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REPORT FROM THE COMMISSION

**Fourth Biennial Report from the European Union
Required under the United Nations Framework Convention on Climate Change
(Decision 2 CP.17)**

{SWD(2019) 432 final}

INTRODUCTION

This report and its accompanying Staff Working Document constitute the Fourth Biennial Report of the European Union (EU), as required under Article 18(1) of Regulation (EU) No 525/2013 and Decision 2/CP.17 of the Conference of the Parties under the United Nations Framework Convention on Climate Change (UNFCCC). Both documents will be transmitted to the UNFCCC Secretariat as the EU's Fourth Biennial Report submission, responding to the EU's reporting obligation under the UNFCCC. The EU's Fourth Biennial Report includes information on greenhouse gas emissions and trends, on the progress made by the EU in achieving its quantified economy wide emission reduction target under the UNFCCC, and on policies and measures in place to meet mitigation targets and promote climate change adaptation.

INFORMATION ON GREENHOUSE GAS EMISSIONS AND TRENDS

The emissions included in this Biennial Report are those relevant to the EU 20% emissions reduction target under the UNFCCC, and the data is taken from the latest submission of the EU inventory to the UNFCCC Secretariat, reported in 2019.

Total greenhouse gas (GHG) emissions in the EU-28 decreased by 23.5 % between 1990 and 2017.

These emissions exclude Land Use, Land- Use Change and Forestry (LULUCF) as well as, international aviation and maritime transport, but include indirect CO₂ emissions.

The most important GHG by far is carbon dioxide (CO₂), which accounted for 81.3% of total EU emissions in 2017, excluding LULUCF.

The energy sector accounted for most of the EU's GHG emissions in 2017 (77.9%). In the energy sector, 28.1% of GHG emissions come from transport. The next largest contributors were agriculture (10.2%) and industrial processes and product use (8.7%).

Per capita emissions dropped by from around 12 tonnes in 1990 to 8.8 tonnes in 2017. The ratio of GHG emissions to GDP also fell considerably, thanks to a steady progress on decoupling economic activity from GHG emissions since 1990.

QUANTIFIED ECONOMY WIDE EMISSIONS REDUCTION TARGET

Under the UNFCCC, the EU and its Member States have taken a joint emission reduction target to reduce the EU's GHG emissions by 20% compared to 1990 by 2020. This target excludes the LULUCF sector but includes international aviation (outgoing flights).

The 2020 Climate and Energy Package underpins the EU's implementation of the target. Indeed, the package has introduced a clear approach to achieving the 20% reduction of total GHG emissions from 1990 levels, representing a 14% reduction compared to 2005 levels. This effort was divided between the sectors covered by the EU Emissions Trading System (EU ETS) and non-ETS sectors under the Effort Sharing Decision (ESD). Consequently, the EU 2020 Climate and Energy Package aims at a 21% reduction target compared to 2005 for emissions covered by the EU ETS, and a 10% reduction target compared to 2005 for non-ETS sectors. Whilst LULUCF is not counted towards the EU commitment or Member States targets, it does count towards the achievement of the Kyoto

Protocol target (the LULUCF Decision, NO 529/2013, translates the Kyoto Protocol accounting rules for this sector into EU law). Additionally, the package sets targets to increase the share of renewable energy in gross final energy consumption at EU level by 20%, to increase the share of renewable energy in transport at EU level by 10%, and to improve energy efficiency at EU level by 20%. Greenhouse gas emissions reduction as well as renewables targets are shared among Member States through individual national GHG targets for the period of 2013-2020.

To pursue its decarbonisation objective, the EU has established the 2030 EU Climate and Energy Framework, for the period 2021-2030. The Framework sets a target for the EU to reduce GHG emissions by at least 40% (compared to 1990 levels) by 2030. This target includes several components, all to be achieved by 2030. Firstly, emissions under the EU ETS have to be reduced by 43% (compared to 2005). Secondly, emissions under the Effort Sharing Regulation (ESR, Regulation (EU) 2018/842) have to be cut by 30% (compared to 2005). Thirdly, emissions and removals from the LULUCF sector are for the first time included in the EU climate target, through the ESR. The LULUCF Regulation (2018/841) provides specific accounting rules. Member States must maintain or enhance the carbon sinks in the LULUCF sector. Fourthly, the 2030 Climate and Energy Framework, through the revised Renewable Energy Directive (2018/2001) and the amended Energy Efficiency Directive (2018/2002) set a binding renewable energy target (at least 32% of final energy consumption) and a headline target for energy efficiency (at least 32.5% of final energy consumption) to be achieved by 2030. Additionally, it sets a binding target of renewable energy in the transport sector (at least 14% of final energy consumption in transport) by 2030. As a way to monitor the progress made by Member States, the Regulation on the Governance of the Energy Union and Climate Action (2018/1999) establishes planning, monitoring and reporting processes and rules. Accordingly, Member States are required to adopt integrated National Climate and Energy Plans (NECPs) for the period of 2021-2030, and every subsequent ten-year period thereafter. In June 2019, the Commission assessed drafts of these plans, and Member States are required to submit the final versions by the end of 2019.

