



# Climate Change: The Copenhagen Conference

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This paper covers the lead up to the UNFCCC climate change conference that will be taking place in Copenhagen from 7 to 18 December 2009. The aim of the conference is to reach an agreement on a Kyoto Protocol successor that will ensure global reductions in greenhouse gas emissions beyond 2012.

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## Research Paper 09/87

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## Summary

The fifteenth Conference of the Parties (COP15) of the United Nations Convention for Climate Change (UNFCCC) will take place in Copenhagen for two weeks between 7 and 18 December 2009. The aim of the conference is to negotiate a successor to the Kyoto Protocol. The Protocol committed developed countries to reducing their greenhouse gas emissions by 5.2% compared with 1990 levels by 2008-2012. That has not been achieved. Emissions from these countries, including the US which did not ratify the Protocol, fell by 4.3% between 1990 and 2007. It is also estimated that global greenhouse gas emissions increased by 22%.

The Intergovernmental Panel on Climate Change (IPCC) published its latest report in 2007. That report concluded that warming of the climate system was unequivocal and very likely (more than a 90% chance) caused by humans. The report also concluded that global emissions would have to peak by 2015 and be reduced by 25-40% by 2020 and by 50-85% by 2050 to have a 50% chance of limiting global temperature increases to 2°C. Since then emissions trends have worsened and are now higher than in the IPCC worst-case scenario. In addition, some of the climate change impacts predicted by scientists are being observed sooner than expected.

The UNFCCC has set out the four main areas that need to be clarified for the negotiations at Copenhagen to be a success:

- the level of mid-term emission reduction targets that industrialised countries will commit to;
- the actions that developing countries could undertake to limit their greenhouse gas emissions;
- definition of stable and predictable financing to help the developing countries reduce greenhouse gas emissions and adapt to the impacts of climate change;
- identification of institutions that will allow technology and finance to be transferred to developing countries.

During the several preparatory meetings limited progress was made in these areas. Some progress was made on the inclusion of forests under the reduced emissions from deforestation and forest degradation (REDD) proposals.

The run up to the Copenhagen conference has seen commitments from developed countries and major emitting developing countries. The US and China, the two biggest emitters, have both made commitments. However, the US has been criticised for not setting ambitious enough targets. It is also hampered by the fact that a proposed Energy and Climate Bill has stalled in the Senate. Proposals on finance have been put forward by the EU, the UK and the Commonwealth.

## 1 Background

This paper is primarily concerned with the Copenhagen conference and events leading up to it. For a more detailed examination of climate change science, including the accepted facts and key uncertainties, the Parliamentary Office of Science and Technology (POST) has produced a note, *Climate Change Science*, which goes into this issue in more depth.<sup>1</sup>

Representatives of the 192 countries that are signatories to the United Nations Framework Convention for Climate Change (UNFCCC) will be meeting in Copenhagen in December 2009 with the aim of negotiating a successor agreement to the Kyoto Protocol which has been ratified by 189 countries along with the EU. The Protocol binds industrialised countries (also called Annex I countries) to reducing their emissions by 5.2 % by 2012 compared with 1990 levels. Appendix 1 to this paper lists all the party or country groupings.

The US is a member of the UNFCCC but not a signatory to the Kyoto Protocol. The fact that the second biggest global emitter of greenhouse gases has not signed the Protocol has been one of its weaknesses; the aim of the current negotiations is to produce an agreement which all member countries will accept.

Global greenhouse gas emissions are estimated to have increased by 22% between 1990 and 2005. The Intergovernmental Panel on Climate Change (IPCC) said in 2007 that global emissions would have to peak by 2015 and be reduced by 25-40% by 2020 and by 50-85% by 2050 to have a 50% change of limiting global temperature increases to 2°C.<sup>2</sup>

Whereas the Kyoto Protocol required a 5.2% cut in greenhouse gas emissions by industrialised nations any successor is likely to involve significantly higher emission cuts for industrialised countries and reductions in business-as-usual projections in rapidly growing economies in developing countries.

### 1.1 Trends in emissions

#### ***Kyoto targets***

Between 1990 and 2007 the total emissions of Annex I countries<sup>3</sup> fell by 15.3% (this excludes the US). There was much variation; there were cuts of 30-50% in many former Eastern Bloc states and increases of 30% in Australia, nearly 40% in Portugal and more than 50% in Spain. A significant part of the overall decline was due to the 'Economies in Transition'. However, their emissions generally stopped falling towards the end of the 1990s and as a result the total emissions of all Kyoto parties increased by 3.8% between 1999 and 2007.<sup>4, 5</sup>

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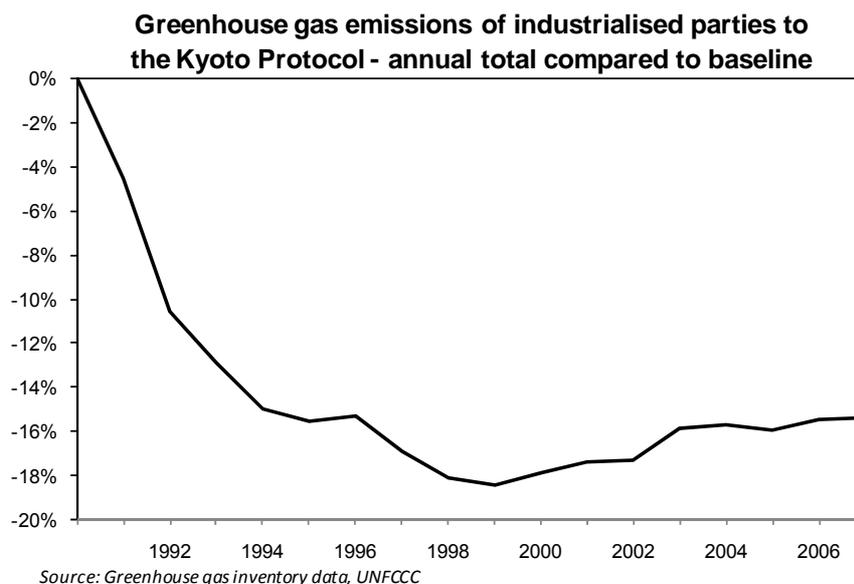
<sup>1</sup> Post Note 295, *Climate Change Science*, November 2007

<sup>2</sup> Environmental Audit Committee, *Reaching an international agreement on climate change*, 1 July 2008, HC 355, 2007-08

<sup>3</sup> All parties including recent ratifiers such as Australia and Croatia.

<sup>4</sup> Excludes emissions from land use change and forestry.

<sup>5</sup> [UNFCCC GHG data interface](#)



If all industrialised countries are included, including the US whose emissions have risen by 17%, the overall cut in emissions by industrialised countries between 1990 and 2007 was 4.8%.<sup>6</sup>

While there have been cuts in emissions from industrialised countries, these have been more than outweighed by increases from developing countries, particularly China, Brazil, India and Indonesia. Global emissions of all greenhouse gases are thought to have increased by around 22% between 1990 and 2005. This was an annual average increase of 1.3%, but the increase between 2000 and 2005 was faster at 2.9%.<sup>7</sup>

Data on CO<sub>2</sub> emissions alone are more up to date and more certain. These also show a faster rate of increase in emissions from around the start of this century and show it continuing at this faster rate through 2007 and 2008.<sup>8</sup> The UN Environment Programme has quoted research which stated that rates of increase in CO<sub>2</sub> emissions since 2000 have been faster than any scenario outlined in the late 1990s by the IPCC for this decade as a whole and current emission trends are higher than in the IPCC worse-case scenario.<sup>9</sup>

### ***Per capita emissions***

The table on page 4 shows data for the 15 largest source countries of the 'Kyoto basket' of greenhouse gases in 2005. Within this group there are significant variations in both per capita emissions and changes in emissions since 1990.

The UK ranked 14<sup>th</sup>. Its per capita emissions were below the other industrialised countries in this list and below some of the developing countries where deforestation is a major source of emissions. However, at 10.5 tonnes per capita it was still 50% above the global average.

