Where do key countries stand on their climate and energy commitments for the Paris Protocol?

To avert the worst impacts of climate change and reap the benefits of climate action – improved public health, more jobs and stronger economies – all countries need to take bold action now.

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It is time to end the blame game and instead embrace an approach based on responsibility and opportunity. Every country must commit to binding actions. Keeping national historic responsibilities, trajectories and social and economic realities in mind, the efforts must reflect each country's *fair share*. Richer countries need to stand with the poorest, provide them with technology, adequate funding, and capacity building, as well as compensation for loss and damage that result from the climate already changing.

The three biggest polluters, China, the United States, and Europe tabled the first emission reduction offers. It was an important step in terms of kicking off the process but insufficient good in terms of ambition: All three can and must do a lot more if we want to keep global warming below two degrees Celsius – not to mention below 1.5 degrees Celsius.

United States

Both the United States and China have come to the realization that they have to cooperate. Over the past couple of months, Beijing and Washington worked together and eventually surprised us with the joint announcement of their Climate Change and Clean Energy Cooperation ⁽¹⁾ on November 12, 2014, in Beijing.

Their engagement shows a clear sense of collective responsibility. We could see a game-changing climate relationship of two countries pushing each other to perform better. The US will submit its 2025 targets (26-28% from 2005 levels and about 19% from current levels) to the negotiations as an "Intended Nationally Determined Contribution" (INDC) no later than the first quarter of 2015. This is good in terms of process, but not enough content wise. The target, lower than the one indicated for 2025 emission cuts in their Copenhagen Accord pledge in 2009 (-30% by 2025), is not the best US can do, and even less a reflection of their *fair share*.

According to the Greenpeace Energy Revolution $^{(2)}$ scenario for the US, the country could do about -39% cuts from 2005 levels in the energy sector by 2025.

The commitment was made regardless of approval by the Republican Congress. The Congress is known for blocking mitigation action.

President Obama should lead the international community to a strong, legally binding climate agreement rooted in law and science.

In any case, the US must submit a strong post-2020 mitigation target. The proposed EPA carbon rules for power plants must be significantly improved before they are finalized in the months ahead. Improved rules will enable the United States to achieve a target of 40% by 2025 from

2005 levels (27% under 1990 values). This should be their commitment for the Paris Protocol. In addition, the US must implement domestic and international policies that will reduce emissions in the short-term.

President Obama should help end public financing of coal plants overseas and all fossil fuel projects domestically. Assuming that the US Congress agenda continues to focus on the interests of the fossil fuel industry, the Obama administration must proceed to reduce global climate pollution without legislation and put in place strong EPA regulations before he leaves office.

China

Together, the US and China account for over one-third of global greenhouse gas emissions – which is why its recent announcement of a climate and energy cooperation is an important political step forward. It should however only be the floor of joint actions, not their ceiling.

Based on the urgent need to improve air quality and curb coal as the main reason for air pollution, the ongoing effort to restructure the economy and improve energy efficiency, and the action to upgrade to renewables, Greenpeace analysis indicates that CO2 peaking much earlier than 2025 is, in fact, achievable by China. Climate analytics also recently assessed that, applying best practice, China's emissions could peak below 12 GtCO2e/a in the early 2020s. China should introduce an ambitious CO2 target by March 2015 as part of its INDC.

For the near term, China should move its current CO2 intensity reduction to the upper range of the 40-45 % target by 2020. Coal consumption should peak and decline in the upcoming 13th Five Year plan (2016-2020). China's target to expand its total energy supply from zero-emission sources to around 20 % by 2030 is notable and implies the closing of the coal chapter and the beginning of a clean energy era.

European Union

The European Union (EU) with its 28 member states is the world's third largest emitter, accounting for about 10% of today's annual global emissions and 13% of cumulative emissions from 1990-2010.

The EU has a mixed record on climate change. It showed leadership when it signed up for a second commitment period of the Kyoto Protocol and championed the need for a new, comprehensive, and binding global climate treaty. It achieved energy independence and created over one million jobs, thanks to its ground-breaking renewable energy target for 2020, driven forward by the Renewable Energy Directive. The EU is on track to meeting its 2020 renewable energy goal. Renewable energy already accounted for 13% of the EU's energy consumption in 2011 when, looking at the Gross Inland Consumption, the share of oil was 35%, gas 24%, coal and other solid fuels 17%, nuclear 14%, and renewables 10%.

