

Common - Environmental issues/Road - Environmental friendly vehicles:

The SOER report: European Environment - state and outlook 2020 and the increasing GHG emissions in the transport sector

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【概要 : Summary】

In order to meet the targets in the Paris Agreement and the EU' s mid- and long-term CO2 emission reduction targets, significant reductions in CO2 emissions will still be necessary. Europe' s state of the environment as described in the European Environment Agency (EEA) ' s latest report "European Environment - state and outlook 2020" (SOER 2020) provides an overview of the state of Europe' s environment and highlights the urgency to overcome the environmental challenges in Europe. The SOER 2020 report shows that Europe has made significant progress over the past two decades in terms of climate change mitigation and reducing GHG emissions. However, while European environment and climate policies have helped improving some of the environmental conditions, Europe is not making enough progress to achieve the 2030 and 2050 targets. The report underlines that a change of direction is urgently needed to face climate change challenges, as some sectors including transport, buildings, agriculture and energy production are responsible for a further increase of GHG emissions. The transport sector' s GHG emissions have increased by a quarter since 1990 and are continuing to rise, with oil consumption in 2017 increasing at its fastest pace since 2001. Currently, the transport sector is responsible for more than 25% of all GHG emitted in the EU. The

transport sector' s GHG emissions need to be brought under control, or the EU Member States' national 2030 climate goals will be missed. Furthermore, in order to meet the 2050 Paris climate commitments, cars and vans would have to be entirely decarbonised. This requires the abolishment of vehicles with an internal combustion engine by 2035. It would mean not only to transform the entire production of vehicles but it also requires wholesale changes and the way how vehicles are used and taxed. The report sends an urgent call to European countries, leaders and policymakers to scale up and speed up measures to meet the medium and long-term environmental policy targets.

【記事 : Article】

1. The GHG emissions in the EU

The EU has made a commitment to reduce GHG emissions by at least 20% below 1990 levels by 2020, while improving energy efficiency by 20% and increasing the share of renewable energy sources to 20%. Furthermore, the 2014 EU framework for energy and climate aims at reducing GHG emissions by at least 40% below 1990 levels by 2030 and at the same time it sets new targets for both renewable energy sources and energy efficiency. The target of 40% by 2030 was the basis for the EU' s position before the Paris Agreement in December 2015. In order to achieve the targets for 2020 and 2030, a large

number of legislative actions were approved at EU level. However, although EU environment and climate policies have delivered substantial benefits, Europe faces persistent problems to further reduce its GHG emissions which also jeopardises the EU's objective to achieve the Paris Agreement target of keeping the increase in global temperature well below 2° C and to pursue efforts to achieve 1.5° C. The EU's long-term CO2 emission reduction target aims at reducing CO2 emissions by 80%–95% by 2050 compared to 1990 figures.

In 2017, GHG emissions in the EU had decreased by 22% according to preliminary data, which also covered emissions from international air transport. According to EU Member States' forecasts, emissions will decrease further and the EU expects to overachieve its target by 2020. Under the policies that have been implemented to date and without any further measures, emissions in 2030 are forecast to be 30% lower than 1990 levels. According to the Directorate-General for Internal Policies' Georgios Amanatidis, the EU is on the right path to achieve the GHG emissions and quantitative targets set for 2020 for renewable energy and energy efficiency. However, more recent trends are less positive. The final energy demand has actually increased since 2014 and if that continues, the EU's 2020 target for energy efficiency may not be met. Furthermore, the outlook to 2030 suggests that the current rate of progress will not be sufficient to meet 2030 and 2050 climate and energy targets.

2. The transport sector's increasing GHG emissions

The transport sector remains the only main European economic sector in which GHG emissions are continuously increasing, when compared with 1990 levels.

The EU's transport sector consumes one third of all final energy in the EU, while road transport accounts for 82% of the transport sector's GHG emissions and one fifth of the EU's total GHG emissions. According to the EEA report

“Publications – Transport and Environment Reporting Mechanism (TERM)”, the EU GHG emissions in the transport sector are increasing continuously.

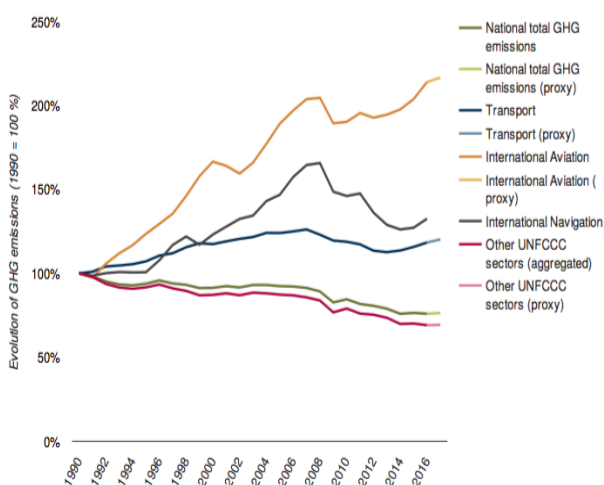
The GHG emissions from transport have been increasing since 2014, whilst average CO2 emissions of new passenger cars increased for the first time in 2017. By 2016, transport emissions were 26.1% higher relative to 1990. Preliminary estimates from EU Member States show that GHG emissions from transport were 28% above 1990 levels in 2017. The latest data show that the EU transport sector is currently not on track to reach the policy targets and average CO2 emissions from new cars increased again for the first time in 2017. The sector also remains a significant source of air pollution, especially of particulate matter (PM) and nitrogen dioxide, although these emissions have been reduced in the last decade. The remainder of GHG emissions in the transport sector comes mainly from shipping and aviation. Since this trend for GHG emissions from transport is continuing, it means that the transport sector is a major obstacle for the EU to realising its climate protection goals. Meanwhile, average CO2 emissions of new vans continue to fall, with the largest annual reduction occurring in 2017. However, considerable reductions still need to take place in the coming years to meet the EU's 2020/2021 targets. The use of diesel remains dominant in Europe, representing 67% of total fuel sold for road transport use in 2016.