<sup>6</sup> These figures are total national emissions excluding the impact of land use change and forestry. They do not include so-called 'Kyoto mechanisms' such as emissions trading or the Clean Development Mechanism. Reporting under the Protocol for the years it covers (2008-2012) will include emissions reductions under these mechanisms

<sup>7</sup> IEA, *CO<sub>2</sub> Emissions from Fuel Combustion 2009*, 2009

<sup>8</sup> *ibid.* and US Carbon Dioxide Information Analysis Centre (CDIAC) *Preliminary 2007-08 Global & National Estimates*

<sup>9</sup> UNEP, *Climate Change Science Compendium 2009*, Chapter 1 Earth Systems

**Estimated emissions of greenhouse gases from the major source countries, 2005**

Country	Billion tonnes CO <sub>2</sub> -eq	Tonnes per capita	Change 1990 to 2005
People's Republic of China	7.6	5.8	+104%
United States	7.0	23.7	+17%
Brazil	2.6	13.7	+59%
Russian Federation	2.3	16.2	-26%
India	2.1	1.9	+52%
Indonesia	1.6	7.1	+83%
Japan	1.4	11.1	+12%
Democratic Republic of Congo	1.0	17.5	-30%
Germany	1.0	11.9	-18%
Canada	0.7	22.9	+28%
Korea	0.7	14.0	+126%
Angola	0.7	41.4	-3%
Mexico	0.7	6.3	+35%
United Kingdom	0.6	10.5	-10%
Australia	0.6	29.0	+29%
<b>World</b>	<b>45.4</b>	<b>7.0</b>	<b>+22%</b>

Note: Includes the six greenhouse gases covered by the Kyoto Protocol

Source: CO<sub>2</sub> Emissions from Fuel Combustion 2009, IEA

### **Non Annex I Countries**

Non-Annex I countries do not have any legally binding obligations to reduce emissions. These are less developed countries that do not have significant historical emissions. However this group now includes some of the most important and rapidly increasing greenhouse gas emitters, including China, India and Brazil. Emissions data on these countries is less comprehensive, up-to-date and consistent than figures for industrialised countries, but from the available data it is possible to say that emissions from these three countries have increased by more than 80% since 1990.<sup>10</sup>

The graphs on page 5 illustrate trends in CO<sub>2</sub> emissions from fossil fuels for the 12 largest source countries in 2007. China is now the largest emitter of carbon dioxide, followed by the US, Russia, India and Japan. If the EU as a whole is included it is third in the list after the US.

Information on emissions from the Least Developed Countries (LDCs)<sup>11</sup> is even less reliable. However, estimated total greenhouse gas emissions from these 49 countries in 2005 were around 8% of global emissions.<sup>12,13</sup> In most of these countries agriculture and deforestation are the main sources of greenhouse gas emissions. In the Democratic Republic of the Congo, Angola and Burma (which made up 60% of estimated LDC emissions) these sources accounted for 85% of their emissions.

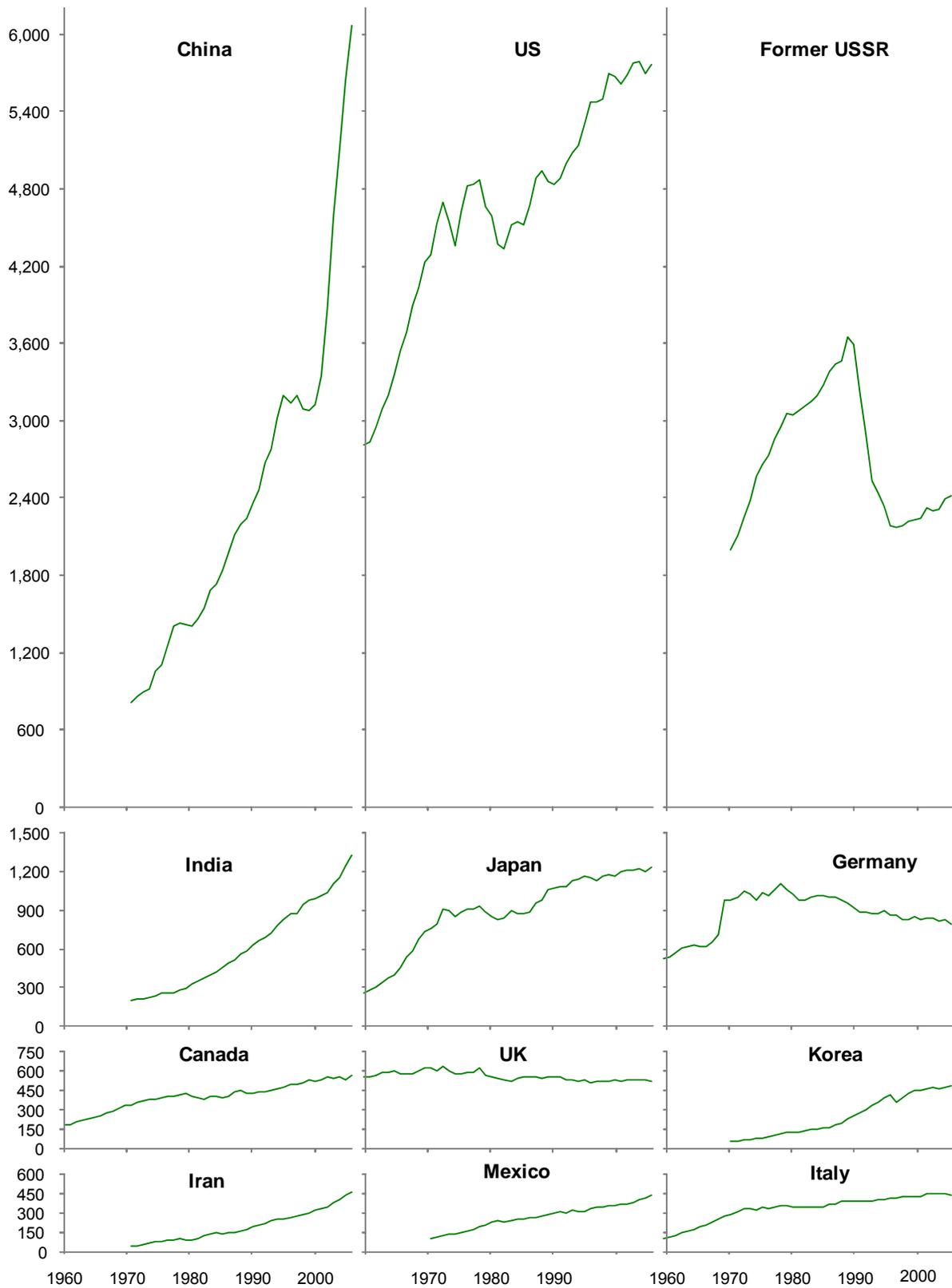
<sup>10</sup> CO<sub>2</sub> Emissions from Fuel Combustion 2009, IEA

<sup>11</sup> List available at: UN – OHRLLS [Least Developed Countries](#) webpage [on 2 December 2009]

<sup>12</sup> CO<sub>2</sub> Emissions from Fuel Combustion 2009, IEA; *Climate Analysis Indicators Tool* (CAIT), World Resources Institute

<sup>13</sup> No estimates have been made for Somalia, Timor-Lest or Tuvalu. Some of the estimates for the smaller LDCs are for 2000 and some of these exclude land use change and forestry.

**Trends in CO<sub>2</sub> emissions, selected countries, 1960-2007 (MTCO<sub>2</sub>)**



Source: CO<sub>2</sub> Emissions from Fuel Combustion, 2009 edition, IEA

## 2 Climate science: recent developments

This section covers information that has been made available in the lead up to the Copenhagen conference. For a more detailed examination of climate change science the Parliamentary Office of Science and Technology (POST) has produced a note, *Climate Change Science*, which goes into the science in more depth.<sup>14</sup>

### 2.1 The 2007 IPCC Report

The Intergovernmental Panel of Climate Change or IPCC was established by the United Nations Environment Programme and the World Meteorological Organization to provide a scientific view on the state of climate change, and its potential environmental and socio-economic impacts. It does this by reviewing and assessing the peer-reviewed published information on climate change and its impacts every seven years and producing a report.

The IPCC synthesised all the available evidence on climate change in its fourth report (AR4) in 2007 and concluded that global average mean temperatures have increased by 0.74 °C (+/- 0.18 °C) over the past 100 years<sup>15</sup> and it was very likely that this was due to the emissions of greenhouse gases:

Warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice and rising global average sea level.

And

Most of the observed increase in global average temperatures since the mid-20th century is very likely [greater than a 90% chance] due to the observed increase in anthropogenic<sup>16</sup> GHG concentrations.<sup>17</sup>

### 2.2 Scientific developments since 2007

The next IPCC report (AR5) is not due for publication until 2013. However scientific findings published since the last report have prompted the publication of several updates in the science in the run up to the Copenhagen conference.

