Global

2017: A critical year for the climate negotiations

- **CO_2 emission stagnated in 2015. However, more effort needs to get the world economy on a low carbon pace.**
- **The Paris agreement concluded at the COP21 in December 2015 came officially into force on 4 November**
- **The major advance at the COP22 in Marrakech was the acceleration of the agenda concerning the implementation of the Paris agreement.**
- **The Trump presidency might slow the transition towards a low-carbon economy, without derailing the process.**

In the past decade, substantial progress has been made in reducing carbon emissions. In 2015, energy-related CO_2 emissions stalled at 32.1 billion tonnes for the second successive year, even though the world GDP grew by around 3% (chart 1). It provides further evidence of the weakening of the link between emissions and economic growth.

This development is due to three important trends. First, energy efficiency has increased as households and businesses have become more aware about the savings that can be made by isolation and other energy-saving innovations.

Second, the energy mix has become less carbon intensive, in particular in electricity production. Behind this development is the growing role of renewable energies. In 2015, investment in renewables excluding large hydro-electric projects increased by 5% to USD 285.9 billion exceeding the previous record of USD 278.5 billion achieved in 2011. Even more remarkable was the amount of generating capacity added, 134 GW, mainly in wind and solar PV. This amounted to 53.6% of the gigawatt capacity installed in 2015. For the first time, investment in renewables made up the majority of all newly installed electricity capacity. Nevertheless, the share of renewable capacity remains modest at only 16.2% of all installed capacity. Moreover, it only accounted for 10.3% of global electricity generation, preventing the emission of 1.5 Gt of CO_2 equivalent. In addition, specifically in the United States, the combination of hydraulic fracturing and horizontal drilling, is responsible for surging U.S. oil and natural gas production. The shale gas revolution is largely responsible for the decline in coal in the US power generation.

Third, the industrial structure has been changing, in particular in the advanced economies. Services have become more important to the detriment of the more energy-intensive manufacturing sector. Worldwide, total primary energy supply (TPES) per unit of GDP was 15% lower in 2014 than a decade earlier. In Europe, the decline was even 20%.

Despite the progress in recent years, there is still a long way to go. The International Energy Agency estimates that global energy demand will be 30% higher in 2040, as the declines in energy consumption in the advanced economies will be more than offset by consumption increases in the developing world. Even in this scenario,

CO_2 emissions from fossil fuel use and cement production (Gt CO_2)

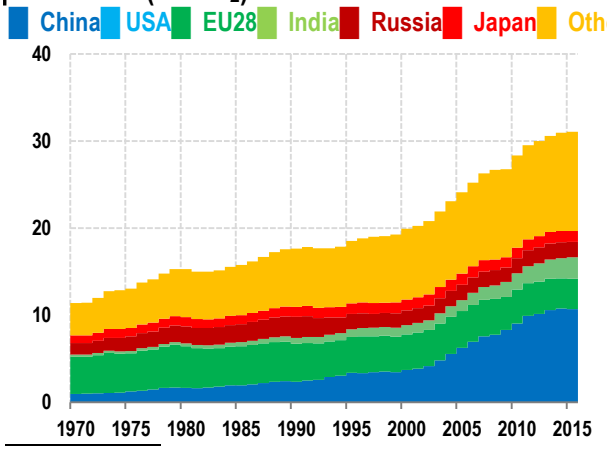

Chart 1 Source: PBL

hundreds of millions of people are still left without basic energy services. As carbon emissions are still closely linked to energy usage, global warming risks to exceed the 2°C from pre-industrial times, the ceiling target adopted at the 2015 Paris Agreement.

In the run-up to the Paris Climate Conference COP21, all participating countries filed their carbon reduction plans, the so-called Nationally Determined Contributions (NDCs). The sum of these pledges will not be sufficient to slow carbon emissions sufficiently in order to limit global warming to less than 2°C (Chart 2). A scenario consistent with a 50% chance of achieving this objective requires to limit the concentration of greenhouse gases in the atmosphere to 450 parts per million (ppm). It will require greenhouse gas emissions to be 40-70% below 2010 levels by 2050 and near or below zero by the end of the century. To achieve it, the NDCs will have to be tightened.

Limited progress at COP22

The Paris agreement concluded at the COP21 in December 2015 came officially into force on 4 November 2016, as more than 55 countries representing more than 55% of total global greenhouse gas emissions, had ratified it. It was a promising start for the climate conference COP22 held from 7 to 17 November in Marrakech. The agreement is now ratified by 120 countries.