The EU's share of renewable energy in transport rose slightly from 7.1% in 2016 to 7.2% in 2017. However, it remains well below the 10% target set for 2020 under the EU's Renewable Energy Directive. Just two Member States (Austria and Sweden) have already reached the 10% target. Although electric cars are slowly penetrating the EU market and have shown significant increases in sales in 2017, battery electric vehicles (BEV) and plug-in hybrid electric vehicles (PHEV) represent only 0.6% and 0.8%, respectively of new passenger car registrations in the EU.

GHG emissions from international aviation have more

than doubled since 1990 and were almost 30% higher in 2017 than in 2000. Emissions from the sector have increased over each of the last 5 years (2013–2017), at an average rate of over 2% each year. In October 2016, the International Civil Aviation Organization (ICAO) agreed on a basket of measures to address emissions from international aviation, including the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA). However, the CORSIA’s environmental effectiveness of offsets depends on robust implementation of CORSIA in avoidance of double counting of GHG emission reductions.

Regarding maritime transport, after the GHG emissions from maritime bunker fuels (or fuel use in ships in relation to international transport) sold in the EU peaked in 2008. Then they decreased by almost one quarter during the period 2009–2014, largely as a result of the economic recession. However, since then, these GHG emissions have followed an upward trend, amounting to 147 Mt CO₂ in 2016. GHG emissions from shipping are 10% below 2005 levels but need a further decrease of 34% from current levels by 2050, or a 40% reduction of GHG emissions from shipping to reach the 2050 target, compared with 2005 levels.



Data sources: a. EEA, National emissions reported to the UNFCCC and to the EU Greenhouse Gas Monitoring Mechanism
 b. EEA, Approximated greenhouse gas emissions in 2017

Graph 1: The Evolution of GHG emissions in the EU’s transport sector compared to other sectors (1990 = 100 %)

Source: EEA: Transport Publications – Transport and Environment Reporting Mechanism (TERM). In: <https://www.eea.europa.eu/downloads/f432684a19e945279dcf4186f273028e/1512466144/publications-transport-and-environment-reporting-1.pdf> 2017, p.10

The system for monitoring, reporting and verification of CO₂ emissions from maritime transport, which was introduced by Regulation (EU) 2015/757) as of 2018, will deliver an annual update of maritime GHG emissions data reported by ships. Furthermore, the International Maritime Organization (IMO) adopted in April 2018 its Initial Strategy to reduce GHG emissions from ships of at least 50% by 2050 compared to GHG emissions in 2008.

Considering these results, the EEA’s TERM report concludes that the EU’s transport sector is not on track towards its climate goals and that transport is a key economic sector in Europe, which could decide on the success of meeting the 2030 and 2050 climate targets.

3. Environmental state and outlook in Europe: The SOER 2020 report

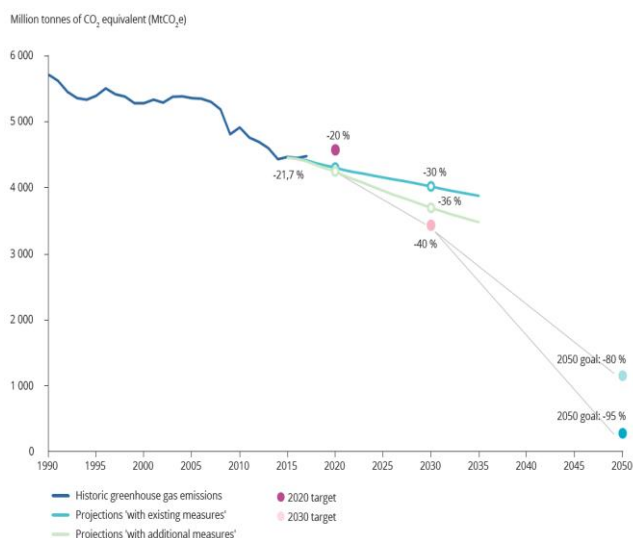
The EEA together with the European Environment Information and Observation Network (Eionet), a partnership network of 33 member countries, provide knowledge in order to enable the relevant stakeholders and EU institutions to make informed decisions about improving Europe’s environment and sustainability. As part of this mandate, the EEA reports every 5 years on the state of and outlook for the European environment. According to the EEA’s latest report “European Environment - state and outlook 2020” (SOER 2020), published on 4 December 2019, Europe has made significant progress over the past two decades regarding climate change mitigation and reducing GHG emissions. The SOER Report 2020 evaluates data from 39 countries in relation to important environmental issues such as climate, biodiversity, air, water and soil. Pollution due to human activity is also recorded, by sectors such as energy use, mobility, housing,

production, agriculture and consumption.

