climate issues, promotion of ideas to be implemented and raise awareness on issues that need to be of focus, to the government, businesses or other actors.

Although the council has not operated for a long time, the general experience is seen as positive. The council is independent and has provided important counselling to authorities, but the law does not state that the Icelandic government is bound by its counselling.

Question by United Kingdom of Great Britain and Northern Ireland at Tuesday, 31 August 2021 Category: Progress towards the achievement of its quantified economy-wide emission reduction target Type: Before 31 August Title: Efficacy of policies and measures in the transport sector We thank Iceland for the opportunity to comment on the Fourth Biennial Report. Iceland's Fourth Biennial Report highlights that there are positive signs regarding the efficacy of policies and measures implemented in the transport sector, especially policies aimed at incentivising the uptake of electric and hybrid vehicles. Could you tell us more about how you engaged the public in implementing those policies and share any lessons learnt?

Answer by Iceland, Monday, 25 October 2021

The policies and measures set fort have mainly focused on the general public, with tax exemptions on electrical cars and with public support of the build-up of charging infrastructure.

The Climate Action plan was put out for public consultation to engage stakeholders and the general public.

Looking into the figures it is clear that the incentives and measures taken have had produced positive results. The best example is that since the first tax incentives and other measures were introduced in 2012, the number of electric cars sold has steadily increased.

Question by Switzerland at Tuesday, 31 August 2021 Category: Progress towards the achievement of its quantified economy-wide emission reduction target Type: Before 31 August Title: Emissions from the LULUCF sector

According to data provided by Iceland, the LULUCF sector is by far the largest source of GHG emissions, even if a slight decrease in these emissions can be observed since 1990. i) Could Iceland indicate the main drivers of emissions in the LULUCF sector? ii) How does the Party intend to use reforestation, afforestation, revegetation and the restoration of drained wetlands as mitigation efforts against climate change? iii) What are the expected respective contributions of these fields of action with a view to the achievement of 2030 and 2040 emission targets?

Answer by Iceland, Tuesday, 26 October 2021

According to data provided by Iceland, the LULUCF sector is by far the largest source of

GHG emissions, even if a slight decrease in these emissions can be observed since 1990.

i) Could Iceland indicate the main drivers of emissions in the LULUCF sector?

Net emissions (emissions minus removals) in the LULUCF sector have slightly decreased over the time period. Emissions from Grassland are mainly explained by drainage of wetland, converting Wetlands to Grassland. Drainage of wetlands was subsidised heavily from 1950s until 1980s, when government subsidies were ended. Subsidies for drainage were part of Iceland's agricultural policy, and the drained land was mainly being used for hayfields and as grazing land. Increase in wetland drainage decreases the area of wetland and consequently the emissions. These policies have been reversed, with the government encouraging, including through grants, the reclamation of drained wetlands. The fact remains that significant legacy emissions remain as the result of past activities and government policies. The increased removals through afforestation are explained by increased activity in the category and changes in forest growth with stand age. Decreased emissions from Cropland are explained by changes in the agricultural sector, leading to less cropland area.

Analyses of trends in emissions of the LULUCF sector must be interpreted with care as they are subject to great uncertainty; uncertainties that are much higher than for any other sector of emissions. Iceland is working on extensive improvements in measurements and accounting of emissions and carbon sequestration in the LULUCF sector. In September an improvement plan on measures to be taken to improve Iceland's GHG inventory was published. Improved scientific knowledge and accounting should provide more accurate estimates and improve the knowledge base for estimating the effect of different policies and measures and thereby provide a better ground for long-term projections.

ii) How does the Party intend to use reforestation, afforestation, revegetation and the restoration of drained wetlands as mitigation efforts against climate change?

LULUCF is a cornerstone of Iceland's climate mitigation policy. Government agencies have pursued afforestation and efforts to reclaim soil and vegetation (revegetation) for over a century. Carbon uptake from the atmosphere is seen as an added benefit of such efforts. Iceland has great potential for carbon sequestration in LULUCF, and this fact must be considered in climate policy.