The European Commission's Long Term Strategic Vision on GHG Emissions Reduction, Communication "A Clean Planet for All", published in late 2018, shows pathways and calls for a climate-neutral European Union by 2050.

PROGRESS IN ACHIEVING THE ECONOMY WIDE EMISSIONS REDUCTION TARGETS – EU POLICIES AND MEASURES AND THEIR EFFECTS

Policies and measures are developed at both the Union and national levels. At the EU level, they stem from legislative proposals from the Commission, which are subsequently approved or amended by the European Parliament and the Council of the EU. These Union laws are applicable to all Member States, but some of them, referred to as Directives, only set objectives and minimum standards that may then be implemented in different ways by Member States. National policies translate the relevant pieces of legislation into practice. Additionally, EU Member States can adopt national climate policies and measures on top of those required under EU legislation.

The reporting in this Biennial Report focuses on EU policies. The national policies are outside its scope. Information on national policies and measures is found in the individual Biennial Reports of EU Member States.

This report focuses in particular on updates or changes to the policies and measures at the EU level, and does not attempt to include a comprehensive background to each policy. If more background is required, links are provided, and additionally, the reader can refer to the EU's Third Biennial Report.

This Fourth Biennial Report presents the key cross-cutting policies and measures to achieve the Union level target; namely the EU Emissions Trading System and the Effort Sharing Decision and Regulation. The Biennial Report also explains key cross-cutting initiatives, such as the Covenant of Mayors, and funding mechanisms, such as Horizon 2020 and the European Structural and Investment Funds.

In addition to cross-cutting policies, a wide range of sectoral policies and measures in the energy, transport, industry, agriculture, land use, land-use change and forestry, and waste sectors are summarised.

PROGRESS IN ACHIEVING THE ECONOMY WIDE EMISSIONS REDUCTION TARGETS - PROJECTIONS

Projections

According to the latest projections with existing measures, as aggregates on basis of the data submitted by Member States in 2019 to the EU, total EU-28 GHG emissions are projected to be 25% lower in 2020 than in 1990 (excluding LULUCF). The EU remains therefore well on track to achieve its target under the UNFCCC by 2020.

In so far as 2030 is concerned, Member States are planning how to achieve their 2030 effort sharing targets through the preparation of their NECPs. With implementation of the planned measures or stated ambitions in the draft NECPs, the overall GHG reduction of the EU is estimated to reach the at least 40% reduction target. The effective implementation of all climate, energy and mobility targets laid down in Union law could even lead to EU-28 greenhouse gas reductions up to around 45% in 2030 compared to 1990.

Emissions from the energy sector, excluding transport, represent the largest share of total GHG emissions and of the projected total emission reductions. Emissions from this sector are projected to decrease by 36% in 2020 compared to 1990 and by 42% up to 2030.

The transport sector is the only sector whose emissions are projected to increase, by 19% between 1990 and 2020, and by 14% between 1990 and 2030. After 2007, a slow but steady decline in transport emissions is visible until 2013. This is due to a combination of higher fuel prices and more stringent policies, such as CO₂ standards for cars and vans.

Emissions from international aviation are projected to continue to increase, reaching 125% above 1990 levels by 2020, and 152% above 1990 levels by 2030. Emissions from international shipping are projected to increase as well, however far less steeply than for international aviation. In 2020, emission levels from international shipping are projected to reach 43% above 1990 levels, and 54% above 1990 levels in 2030.

In the industry sector, GHG emissions are projected to decrease by 29% in 2020 compared to 1990, and by 37% up to 2030.

In the agricultural sector, GHG emissions are projected to slowly decrease by 21% in 2020 compared to 1990, and by 22% up to 2030.

In the waste sector, GHG emissions are projected to steadily decrease, by 48% in 2020 compared to 1990, and by 56% in 2030.

The GHG with the highest contribution to current GHG emissions in the EU-28 is CO₂ with around 82% of total emissions in 2020 under the “with existing measures” (WEM) scenario. Compared to 1990 levels, CO₂ emissions are projected to decline by approximately 22% in 2020, and by approximately 27% by 2030.

PROVISION OF FINANCIAL, TECHNOLOGICAL AND CAPACITY BUILDING SUPPORT TO DEVELOPING COUNTRY PARTIES

Climate finance plays a key role as means to promoting reaching the goal of limiting the global average temperature increase to below 2°C above pre-industrial levels, supporting transformational changes towards lower GHG-emissions economies as well as supporting climate resilient sustainable development.

Collectively, the EU, its Member States and the European Investment Bank (EIB) are the largest providers of public climate finance globally to developing countries, accounting for €21.7 billion in 2018, including €2.65 billion from the European Commission and €2.97 billion from the EIB. This collective commitment has kept increasing over the past five years.

The development and deployment of new technologies has an essential role to play in promoting meeting global climate change objectives, as well as contributing to new jobs and sustainable economic growth. The EU is a lead player in the area of low-carbon technologies, yet while emissions are falling in Europe, they are rising in most parts of the rest of the world. Therefore, the EU has mainstreamed technology transfer activities into many development cooperation activities. Yet, the successful transfer of climate technologies to developing countries requires support to increase local climate governance and institutional and administrative capacities. The EU works closely with governments to reinforce administrative capacities.