Still, the target value for reduced greenhouse gases in 2020 was far below the value indicated by the IPCC as appropriate, and the passage of the recent climate and energy package for 2030 is disappointing.

The package of measures includes a binding domestic carbon target of at least 40%, a renewable energy target of at least 27% binding at EU level, and an indicative efficiency target of at least 27% that will be reviewed in 2020 with an option to bump it up to 30%.

Those targets are significantly below the EU's *fair share* and falls short of the actions needed to keep global warming below 2 degrees Celsius ⁽³⁾. Moreover, it will not put a price on carbon – a measure that could drive the phase-out of coal and be a first and essential step towards a climate-safe energy system. It could be argued that the EU Emissions Trading Scheme (ETS) is becoming a barrier to Europe's environmental progress. The scheme was expected to achieve 2.8 billion tonnes of emission reductions by 2020, but over-allocation, an influx of international offset credits, and the economic recession have created a huge oversupply of more than two billion emission allowances, thus undermining the effectiveness of the ETS.

The price of EU emission allowances is currently approximately 6.75€ per tonne CO2 instead of the 30€ per tonne which was assumed in the EU's climate policy scenarios. The EU is poised to temporarily remove 900 million tonnes of carbon allowances from the scheme and store these allowances for further use in 2018 and beyond ("back-loading"). The "market stability reserve" is another mechanism under discussion to handle storage and input of surplus allowances from 2020 onwards, but will also not delete the huge surplus of allowances. In conclusion, the EU policymakers have failed to provide a lasting structural solution for the ETS. Moreover, the reintroduction of stored ETS allowances after 2020 will significantly weaken any post-2020 EU climate action.

By setting meager goals for 2030, the EU risks locking-in low ambition for the continent for the next 16 years. The EU has to propose a 2025 target which reflects more realistically its *fair share* of future mitigation efforts, drives out coal, increases energy efficiency, and develops further its renewable energy supply. Large coal-dependent economies like Germany, the UK and Poland should bring forward national legislation or regulation to phase-out the use of coal-fired power.

Even Germany is struggling with achieving its national 40% reduction target by 2020 because the weak EU ETS is not driving divestment from coal. Germany's credibility in taking on climate change will depend on whether the Merkel government will regulate the long-term phase-out via national legislation now.

The **United Kingdom** has a binding climate law that commits it to an 80% reduction in emissions by 2050. It recently confirmed its fourth "carbon budget" which will require a 50% cut by 2025 to 1990 levels. However, current government policy is undermining the UK's energy transition by failing to deliver effective energy efficiency policies and supporting onshore wind and solar power. A more coherent and ambitious approach to endorsing new energy sources will be essential to deliver on domestic climate targets.

France appears to talk a good game regarding climate policies. But in reality, the country is far from being the leader it pretends to be. François Hollande's Government just got rid of the "ecotax" on high polluting road transports. Carbon price is still very low (7€/tCO2) in France with almost no impact on stakeholders' decision making. The "law on energy transition" which is about to be passed in the Senate will adopt the following objectives: (1) a reduction of 40% of GHG by 2030 against 1990 levels and 75% by 2050; (2) halving final fossil fuel energy consumption by 2050 against 2012 levels; (3) a reduction of 30% of final fossil fuel energy consumption by 2030 against 2012 levels; (4) a share of 32% of renewable energies in the energy mix by 2030. Nonetheless, these objectives remain far below what is recommended by the IPCC and only a third of these objectives is achievable with the current means developed in the law.

On the other hand, COP21, under French presidency, must not be the arena to promote false solutions *made in France*, like nuclear. In the energy transition law, France commits to reduce from 75% to 50% the share of nuclear in its electricity mix around 2025. But this objective has no clear implementation roadmap whereas it should lead to the closure of many nuclear reactors.

Poland's coal addicted energy system needs an urgent transformation as most of its existing coal-fired power plants will soon face disassembly due to old age. The solidarity mechanisms provided by the EU climate and energy framework to countries such as Poland should be used for the development of renewable energy sources as well as for energy efficiency measures.

According to the European Environment Agency (EEA), **Spain** is one of the EU countries with the largest cumulated deficit of annual emission allocations. Spain is not on track with meeting its targets: projected GHG emissions indicate that it will not achieve its 2020 targets with its intended domestic policies and measures.

Regarding the share of renewable energy in the energy mix, Spain has not achieved its set target for 2012 and has to aim for absolute growth by 2020 – at least two to three times the growth in the period of 2005 to 2012. The 2020 target for energy efficiency is on track, but is mainly due to the economic recession and the associated decrease in final energy consumption of all economic sectors.

