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THAWING TOO SLOWLY IN A WARMING WORLD:

American climate change policy and the UN Climate Change Summit in Copenhagen

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Summary Points

- After two years of intense negotiations, deep divisions remain to be resolved in Copenhagen with respect to three major issues: ambitious mitigation targets for industrialized states, a peak in emissions from developing countries in the next decade and a transfer of resources to developing countries to help them adapt to climate change.
- The Obama administration has started to lay the groundwork for an American policy on climate change that addresses the American dependence on foreign oil and strengthens the competitiveness of the American economy.
- The US House of Representatives passed the 'American Clean Energy and Security Act' in July 2009, which proposes a national cap-and-trade system.
- The US Senate is currently debating the 'Clean Energy, Jobs and American Power Act'.
- These bills can be criticized because of their lack of science-based targets, the wide availability of domestic and international offsets within the cap-and-trade system, and their continued support for the coal industry by subsidizing the large-scale development of Carbon Capture and Storage.
- At the Copenhagen conference key actors such as China, Brazil and the EU will likely dismiss the US negotiating positions as out of step with ongoing multilateral discussions on climate change.

Climate Change 101

We are just days away from the Copenhagen conference that will seek to hammer out an international agreement on climate change to replace the Kyoto Protocol, which expires in 2012. The contrast between the urgency with which climate experts call for an ambitious agreement and the snail's pace of ongoing climate change negotiations is stark. John P. Holdren, President Obama's advisor for Science and Technology, used the following metaphor to describe the current situation:

> We are in the situation of driving an automobile with bad brakes toward a cliff... in the fog. The auto is the world's energy-economic system and the cliff is climate-change catastrophe. We don't know exactly where the cliff is because of the uncertainties in climate science —the fog—but that is hardly a consolation, or a reason not to try to slow down.

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Yet domestic policy debates on climate change, particularly in the United States (US) and Canada, remain disconnected from the basic findings of climate scientists. It is worth reviewing the basics upon which the Intergovernmental Panel on Climate Change (IPCC) agrees: There is clear evidence for a 0.7 ºC increase in global temperatures over the last century. Eleven of the twelve years between 1995 and 2006 rank among the twelve warmest years since scientists started recording global temperatures in 1850. The IPCC leaves no doubt: Most of the observed increase in global average temperatures since the middle of last century is "very likely" due to the observed increase in man-made greenhouse gas (GHG) concentrations. Human activities have led to a 70% increase of GHG emissions between 1970 and 2004 "due primarily to fossil fuel use, with land-use change providing another significant but smaller contribution".

The 1992 United Nations Framework Convention (UNFCCC) set the objective of a stabilization of GHG concentrations in the atmosphere at a level that would prevent dangerous human interference with the climate system. There is now widespread agreement – as reflected in the 2009 Group of Eight Leaders' Declaration – on the need to prevent global warming beyond the critical threshold of 2°C. The IPCC said that the key for preventing dangerous global warming was to keep CO_2 concentrations below 450 parts per million (ppm) in order to have a 50% chance of avoiding more than a 2ºC increase in global temperatures. Carbon dioxide concentration levels in 2005 stood at 380 parts per million, a significant increase from pre-industrial levels of 280 ppm. Environmental NGOs and small island states like the Maldives have objected to 450ppm as a risky target. International campaigns, such as 350.org, advocate for 350ppm as the safe upper limit for CO_2 in the atmosphere. Recent peer-reviewed research supports such demands: climate scientists found increased ocean acidification, and accelerated melting of ice sheets in Greenland and Antarctica as well as of the Arctic sea ice and thawing permafrost. In other words, climate change is proceeding more rapidly than anticipated.