In March 2009, the International Alliance of Research Universities organised an international scientific congress on climate change to synthesise research published since the IPCC report. It reached the following conclusion:

Recent observations show that greenhouse gas emissions and many aspects of the climate are changing near the upper boundary of the IPCC range of projections. Many key climate indicators are already moving beyond the patterns of natural variability within which contemporary society and economy have developed and thrived. These indicators include global mean surface temperature, sea-level rise, global ocean temperature, Arctic sea ice extent, ocean acidification, and extreme climatic events. With unabated emissions, many trends in climate will likely accelerate, leading to an increasing risk of abrupt or irreversible climatic shifts.<sup>18</sup>

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<sup>14</sup> Post Note 295, *Climate Change Science*, November 2007

<sup>15</sup> Intergovernmental Panel on Climate Change, *Climate Change 2007: Synthesis Report, 2007*

<sup>16</sup> Caused by humans

<sup>17</sup> Intergovernmental Panel on Climate Change, *Climate Change 2007: Synthesis Report, 2007*

<sup>18</sup> International Alliance of Research Universities, *Synthesis Report from Climate change: Global Risks, Challenges, and Decisions*, March 2009

The UN Environment Programme published a *Climate Change Science Compendium* in September 2009 summarising the findings of around 400 peer-reviewed papers or publications from scientific institutions that have been published since the IPCC report. The report concluded:

An analysis of the very latest, peer-reviewed science indicates that many predictions at the upper end of the IPCC's forecasts are becoming ever more likely. Meanwhile, the newly emerging science points to some events thought likely to occur in longer-term time horizons, as already happening or set to happen far sooner than had previously been thought.<sup>19</sup>

Some of the findings of the report included:

- Researchers have become increasingly concerned about ocean acidification linked with the absorption of carbon dioxide in seawater and the impact on shellfish and coral reefs. Water that can corrode a shell-making substance called aragonite is already welling up along the California coast decades earlier than existing models predict.
- Losses from glaciers, ice-sheets and the Polar Regions appear to be happening faster than anticipated, with the Greenland ice sheet, for example, recently seeing melting some 60 percent higher than the previous record of 1998.
- The growth in carbon dioxide emissions from energy and industry has exceeded even the most fossil-fuel intensive scenario developed by the IPCC at the end of the 1990s. Global emissions were growing by 1.1 percent each year from 1990-1999 and this accelerated to 3.5 percent per year from 2000-2007.
- The observed increase in greenhouse gas concentrations are raising concern among some scientists that warming of between 1.4 and 4.3 degrees Centigrade above pre-industrial surface temperatures could occur. This exceeds the range of between 1 and 3 degrees perceived as the threshold for many "tipping points", including the end of summer Arctic sea ice, and the eventual melting of Himalayan glaciers and the Greenland ice sheet.
- Recent estimates of the combined impact of melting land-ice and thermal expansion of the oceans suggest a plausible average sea level rise of between 0.8 and 2.0 metres above the 1990 level by 2100. This compares with a projected rise of between 18 and 59 centimetres in the last IPCC report, which did not include an estimate of large-scale changes in ice-melt rates, due to lack of consensus.<sup>20</sup>

*The Copenhagen Diagnosis*, published in November 2009, is also a summary of the most recent scientific findings. Many of the authors have worked on previous IPCC reports. The report echoed the findings of the UN Climate Change Science Compendium. With regard to the increase in emissions it concluded that on current trends the chances of limiting temperature increases to 2°C were reduced:

Global carbon dioxide emissions from fossil fuels in 2008 were nearly 40% higher than those in 1990. Even if global emission rates are stabilized at present day levels, just 20 more years of emissions would give a 25% probability that warming exceeds 2°C. Even

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<sup>19</sup> UNEP, [Climate Change Science Compendium](#), September 2009

<sup>20</sup> *ibid*

with zero emissions after 2030. Every year of delayed action increase[s] the chances of exceeding 2°C warming

The report also highlighted the issue of “tipping points” within the climate system:

Several vulnerable elements in the climate system (e.g. continental ice-sheets, Amazon rainforest, West African monsoon and others) could be pushed towards abrupt or irreversible change if warming continues in a business-as-usual way throughout this century. The risk of transgressing critical thresholds (“tipping points”) increase strongly with ongoing climate change. Thus waiting for higher levels of scientific certainty could mean that some tipping points will be crossed before they are recognized.<sup>21</sup>

### **Air temperatures**

The Climate Change Congress concluded that global average surface air temperatures are increasing in line with projections:

2008 was comparatively cooler than the immediately preceding years, primarily because there was a minimum in the cycle of the sun’s magnetic activity (sun spot cycle) and a La Niña event in 2007/2008. Nevertheless, the long-term trend of increasing temperature is clear and the trajectory of atmospheric temperature at the Earth’s surface is proceeding within the range of IPCC projections.<sup>22</sup>

The Met Office said that all years from 2000 to 2008 have been in the top 14 warmest years on record, but recognised that:

After 1998, however, warming slowed significantly - trends over the past 10 years show only a 0.07 °C increase in global average temperature. Although this is only a small increase, it indicates that there has been no global cooling over this period. In fact, over the past decade, most years have remained much closer to the record global average temperature reached in 1998 than to temperatures before the 1970s. All the years from 2000 to 2008 have been in the top 14 warmest years on record.

After three decades of warming caused by man-made greenhouse gas emissions, why would there suddenly be a period of relative temperature stability — despite more greenhouse gases being emitted than ever before? This is because of what is known as internal climate variability. In the same way that our weather can be warm and sunny one day, cool and wet the next, so our climate naturally varies from year to year, and decade to decade.

There are a huge number of factors which cause this variability in our climate, but one of the most important is the El Niño phenomenon and its counterpart, La Niña. El Niño years see a shift in Pacific Ocean currents which results in the surface of the ocean heating, creating a warming effect. La Niña brings cooler water to the surface and creates a cooling effect. These processes happen in cycles over many years and, depending on which is in force at the time, can significantly affect global temperatures.

In 1998 El Niño was at a 20th-century peak, which contributed to record global temperatures seen that year. Many climate sceptics point to the fact that 1998 was the warmest year on record, and say that because no year has topped that since, there must have been global cooling. However, to look at one year in isolation is effectively

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<sup>21</sup> [The Copenhagen Diagnosis, 2009: Updating the world on the Latest Climate Science](#). I. Allison *et al*, November 2009

<sup>22</sup> International Alliance of Research Universities, [Synthesis Report from Climate change: Global Risks, Challenges, and Decisions](#), March 2009

seizing on an extreme of natural variability and using that to judge long-term climate. It's the underlying trend that is important, which is why you can only make judgements over longer periods of time.<sup>23</sup>

### **Arctic sea ice**

The Met Office has concluded that while the 2007 sea ice minimum event could not wholly be attributed to climate change, there has been a detectable reduction of sea ice coverage over the past 30 years:

The long-term trend of reduction is robust - with the first ice-free summer expected to occur between 2060 and 2080. It is unlikely that the Arctic will experience ice-free summers by 2020.

Analysis of the 2007 summer sea-ice minimum has subsequently shown that this was due, in part, to unusual weather patterns. Arctic weather systems are highly variable year-on-year and the prevailing winds can enhance, or oppose, the southward flow of ice into the Atlantic. Consequently, the sea ice has not declined every year, but has shown considerable variability - both in extent and thickness.

The high variability has made it difficult to attribute the observed trend to man-made emissions of greenhouse gases, although there is now enough data to detect a human signal in the 30-year trend. The trend and observed variability, including the minimum extent observed in 2007, is consistent with climate modelling from the Met Office.<sup>24</sup>

## **2.3 Revised climate change impacts**

The Met Office has undertaken modelling to determine what temperature and climatic changes could be expected under current emission trends:

The Met Office study used projections of fossil fuel use that reflect the trend seen over the last 20 years. Their computer models also factored in new findings on how carbon dioxide is absorbed by the oceans and forests. The results show a "best estimate" that 4°C (measured from pre-industrial times) will be reached by 2070, with a possibility that it will come as early as 2060.<sup>25</sup>

An article by Professor Stephen H. Schneider in *Nature* magazine outlined the possible impacts associated with this degree of warming:

With warming of just 1–3 °C, projections show a mixture of benefit and loss. More than a few degrees of warming, however, and aggregate monetary impacts become negative virtually everywhere; and in a 1,000 p.p.m. scenario current literature suggests the outcomes would be almost universally negative and could amount to a substantial loss of gross domestic product. Millions of people at risk from flooding and water supply problems would provide further economic challenges.<sup>26</sup>

The Met Office said that the temperature increase would not be the same across the globe:

In some areas warming could be significantly higher (10 degrees or more).

- The Arctic could warm by up to 15.2 °C for a high-emissions scenario, enhanced by melting of snow and ice causing more of the Sun's radiation to be absorbed.

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<sup>23</sup> The Met Office, [Global temperature slowdown — not an end to climate change](#), November 2009

<sup>24</sup> The Met Office, [The decline in Arctic summer sea ice](#), 15 October 2009

<sup>25</sup> BBC News ["Four degrees of warming 'likely'"](#), 28 September 2009

<sup>26</sup> Stephen Schneider, "The worst-case scenario", *Nature*, 30 April 2009

- For Africa, the western and southern regions are expected to experience both large warming (up to 10 °C) and drying.
- Some land areas could warm by seven degrees or more.
- Rainfall could decrease by 20% or more in some areas, although there is a spread in the magnitude of drying. All computer models indicate reductions in rainfall over western and southern Africa, Central America, the Mediterranean and parts of coastal Australia.
- In other areas, such as India, rainfall could increase by 20% or more. Higher rainfall increases the risk of river flooding.

