Session SECONDMA2021 (2021)

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A compilation of questions to - and answers by - Slovenia [exported on 30-10-2021] by the UNFCCC secretariat Question by United States of America at Tuesday, 31 August 2021 Category: All emissions and removals related to its quantified economy-wide emission reduction target Type: Before 31 August Title: Impact of EU-wide mitigation actions

Could Slovenia discuss the extent to which it is dependent on EU-wide mitigation actions to achieve national emissions reductions or to achieve national emissions targets, including the mitigation actions that are still under development?

Answer by Slovenia, Wednesday, 20 October 2021

The EU-wide measures to mitigate climate change represent an important part of Slovenia's measures to mitigate climate change. We can divide Slovenia's actions into these pillars:

- Some of the EU-level measures are directly implemented at national level, i.e. measures written down in regulations (such as the regulation defining CO2 in light and heavy duty vehicles, the F-Gas regulation, the Ecodesign regulation).

- The EU directives have to be transposed into national law, which can be done in different ways. Emissions trading, a very important measure to reduce emissions, was introduced by a directive and is implemented in Slovenia by the Environmental Protection Act and the underlying regulations.

- Many directives specify different targets that must be met by Member States, e.g. Directive 2018/2001/EU on renewable energy and Directive 2018/2002/EU on energy efficiency. The measures required to meet these targets are set and implemented by individual Member States, but can be traced back to the EU Directive or Regulation when reporting. Targets are also set in EU regulations, e.g. Regulation 2018/842/EU on effort sharing.

- Some measures are purely national measures with no link to EU measures (CO2 tax, financial incentives, ENSVET), i.e. the measures were already in place before accession to the EU.

In many cases, it is difficult to separate national and EU measures, as the overlap is (and will become) very large (and will become even larger), especially when it comes to targets set at EU level and to be achieved through the implementation of national measures (RES targets, EE target).

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 Could Slovenia outline the role your states play in implementing the Road Transport and the Railway Transport Acts, and how they work within the Transport Development Strategy, the National Programme for the Development of Transport, and the NECP?

Answer by Slovenia, Wednesday, 20 October 2021

Road Transport Act and Railway Transport Act are national acts. They (among others) define scope for public transport (operators, integrated ticketing...) and also regulate the use of the public railway network.

The main strategic document for transport in Slovenia is the Transport Strategy, which contains a list of measures (e.g. improvement of the railway connection between Ljubljana and Koper, upgrade of the Ljubljana transport hub). The national programme contains specific actions to implement the measures of the Transport strategy. For each action, a clear timeline is defined and financial data are set (e.g. construction of the second track between Koper - Divača by 2026, spatial planning of the Ljubljana transport hub by 2030...). The measures and actions from the Transport strategy and programme were also taken up again in the long-term strategy and the NECP.

Local and upcoming regional authorities currently play only a limited role in transport and transport infrastructure planning (mainly in the operation of local roads, infrastructure for cyclists and pedestrians, public transport and parking management).

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: Climate Action Mirrors framework

The Lessons learned. Climate Action Millions harnework

Could Slovenia outline the lessons learned in designing, developing, and implementing the Climate Action Mirrors framework?

Answer by Slovenia, Wednesday, 20 October 2021

The Climate Action Mirrors framework was developed in consultation with stakeholders and with the involvement of a broad network of experts over three annual cycles as part of the LIFE ClimatePath2050 project (https://podnebnapot2050.si/?lang=en). Main elements of the framework are: main indicators for assessing compliance with targets (greenhouse gas

emissions, energy efficiency, RES); sectoral indicators for tracking progress; qualitative overviews of policy implementation; overview of resources used to finance climate action; measures in focus. An important part of the framework is recommendations for decision-makers that support the development of short-term corrective actions, thus implementing the PDCA cycle ("Plan-Do-Check-Act").

The main lessons learned are:

- Main indicators are not enough to track climate action - sectoral indicators to track progress and qualitative reviews of action implementation give us better insight into what is happening at the implementation level and support the design of short-term corrective actions through recommendations.

- In order to move from reporting to designing short-term corrective actions and providing specific guidance for medium and long-term planning, active stakeholder participation is essential.

- Good quality of information collected and presented can only be ensured by involving a team of experts from different sectors for reviewing and assessing sector specific information.