What does this mean in terms of mitigation policies? All parties to the UNFCCC, including the US, agreed in a footnote attached to the Bali Action Plan to use a set of IPCC tables and figures as the basis for a discussion of mitigation targets on climate change in Copenhagen. The IPCC report suggests the following: to have a 50% chance of making a 2ºC stabilization target global emissions need to be reduced by 50–85% relative to levels in 2000 by 2050. Global emissions, including emissions from developing countries, would need to peak by 2015 and industrialized countries (or Annex I Parties) would need to decrease their emissions 25-40% below 1990 levels by 2020. Delivering on such a mitigation target in the next decade gives the planet the best chance of avoiding runaway climate change. If such cuts do not materialize steeper mitigation targets will be required after 2020. By comparison the 1997 Kyoto Protocol called for industrialized states to reduce emissions by 5.2% below 1990 levels by 2012. Such a modest target will be wholly inadequate in averting runaway climate change: mitigation and adaptation efforts will need to be stepped up in industrialized as well as developing countries.

Are we there yet? The negotiations so far, and the major hurdles that await

Negotiations had to begin almost immediately following the entry into force of the Kyoto Protocol in 2005 to ensure the timely conclusion of a post-2012 agreement. So far, the negotiations have produced a heavily bracketed 180 page negotiating text. By contrast the Kyoto Protocol, including annexes, is a mere 20 pages! Much unfinished business remains just days before the conference in Copenhagen. There is some good news, because progress has been made on less controversial issues such as technology transfer, capacity-building, or REDD. However, there are three major stumbling blocks: mitigation targets for industrialized countries, mitigation targets for developing countries and climate financing.

Time for industrialized countries to deliver?

Industrialized countries have not succeeded in reducing their emissions to meet the modest ambitions of the Kyoto Protocol. If the lower GHG emissions of economies in transition (e.g. Russia) are excluded industrialized states have actually increased their GHG emissions by 8.4% by 2002 compared to 1990 levels. The pres-

Table: Overview of industrialised countries' mitigation targets

	Kyoto target	Emission trend 1990 - 2006[2]	Proposed Copenhagen target	Proposed baseline year	Proposed target year
Australia	+ 8%	+ 54.4%	-5 % or - 25%	2000	2020
Canada	- 6%	+ 29.4%	20%	2006	2020
EU 27[3]	- 8%	+ 1.9%	- 20% or -30%	1990	2020
Japan	- 6%	+18.3%	-25%	1990	2020
Norway	+ 1%	+ 29%	- 40%	1990	2020
Russia	0%	- 17%[4]	- 10% or -15%	1990	2020
US	- 7%	+ 17.4%	- 17%[5]	2005	2020

Variations in ambition are not only related to percentages and timing of targets. The way in which industrialized countries set out to achieve their mitigation targets is equally contentious. More specifically, the use of international offsets are considered to be a way for richer countries to buy their way out of reducing the carbon footprint of their economies. For example, the offsets used by EU Member States in the EU's Emission Trading System in the period 2008-2012 will potentially count for half of the EU's emissions reduction commitment.

sure will be first and foremost on them to commit to more ambitious targets in Copenhagen.

Most of the controversy is focused around the legally binding mitigation targets for industrialized countries or QELROs. The discussion is often confusing because different countries suggest different targets (expressed in terms of percentage targets) with varying baseline years and target dates. Moreover, the EU and Australia set themselves different targets depending on whether a global agreement is reached in Copenhagen. These differences make it challenging to compare the ambition behind the various proposals. So far mitigation targets of industrialized states, taken together, add up to only a 10% to 24% mitigation effort below 1990 levels by 2020.

2 Source: US Energy Information Administration

3 More recent estimates of the European Environment Agency indicate that the EU 27 will be able to achieve its – 8% Kyoto target as a result of existing and additional policies that will help to reduce emissions by 2012 as well as international offsets and improved management of European carbon sinks, such as forests.

4 The emission trend for Russia is based on figures from 1992 until 2006.

5 The Obama administration has not announced its own benchmark mitigation target. The American mitigation target in this table refers to the target contained in the Waxman-Markey bill, which the US House of Representatives passed in July 2009.

Environmental organizations have pointed out that projects financed by international offsets purchased via the Kyoto Protocol's flexibility mechanism, like the Clean Development Mechanism, have not always delivered "real, measurable, and long-term benefits" in terms of mitigation and "reductions in emissions that are additional to any that would occur in the absence of the certified project activity" as is required by the Kyoto Protocol.