Iceland has strengthened and intends to strengthen even more its mitigation efforts with interventions in already running programs where landowners, including farmers, are supported by the Government to implement mitigation measures.

Government agencies also apply mitigation efforts on state owned land. Much emphasis is on restoration efforts which also incorporate objectives in conserving biodiversity.

Iceland's climate measures put emphasis on reducing emissions and increasing carbon sequestration in land use by the restoration of woodlands and wetlands, revegetation, and afforestation. These measures were outlined in Iceland's LULUCF mitigation plan, published in 2019[1] (only available in Icelandic), as well as in the new Climate Action Plan that was

published in June 2020[2]. These measures play a role in Iceland meeting the 2030commitments, but an even an important role in achieving Iceland's goal of climate neutrality by 2040.

iii) What are the expected respective contributions of these fields of action with a view to the achievement of 2030 and 2040 emission targets?

Iceland is working on creating emission and carbon sequestration projections for the LULUCF sector. Currently, there are only projections for some sub-sectors or emissions effected by specific measures. Even though Iceland has not produced complete projections for the LULUCF sector, significant measures are being taken to reduce emissions and increasing carbon sequestration in land use. According to historical data and the projections that have been developed, total carbon sequestration was estimated to be 204 kt CO_2 -eq. in 2005 and 523 kt CO-eq. in 2018 and the total carbon sequestration estimated to be 1,252 kt-eq. in 2030 and 2,401 kt- CO_2 -eq. in 2050.

For Iceland to comply with the 2030 commitments and the new LULUCF Regulation, Iceland is working on extensive improvements in measurements and accounting of emissions and carbon sequestration in the LULUCF sector. Improved scientific knowledge and accounting should provide more accurate estimates and improve the knowledge base for estimating the effect of different policies and measures and thereby provide a better ground for long term projections.

[1] LULUCF Mitigation Plan (Bætt landnýting í þágu loftslagsmála): https://www.stjornarradid.is/lisalib/getfile.aspx?itemid=f8c0433d-9cca-11e9-9443-005056bc4d74

[2] New Climate Action Plan, June 2020: https://www.stjornarradid.is/library/02-Rit--skyrslurog-skrar/Adgerdaaetlun%20i%20loftslagsmalum%20onnur%20utgafa.pdf

Question by Japan at Monday, 30 August 2021

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

Type: Before 31 August

Title: Measures to reduce emissions in the metal production sector

In Iceland, the share of emissions from the metal production sector is relatively high. What

policies and measures will be implemented in the metal production sector to achieve the 2030 target and the 2040 carbon neutrality goal?

Answer by Iceland, Monday, 25 October 2021

The aluminium industry in Iceland falls under the EU-ETS system where the overall volume of greenhouse gases that can be emitted from industry covered by the system is limited by a cap on the number of emission allowances. The cap is lowered every year, with fewer allowances circulating, ensuring that total emissions fall.

Hence, no specific targets are set for the Icelandic metal production.

In June 2019 the Government and heads of heavy industry operators in Iceland signed a declaration of intent to explore possibilities for carbon capture and mineralization of industrial emissions, using the Carbfix method. This effort is described as one of the measures set forth in the Climate action plan but is still in the planning phase.

See further information in the answer to question from the European union: Addressing greenhouse gas emissions in the aluminium industry

Question by Japan at Monday, 30 August 2021 Category: Progress towards the achievement of its quantified economy-wide emission reduction target Type: Before 31 August Title: Climate Council

In Iceland, an independent Climate Council was established in 2018 to provide advice on policy objectives and specific measures related to climate change. Could Iceland share the advantages of establishing the Climate Council and the lessons learned in the design and operation?

Answer by Iceland, Monday, 25 October 2021

The Climate Council was established in 2018 and was given a legal basis with amendment to the Icelandic Climate Act in 2019. Members of the Climate Council are appointed for four years at a time.