The country's energy reform plan lowered subsidies provided to the renewable energy sector by retroactively changing the rules. On the other hand, the Spanish government is financing the

search for new fossil fuels, offshore oil and fracking for gas included. Spain is also renegotiating subsidies for more Spanish coal.

India

India is one of the countries that has not yet announced when it will deliver its commitment for the Paris Protocol but there are signs that the new government considers climate change a key issue in its public portfolio. The new Prime Minister has renamed the Ministry of Environment and Forest the Ministry of Environment, Forest and Climate Change and, more importantly, has signaled his intention to table ambitious renewable energy targets, including solar energy as a means to deliver energy access to every household in the country by 2019.

For this to become reality, the Indian government must create a policy roadmap along with a financial framework for micro-grid based, decentralized renewable energy systems that give people control over a sustainable energy source. Unfortunately, India is still largely locked into a coal-based energy paradigm which affects large areas of the central Indian habitat and displaces thousands of people. New coal plants will aggravate the problem of water shortages in water-stressed regions of the country. India needs to realign its energy future in a way that does not harm its people and habitat while providing energy security for its climate vulnerable nation.

India has to take the lead in outlining the framework of the Green Climate Fund and push for the deployment of sustainable and renewable energy resources for GHG emission mitigation and decoupling development from intense carbon use.

Brazil

Brazil is the world's sixth largest emitter of greenhouse gases, released primarily from deforestation in the Amazon and the use of dirty energy sources. In 2009, at the Climate Conference in Copenhagen, the country presented voluntary targets to reduce emissions from 36.1% to 38.9% by 2020. It is estimated that even if the country achieves the target announced, Brazil's emissions will still be growing in 2020.

In 2013, Brazilian emission estimates showed an increase of 7.8% over 2012. This growth was reflected in every sector, with land-use change as the largest contributor (16%), due to a 29% increase in deforestation in the Amazon, and a 7% increase from the energy sector due to the increase of fossil fuel use.

Deforestation and forest fires are responsible for around 34% of the country's emissions. Deforestation in the Amazon is still high and affects around 6,000 km² per year. The country has been reducing forest protection mechanisms and increasing investment in large infrastructure projects, especially hydroelectric dams in the Amazon. The forest plays an important role as climate regulator. Progressive deforestation and forest degradation are destroying this ability, which can lead to abrupt and profound changes in the climate of South America.

The energy sector represents 30.2% of Brazil's total emissions, primarily resulting from dirty fuel sources. Brazil's Ten Year Energy Plan estimates that about 70% of the energy sector's investments will be directed toward fossil fuels and only 9.2% toward renewables, such as wind, solar and biomass, while biofuels will receive 6.5% of the new investments. Besides the investments in dirty fuel sources, Brazil is promoting massive investments in hydroelectric dams, which due to changes in rain patterns in the country—that can be exacerbated by climate change—do not bolster energy security and divert investment from renewables. Brazil must stop building new hydroelectric dams in the Amazon and direct investment toward new renewable energy sources, like solar and wind.

In Lima, Brazil must work on the definition of an INCD to be presented by March 2015, not after June as the country seems to be planning to do. Among the elements that Brazil should include in the INDC, apart from a 2025 timeframe, is the willingness to diversify its energy sources, including more renewables, like solar and wind, and implement forest protection mechanisms designed to end deforestation. Brazil needs to return to a position of constructive negotiation and

stop waiting to see other countries' commitments before presenting its own. This is the only way to show the leadership that Brazil claims to have in the region.

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(1) Press statement anouncing the agreement between China and United States http://mobile.nytimes.com/2014/11/12/world/asia/china-us-xi-obama-apec.html?r=2&referrer="http://mobile.nytimes.com/2014/11/12/world/asia/china-us-xi-obama-apec.html">http://mobile.nytimes.com/2014/11/12/world/asia/china-us-xi-obama-apec.html?

^{(2) &}lt;a href="http://www.greenpeace.org/usa/en/campaigns/global-warming-and-energy/The-Solutions/Energy-Revolution/">http://www.greenpeace.org/usa/en/campaigns/global-warming-and-energy/The-Solutions/Energy-Revolution/

⁽³⁾ Niklas Höhne, Michel den Elzen & Donovan Escalante (2014) Regional GHG reduction targets based on effort sharing: a comparison of studies, Climate Policy, 14:1, 122-147, DOI:10.1080/14693062.2014.849452