The Western pot calling the Chinese kettle black

Another contentious mitigation issue is whether developing countries with emerging economies such as China and India, should also take on legally binding targets. China's emissions have tripled compared to Kyoto's 1990 baseline year and in 2007 China overtook the US as the world's largest emitter of CO_2. The Kyoto Protocol did not oblige developing countries to reduce emissions under the principle of 'common but differentiated responsibilities', and recognized that their per capita emissions were (and still are) relatively low compared to so-called 'Annex I countries' of the industrialized world. Chinese negotiators on climate change also frequently refer to the preamble of the UNFCCC, which notes "that the largest share of historical and current global emissions of greenhouse gases has originated in developed countries". Industrialized countries ac-

count for more than 50 to 60% of the historical contributions to climate change, even though their populations account for less than 20% of the world population today. Moreover, recent research shows that "offshored emissions", i.e. carbon dioxide pollution caused by the manufacturing of goods for export to other countries, account for half of China's increase in emissions. For example, European countries have been able to lower their emissions in part thanks to relocating manufacturing to emerging economies in Asia. While diplomatic discussions on mitigation are conducted on the basis of the location of the *production* of emissions, environmentalists have raised the issue of industrialized countries' responsibility for the *consumption* of these emissions.

While there is some truth to these arguments, limiting global warming to 2ºC will require developing countries to significantly reduce the carbon intensity of their GDP growth and then let their emissions peak as soon as possible. Few deny that industrialized countries should take the lead in mitigation efforts. Yet all agree that their efforts would be futile unless developing countries also make an effort. If industrialized states reduce their emissions compared to 1990 levels by 20% or 30%, developing countries need to cut their emissions respectively by 15-30% or 10-25% by 2020 compared to the 'business-as-usual' projected increase in emissions.

Money talks - the issue of climate finance for developing countries

How can industrialized countries convince e.g. China to take on a binding mitigation target? Undoubtedly, the answer requires resolving the disagreements about climate financing. At the 2007 Conference of Parties in Bali, there was consensus that mitigation actions by developing country Parties should be "supported and enabled by technology, financing and capacity-building" from industrialized countries. For example, 70% of Chinese energy production relies on inefficient coal-fired power plants. To help China embark on a low-carbon growth strategy, a major deal sweetener needs to emerge from the Copenhagen summit. Considerable resources will need to be transferred to developing countries to help them in efforts to reduce deforestation, to diffuse environmentally sound technologies for energy production, to build the capacity of effective national environmental administrations in developing countries, etc. The price tag to achieve this is estimated to be well over $150 billion annually.

American climate change policy under the Obama Presidency

It is impossible to evaluate President Obama's track record on climate change, after having been in office for 10 months, without addressing the legacy of inaction on the part of previous administrations, notably that of President George W. Bush. Many supporters of climate chance initiatives accuse the Bush Administration of far more than inaction beyond the basic refusal to implement the Kyoto Protocol. That resistance included everything from bureaucratic maneuvers preventing the Environmental Protection Agency (EPA) from regulating CO_2 under the Clean Air Act to the manipulation and silencing of scientific evidence linking CO_2 to climate change; all actions culminating in a diplomatic row at the Bali climate change talks in 2007 where the US delegation was greeted with jeers from other delegates.

The US has to begin clearing some of this left over debris and begin repairing America's international reputation on climate change. To date that has meant publicly pursuing new initiatives with a fickle electorate in a weak economy, empowering executive branch agencies like the EPA to tackle GHG emissions, and, most importantly, pushing the US Congress to enact new legislation.

American public opinion on climate change: A tough crowd

Despite Al Gore's best efforts, a recent PEW poll shows that that only 57% of Americans accept the evidence that human activities contribute to global warming, a drop of 14% between April 2008 to October 2009. The millions of dollars, spent on advertising campaigns by the fossil fuel industry against a 'cap-and-trade' system seem to have had their intended effect. Furthermore, environmental issues such as global warming have taken the backseat among voters' top concerns; they consider the economy and jobs as their main priority in the current recession. Influential opinion makers,

such as Thomas Friedman with his book *Hot, Flat and Crowded*, have pushed back and strongly supported an increased investment in clean technologies as a way of strengthening American competitiveness. The Apollo Alliance, a coalition of labor, business, and environmental groups established in 2001, has also been successful in pushing the idea of a green-collar-economy.