- However, in order to establish a good monitoring system, climate change mitigation, GHG emission reductions and the transition to climate neutrality must be given high priority in national policy, development and implementation. This is the only way to ensure appropriate conditions (financial and human resources, organizational structure, etc.) for the implementation of actions and their monitoring.

More information on the Climate Action Mirror can also be found in the presentations Monitoring Climate and Energy Policy Implementation - How to take a step forward (https://podnebnapot2050.si/wp-content/uploads/2020/05/2021-05-17_WS34_Monitoringclimate-and-energy-policy-implementation.pdf) or The Climate Action Mirror and the Local Climate Action Scoreboard (https://podnebnapot2050.si/wp-

content/uploads/2021/10/II_1_Barbara-Petelin-Viso%c4%8dnik_The-Climate-Action-Mirror-and-the-Local-Climate-Action-Scoreboard.pdf).

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: Public advisory services to reduce emissions from the agriculture sector

We thank Slovenia for the opportunity to comment on the Fourth Biennial Report. Slovenia's

Fourth Biennial Report highlights that training, building knowledge and encouraging innovation will be key levers for reducing emissions in the agriculture sector. Can you provide more detail on the public advisory services that have been set up to support farmers to transition to modern processes with lower GHG emissions? Have there been any lessons learnt for other sectors?

Answer by Slovenia, Wednesday, 20 October 2021

Slovenia has a long tradition in the field of public advisory services. The activities started about 50 years ago. Currently the service is organized within the Chamber of Agriculture and Forestry. Its work is financed by the Ministry of Agriculture, Forestry and Food. The advisory service is free of charge for farmers. Already when the service was established, it was found that Slovenian farms are too small (on average 7 ha of UAA) to hire paid advisors. Additional reasons for public funding of the advisory service include its focus - while improving the competitiveness of farms, activities are aimed at protecting the environment and nature. The main tasks of the Agricultural Advisory Service include technological, economic and environmental advice (146,923 advisory hours in 2019). This includes advice on reducing nitrous oxide and methane emissions, such as techniques for more efficient nitrogen cycling in agriculture and advice on animal feeding.

In terms of lessons that could be used in other sectors, we note that free advice does not necessarily reach all target groups. We note that some of them need special encouragement despite free advisory services.

Question by Switzerland at Tuesday, 31 August 2021 Category: All emissions and removals related to its quantified economy-wide emission reduction target Type: Before 31 August Title: Emission trends in the LULUCF sector

Between 1990 and the latest reported year, emission trends in the LULUCF sector have changed in a remarkable manner. Could Slovenia indicate the main drivers of emission and/or removal trends in the LULUCF sector? What measures have contributed the most to the observed development of emissions in this sector?

Answer by Slovenia, Thursday, 21 October 2021

As explained in the latest National Inventory Report submission (p. 228, NIR 2021 - https://unfccc.int/sites/default/files/resource/svn-2021-nir-15apr21.zip), the net sink in the LULUCF sector has begun to decline since 2007. In 2007-2013, the decrease was due to the

increase in regular timber harvesting as a result of the change in the national forest policy (adoption of the National Forest Programme), which provided for allowable cut up to 75% of the increment specified in the forest management plans. In early 2014, Slovenian forests were severely affected by ice sleet and in subsequent years by bark beetle infestation and windthrows. As a result, sanitary felling was increased by more than 50%, which led to a significant decrease in the sink in this sector.

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 agriculture sector

The projections by sector provided on p.102 of the BR4 show that the reduction rate of emissions in the agriculture sector is smaller than in other sectors. What measures will be taken in the agriculture sector to reduce emissions?

Answer by Slovenia, Wednesday, 20 October 2021

Priority areas for action:

- methane emissions from enteric fermentation, particularly in cattle production;
- methane emissions from the storage of livestock manure;
- efficient nitrogen cycle in agriculture.

Instruments:

Common Agricultural Policy Strategic Plan

- Investments in buildings and equipment that contribute to the reduction of greenhouse gas emissions and food waste in primary production (biogas plants, precision fertilization and low-emission fertilization equipment, grazing facilities, animal houses and livestock manure stores, agricultural warehouses, ...).