Dr Betts added: "Together these impacts will have very large consequences for food security, water availability and health. However, it is possible to avoid these dangerous levels of temperature rise by cutting greenhouse gas emissions. If global emissions peak within the next decade and then decrease rapidly it may be possible to avoid at least half of the four degrees of warming."<sup>27</sup>

The Department of Energy and Climate Change (DECC) and the Foreign Office have produced a map - available on the DECC website - based on the Met Office data, which highlights the global impacts of a 4°C rise in average temperatures.<sup>28</sup>

## 2.4 Climate change targets

The UK Government has said that it will seek to keep the global average temperature increase to less than 2°C.<sup>29</sup>

In view of the 2007 IPCC report the Environmental Audit Committee summarised what this would mean in practice:

The IPCC report indicates that if we are to have a [50%] chance of avoiding [a temperature rise greater than 2 °C], global emissions would have to peak and start to decline by 2015, reducing globally by 50-85% in 2050 (from 2000 levels). Annex 1 countries would have to reduce emissions by 25-40% by 2020 and 80-95% by 2050. Non-Annex 1, or developing, countries would in many cases still be permitted to increase their emissions, but at a slower rate. However, reducing emissions by these amounts might still only give us a 50% chance of avoiding dangerous climate change. Reducing these odds would require more stringent targets and earlier emissions reductions.<sup>30</sup>

The *Climate Change Act 2008* has created a legally binding target in the UK of at least an 80% cut in greenhouse gas emissions by 2050 and a reduction in emissions of at least 34 percent by 2020, compared with 1990 levels.

## 3 The Bali Roadmap

The agreement by the members of the UNFCCC to negotiate a successor to the Kyoto Protocol was reached in Bali in 2007. The meeting's main aim was to agree to put in place a new global climate policy for beyond 2012, when the Kyoto Protocol expires. This was

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<sup>27</sup> [Four degrees and beyond](#), The Met Office, 28 September 2009

<sup>28</sup> DECC, [Climate map shows impacts if we fail to limit dangerous climate change](#), 22 October 2009

<sup>29</sup> [Government's key climate change initiatives](#), Act on CO2, November 2009

<sup>30</sup> Environmental Audit Committee, [Reaching an international agreement on climate change](#), 1 July 2008, HC 355, 2007-08

achieved. The so called “Bali Roadmap” set a target of reaching agreement at the Copenhagen conference due to take place in December 2009.

However, there was no mention in the agreed text of specific targets for cuts in emissions by 2050 as was proposed by the EU and the UK. Instead a footnote to the sentence reading:

deep cuts in global emissions will be required to achieve the ultimate objective of the Convention and emphasizing the urgency to address climate change as indicated in the Fourth Assessment Report of the Intergovernmental Panel on Climate Change.

referred to several pages in the IPCC 2007 AR4 report. The conclusion from the meeting was summarised as follows by *ENDS Report*:

The “Bali Roadmap”, agreed at the Bali Climate Summit by more than 180 countries, contains no targets for emissions cuts, but does include a mandate to negotiate new binding objectives for developed countries, including the US. It also requires “measurable, reportable, and verifiable nationally appropriate mitigation actions” from developing countries.

The roadmap sets the talks a deadline of the end [of] 2009 to conclude, to give time for governments to ratify the treaty to allow it to come into force in 2013, when existing commitments under the Kyoto Protocol expire. Other key areas for negotiation identified include: funding to help developing countries adapt to climate change, technology transfer and halting deforestation.

The UK and the EU had wanted developed countries to cut their emissions by 25-40% by 2020 and for global emissions cuts of 50% by 2050. But the US, backed by Canada, Japan and Russia refused to accept any reference to the level of cuts required or to sign up to an agreement that did not require action on the part of big developing countries, which in turn insisted that developed countries take the lead.

As a result, the talks, due to finish on Friday, continued through the night and into Saturday. In the end the US found itself completely isolated when all other parties backed a compromise agreement that neither quantified the level of cuts from developed countries or required reductions from developing countries.

At the last minute the US signed up to the deal on the table. But later that day the White House issued a statement insisting that big developing countries have to take action too.

Meanwhile, in parallel negotiations, Annex I signatories to the Kyoto Protocol including the UK, agreed to negotiate future commitments to cut their emissions between 25-40% by 2020.

UK Environment Minister Hilary Benn said, “For the first time ever all the world’s nations have agreed to negotiate on a deal to tackle dangerous climate change concluding in 2009.” But NGOs were not impressed. “Without a clear range for the global emissions cuts needed, this deal fails to keep us from the brink of exceeding 2°C of warming.” said Antonio Hill from Oxfam.<sup>31</sup>

The final text of the agreed [Bali Action Plan](#) can be found on the UNFCCC website.<sup>32</sup>

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<sup>31</sup> *Ends Report*, “Talks but no targets from Bali”, 20 December 2007

<sup>32</sup> UNFCCC, [Decision-/CP.13 Bali Action Plan](#)

## 4 Copenhagen - EU position

The EU has committed to reducing emissions by 20% by 2020 regardless of any agreement in Copenhagen. If agreement is reached it will commit to a reduction of 30% by 2020. The European Council agreed the following position on the Copenhagen conference on 20 March 2009:

25. The European Union remains committed to playing a leading role in bringing about a global and comprehensive climate agreement in Copenhagen in December 2009 designed to limit global warming to below 2°C. To this end, the European Council recalls the EU's commitment to a 30% emission reduction as its contribution to such an agreement provided that other developed countries commit themselves to comparable emission reductions and that advanced developing countries contribute adequately according to their responsibilities and respective capabilities. The Council conclusions of March 2009 set out in more detail the efforts the EU expects from developed and developing countries, including the need for the overall target for developed countries to be distributed in a manner that is fair and ensures the comparability of efforts.

26. The European Council emphasises the importance of building a global carbon market, including a reformed Clean Development Mechanism.

27. Significant domestic and external sources of finance, both private and public, will be required for financing mitigation and adaptation actions, particularly in the most vulnerable developing countries. The European Union will take on its fair share of financing such actions in developing countries. Future discussions on generating financial support should focus on, inter alia, different approaches, including a contributory approach based on an agreed scale, market-based approaches based on auctioning arrangements or a combination of these and other options.<sup>33</sup>

It has since updated its position following the latest meeting of the UNFCCC that took place in Barcelona in November 2009:

The EU has shown leadership by committing unconditionally to cut its emissions to at least 20% below 1990 levels by 2020. It is implementing the climate and energy package (see IP/09/628 ) as well as a programme of energy efficiency measures to achieve this. Moreover, it has committed to scale up its emission cut to 30% on condition that other industrialised countries agree to make comparable reductions and developing countries contribute adequately to a global deal.

However, emission targets put forward by industrialised countries so far add up to a reduction of only around 10-17% below 1990 levels by 2020, while the more economically advanced developing countries have offered little in terms of concrete action to control their emissions.

The European Council of 29-30 October committed the EU and Member States to contribute a fair share of the estimated €22-50 billion in additional international public finance that developing countries will need annually by 2020 under an ambitious agreement. All countries, except the least developed, should contribute to this total through an agreed global contribution key based on countries' emission levels and ability to pay. Emission levels should have a considerable weight in the key and this should increase over time. Developing countries would be net recipients of international public finance.

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<sup>33</sup> EU Commission, Presidency Conclusions of the Brussels European Council (19/20 March 2009). 7880/1/09 REV 1, 29 April 2009

The EU is also committed to providing its fair share of 'fast-start' financing to help developing countries build up their capacities to combat climate change over the period 2010-2012. The EU's contribution will be decided in the light of the outcome of the final agreement. The European Commission estimates a global total of €5-7 billion could be needed annually over the three years following an ambitious global agreement.<sup>34</sup>

## 5 UK Government priorities

The Government's priorities for the Copenhagen agreement were set out in its announcement of the publication of *The Road to Copenhagen* on 26 June 2009:

i) Ambitious action to reduce emissions. Global emissions must peak and start to fall before 2020 and be at least 50 per cent. below 1990 levels by 2050, if temperature increases are to be limited to no more than 2 degrees. The Government are therefore calling for firm, binding targets from developed countries; and significant action by developing countries with appropriate support from developed countries, to reduce their emissions below "business as usual" levels.

ii) A reformed, expanded carbon market to support emissions reductions, and action to extend flows of carbon market finance over time, including: the establishment of new sectoral carbon trading systems in advanced developing countries by 2020 at the latest; sectoral crediting in other developing countries where appropriate; and a reformed clean development mechanism.

iii) A new international framework for low-carbon technologies to be more rapidly developed and deployed; including new low-carbon development strategies in which individual countries assess their own technology needs; capacity building support; and incentives to encourage international collaboration.

iv) Commitments to deep reductions in emissions from deforestation, halving tropical deforestation by 2020 and achieving zero net loss of forest by 2030; with new short-term financing mechanisms; and more comprehensive arrangements to account for emissions reductions from deforestation and land use.

v) Enhanced support for developing countries to adapt to climate change, with adaptation integrated into national development planning processes; support for developing countries in prioritising their own adaptation needs; and greater international support for better sources of information on climate risks and adaptation expertise.

vi) Commitment to provide international finance that is adequate, additional, predictable and timely, through a combination of sources including the carbon market, potential new automatic mechanisms, and a small, limited proportion of official development assistance (ODA). All countries except the least developed should contribute, using a transparent and dynamic formula based on emissions and ability to pay, and based on the understanding that developing countries will receive significantly more than they contribute. The UK remains committed to our target of providing 0.7 per cent. of our gross national income as ODA by 2013 and will provide finance for climate change that is new and additional to this. All ODA will be climate proofed and up to 10 per cent. of ODA will be used for activities which achieve both poverty reduction and climate objectives.