President Obama takes his first steps … in addressing climate change

Key officials in the Obama administration understand the severity of the climate change challenge. For example, Lisa P. Jackson, head of the EPA, announced in April 2009 that her agency would start regulating the climate-altering substances like CO_2 in response to a Supreme Court ruling "Massachusetts v. EPA", which confirmed the EPA's authority to regulate CO_2 and other GHGs as pollutants under the Clean Air Act. In September 2009, the EPA finalized a national GHG reporting system, which will start monitoring emissions of about 10,000 facilities. President's Obama stimulus package included $80 billion for clean energy such as investments in the energy grid and renewable energy, weatherization of homes, etc. The Department of Transportation was directed to start reviewing the Corporate Average Fuel Economy or CAFÉ to establish higher fuel efficiency standards for cars entering into effect in 2011. President Obama also instructed the Department of Energy to establish new energy efficiency standards for a wide range of consumer products.

However, the bulk of the work on reducing America's GHG emissions has been focused on Congress and its efforts to pass a cap-and-trade bill. The White House has repeatedly proclaimed its support to put a price on carbon emissions to begin to address climate change but has consistently presented such a policy as a way to reduce the US dependence on foreign oil and to strengthen the competitiveness of the American economy in future economic growth sectors such as renewable energy, i.e. not an environmental policy. Given the Clinton administration's failure to ratify the Kyoto Protocol, the tactics of the Obama administration have also focused on avoiding the perception of making a multilateral commitment beyond the proposals currently under discussion in Congress, which would prejudice the domestic legislative process. Carol Browner, President Obama's 'climate czar', has worked behind the scenes to help Congress pass a bill on climate change. H.R. 2454 or "American Clean Energy and Security Act', written by Henry Waxman (D-CA) and Edward J. Markey (D-MA), aims to establish a cap-and-trade system. The US House of Representatives narrowly passed the bill in July 2009 and the Senate is now considering its own version of a bill to address climate change.

The Waxman-Markey bill covers three main areas. First, renewable energy is promoted by requiring electric utilities by 2012 to meet 6% of their electricity demand through renewable energy sources and energy efficiency and to increase this to 20% by 2020. At least 75% of this increase must come from renewable energy sources. It also addresses the problem of CO_2 emissions from coal-fired power plants: carbon capture and storage (CCS) standards will regulate possible leakage from CO_2 stored underground. The bill mandates that all new plants granted permits between 2009 and 2015 reduce emissions by at least 50 percent within four years after a threshold amount of CCS-equipped capacity is operating. New coal-fired power plants must reduce their emissions by at least 65 percent if they receive air permits after 2020. To make 'clean coal' a reality, the Act provides $4 to $7 billion per year until 2050 to support up to 72 gigawatts of CCS-equipped generating capacity.

A second focus of the bill is on energy efficiency with particular attention for more fuel-efficient vehicles, including the development of a large-scale plug-in hybrid programme, and improving the energy efficiency of buildings, lights and appliances. However, it is the third part of the Waxman-Markey bill which has been most eagerly anticipated: the implementation of a national cap-and-trade system. The GHG emitting facilities covered under this bill will account for 85% of total US emissions. The facilities covered will be phased into the program over a four-year period from 2012 to 2016. The bill sets targets for limits on the total allowable emissions based on 2005 US emissions levels and then progressively reduces those targets in stages; 3% below 2005 in 2012, 17% below in 2020, 42% in 2030, and 83% in 2050. Most of the allowances will be given away for free; only 15% of total allowances

will be auctioned at the start of the scheme in 2012. The share of auctioning will increase by 2030 to 65%. The Waxman-Markey bill stipulates that the allowances are to be allocated to specific sectors. Almost 60% of the total amount of allowances is dedicated to consumers' energy consumption (electricity, natural gas, home heating, etc.). For example, electricity distributors will receive 32% through 2025. Another 15% goes to support new technologies such as CCS, renewable energy, low-carbon vehicles, etc. To smooth the transition to a less carbon-intensive economy of the future, another 8% of allowances are dedicated to energy intensive manufacturers in order to prevent 'carbon leakage'. This provision aims to protect the competitiveness of industries (e.g. the cement, steel, aluminium and chemical sectors) that are subject to strong international competition and at a risk of relocation to countries with less stringent restrictions of GHG emissions.