Members of the Council represent the business community, academia, municipalities, and environmental NGOs. Additionally, representatives from other stakeholders can be asked to

participate as considered necessary at any given point in time. The Minister for the Environment and Natural Resources appoints the chair and the vice chair of the Council and has also appointed representatives of youth. The Climate Council shall be impartial and independent in its work.

The Icelandic Climate Council is an independent body whose role is to hold authorities accountable and provide advice on policy objectives and specific measures related to climate change.

The Council has the following tasks:

- provide advice on the reduction of greenhouse gas emissions and on measures for carbon sequestration,

- provide advice on climate change adaptation,

- review climate policies and plans of the government during the preparation phases.

- have an overview of educational initiatives and dissemination of information on climate issues to the public, businesses, institutions, and municipalities,

- review proposals from government agencies about monitoring and climate related research,

- work on other tasks the Minister assigns to the Council at any given time.

The Icelandic Climate Council is a multi-stakeholder council with representatives from across the Icelandic society. A priority of the council has been to establish a platform of interest and knowledge on the broad topic of climate change and get the various actors to engage in the common goal of climate action. This has proved a success as it has been pivotal in increasing the awareness across the main sectors of the society. It has furthermore addressed issues such as the governance of climate issues, promotion of ideas to be implemented and raise awareness on issues that need to be of focus, to the government, businesses or other actors.

Question by Japan at Monday, 30 August 2021 Category: Progress towards the achievement of its quantified economy-wide emission reduction target Type: Before 31 August Title: CO2 captured from geothermal power generation

In Iceland's GHG inventory, GHG emissions from geothermal power generation are reported, and CO2 is captured and injected into the ground by the CarbFix project. Could Iceland

provide information on the future prospect of the amount of CO2 capture and storage in geothermal power generation? How is this mitigation measure taken into account in the emissions projections?

Answer by Iceland, Monday, 25 October 2021

The Carb-fix method has been developed by Reykjavik Energy onside the Hellisheidi Powerplant. According to Reykjavik energy the plans are to capture up to 95% of the CO2 emission from the power plant and inject with the Carbfix method. The same plans are with emission from the Nesjavellir power plant, also run by Reykjavik Energy but the Carbfixoperation at Nesjavellir is still only on the explorational phase, but planned to be in operation 2025-2030.

There are two other power companies running geothermal power plants. According to information from the companies, they have plans on reducing their emissions before 2030, but are more likely to go for CCU-methods.

Information from the power companies are taken into account when the Environment Agency sets forth the GHG projection.

Question by Japan at Monday, 30 August 2021 Category: Progress towards the achievement of its quantified economy-wide emission reduction target Type: Before 31 August Title: Details of landfill tax

According to p.43 of the BR4, a landfill tax will be designed and employed to decrease the landfilling of organic waste. Could Iceland provide the details of the landfill tax, such as expected taxpayers, tax rates, and use of revenue?

Answer by Iceland, Monday, 25 October 2021

Although the plan has been to establish a landfill tax, this proposal has not been passed into law.

Municipalities, which are responsible for waste management in Iceland, have argued that more time was needed to prepare for new infrastructure needed and management for implementing a landfill tax. These arguments have been taken into consideration by the legislature and the government by postponing its implementation, but the landfill tax is still seen as an important measure and now the plan is to implement a landfill tax before 2023.

Question by Germany at Monday, 30 August 2021 Category: Assumptions, conditions and methodologies related to the attainment of its quantified economy-wide emission reduction target Type: Before 31 August Title: Gender-differentiated Data

Did Iceland integrated gender-differentiated data in the reporting? If so how and what challenges were identified for a meaningful reporting on climate action?

Answer by Iceland, Monday, 25 October 2021

There were no specific gender-differentiated data intergraded in the Biennial Report.

Working methods and quality control structures behind policy-making and development in the Government Offices require a gender impact assessment in the work process. This process is still being developed and implemented as well as capacity building on gender perspectives among those working on policy-making.