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<sup>34</sup> EU Commission, *The Copenhagen climate change negotiations: EU position and state of play*, 9 November 2009

vii) Reformed international institutional arrangements which ensure an equal voice for developing countries and that decisions on spending priorities are made at the country level; simple, efficient and effective mechanisms for allocating finance to priority areas and countries that need them most, consistent with international standards of financial management; and robust monitoring, reporting and verification arrangements.<sup>35</sup>

*The Road to Copenhagen* is available on the [DECC website](#).<sup>36</sup>

## 6 Other key players

### 6.1 United States

The new US administration has signalled its intention fully to participate in the negotiations. As part of this it established the Major Economies Forum on Energy and Climate (MEF) which includes the world's 17 most significant emitters.<sup>37</sup> The Forum is:

intended to facilitate a candid dialogue among major developed and developing economies, help generate the political leadership necessary to achieve a successful outcome at the December UN climate change conference in Copenhagen, and advance the exploration of concrete initiatives and joint ventures that increase the supply of clean energy while cutting greenhouse gas emissions.<sup>38</sup>

The Forum met in April, May and June 2009 and then at the G8 meeting in July 2009 in Italy.

Domestically the US Government is in the process of passing a Climate and Energy Bill that would introduce a cap and trade system for emissions. The original aim was to have the legislation passed before the conference in Copenhagen. However the process has been put on hold in the Senate whilst the Environment Protection Agency spends five weeks examining the costs of implementation. As a result the Bill will not become law before the conference. This may hamper the US negotiating position as it will not have a domestic mandate.<sup>39</sup> The delay also has implications for the longer term as there is strong opposition to the Bill and there are congressional elections due in the US in November 2010. As a result the general view from commentators is that the Bill would have to be passed before March 2010 or is unlikely to be successful.

Although there is a long term commitment from the US to reduce emissions by 80% by 2050 compared with 1990 levels, the Bill so far only commits to reduce emissions by 17% below 2005 level by 2020, which is equivalent to around a 4% reduction compared to 1990 levels. The US has also called for an international agreement based on domestic legislation - rather than an internationally binding Kyoto style agreement. Developing countries are reported to be completely opposed to this:

Developing nations insist that nations are negotiating a second commitment period to the Kyoto Protocol, the first part of which ends in 2012. Under the set of rules outlined in that 12-year-old agreement, industrialized countries must slash their CO2 emissions, but developing nations -- even fast-growing ones like China and India -- are under no such obligation.

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<sup>35</sup> HC Deb 26 June 2009 c76WS

<sup>36</sup> [Road to Copenhagen](#), DECC webpage [on 2 December 2009]

<sup>37</sup> The 17 major economies participating in the Major Economies Forum are: Australia, Brazil, Canada, China, the European Union, France, Germany, India, Indonesia, Italy, Japan, Korea, Mexico, Russia, South Africa, the United Kingdom, and the United States. Denmark and the United Nations have also been invited to participate.

<sup>38</sup> US Department of State, [Major Economies Forum on Energy and Climate webpage](#), [on 2 December 2009]

<sup>39</sup> *Guardian*, [US puts climate debate on hold for five weeks despite plea by Merkel](#), 2 November 2009

The United States never became a party to Kyoto, largely because of that omission. Since President Obama took office in January, administration officials have pledged to become part of a new international agreement. But they have also consistently called for a new deal to replace Kyoto. America's terms: Major developing nations must make legally binding commitments to temper their own global warming pollution.

In Bangkok this week, U.S. officials openly floated the idea of a new system of national climate plans. Meanwhile, State Department deputy climate envoy Jonathan Pershing explicitly said Kyoto should be scrapped.<sup>40</sup>

The US administration is also involved in direct dialogue with China with the aim of reaching agreement on the way forward. However, there are reports that while the US has accepted that China does not need to commit to actual cuts in emissions, the Chinese are unhappy about the levels of cuts that the US is willing to agree to. Hillary Clinton has also travelled to India for a strategic dialogue with that country on various issues, including climate change.<sup>41</sup>

There was a great deal of frustration with the US position as demonstrated by the calls from the EU at the meeting in Barcelona – the last preparatory meeting before Copenhagen - for the US to show leadership and put forward firmer proposals.<sup>42</sup> It has now done this by committing to the 17% targets included in the proposed Bill.

## 6.2 India

In a press interview in June 2009 the Indian Government's special envoy on climate change Shyam Saran set out his views on what needed to be achieved in Copenhagen:

### **What does India want out of the Copenhagen Summit?**

India would like to see a comprehensive, balanced, and above all, an equitable outcome at Copenhagen. It must be comprehensive in the sense that it must include action on all four pillars of the Bali Action Plan, that is mitigation, adaptation, finance and technology. And finally, technology will be a key determinant of our success in tackling climate change.

### **What could be a credible wish list?**

That developed countries agree to at least a 40 per cent cut in their emissions by 2020 and over 80-90 per cent by 2050. A climate fund is created through assessed contributions of developed countries, totalling at least 0.5 per cent of their GDP, but ideally 1 per cent of their GDP.

### **Are we perhaps open to committing to some voluntary targets on emission reduction through a big push for solar energy, for instance?**

Given the very low level of energy consumption in our country, it is inevitable that our total and per capita emissions will continue to rise in the foreseeable future, before they peak and decline. Nevertheless, India has consciously embraced the philosophy of sustainable growth. This is why the energy intensity of our GDP growth has been declining over the past decade and more. We have delivered 8-9 per cent of annual GDP growth with a less than 4 per cent per annum growth in our energy use. Our PM has made a commitment, which is not required of us legally even as we pursue our goal of economic and social development and poverty eradication. We will not allow

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<sup>40</sup> ClimateWire, [Potholes in Road to Copenhagen Climate Accord Widen During Bangkok Talks](#), 9 October 2009

<sup>41</sup> *The Economic Times*, [Trip to India to start a strategic dialogue: Clinton](#), 14 July 2009

<sup>42</sup> *Guardian*, [Climate negotiators grow impatient at lack of leadership from America](#), 2 November 2009

our per capita emissions to exceed the average per capita emissions of the developed countries<sup>43</sup>

Whilst India's public position has not changed there have been signs that there is debate within the Government on committing to emission reductions. A letter from the Environment Minister, Jairam Ramesh, to the Indian Prime Minister, Manmohan Singh, leaked to the *Times of India*, called for a softening in the country's negotiating position:

Environment minister Jairam Ramesh, in a confidential letter to the PM, has suggested that India junk the Kyoto Protocol, delink itself from G77 -- the 131-member bloc of developing nations -- and take on greenhouse gas emission reduction commitments under a new deal without any counter guarantee of finances and technology.

This proposal comes just after he wrote to the PM suggesting India permit strict external scrutiny -- just as is done under IMF and WTO -- of the mitigation measures it takes at its own cost.

If accepted by the government, the minister's proposal will radically shift India's stand away from its position on climate negotiations that governments of all political hues have backed since 1990 and which was defended robustly as recently as at the UN talks in Bangkok earlier this month.

The minister has justified the proposed shift of gears by repeating his argument that India need not be seen as a deal-breaker and should try to curb emissions in its own interest. He has also pointed to the advantages -- a permanent seat on the Security Council, for instance -- that it can hope to reap with a changed stance.<sup>44</sup>

### 6.3 China

An article in June 2009 by Xie Zhenhua, vice-director of the National Development and Reform Commission responsible for climate change issues, set out the Chinese Government's approach to dealing with climate change:

In its National Climate Change Program, China set an objective to lower its energy consumption per unit of GDP by 20 percent or so of 2005 level by 2010 and in its Mid-and Long-Term Plan for the Development of Renewable Energy, China also sets an objective of increasing the proportion of renewable energy in the primary energy mix to 10 percent by 2010, and to 15 percent by 2020.