While an EPA study estimates the actual price of carbon to be $12 - $20 per ton between 2012 and 2020, the Act includes a minimum auction price of $10 per ton below which allowances are withheld from auction and added to the strategic reserve. There are, however, a number of provisions in the Waxman-Markey bill that seek to reduce the financial burden of transitioning to a low-carbon economy on families. For example, allowances are provided to local electricity and natural gas distribution companies that are to be used to compensate for the increases in retail electricity prices arising from the cap-and-trade scheme. The Waxman-Markey bill also foresees that 15% of the allowances will be auctioned and that the money raised will help provide tax credits and energy refunds to low-income consumers. The Congressional Budget Office estimates that energy costs for an average American household will increase by US$175 a year. The Congressional Budget Office has also estimated the Waxman-Markey bill's impact on government revenues to be almost neutral - creating a net revenue of US$9 billion.

A number of provisions are designed to provide flexibility and contain the costs of the scheme. These provisions include, for example, unlimited banking of allowances, a rolling two-year compliance period (which permits borrowing one year in advance) and the right to borrow up to 15% of allowances from years 2 to 5 beyond the current year, but subject to payment of 8% interest. To avoid a scenario whereby the price of allowances rises uncontrollably, the Waxman-Markey bill establishes a strategic reserve of allowances. However, the most important cost control mechanism in the cap-and-trade program will likely be the availability of domestic and international offsets. The proposed cap-and-trade system will allow a total of 2 billion tons per year of offsets, equivalent to 30% of total US emissions. The bill allows up to one billion tons of domestic offsets each year, sourced from the domestic forestry and agriculture sector. The other one billion ton each year are set aside for international offsets.

A number of addition provisions in the Waxman-Markey bill also focus on generating emission reductions outside the cap-and-trade system. The Act lays the basis for a program to halt tropical deforestation. By auctioning 5% of the allowances, the Waxman-Markey bill hopes to generate sufficient funding for such a program, which should achieve a supplemental reduction by an amount equal to 10% of the US's 2005 emissions by 2020.

The inclusion of the potential introduction of a border adjustment tariff in 2020 has raised concern in countries that export goods to the US. The Waxman-Markey bill would require importers of energy-intensive products (primary goods like iron and steel as well as products that generate a substantial quantity of GHG emissions in the course of their manufacture) from countries with insufficient climate change policies to purchase a prescribed amount of "international reserve allowances" (IRAs) for their products to gain entry into the US. A Congressional Research Service report doubted whether such a de facto tariff could be made to work given the "daunting administrative, informational, and analytical resources necessary to implement such a program" and its questionable conformity with the rules of the World Trade Organization.

Talk shop or talking-shop: the US Senate until Copenhagen

The US Senate has started working on climate change legislation as well. The main piece of legislation under consideration is the proposal of Democratic Senators John Kerry and Barbara Boxer, S. 1733 or the 'Clean

Energy Jobs and American Power Act'. Their proposal was approved in the Senate Committee on Environment and Public works by a 10 to 1 vote. Republicans boycotted the vote because they consider the cost of the legislation to be insufficiently examined. The bill will now be considered alongside legislation being written by five other Senate panels. The Senate Energy and Natural Resources Committee also passed its own version of a bill on July 16, 2009 called the American Clean Energy Leadership Act (S.1462).

While the thinking behind the Kerry-Boxer bill is on the whole similar to the legislation passed in the House, there are some differences. The 2020 target has been strengthened to 20% instead of 17% below 2005 levels. Apart from a floor price, the Senate bill also includes a cost ceiling, initially set at $28 per ton in 2012. The Kerry-Boxer bill differs from Waxman-Markey in that it includes a greater role for domestic offsets than international offsets. It also explores a greater role for nuclear energy by proposing to establish a federal advisory commission to conduct a comprehensive study of alternative means of managing radioactive waste. Promoting natural gas as a cleaner burning fuel also receives more specific attention.