Gender mainstreaming is one of the main objectives of the Act on Equal Status and Equal Rights Irrespective on Gender, No 150/2020 and referred to in art. 2, para. 7, as obligatory in organizing, improving, developing and evaluating the policy -making process in such a way that gender equality perspectives are incorporated in all spheres in the policy-making and decisions of those who are generally involved in policy-making in society.

This is supported further through various canals, such as setting a 40% minimum participation of women in government and municipal committees, councils and boards. Gender equality representatives are employed in each ministry with expert knowledge on gender equality issues and are instrumental in implementing gender mainstreaming.

Question by New Zealand at Friday, 27 August 2021 Category: Assumptions, conditions and methodologies related to the attainment of its quantified economy-wide emission reduction target Type: Before 31 August Title: Mitigation quantification

1. How does Iceland plan to quantify the mitigation (either reduced emissions or increased removals) from actions 21 (Restoration of drained wetlands) and 22 (Cooperation with sheep farmers on climate mitigation measures) in Table 4.1?

Answer by Iceland, Monday, 25 October 2021

21 Restoration of drained wetlands:

In the Climate Action plan published in 2020 it is estimated that action 21, Restoration of drained wetlands will lead to reduction of CO2 emission for about 25 kt CO2-eq. in 2022 and in 2030 the emission reduction is estimated to be around 107 kt CO2-eq. This estimate is based on Iceland's LULUCF mitigation plan issued in 2019. (only available in Icelandic)

Iceland is improving the information on the impact of wetland restoration on GHG emissions through a research initiative. Also information stocks and fluxes of GHG in soils are being improved through mapping of different land types. The aim is to improve emissions inventories according to EU standards etc.

22 Cooperation with sheep farmers on climate mitigation measures:

This action has not been quantified. In the first phase the focus has mainly been on cooperation with farmers with active participation where farmers get information from consultans on all possibilities to reduce emission from their respective farm.

The project is in cooperation with The Farmers association, The Icelandic Agricultural Advisory Centre, The Soil Conservation Service of Iceland and the Icelandic Forest Service.

The project started with sheep farmers, but has been expanded to include also dairy farmers. The goal is to have at least 100 participating farmers in 2022.

Cooperation with sheep farmers includes working with a group of farmers on an inventory of the emissions from their farm. Based on that the farmers create an action plan which includes targets for decreased emissions and increased carbon sequestration, including land use. These farmers are seen as pioneers for other farmers on how to incorporate these actions. It is therefore difficult to quantify the impact of this action.

Question by New Zealand at Friday, 27 August 2021 Category: All emissions and removals related to its quantified economy-wide emission reduction target Type: Before 31 August Title: Agriculture

- 1. The BR4 notes that historical and future emissions in agriculture are forecast to decline due to a decrease in livestock numbers. Is there an expected corresponding increase in imports of meat/dairy products?
- 2. Can any more detail be provided on the project cooperating with sheep farmers on climate mitigation measures (outlined in Action 22 in Table 4.1)?
- 3. Could Iceland please provide more information on any mitigation activities under consideration for its major livestock products, particularly for its dairy sector?
- 4. Two of the agriculture mitigation actions described in Iceland's BR4 are 'Reduction in use of fertilisers,' and 'Nitrogen fertiliser use efficiency in agriculture'. Are these two initiatives related?
- 5. Could Iceland provide more information on the initiative focused on the efficiency of nitrogen fertiliser use, including how the plan was set up and implemented, organisations involved, and main objectives?

Answer by Iceland, Monday, 25 October 2021

1. The BR4 notes that historical and future emissions in agriculture are forecast to decline due to a decrease in livestock numbers. Is there an expected corresponding increase in imports of meat/dairy products?