To achieve such objectives, China has adopted a series of effective policies and measures, achieving remarkable progress. Firstly, China succeeded in lowering its energy consumption per unit of GDP by 1.79 percent, 4.04 percent, and 4.59 percent respectively for 2006, 2007, and 2008, which strongly suggests the prospect of meeting the 20 percent objective by 2010.

Secondly, between 2006 and 2008, China shut down small thermal power-generation units with a total installed capacity of 34.21 GW, phased out 60.59 million tons of backward steel-making capacity, 43.47 million tons of iron-smelting capacity, and 140 million tons of cement-production capacity. All of these steps reduced pollution markedly.

Thirdly, between 2000 and 2008, China increased its wind power generating capacity from 340 MW to 10 GW, hydropower from 79.35 GW to 163 GW, and nuclear power from 2.1 GW to 9.1 GW. It has also made great efforts to reduce agricultural and rural

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<sup>43</sup> *Business Standard*, 'India would like to see an equitable outcome at Copenhagen' 30 June 2009

<sup>44</sup> *The Times of India*, [Jairam for major shift at climate talks](#), 19 October 2009

greenhouse gas emissions. Indeed, by the end of 2007, more than 26.5 million rural households were using household biogas digesters, thereby avoiding CO<sub>2</sub> emissions by 44 million tons.

Fourthly, China has increased its carbon sinks by promoting reforestation. China's forest coverage rate increased from 12 percent in the early 1980s to 18.21 percent today.

For this year, China will complete formulating provincial climate change programs throughout the country, promoting effective implementation of the National Climate Change Program. Furthermore, in China's economy stimulus package, 210 billion yuan is allocated for energy conservation, pollutants reduction, and ecosystem protection projects, 370 billion yuan for economic structural adjustment and technology renovation, and 400 billion yuan for new energy-efficient housing that will use environment-friendly materials. Besides, 370 billion yuan will be used to improve rural living standards in an environmentally sound manner and sustainable way.

China is making huge efforts to combat climate change despite the fact that it remains a low-income developing country with a per capita GDP of just about \$3,000. Indeed, by United Nations standards, China still has 150 million people living in poverty. China has no other choice but to pursue sustainable development in order to meet the basic needs of its people and to eradicate poverty. In this process, the world is assured that China will make every effort to address climate change.<sup>45</sup>

China's detailed position on the Copenhagen conference was published on the National Development and Reform Commission's website on 20 May 2009. This includes a section on its views on mitigation measures:

## **Mitigation**

### **(a) Mitigation Commitments by Developed Countries**

- i) Developed countries shall undertake measurable, reportable and verifiable legally-binding deeper quantified emission reduction commitments;
- ii) Given their historical responsibility and development level and based on the principle of equality, developed countries shall reduce their GHG emissions in aggregate by at least 40% below their 1990 levels by 2020 and take corresponding policies, measures and actions;

And:

### **(b) Nationally Appropriate Mitigation Actions by Developing Countries**

- i) Nationally Appropriate Mitigation Actions (NAMAs) by developing countries shall be taken in the context of sustainable development and in line with the legitimate priority needs of developing countries for development and the eradication of poverty;<sup>46</sup>

On financing and technology transfer to developing countries:

- iii) The provision of technology, financing and capacity building support to developing countries is the obligation of developed country Parties under the *UNFCCC*, and the

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<sup>45</sup> Policy Innovations, [China in Action on Climate Change](#), June 2009

<sup>46</sup> [Implementation of the bali roadmap-China's Position on the Copenhagen Climate Change Conference](#), 20 May 2009

government of the developed country shall play the central role and shall not evade its obligation.

China has hinted at the possibility of setting an international target with regard to energy intensity of GDP in a speech by the Chinese President Hu Jintao to the UN in September 2009:

We will endeavour to cut carbon dioxide emissions per unit of GDP by a notable margin by 2020 from the 2005 level. Second, we will vigorously develop renewable energy and nuclear energy. We will endeavour to increase the share of non-fossil fuels in primary energy consumption to around 15% by 2020. Third, we will energetically increase forest carbon sink. We will endeavour to increase forest coverage by 40 million hectares and forest stock volume by 1.3 billion cubic meters by 2020 from the 2005 levels. Fourth, we will step up effort to develop green economy, low-carbon economy and circular economy, and enhance research, development and dissemination of climate-friendly technologies.<sup>47</sup>

The speech in full, which again focused on the issue of common but differentiated responsibility, is available on the Chinese UN website.

## 7 Preparatory meetings

Following on from Bali were several UNFCCC preparatory meetings. Dialogue on the issue has also taken place in other arenas such as the G8, G20 and Major Economies Forum.

### ***Bonn - June 2009***

A preparatory meeting took place in Bonn from 1 to 12 June 2009. During this meeting two documents were prepared and discussed in draft form:

One key document focuses on amendments to the Kyoto Protocol relating to emission reduction commitments of industrialized countries for the second phase of the Protocol (post-2012). A second document covers other related issues, including emissions trading and the project-based mechanisms, and land use, land-use change and forestry.

In the lead up to the meeting the EU reportedly “shied away from an early stance on how it will fund a new treaty”. According to an article in the April 2009 *Ends Europe*, as a result of its experience negotiating the Kyoto Protocol “Europe will only specify its financial contribution to a new global climate treaty once other developed countries have done the same”.<sup>48</sup>

Following the meeting the UNFCCC published a press release summarising progress:

A group focusing on further commitments for industrialised countries under the Kyoto Protocol (AWG-KP) focused on a proposal for amendments to the Kyoto Protocol, including the future emission reduction commitments of 37 industrialized countries for the second phase of the protocol (post-2012).

Good progress was made on options for the treatment of land-use, land-use change and forestry to reduce emissions. But John Ashe, the Chair of the AWG-KP pointed out that this group still needs to decide on the aggregate emission reduction target [for] industrialised countries, along with individual targets.

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<sup>47</sup> [President Hu Jintao's Speech at the Opening Plenary Session of the United Nations Summit on Climate Change](#), 23 September 2009,

<sup>48</sup> *Ends Europe*, EU Treads Carefully in Europe, April 2009.

And:

The UN's top climate change official Yvo de Boer warned that AWG-KP negotiating group was still far away from the emission reduction range that has been set out by science as a beacon to avoid the worst ravages of climate change: a minus 25% to minus 40% reduction below 1990 levels by 2020. "Between now and Copenhagen, the level of ambition needs to be increased. This is still possible if the opportunities for international cooperative action are fully seized" he said.<sup>49</sup>

### **G8 Meeting – July 2009**

The meeting held in Italy on 8 and 9 July 2009 resulted in a declaration from the G8. This set, for the first time, a target for developed countries of reducing emissions by 80% by 2050:

We recognise the broad scientific view that the increase in global average temperature above pre-industrial levels ought not to exceed 2°C. Because this global challenge can only be met by a global response, we reiterate our willingness to share with all countries the goal of achieving at least a 50% reduction of global emissions by 2050, recognising that this implies that global emissions need to peak as soon as possible and decline thereafter. As part of this, we also support a goal of developed countries reducing emissions of greenhouse gases in aggregate by 80% or more by 2050 compared to 1990 or more recent years. Consistent with this ambitious long-term objective, we will undertake robust aggregate and individual mid-term reductions, taking into account that baselines may vary and that efforts need to be comparable. Similarly, major emerging economies need to undertake quantifiable actions to collectively reduce emissions significantly below business-as-usual by a specified year.<sup>50</sup>

With regards to financing any commitments made in Copenhagen they expressed the view:

that all countries, except Least Developed Countries (LDCs), should participate in the financial effort to tackle climate change, according to criteria to be agreed, and we support consideration of the proposal by Mexico.<sup>51</sup>

The full document is available on the G8 Summit website. Details of the proposed Mexican green fund were put forward during the Major Economies Forum meeting held in Mexico in June:

Calderon said the green fund could be administered by the World Bank or some other multilateral agency. It would be funded by contributions from all nations — and open to finance projects from all nations — as opposed to largely private-sector carbon credit market.

"It will have a framework of greater multilateral participation, which will result in a more equitable and efficient distribution of funds," Calderon said. He said the idea "does not seek, as has been traditional, that the funds to fight climate change ... come from the same old donors as an act of charity or a handout given to developing countries." "It is time to move on from mutual reproaches, to a shared scheme of responsibility," Calderon said.