So far, about 40 Senators have indicated their support for the current proposals. This means that about 20 'fence-sitting' Senators need to be convinced to avoid a filibuster before holding a vote on the floor of the Senate. Key players in winning bipartisan support will be Republican Senator Lindsay Graham and Democratic Senator and Finance Committee Chairman, Max Baucus, who publicly stated that no climate change legislation would be adopted before the Copenhagen summit. Important challenges remain before US legislation becomes law. Once the Senate approves a bill, a conference committee will then consider where differences between the House and Senate versions will need to be bridged and transformed into a single piece of legislation before its is approved by both houses and sent to the president's desk for signature. In short, much work and many changes lay ahead.

Will American policy help to avoid dangerous climate change?

The Obama presidency in cooperation with Democratic Congress has put a halt to more than a decade of weakening American environmental legislation and enforcement. Yet, the most important question is whether the new legislation currently under consideration will help the US to meet its legal obligation under the UNFCCC to avoid dangerous levels of global warming. A number of critiques have been leveled against the proposals as they stand today.

For instance, the targets currently under consideration for an American cap-and-trade system are not related to the IPCC's recommendations. The Act requires the President to respond to latest scientific findings by recommending changes to Congress. However, President Obama publicly announced in late November that the US negotiation position in Copenhagen on mitigation targets will be around 17% below 2005 levels in 2020, i.e. in line with debates in Congress. In other words, chances are very slim that the American mitigation targets will be dramatically revised in the future. Debates in Congress have completely ignored that the Bali Action Plan refers to the need for industrialized countries to decrease their emissions by 25% to 40% below 1990 levels by 2020. At best, if the American cap-and-trade system delivers on its promises American emission reductions will merely be brought back to 1990 levels, falling 7% short of the original Kyoto target! The targets under debate in Washington are based on politics, not science.

A second critique of current American climate policy is the questionable 'cap' of the cap-and-trade system due to the heavy reliance on offsets to meet mitigation targets. Both the quantity and quality of these offsets have been criticized. The extensive use of international and domestic offsets could allow polluters in capped sectors to continue their emissions at levels well above the reductions imposed by the emissions cap. Several estimates concur that emissions from "capped" sectors under the Waxman-Markey bill could continue to grow at business-as-usual rates up to 2030. This goes against the scientific recommendations to have emissions peak in the next decade. The critique also focuses on the

challenge of developing a robust methodology to monitor offsets from the agriculture and forestry sector due to the complex nature of biological carbon sequestration. This is the reason why the EU's Emission Trading Scheme rejects international offsets from the agriculture and forestry sector

A last critique has been that the Waxman-Markey bill continues to support coal as a major source of energy for the US, which was the reason why Greenpeace US lobbied against passing the Waxman-Markey bill. Current proposals will not, to paraphrase Al Gore, "repower America" and will delay a definitive transition to renewable energy sources. Both pieces of legislation continue placing near-universal faith in CCS despite the considerable economic cost and environmental risk[6]. The ability of CCS to help meet distant climate change targets is yet unproven and undeveloped on an industrial scale. Yet the US Congress is willing to support the coal industry with billions of dollars of subsidies to develop this technology.

In conclusion: Impact of the American debates on Copenhagen

Other major CO_2 polluters, such as the EU and China, have grown increasingly impatient with the US because its positions are perceived to be out of step with the ongoing multilateral negotiations. The decision to finish negotiations by December 2009 was taken two years ago in Bali with the consent of the George W. Bush administration, so there is little international sympathy for US pleas to delay the conclusion of a binding agreement until after Copenhagen because the US is still making up its mind on climate change policy. Specific criticisms of the US position focuses on three aspects.