No, the decrease in livestock numbers that is forecasted is mainly expected for sheep and dairy cows. Decrease in the number of sheep can be explained by e.g., changes in consumption patterns and decrease in demand for sheep / lamb meat which has been the trend for last years and is expected to continue in the future. The poultry and pork sectors have at the same time increased their market share. Because emissions from those animals are lower, we forecast an overall reduction. The decrease that is forecasted for the number of dairy cattle can be explained by increase in productivity per dairy cow. So even though the livestock projection shows number of dairy cattle to decrease the average annual milk yield per dairy cows is projected to increase. It is therefore not necessarily expected that imports of meat/ dairy products will increase due to the decrease that is projected.

Can any more detail be provided on the project cooperating with sheep farmers on

climate mitigation measures (outlined in Action 22 in Table 4.1)?

The project is called Climate-friendly agriculture and is a cooperative project between the government, the Agricultural Advisory Centre (RML), Forestry and the Soil conservation service of Iceland and sheep farmers.

Participants receive education and advice on how they can make their farming more climatefriendly with improved farming methods, forestry, and soil conservation. Each participant (farmer) sets its own action plan together with experts on how to reduce greenhouse gas emissions and increase sequestration based on the situation, capacity, and possibilities of their own farm.

The project started in 2020 with sheep farmers and in 2021 the project expanded and now welcomes cattle/dairy farmers as well. Participants today are therefore both sheep and cattle/dairy farmers.

2. Could Iceland please provide more information on any mitigation activities under consideration for its major livestock products, particularly for its dairy sector?

In Iceland's 2020 Climate Action Plan there are five actions focused on agriculture. The first one is the project explained in previous question. In 2021 cattle/dairy farmers were invited to participate in the project and will receive advice and education on how to reduce greenhouse gas emissions and increase sequestration on their farms. Other actions include improved use and handling of fertilisers, improved feeding of livestock to reduce enteric fermentation and carbon-neutral beef production before 2040.

3. Two of the agriculture mitigation actions described in Iceland's BR4 are 'Reduction in use of fertilisers,' and 'Nitrogen fertiliser use efficiency in agriculture'. Are these two initiatives related?

Yes. In the first government climate action plan published in 2018 the actions were two as described. In the current plan published 2020 they have been merged.

4. Could Iceland provide more information on the initiative focused on the efficiency of nitrogen fertiliser use, including how the plan was set up and implemented, organisations involved, and main objectives?

The goals of the initiative are first and foremost to increase productivity and efficiency in fertiliser use, both synthetic and organic (i.e. manure and similar). It is not fully operational, but the first steps are simply to document the usage better. From 2021, farmers are required to report all fertiliser use, to receive government payments based on land use. The need to report what they use, when and where. We are also surveying slurry storage facilities on farms to assess their possibilities to apply it at times when it is most effective. Farmers are also encouraged to take soil samples to be better informed on what fertiliser to use and where for best yields. Soil types are quite varied in Iceland. By building up better data on the soil and fertiliser use, we aim to enable the farmers to be better able to use it in the most efficient ways possible - in other words: Produce the same with less resources and smaller climate footprint. The Ministry of Industries and innovation is responsible for implementation cooperating with the Ministry of Environment and the Agricultural Advisory Centre (which is farmer owned).

Question by New Zealand at Friday, 27 August 2021 Category: All emissions and removals related to its quantified economy-wide emission reduction target Type: Before 31 August Title: LULUCF data gap

1. Noting current projections do not include emissions or removals from the LULUCF sector due to a data gap, what steps is Iceland taking to rectify the data gap and include LULUCF within projections?

Answer by Iceland, Monday, 25 October 2021

Emissions of the LULUCF sector must be interpreted with care as they are subject to great uncertainty. These uncertainties are much higher than for any other sector of emissions. Iceland is working on extensive improvements in measurements and accounting of emissions and carbon sequestration in the LULUCF sector. In September 2021 an improvement plan on measures to be taken to improve Iceland's GHG inventory was published. Improved scientific knowledge and accounting should provide more accurate estimates and improve the knowledge base for estimating the effect of different policies and measures and thereby provide a better ground for long-term projections.