- Promotion of agricultural practices that contribute to the reduction of methane and nitrous oxide emissions, taking into account the principles of circular economy and incorporating precision farming techniques and digital technology (improvement of feed quality, improvement of livestock health, scheduled fertilization of agricultural crops based on soil analysis results, effective and environmentally friendly crop protection against diseases and pests, low-emission fertilization, biogas production from livestock manure, grazing of

cattle and sheep, cover crops, grain legumes and clover, practices to reduce food/feed waste during production and storage, etc.).

- strengthening local food supply chains, which will enable a gradual shift from livestock to high value-added crop production in areas with favorable growing conditions.

Livestock breeding programs

- Secondary traits that affect GHG emissions (feed energy utilization, reproductive traits, longevity, accumulation of body reserves, etc.).

- Introduction of direct and reliable indirect measurements of methane emissions at the individual animal level and use of modern selection methods for low emissions (e.g. genomic selection).

An efficient Agricultural Knowledge and Innovation System

- Creation of new knowledge and innovation in the field of emissions and emissionsrelated areas.

- Maintenance, exchange and transfer of knowledge in the field of emissions,

- Intensify the inclusion of content in the field of emissions in the programs of secondary and higher agricultural education.

- Operation of the public advisory service and expansion of its scope in the field of climate change mitigation.

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: Emissions projections for the transport sector

The transport sector has been the largest emission source in Slovenia since 2014. According to p.90 of the BR4, emissions from the transport sector under the WAM scenario are projected to decrease rapidly from 2025 onwards. What are the main factors behind this decline?

Answer by Slovenia, Wednesday, 20 October 2021

The key drivers of rapid emissions reductions from 2025 onwards are (in order of magnitude)

- Improving vehicle efficiency (through hybridisation of vehicles and other improvements approximate 20% drop in energy consumption by 2030 compared to 2017) and increasing the share of electric vehicles (in 2025 the share of electric vehicles (BEV, PHEV, H2) in the total number of vehicles is 3%, in 2030 the share is 17% and in 2040 it is 73%) - the share of electric vehicles is increasing in all vehicle segments, except for heavy-duty vehicles, for which a switch to natural gas is foreseen, which will be gradually replaced by CO2 neutral synthetic gas
- Increasing the share of biofuels (in 2020 the share is 6.5%, rising to 11% by 2030 and 40% by 2050) and increasing the share of CO2-neutral synthetic fuels 10% in 2030, 25% in 2040.
- Increasing load factor (occupancy levels) the use of cars for cars (by 10% in 2017-2030) and heavy trucks (by 12% in 2017-2030).

- Reduce car use by encouraging cycling and walking, work at home, etc.
- - Increase the share of public transport

Question by New Zealand at Monday, 30 August 2021

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

Type: Before 31 August

Title: Agriculture

1. Could Slovenia share any information about their expected emissions reductions from agriculture based on current and future mitigation technologies?

Answer by Slovenia, Wednesday, 20 October 2021

Anaerobic digesters (biogas), efficient livestock production (same output with fewer animals), inhibition of methanogenesis in the rumen and low-emission manure application techniques were considered the most efficient emission reduction technologies. They are expected to reduce GHG emissions by 6.1, 5.5, 1.7 and 1.2% respectively by 2040.

Question by New Zealand at Monday, 30 August 2021

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

- 1. Slovenia's multi-sectoral instrument M-5 refers to agriculture in the Rural Development Programme. Could Slovenia please clarify whether components of this instrument will directly target the agricultural sector?
- 2. Does Slovenia have other multi-sectoral instruments which will directly address emissions from agriculture?

Answer by Slovenia, Wednesday, 20 October 2021

- 1. Yes, the Rural Development Program (in the period 2023-2027 under the name CAP Strategic Plan) will directly address agricultural emissions. Activities include training programs, advisory and demonstration projects, European Innovation Partnership projects and Local Action Groups.
- 2. The Ministry of Agriculture, Forestry and Food also co-funds applied and targeted research projects that are important for environmental protection. The four priority areas of the target research program "Food for Tomorrow" also include the sustainable management of natural resources, which aims at the sustainable use of production potentials and the provision of public goods in connection with agriculture, forestry and fisheries.