SOER 2020 also provides information on where Europe stands in meeting 2020 and 2030 policy targets as well as longer-term 2050 goals, towards a sustainable, low carbon future. According to SOER 2020, overall environmental trends in Europe have not improved since the last EEA state of the environment report in 2015. Since the outlook for the environment is not positive in the next decade, Europe might not be able to achieve its 2030 goals without urgent action during the next 10 years.

However, the need for fundamental sustainability transitions is not entirely new, especially the sectors energy and mobility. Also the SOER 2010 and 2015 editions pointed out the important policy initiatives such as the circular and bio-economy packages, the climate and energy policies for 2030 and 2050, and its future research and innovation programme.

The SOER 2020 report provides information on the state of the European environment and where Europe stands in meeting the 2020 and 2030 policy targets as well as longer-term 2050 goals and ambitions to shift to a sustainable, low carbon future. Although the EU environment and climate policies have made some progress in the last years, Europe is still facing problems regarding climate change impacts and environmental risks.



Graph 2: Projections of the development of GHG emissions depending on measures

Source: EEA: Europe's state of the environment 2020: change of direction urgently needed to face climate change challenges, reverse degradation and ensure future prosperity. In:

<https://www.eea.europa.eu/highlights/soer2020-europes-environment-state-and-outlook-report>

According to the SOER 2020 report, the European overall environmental trends have not improved since the last EEA state of the environment report in 2015. The state of the environment has worsened and the outlook is mixed. The recent trends highlight a slowing down of progress in areas such as reducing GHG emissions, industrial emissions, waste generation, improving energy efficiency and the share of renewable energy. A change of direction in measures is urgently needed to face climate change challenges.

4. The SOER 2020 report's recommendations to overcome environmental challenges

The SOER 2020 report outlines key areas where bold action is needed to get Europe back on track to achieve its 2030 and 2050 goals, including the reduction of GHG emissions. According to the SOER 2020 report, the current range of European policy actions provide an essential foundation for progress in CO2 emission reduction, but they are not enough. Europe faces systemic challenges as the major environmental challenges persist. Recent trends highlight a slowing down of progress in areas such as reducing GHG emissions and Europe will not achieve its sustainability vision of "living well within the limits of the planet" as in particular harmful emissions from transport and agriculture have further risen. In addition, addressing environmental pressures from economic sectors through environmental integration has not been successful.

The EU needs to deliver more ambitious and quick responses to such challenges to be able to achieve the long-term sustainability goals. The SOER 2020 report points out that since Europe is not making

enough progress and the outlook for the environment in the coming decade is not positive. However, the outlook to 2030 suggests that achieving Europe's low carbon and sustainability vision is still possible, if the focus will be on scaling up, speeding up, streamlining and implementing the many solutions and innovations of environmental policies in order to achieve their full benefits regarding GHG emission reduction.

Furthermore, it will need additional policy actions to achieve fundamental changes in the key systems of production and consumption, such as in transport and mobility. Achieving changes will require not only investing in a sustainable future but also stopping using public funds to subsidise environmentally damaging activities. This change in investment priorities will be essential because of the economic and social opportunities that it can create. At the same time, it will be crucial to listen to public concerns and ensure widespread support for such a shift – a socially fair transition.

5. The SOER 2020 report's outlook

The SOER report sends an urgent call to European countries, leaders and policymakers to introduce measures that will allow to meeting the medium and longer-term environmental policy goals and GHG emission reduction targets. Most solutions are already identified but they risk to failing, if they are not implemented with the required urgency.

The EEA's Director Hans Bruyninckx emphasised the urgency to take action as the challenges in relation to sustainability demand decisive measures and systemic solutions. A business as usual approach will not be enough since there exists only a narrow window of opportunity in the next decade to scale up measures to lessen the impacts of climate change and radically reduce consumption of natural resources. However, the knowledge, technologies and tools are already available that are needed to make key production and consumption systems such as mobility and transport as well as other sectors sustainable. The measures should include the realisation of the

unfulfilled potential of existing environmental policies and their full implementation. Sustainability would need to become the framework for policy making and the development of long-term policy with binding targets could guide actions across policy areas and society. Another important aspect would be to scale up investments and reorient the finance sector to support sustainable projects and businesses. This requires to making full use of public funds to support innovation and nature-based solutions, procuring sustainable sectors. The SOER 2020 report came at the perfect time, shortly before the presentation of the new European Commission's so-called "European Green Deal" (COM (2019) 640 final), which was presented on 11 December 2019 and aims at achieving net-zero GHG emissions by 2050, by making the EU a front-runner in climate friendly industries and clean technology.

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