The main objective of the COP22 was to put some force behind the pledges made in Paris. The Paris agreement only provided a framework for what has to be done to limit global warming to 1.5-2°C. The next step is to establish new procedures and mechanisms to achieve the objective, which is loosely called the Paris rulebook. These include rules on how countries will communicate their efforts with regards to adaptation, climate finance, transfer of technology, and human and institutional capacity building. For the moment, the

varying quality of information included in NDCs prevents a full assessment of the individual and collective efforts. In addition, as the NDC are not ambitious enough a mechanism is needed to upscale the national efforts. At the Marrakech summit, the agenda for getting this toolbox in place was advanced to 2018 instead of 2020 as was decided in Paris.

As the conference took place in Africa, the COP22 was expected to clarify the mechanisms to mobilise climate finance to help the developing countries in taking adaptation measures. The developed countries are confident to reach the USD 100 billion. According to an OECD analysis, pledges made in 2015 will boost public finance from an average USD 41 billion over 2013-14 to USD 67 billion by 2020. The Organisation estimates that the rest of the money can be found by mobilising private finance in an efficient way. These calculations are contested by the developing countries, which argue that only financial transfers for climate specific actions should be counted. On this basis, Oxfam estimates that net-climate specific assistance only amounted in 2013-14 on average to between USD 11 billion and USD 21 billion. Moreover, only 18% of these transfers go to the least developed countries. In the end, the developed countries only reaffirmed the USD 100 billion mobilisation goal without any further precision.

2017: A crucial year

The election of Donald Trump as the 45th US President cast a shadow over the deliberations at the COP22. During his election campaign, Mr. Trump had portrayed himself as a climate sceptic, promised to boost the fossil fuel industry and to roll back regulations. He even threatened to leave the Paris Agreement.

An immediate withdrawal of the Paris agreement is unlikely. The Treaty prescribes that a Party can leave only after four years. The only way to quite the Agreement immediately is to leave the UN Framework Convention on Climate Change (UNFCCC), which is a rather drastic step. The biggest threat for the Agreement is that the Trump administration will simply ignore the US pledges. The Paris deal might unravel if other major countries follow the US example.

Nevertheless, there is reason for optimism as the momentum for taking climate action remains strong at a global level. Even in the absence of regulations, companies have already been anticipating future legislations, for example by including carbon prices in their investment decisions.

This is partly due to the growing pressure from the financial sector on industries to reduce greenhouse gas emission. Investors are increasingly demanding climate related information to better assess their exposure to climate-related risks. To reduce the risk of stranded assets, they might engage with fossil fuel companies or even divest altogether from fossil fuels. Institutional investors are also under growing pressure from a wide range of stakeholders to pay attention to environmental issues. In addition to a good retirement income, pension fund members want their fund to pay attention to environmental, social and corporate governance issues. Moreover, media and campaign groups are trying to influence institutional investors. This also increases the reputational risks associated with the handling of climate issues.

Global greenhouse gas emissions

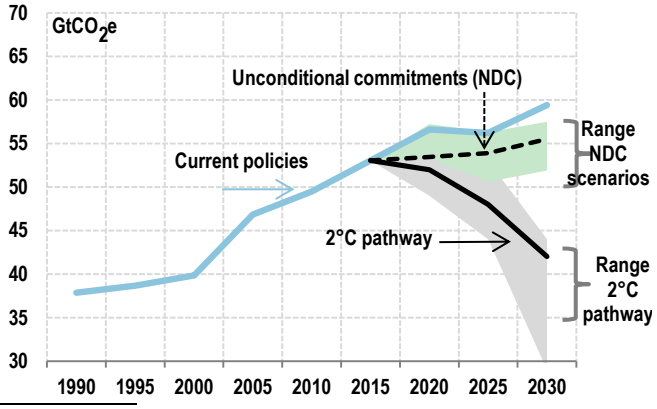

Chart 2 Sources: UNEP,PBL, BNP Paribas

Moreover renewables are becoming more competitive with regard to coal-and natural gas fired power generation, as installation prices are declining, in particular for solar PV. Renewables in the US continue to receive support at the state and federal level. Key federal tax credits for wind and solar were extended just 12 months ago, with substantial Republican support. These tax credits will remain in place until their phase out periods start in 2020. It is likely that investment projects might by brought forward ahead of the expiration of the tax credits. Finally, Mr Trump's promises to support the coal industry are likely to remain empty, as coal mining will continue to shrink for the simple reason that gas has become less expensive.

This year will be crucial for the international efforts to reduce carbon emissions. During this year, the countries that signed up to the Paris Agreement should start implementing their pledges. The COP23 organised by the Fiji Islands in Bonn in early November will be the last one before the crucial COP24 meeting. A lukewarm approach of the Trump administration on environmental issues might make it more difficult to agree internationally on further reductions in greenhouse gas emissions.