Question by New Zealand at Monday, 30 August 2021 Category: All emissions and removals related to its quantified economy-wide emission reduction target Type: Before 31 August Title: Waste

- 1. New Zealand would be interested to know about the level of compliance of landfill operators with their obligation to build landfill gas capture facilities by the end of 2005 and how this was verified?
- 2. Noting the capture rate of 21 per cent for landfill gas, are there plans to further address methane emissions from landfill?
- 3. How is the gas recovered from wastewater plants used?
- 4. Are there any measures and policies to further reduce emissions from wastewater?

5. Could Slovenia please provide an update on the progress in, or towards, the pilot projects for processing waste into synthetic fuel?

Answer by Slovenia, Wednesday, 20 October 2021

 The Republic of Slovenia made the first transposition of the requirements of Directive 1999/31/ EC by adopting the Landfill of Waste Regulations (Official Gazette of the Republic of Slovenia, No 5/00; available at: https://www.uradni-list.si/glasilo- official-listrs/content / 2000-01-0259? sop = 2000-01-0259), which entered into force on 5 February 2000 (Slovenia joined the EU on 1 May 2004).

In accordance with Article 14 of Directive 1999/31/ EC, some operators closed the landfill according to an approved closure plan, while others took technical and organisational measures to comply with the requirements of the Directive according to the approved adaptation programme (conditioning plan). The transition periods for bringing existing landfills into compliance varied, namely landfill operators had until 31 December 2005 to implement measures relating to landfill gases (in accordance with Article 40 of these Rules) (Article 66). The implementation of the relevant adjustments was monitored and approved by the Republic of Slovenia's Inspectorate for the Environment and Spatial Planning. Landfill operators found not to have implemented the relevant adjustments were not granted an environmental permit for waste disposal and had to close the landfill.

All landfills (for non-hazardous or hazardous waste) in Slovenia that generate landfill gases have an appropriate environmental permit for operation and must ensure that sufficiently large, durable and explosion-proof devices are installed for the estimated quantities of gases generated. The collection, treatment and use of landfill gases must be carried out in such a way as to minimise the impact on or degradation of the environment and the risk to human health. If the collected landfill gases cannot be used for energy production, they must be combusted on the landfill site or prevented from being emitted into the air by other processes equivalent to gas combustion.

All landfill operators must carry out measurements of landfill gas emissions.

- 2. As of 2016, landfilling of biodegradable waste that contributes to GHG emissions is prohibited in Slovenian landfills, resulting in a decreasing rate of landfill gas formation. Due to the decreasing methane content in the gas, the amount of gas suitable for energy use decreases, which is why the gas at some landfills is directed into biofilters that further reduce the methane content. The use of biofilters will increase in the future. There are no additional plans to further reduce methane emissions from landfills.
- 3. The gas recovered from the wastewater treatment plants is used in cogeneration plants to produce electricity and heat, and is partly burned with a burneron a torch.
- 4. Measures to further reduce emissions from wastewater in Slovenia are:
 - 1. Gradual expansion of the connection of the population to well-functioning public sewage systems.

- 2. Improvements and upgrading of wastewater treatment plants.
- 3. Elimination of septic tanks by replacing them with individual small urban wastewater treatment plants (which comply with the Ordinance and are therefore considered well-managed systems).

The measures are set out in the Operational Programme for Urban Wastewater Discharge and Treatment adopted by the Government in 2020.

5. There are currently no pilot projects underway in Slovenia for the processing of waste into synthetic fuels. There is a measure in the NECP that develops a vision for the development and application of new technologies for the production of synthetic recycled carbon fuels (production of synthetic fuels, hydrogen and synthetic gas from waste, etc.) to be implemented by 2022.

Question by New Zealand at Monday, 30 August 2021 Category: All emissions and removals related to its quantified economy-wide emission reduction target Type: Before 31 August Title: LULUCF

- 1. Could Slovenia elaborate on any specific measures or policies that are in place to sustainably manage forests?
- 2. Does Slovenia have measures or policies to manage other CO2 sinks, besides forests?
- 3. New Zealand would be interested to know about progress with the five-year programme to implement the Resolution on National Forestry Programme?
- 4. What specific measures or policies have been included to meet the National Forestry Programme objective of sustainable development as an eco-system in the sense of its biodiversity and all its ecologic, economic, and social functions?
- 5. Could Slovenia please provide information on which implemented measures for the National Forestry Programme have been most successful?