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<sup>49</sup> UNFCCC Press Release, [Progress Made in Negotiations for Ambitious and Effective Copenhagen Deal at Bonn UNFCCC Meeting](#), 12 June 2009

<sup>50</sup> [G8 Leaders Declaration: Responsible Leadership for a Sustainable Future](#), 8 July 2009

<sup>51</sup> Ibid

The amount each country would donate to the fund would be open to negotiation, but rich countries would be expected to give more.<sup>52</sup>

The Major Economies Forum also met at the G8 summit to discuss climate change and agreed a statement. However this did not include any commitment to specific targets. The full statement is available on the summit website.<sup>53</sup>

### ***Bangkok – September 2009***

The UNFCCC meeting that took place in Bangkok in September 2009 failed to produce significant progress. There was still disagreement on what developing countries should commit to on emissions; developing nations want to see a commitment to reduce emissions by developed countries by 40% by 2020 compared with 1990 levels, and clear indications of the level of financing that would be provided for mitigation and adaptation. A UNFCCC press release summarised progress as follows:

Parties made progress on the issues of adaptation, technology transfer and capacity building. They also reached agreement on technical issues such as forests and land use, how to assess the global warming potentials of new greenhouse gases and the number of options for strengthening the Kyoto Protocol's Clean Development Mechanism.

However, little progress was made on the issue of mid-term emission reduction targets for industrialised countries. And clarity is lacking on the issue of finance that developing countries need to undertake additional actions to limit their emissions growth and adapt to the inevitable effects of climate change.

"A good example with regard to what industrialised countries can do to increase the level of their ambition in the context of an international agreement at Copenhagen is the minus 40% emissions reduction target announced by Norway today," the UN's top climate change official said.<sup>54</sup>

### ***Barcelona – November 2009***

This was the final preparatory meeting of the UNFCCC. While progress was made in some of the detail there was little progress in resolving the main areas of contention. This resulted in a call by the Executive Secretary of the UNFCCC for developed countries to raise their ambitions:

"I look to industrialised countries to raise their ambitions to meet the scale of the challenge we face," said Yvo de Boer. "And I look to industrialised nations for clarity on the amount of short and long-term finance they will commit."

According to Yvo de Boer, developed countries would need to provide fast-track funding of the order of at least 10 billion USD to enable developing countries to immediately develop low emission growth and adaptation strategies and to build internal capacity.

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<sup>52</sup> COP15 website, [Mexico pushes for 'green fund'](#), 23 June 2009

<sup>53</sup> G8 Summit, [Declaration of the Leaders the Major Economies Forum on Energy and Climate](#), 9 July 2009

<sup>54</sup> UNFCCC Press Release, [UN Climate Change Negotiations result in more clarity on "bricks and mortar" of Copenhagen agreed outcome, but decisions on finance and mid-term targets remain outstanding](#), 9 October 2009

At the same time, developed countries will need to indicate how they intend to raise predictable and sustainable long-term financing and what their longer-term commitments will be.<sup>55</sup>

And:

“Negotiators must deliver a final text at Copenhagen which presents a strong, functioning architecture to kick start rapid action in the developing world,” said Yvo de Boer. “And between now and Copenhagen, governments must deliver the clarity required to help the negotiators complete their work,” he added.<sup>56</sup>

## 8 Copenhagen Conference

### 8.1 Main issues

The UNFCCC sets out the following four key issues that need to be addressed if the Conference is to succeed in its purpose of negotiating a post-Kyoto agreement

The Copenhagen agreed outcome need not resolve all details, but it must provide clarity on four key issues: The first is clarity on the mid-term emission reduction targets that industrialised countries will commit to. Second, there must be clarity on the actions that developing countries could undertake to limit their greenhouse gas emissions. Third, it must define stable and predictable financing to help the developing world reduce greenhouse gas emissions and adapt to the inevitable effects of climate. And finally, it must identify institutions that will allow technology and finance to be deployed in a way that treats the developing countries as equal partners in the decision-making process.<sup>57</sup>

However there are other issues that also need to be resolved. For example, there is as yet no agreement on when and how emissions should peak:

Countries cannot agree yet on goals for global emissions to peak – whether to include only a long-term goal (2050) or nearer-term goals such as 2015-2020. There is no agreement yet on whether to use a limit based on the increase of temperature, a total level of emissions or an atmospheric concentration of greenhouse gases. Many developed countries and major developing nations say the increase in global temperature should not exceed 2 °C above pre-industrial levels. But close to 100 other nations, including the LDCs and AOSIS [Alliance of Small Island States], argue for a more ambitious goal of no more than 1.5 °C of warming.<sup>58</sup>

#### ***Targets for developed countries***

A press release from the EU Commission included a table summarising the pledges made from developed countries as of 7 September 2009. This concluded that the total pledges made by Annex I countries, compared with 1990 levels, would result in reductions in emissions ranging from 9% to 16.5% by 2020.<sup>59</sup> This is much lower than the commitment to 40% reductions that developing countries are calling for and which the IPCC 2007 report said was necessary to stabilise temperature increases.

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<sup>55</sup> UNFCCC Press Release, [UNFCCC Executive Secretary: Governments can and must deliver strong Copenhagen deal](#), 6 November 2009

<sup>56</sup> *ibid*

<sup>57</sup> UNFCCC Website, [10 frequently asked questions about the Copenhagen deal](#) [on 2 December 2009]

<sup>58</sup> *ibid*, [COP15 for journalists: a guide to the UN climate change summit](#), November 2009.

<sup>59</sup> EU Commission, [The Copenhagen climate agreement: EU positions and state of play](#), 12 October 2009

This figure includes the pledge by the newly elected Government in **Japan** of reducing emissions by 25% by 2020 if an international agreement is reached. It does not include the recent pledge made by **Russia** in a recent EU summit to cut its emissions by 20 to 25% by 2020, up from its previous commitment of 10 to 15%.<sup>60</sup> **Norway** has increased its commitment to reducing emissions by 40% by 2020 up from a previous commitment of 30%.<sup>61</sup> The **US** has now made a pledge consistent with what is proposed in its domestic legislation, which is to reduce emissions by 17% in 2020 compared to 2005 levels, which critics say only equates to a 4% reduction compared to 1990. It has also committed to a 30% reduction, compared to 2005, by 2025 and 42% by 2030.<sup>62</sup>

The dissatisfaction of developing countries with these positions, and the lack of time allotted in the Barcelona meeting to discussing them, resulted in a boycott by a group of 52 African nations:

This issue was brought to a head early in the week when the African Group walked out of the negotiations based on its belief that Annex I pledges were not strong or coherent enough to facilitate further negotiation. The Group felt that there was no way to discuss other issues without first reaching some sort of resolution on this issue. It was only after a deal that the EU helped to broker that the Africans came back to the table with a pledge that 60 per cent of all remaining meetings of the AWG-KP would be dedicated to the issue of Annex I targets. While this agreement enabled the discussions to go forward, the gap between Annex I pledges (particularly if we look at what the U.S. and Canada are likely to put on the table) and developing country demands is still large and will be the central issue of discussion again in Copenhagen.<sup>63</sup>

A further issue of contention is what form a successor agreement should take. Developing countries are very strongly supportive of ensuring any agreement in Copenhagen is seen as a successor to Kyoto, with emission cuts based on 1990 levels and no obligation for them to reduce actual emissions. As already mentioned, some developed countries, including the US, would like to re-negotiate the whole agreement, including base years for emissions, how emissions cuts are implemented and who should be obliged to reduce emissions:

Under the AWG-LCA negotiating track, meanwhile, the United States is also calling for a replacement of economy-wide targets that are internationally binding (like those of the Kyoto Protocol) with a 'pledge and review' approach. Under this proposal, each nation would pledge national actions that are open to some degree of measurement, reporting and verification (MRV) by other countries, and which then combine to create a global total. Such a total may or may not add up to what science demands, and pledging countries would not be internationally bound to adhere to any targets. The US proposal may appeal to some developing nations that are voluntarily reducing their emissions.<sup>64</sup>

### ***Action by developing countries***

Developing countries are concerned about any attempts to impose mandatory international targets on them and point to the difference in per capita emissions and historical emissions as the reasons for this. However, increasingly the more advanced developing countries have put offers on the table

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<sup>60</sup> Euobserver.com, [Russia Makes surprise CO2 pledge at summit](#), 18 November 2009

<sup>61</sup> COP15, [Norway takes over the yellow climate jersey](#), 9 October 2009

<sup>62</sup> The White House, [President to attend Copenhagen Climate Talks](#), 25 November 2009

<sup>63</sup> [ibid](#), [COP15 for journalists: a guide to the UN climate change summit](#), November 2009

<sup>64</sup> [ibid](#)

**Brazil** is considering the option of committing to reducing emissions to 1.7 billion tonnes by 2020 – a 40% reduction compared to business-as-usual.<sup>65</sup> The Government of **Indonesia** has committed to a national climate change action plan "that will reduce our emissions by 26 percent by 2020 from BAU (Business As Usual)." With international support Indonesia could reduce emissions by as much as 41 percent.<sup>66</sup> This was possible because the majority of the country's emissions come from deforestation and therefore they could "change the status of our forest from that of a net emitter sector to a net sink sector by 2030."<sup>67</sup> **South Korea**, which is one of the top ten global emitters, has pledged to cut emissions by 4% a year below business-as-usual, which would result in a reduction of 30% by 2020.<sup>68</sup> **Mexico** pledged in 2008 to reduce emissions by 50% by 2050 compared to 2002 levels.