First of all, the targets proposed under the American cap-and-trade system are not in line with what many other countries have proposed. On November 25, the White House announced that President Obama will attend Copenhagen and that, in the context of an overall deal in Copenhagen that includes robust mitigation contributions from China and other emerging economies, President Obama is prepared to commit to an American emissions reduction target in the range of 17% below 2005 levels in 2020. Other industrialized states like the EU and Japan have proposed mitigation targets between 20 to 30% compared to 1990 levels. A heated debate can be anticipated in Copenhagen about the appropriate baseline year for measuring emission reductions. The EU has made it clear that the overall target for industrialized countries must be distributed in a manner that ensures "comparability of efforts" taking into account the GHG intensity of GDP growth and the trend in emissions between 1990 and 2005 in order to recognize domestic early action. This puts the US in a tough spot.

Secondly, the US is unlikely to convince India or China to take on binding mitigation targets given America's measly efforts so far. Both countries continue to emphasize the basic principle of 'common but differentiated responsibilities' in the Kyoto Protocol, which distinguishes between developing and industrialized countries. This does not mean that China or India refuse to make any efforts on climate change. On the contrary, India and China have started legislating mandatory fuel efficiency targets as well as an increased role for renewable sources up to 20% by 2020 in order to reduce their economies' energy intensity by a "notable margin" in the words of Chinese President Hu Jintao. Jonathan Pershing, chief US negotiator, is right to say that the China of 1990 is not the same country today in terms of GHG emissions, but American pleas for a new agreement that significantly departs from the Kyoto Protocol ring hollow … too little, too late.

Thirdly, US negotiators have not made any clear pronouncements about an American financial contribution to help developing countries adapt to the impacts of climate change or help their economies pursue a low-carbon trajectory. This significantly reduces the likelihood that the US will be able to use financial 'carrots' to convince developing countries to take strong action. Furthermore, there is considerable nervousness in developing countries like China about the proposed 'border adjustment tariffs'. This American protectionist 'stick'

6 For a good overview of CCS' many hazards, risks and unanswered questions, see Thomson, G. (2009). *Burying carbon dioxide in underground saline aquifers: Political folly or climate change fix?*. Toronto: Munk Centre for International Studies. Retrieved from www.powi.ca/index_transboundary.php

is unlikely to create goodwill among developing countries, after years of American rhetoric about free trade.

To summarize, it seems unlikely that spectacular shifts in the American, Chinese, Indian or European positions will occur during the Copenhagen conference. The Obama administration has avoided specific commitments that would go beyond the bills currently under consideration in Congress and has consistently downplayed international expectations. Recently, President Obama's climate envoy Todd Stern signaled that American diplomacy will focus on reaching a political agreement on the major obstacles in the hope of drafting a blueprint for a binding legal agreement next year; this is a U-turn from President Obama's inaugural address. President Obama's first speech held out the promise that the US cannot "consume the world's resources without regard to effect" and that the US will "work tirelessly to [...] roll back the specter of a warming planet". The old cliché that a year can be an eternity in politics has turned out to be true again. There is little 'hope' of 'change' in American climate leadership. The planet is warming at unprecedented levels, but Washington is freezing the world out of effective action on climate change.

Glossary

Adaptation: Adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.

Annex I Parties: Annex I Parties are the industrialised countries of the world. They include the 24 original OECD members, the European Union, and 14 countries with economies in transition.

CCS: Carbon Capture and Storage involves capturing huge quantities of the CO_2 from the smokestacks of industrial facilities, compress the gas into a fluid state and inject it underground in saline aquifers.

International offsets: A credit which certifies the reduction, removal, or avoidance of GHG emissions by a project taking place outside of the country in question and that is used to compensate for GHG emissions occurring within the country.

Mitigation: Mitigation policies refer to interventions to reduce the sources or enhance the sinks of GHG. Per capita emission levels: Per capita emissions refer to the number obtained by dividing the total amount of tonnes of CO_2 emitted by a country in one year by the number of inhabitants of that country. For example, while every US citizen on average accounts for 23.9 tonnes of CO_2 per year, the average yearly carbon footprint of a Chinese citizen is only 5.6 tonnes of CO_2 per year.

QUELRO: Quantified Emissions Limitation and Reduction Commitments

REDD: Reducing emissions from deforestation in developing countries

Sink: A (carbon) sink is any process, which removes GHGs from the atmosphere. Forests are considered sinks because they remove CO2 through photosynthesis.