Answer by Slovenia, Thursday, 21 October 2021

1. There are ten measures included in the Operational Programme for the implementation of the National Forestry Programme (NFP), which covers all aspects

of sustainable forest management (ecological, economic, social) and determines the framework and content of forestry policy in a transparent manner. These are:

a. strengthening the conservation of forest biodiversity,

b. increasing the use of the productive potential of forest sites,

c. promoting the modernisation and professionalization of forestry production and investment in forestry infrastructure,

d. updating the criteria and indicators for assessing the functions of forest ecosystems,

e. adapting forest infrastructure and utilization systems to societal functions,

f. monitoring the success of forest management in the forests owned by the Republic of Slovenia,

g. ensuring an adequate level of budgetary and European funding for forests and forestry,

h. adopting regulatory frameworks, including the adaptation of the tasks and organization of the public forest service to the budgetary capacity

i. the establishment of a permanent formal "forest dialog" between all actors in the field of forests and forest management

j. international cooperation in the field of forests and forestry.

2. These measures are included and implemented through the Rural Development Programme, such as Agri-environment-climate, Organic farming, Maintenance of permanent grassland, Knowledge transfer and information actions etc and are mainly related to managed cropland and grassland. More information can be found in the Progress Report on LULUCF Actions for Slovenia

(https://www.gov.si/assets/ministrstva/MKGP/PODROCJA/GOZDARSTVO/LULUCF_2 020_progress_report_SI.pdf).

3. The results of the analysis of the implementation of the NGP, or the success of forest management in Slovenia in the period 2015-2019, confirm that it continues to be in line with the principles of sustainability, close-to-nature and multifunctional forests and the planned work with them, as envisaged by the vision, basic objectives and guidelines of the NFP. Nevertheless, there are important threats and challenges, particularly to forest health and economic sustainability and long-term viability of forestry. Forest policies based on an ecosystem approach support the sustainable development of forests in terms of their biodiversity and all their ecological, economic and social functions and are relatively successful in achieving their purpose. It should be noted that despite well-organized forest management, risks to forest management are increasing, mainly due to the impacts of climate change. The main problems in forest management are therefore related to ensuring the mechanical and biological stability of forest stands, maintaining forest biodiversity (also related to preventing the invasion of invasive alien species), strengthening the protective effect of forests, and

coordinating the very different (often contradictory) demands on forests (e.g. increasing the social functions of forests). One of the main challenges remains the lack of implementation of maintenance work, which is mainly related to the large number of forest owners and a small, fragmented ownership.

Measures included in the forest management plans contribute in particular to 4. forest regeneration, tending and protection. In order to ensure an adequate state of health of forests and the mechanical stability of stands, and to promote the mixing of tree species, the budget of the Republic of Slovenia shall finance and co-finance measures for the regeneration, maintenance and protection of forests, the restoration of forests affected by natural disasters and measures to preserve the environment for wildlife. The owners receive forest tree seedlings and materials to protect the seedlings from wildlife, and the implementation of the works is co-financed in a proportion that depends on the emphasis placed on the ecological and social functions of the forest in question. The level of funding increased in 2016-2019 at the expense of earmarked Forest Fund funds for the implementation of actions in the Natura 2000 area, while the level of budget for the implementation of actions outside the Natura 2000 area remained almost unchanged. Despite the additional resources of the Forest Fund, the funds are not sufficient for the implementation of all planned measures, so measures with a higher priority of urgency for the permanent implementation of all forest functions will be implemented.

5. One of the most successful measures is the implementation of forest regeneration, based on the natural regeneration of more than 90% of the forest area. This type of regeneration is about maintaining a tree composition that is close to potential natural vegetation. Last but not least, conservation guidelines, which are integrated into the planning system and form an integral part of forest management plans, are also important for the conservation of forest habitat types.

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

1. Does Slovenia have any sector specific emission reduction targets or ambition relating to agricultural emissions, in addition to or under the EU-wide reduction target?

Answer by Slovenia, Wednesday, 20 October 2021

Slovenia has set sectoral targets for emissions not covered by the ETS (so-called ESR emissions) in its National Energy and Climate Plan (NECP). Targets have been set for transport (1.A.3), Other sectors (1.A.4), Agriculture (3.), Waste (5.), Industry (1.A.2 and 2.

without ETS) and Energy supply (1.A1. and 1.B without ETS). The target for agriculture is a 1 % reduction in emissions by 2030 compared to 2005 levels.

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