

The EU, Governance of climate change and development

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1. Houston, we've got a problem!





The costs of extreme weather events have quadrupled since 1980 to about 120 billion \$ per year





2. The International perspective & The Paris Agreement



GHG Emissions of major economies, 1990-2012



(Source: historical emissions data: inventories data to the UNFCCC (http://unfccc.int/national_reports/)





CO2 emissions per capita (ton CO2eq/capita)







Fossil fuel resources: the haves and have-nots







The Paris Agreement

- > A historic multilateral agreement
 - Adopted by 195 countries on 12 December 2015
 - First ever **universal** agreement on climate change
- EU speaking with one voice, building Alliances with LDC's, OASIS
- > **Ambition :** Well below 2° C + Efforts to limit increase to 1.5° C
- Binding commitment to make "nationally determined contributions" & pursue domestic measures aimed at achieving them (differentiation/bottom-up)
- Solidarity : \$100bn/year goal for developed Parties extended to 2025
- Governments agreed to come together every 5 years to set more ambitious targets as required by science
- Track progress towards the long-term goal through a robust transparency and accountability system

Source: UNFCCC

A strong signal to policy makers, investors & businesses



World emissions

(GtC02e, total excluding sinks) and percent change in emission intensity per unit of GDP





Transition to a low-carbon EU economy in 2050

(greenhouse gas emissions by sector over time as % of 1990 levels)





3. The EU 2030 climate and energy policy framework



EU leading by example : Decoupling emissions from growth (EU, 1990-2016)





The challenge : Decoupling emissions from growth globally, requiring strong deployment of low carbon technologies!





2030 Climate and energy package : adopted targets





Legislative elements of the 2030 package

- revision of the Emissions trading system
- Effort sharing regulation
- Land use regulation
- Revision Renewables Directive
- Revision Energy Efficiency Directive / Energy
 Performance of buildings Directive
- Electricity Market design (still in co-decision)
- Revision CO2&cars Directive (still in co-decision)
- Proposal CO2 emissions from heavy duty vehicles (still in co-decision)



The three legislative pillars of the EU's 2030 climate policy framework





Equity and solidarity in efforts is key





Renewable energy & new emerging power system

• Renewable energy (solar, wind) becoming fully competitive with coal/gas, strong growth in many developing countries



- "Decarbonised, decentralised and digitised"
 - Less baseload provided by large-scale installations
 - New electricity producers : Large number, small-scale, decentralised and intermittent ! Periods of overproduction of electricity
 - Smart grids /smart meters



New EU fleet-wide 2025 and 2030 targets - cars



- 2025: electric vehicles, 10-20% of the automotive market
- 2030: electric vehicles, 20-40% of the automotive market



Demand for raw materials for batteries





Putting a price on CO2 : the EU Emissions trading system

- For environmental reasons
- For economic reasons
- For political reasons: experience in the EU ETS informs and influences new or emerging systems (China, South Korea etc.)





Summing up...

- A policy informed by science
- Fast, global action required
- Strong governance is needed, from local to global
- Putting a price on CO2 is essential to mobilise economic operators, and shift investments towards low carbon
- Technological development enables an affordable energy transition
- Equity, solidarity and development considerations must be integrated in the policy/ governance





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Climate Action





climate science The Intergovernmental Panel on climate change



A REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE



IPCC 5th Assessment Report – Key findings:

- Warming of the climate system is unequivocal and observed changes are <u>unprecedented</u> on scales of decades to millennia
- Human influence on the climate system is clear
- Each of the last three decades has been successively warmer at the Earth's surface than any preceding decade since 1850
- Continued emissions of greenhouse gases will cause further warming and changes in all components of the climate system
- Limiting climate change would require **substantial and sustained reductions in greenhouse gas emissions** which, together with **adaptation**, can limit climate change risks