Question by New Zealand at Friday, 27 August 2021 Category: All emissions and removals related to its quantified economy-wide emission reduction target Type: Before 31 August Title: Industry

- 1. Noting that aluminium plants have not been included in the projections (referred to on page 67 of BR4), how significant are the emissions impacts of the additional plants?
- 2. Does Iceland have expectations for how likely the plants will be to use the allocated permits?
- 3. Will there be limits and/or emissions limits placed on permits for future aluminium plants?

Answer by Iceland, Monday, 25 October 2021

The aluminium industry in Iceland falls under the EU-ETS system where the overall volume of greenhouse gases that can be emitted from industry covered by the system is limited by a cap on the number of emission allowances. The cap is lowered every year, ensuring that total emissions fall.

Although permits have been given for new plants (that is permits for operations, not for emissions, as the emissions allowances come through the ETS-system), the lack of information on if and when they might be built was the reason for not including these plans in the projection. To add to that, on page 70 a reference is made to the quotation from the Ministry for Industry and Innovation, that there are no current plans for adding new aluminium smelters, ferroalloys, or other similar industries in Iceland in the coming years. That is the reason for not including possible new smelters in the projection.

Question by New Zealand at Friday, 27 August 2021 Category: Progress towards the achievement of its quantified economy-wide emission reduction target Type: Before 31 August Title: Agriculture

1. Does Iceland have any sector specific reduction targets or ambitions relating to agricultural emissions in addition to or under their economy-wide targets?

Answer by Iceland, Monday, 25 October 2021

An indicative projection for agriculture emissions in the current action plan foresees 5% reduction in emissions up to 2030. It should be emphasised that this number is not a sectoral goal set by the Icelandic government. The government has set a goal of 40% cuts in emissions in sectors outside of the EU-ETS until 2030 compared to 2005. Projections were made for individual sectors within the overall non-ETS sector to illustrate the possible contribution of each sector, but not as sectoral targets. It is likely that projections for agricultural emissions cuts will increase as individual actions are further developed. The Farmers Association of Iceland adopted a policy in 2020 to be climate neutral by 2030 through emission reductions in part with wetland restorations but also increased carbon uptake with revegetation and increased forestry.

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Question by New Zealand at Friday, 27 August 2021 Category: Progress towards the achievement of its quantified economy-wide emission reduction target Type: Before 31 August Title: Carbon Neutral Government Offices

- 1. Is there a target year for the goal to have carbon neutral government offices?
- 2. Is this goal intended to go beyond the NDC target using correspondingly adjusted mitigation to avoid double counting?

Answer by Iceland, Monday, 25 October 2021

A climate policy and action plan for government offices was published in 2019 and has been implemented. The plan measures emissions, such as from transport and waste, and aims for the climate neutrality of government offices.

The target is set on climate neutrality from 2020 and at the same time reduce emissions by 40% by 2030, which was in line with the Icelandic NDC at the time the policy was launched. The policy and the action plan are expected to be revised next year in line with the current NDC.

The climate neutrality target is to ensure that all emissions from the government offices will be offset. Since international flight was the main source for emissions from the government offices before the pandemic, the offices are obliged to double the offset for emissions from flight, to increase the incentive for reducing emissions from flight.

For now, emissions from the government offices are offset mainly through Icelandic measures in the land use sector, with reforestation and afforestation as well as reclaiming drained wetland in focus. The offset is mainly through two entities; the Iceland Carbon Fund and the Icelandic Wetland Fund.

The Iceland Carbon Fund (ICF) offers carbon offsets through tree planting. The ICF was founded in 2007 by the Icelandic Forestry Association and the Icelandic Environment Association, but the ICF has its own independent board.

The Icelandic Wetland Fund was established around a socially responsible project aimed at having companies, associations and individuals finance the restoration of wetlands in Iceland.

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