**Introduction**

This report and its accompanying staff working document constitute the second 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). They will be transmitted to the UNFCCC as the EU's second Biennial Report submission.

**Information on Greenhouse Gas Emissions and Trends**

Total greenhouse gas (GHG) emissions, including international aviation, in the EU-28 decreased by around 20% between 1990 and 2013. Emissions reported are the emissions relevant to the EU target under the Convention and are taken from the latest submission of the EU inventory to the UNFCCC. The most important GHG is CO2, accounting for 82 % of total EU-28 emissions in 2013.

Emissions per capita in the EU decreased by 26% between 1990 and 2013, from 11.8 t/capita, to 8.9 t/capita. Emissions in the EU-28 have been decreasing while the economy has grown.The decoupling of economic growth from GHG emissions has been progressing steadily since 1990. Gross Domestic Product (GDP) growth for the 1990-2013 period was approximatively 45% for the EU-28, while GHG emissions decreased by around 20%. As a result, the greenhouse gas emission intensity of the EU was reduced by almost a half.

The implementation of structural policies in the field of climate and energy has significantly contributed to this successful decoupling. In particular, the implementation of the 2020 Climate and Energy Package has resulted in a significant increase in renewable energy and progress in energy efficiency. Both of these are the key drivers behind the observed reduction in emissions, with the carbon price acting as driving force expected to be progressively stronger in the future.

**EU Quantified Economy-Wide Emissions Reduction Target**

Under the UNFCCC, the EU and its Member States have taken a joint emission reduction target to reduce its GHG emissions by at least 20% compared to 1990 by 2020, with a conditional offer to move to a 30% reduction, provided that other developed countries commit themselves to comparable emission reductions and developing countries contribute adequately according to their responsibilities and respective capabilities.

The EU target is enshrined in legislation, and is being implemented by the EU and its Member States. At the heart of this legislation, the EU Climate and Energy package sets for the Union a 20% GHG emission reduction target by 2020 compared to 1990, which is equivalent to -14% compared to 2005. This effort has been divided between the sectors covered by the EU Emission Trading System (EU ETS) and non-ETS sectors under the Effort Sharing Decision (ESD).

**Progress in Achieving the Economy-Wide Emissions reduction Target -** **EU Policies and Measures and their effects**

The EU and its 28 Member States, both individually and jointly, have been implementing domestic and international actions against climate change now for a considerable number of years, which resulted in significant emission reductions.

To respond to challenges and investment needs related to climate action, the EU has agreed that at least 20% of the EU budget for 2014-2020 – as much as €180 billion − should be spent on climate change-related action. This represents a significant increase compared to climate action related expenditure in the previous budget, which represented 6.8% of the EU budget for 2007-2013. To achieve this, mitigation and adaptation actions are integrated into all major EU spending programmes, in particular cohesion policy, regional development, energy, transport, research and innovation and the Common Agricultural Policy.

The EU and its Member States are continuously strengthening legislation to enable GHG reductions and the transition to a low carbon economy. Key policy developments since the submission of the first biennial report include developments to the EU ETS, new legislative instruments in the transport sector and a strengthened F-gas Regulation.

Since 2013, the EU ETS operates under the improved and harmonised rules of Phase 3 covering the period 2013-2020. A well-functioning, reformed EU ETS is needed as the main instrument to achieve the reduction of EU ETS emissions to 43% in 2030 compared to 2005. Europe's flagship tool is therefore undergoing significant structural reforms to place the EU on track towards a low-carbon economy.

As a first step, in order to address the challenge of a growing surplus of emission allowances that has built up in the EU ETS, the auctioning of 900 million allowances was postponed. As a second step, a market stability reserve was agreed that will both address the surplus of allowances and improve the system's resilience to major shocks by adjusting the supply of allowances to be auctioned. Finally, in July 2015 the Commission proposed a revision of the EU ETS in order to implement a reduction of EU ETS emissions to 43% in 2030 compared to 2005. This is the final step to make the EU ETS fit to play its full strength in the 2030 context.

Key policy developments also occurred in the transport sector, with new EU legislation setting binding emission targets for new car and van fleets to be met by 2021. The Heavy Duty Vehicle Strategy, adopted in May 2014 is the EU’s first initiative to tackle the fuel consumption of, and CO2 emissions from, trucks, buses and coaches. In April 2015, the EU adopted a legislative instrument providing for an EU-wide monitoring, reporting and verification system for shipping as the first step in the EU strategy towards cutting emissions in this sector.

The revised F-gas Regulation applies from 1 January 2015, strengthening previously existing measures (e.g. containment of gases through the detection of leaks, installation of equipment by trained personnel, recovery of used gases) and introducing a phase-down in the use of F-gases that will cut total EU F-gas emissions by two-thirds by 2030 compared to 2014 levels. It also prohibits the placing of F-gases on the market in certain circumstances where alternatives are available, e.g. domestic refrigerators and freezers that contain HFCs with a GWP in excess of 150.

Moreover, building up on the 2020 Climate and Energy Package, and in line with the objective of moving towards a competitive low carbon economy, the European Council reached an agreement in October 2014 on the main building blocks of the EU 2030 Climate and Energy Framework: a binding target of at least 40% domestic reduction in greenhouse gas emissions by 2030 compared to 1990; a target of at least 27 % renewable energy by 2030, binding at the EU level; an indicative energy efficiency target of at least 27% for 2030, to be reviewed in 2020 having in mind a 30% target.

For this purpose, the Commission has already proposed a revised EU ETS Directive in July 2015 which is currently in discussions in the EU institutions and will come forward with legislative proposals covering the non-ETS sectors. The Commission is also rolling out the initiatives foreseen in the Strategic Framework for the Energy Union, including upcoming proposals on renewable energy and energy efficiency.

**Progress in Achieving the Economy-Wide Emissions reduction Target - Projections**

According to the latest projections with existing measures, as aggregates on basis of the data submitted by Member States in 2015 to the EU, emissions are estimated to be 24% lower in 2020 than in 1990. The EU is therefore currently on track towards meeting its target for 2020.

Up to 2030, GHG emissions are projected to decrease further.

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 approximately 33 % in 2020 compared to 1990 and by about 38 % up to 2030. The transport sector is the only sector whose emissions are projected to increase, by 13% between 1990 and 2020 and then stable until 2030. After 2007, a slow but steady decline in transport emissions is visible, due to a combination of higher fuel prices and more stringent policies, such as CO2 standards for cars and vans.

**Provision of Financial, technological and Capacity Building Support to developing Country parties**

Climate finance plays a key role as a means to reaching the agreed goal of limiting the global average temperature increase to below 2°C above pre-industrial levels, achieving transformational change to low GHG emission economies and supporting climate resilient sustainable development. The EU and its Member States are the largest providers of Official Development Assistance (ODA) to developing countries, accounting for €58.2 billion in 2014 and allocated €7.34 billion to fast start finance over 2010-2012. Furthermore, in 2014, the EU and its Member States collectively committed €14,5 billion to help developing countries tackling climate change.

The EU promotes a common and comprehensive approach to financing for development, including climate change actions as part of the “Agenda for Change,” emphasising mutually reinforcing climate and development co-benefits.

The total support provided by the EU to developing country Parties to the UNFCCC in 2013 and 2014 amounted to USD 2 178 million (€ 1 641 million).

Capacity development is at the heart of the EU development assistance and all development aid cooperation projects in the field of climate change, involve technology transfer activities. Europe is a leading player in the area of low carbon technologies and is maintaining its position with a range of policy initiatives. The EU supports the development and deployment of technologies in developing countries through substantial investments in innovation.