These commitments were praised by the Swedish Prime Minister in a press release on 21 November 2009:

China, where I will be going for an EU summit with President Hu in a week's time, has in the country's five-year plans included concrete programmes on renewable energy and energy intensity. The 'Action Plan on Climate Change' launched by India last year includes major investments in solar energy and climate change adaptation. Brazil has a target of reducing deforestation by 70 per cent by 2017 and this week, new ambitious figures for emission reductions were presented. A number of developing countries have reported declining emission figures compared to business-as-usual. Indonesia is a very important example of this.<sup>69</sup>

More recently **China** has made a commitment to reducing its carbon intensity per unit of GDP by 40-45% by 2020 compared to 2005 levels. This would result in a reduction from projected business-as-usual emissions but not an actual reduction in emissions.<sup>70</sup>

### ***Funding for mitigation and adaptation***

The Prime Minister made a speech on the publication of *Road to Copenhagen* in which he proposed the creation of a \$100 billion fund to assist developing countries to mitigate and adapt to climate change:

If we are to achieve an agreement in Copenhagen I believe we must move the debate from a stand-off over hypothetical figures to active negotiation on real mitigation actions and real contributions; and an urgent recognition of the needs of the poorest and most vulnerable countries for adaptation finance.

So today I propose we take a working figure for this purpose of around \$100 billion per annum by 2020. I believe the mechanisms I have set out are capable of raising at least this sum - and it is a credible number against which countries can develop their plans.

It would come, as I have set out, from a combination of the carbon market, new and additional sources of predictable finance and a limited amount of development aid. And while the figure of \$100 billion would be for 2020, funds would need to become available from 2013.

On this basis I would urge the leading developing countries to bring forward ambitious and concrete propositions for mitigation actions that could be financed by these sources.

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<sup>65</sup> COP15 Copenhagen, [Brazil speeds up its Copenhagen homework](#), 29 October 2009

<sup>66</sup> AFP, [Climate change measures 'crucial for Asia-Pacific'](#), 29 September 2009

<sup>67</sup> Reuters, [Indonesia CO2 pledge to help climate talks- greens](#), 29 September 2009

<sup>68</sup> COP15, [South Korea pledges 30 percent emissions cut by 2020](#), 17 November 2009

<sup>69</sup> Swedish EU Presidency, [It is time to look ahead and focus on what we can achieve](#), 21 November 2009

<sup>70</sup> COP15, [China sets target to cut carbon intensity](#), 26 November 2009

I would propose that a substantial proportion of the public finance should be earmarked for adaptation for the poorest and most vulnerable countries.

The [full speech](#) is available from the Number 10 website.<sup>71</sup> More recently the Commonwealth Leaders meeting in Trinidad in November 2009 issued a declaration calling for a fund to be set up from 2010 to 2012 with a £6 billion contribution from developed countries. Gordon Brown pledged £800 million as the UK contribution.<sup>72</sup>

Despite this progress the general view is that countries do not want to weaken their negotiating position by putting forward a figure too soon. An EU leaders summit in September 2009 saw backing for a Commission estimate of €100 billion a year by 2020 required to tackle climate problems in developing countries and their agreement to pay their fair share. The Commission's view is that:

three main sources of finance should play a role in meeting these needs. Domestic public and private finance in developing countries could cover 20-40%, the international carbon market around 40% and international public finance could contribute to the remainder.<sup>73</sup>

The UN Secretary General has responded to this pledge and the \$100 billion fund proposed by Gordon Brown in June 2009 by saying "it can be a good start but it needs to be scaled up". The estimate from some development groups is that the figure is nearer \$400 billion.<sup>74</sup>

Lord Stern has called for significant, additional, funding to be made available to ensure climate change and poverty are tackled simultaneously:

Developed countries should show the extent of their commitment by providing \$50bn per year by 2015, rising to \$100bn in 2020, and progressing to around \$200bn during the 2020s as effective low-carbon and adaptation programmes are developed and implemented.

Crucially, financial support should be additional, beyond existing official development assistance. While these might sound like large sums, \$50bn is around 0.1% of the likely gross domestic product of the rich countries in 2015, and is very small compared to the costs we will face if we do not secure a strong international agreement to tackle climate change. The immediate priorities for spending should be halting deforestation, supporting adaptation in Africa and other vulnerable nations, and supporting technological change throughout the developing world.<sup>75</sup>

### **Management of Funds**

In addition to agreeing the level of funding there will have to be agreement on how funds are managed and distributed. Whilst developing countries would like all funding to be managed through the UN, other countries such as the US and Japan are reported to support a central role for the World Bank:

G77 countries and civil society organisations argue that all funding should be under the authority of the UN process and the Conference of Parties (COP) responsible for climate negotiations on decisions to be made in Copenhagen in December. De Nevers [World Bank Environment group] took a different view. "Lawyers have to look over what

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<sup>71</sup> Number 10 website, [Gordon Brown Speech](#), 26 June 2009

<sup>72</sup> *Financial Times*, [Brown makes plea for climate fund](#), 29 November 2009

<sup>73</sup> EU Commission, [Climate change: Commission sets out global finance blueprint for ambitious action by developing nations](#), 10 September 2009

<sup>74</sup> *Guardian*, [UN secretary general calls for increase in pledged funding for climate change](#), 3 November 2009

<sup>75</sup> *Guardian*, [Copenhagen climate conference: Emission impossible](#), 30 November 2009

'under the authority' of the COP really means. However, we would be happy to be 'under the guidance' of the COP."

In an address at the Bank annual meetings, Yvo de Boer, Executive Secretary of the United Nations Framework Convention on Climate Change highlighted the importance of the sunset clauses and encouraged the Bank to show sensitivity to the UNFCCC process as it unfolds. While acknowledging a role for multi-lateral development banks, he called attention to critiques of the World Bank and said that, "developing countries are by and large dissatisfied with the existing governance system. They have pointed out ... that it doesn't safeguard their needs; they don't have an equitable voice in it; disbursement is too slow; and the international financing system is fragmented."<sup>76</sup>

A further issue with regards to funding is ensuring an effective distribution. There have been difficulties in the distribution of the UN Least Developed Countries Fund (LDCF) which is managed by the Global Environmental Facility.<sup>77</sup> Problems with the preparation of National Adaptation Programmes of Action, lack of funds and number of bodies involved have led to complaints from developing countries that there is too much red tape and that they should have more direct access to funds.<sup>78</sup>

A recent assessment by the BBC has found that of the \$410m a year promised in 2001 by developing countries to be paid into the LDCF fund and the Special Climate Fund only \$260m has been paid into the fund so far. Developed countries have argued that funds have also been paid via bilateral and multilateral agreements. These kinds of problems have resulted in calls by the UN Secretary General Ban Ki-Moon for any financing system that is agreed at Copenhagen to be "measurable, reportable and verifiable".<sup>79</sup>

### **Other areas**

#### **REDD**

Greenhouse gas emissions from deforestation are estimated to account for around 20% of total emissions. Addressing this was highlighted as a priority in the Stern Review in 2006 because of the relatively low costs involved compared to other mitigation measures:

A substantial body of evidence suggests that action to prevent further deforestation would be relatively cheap compared with other types of mitigation, if the right policies and institutional structures are put in place.

And:

Policies on deforestation should be shaped and led by the nation where the particular forest stands. But those countries should receive strong help from the international community, which benefits from their actions to reduce deforestation. At a national level, defining property rights to forestland, and determining the rights and responsibilities of landowners, communities and loggers, is key to effective forest management. This should involve local communities, respect informal rights and social structures, work with development goals and reinforce the process of protecting the forests.

Research carried out for this report indicates that the opportunity cost of forest protection in 8 countries responsible for 70 per cent of emissions from land use could

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<sup>76</sup> Brettons Wood Project, [Bank wrestling for control of climate finance](#), 20 November 2009

<sup>77</sup> GEF, [About the GEF](#) [on 2 December 2009]

<sup>78</sup> *Nature*, *The long wait for adaptation money*, 22 October 2009

<sup>79</sup> BBC News, [Climate change help for the poor 'has not materialised'](#), 25 November 2009.

be around \$5 billion per annum initially, although over time marginal costs would rise.<sup>80</sup>

A decision was made at the Bali meeting to work towards the inclusion of reduced emissions from deforestation and forest degradation (REDD) in any agreement reached at Copenhagen. An analysis by the Overseas Development Institute in 2008 highlighted the benefits this approach could bring:

REDD is attractive in three ways. First, the mitigation of climate change. Comparing the value of carbon with the opportunity costs of changes in land use to reduce emissions suggests that huge emissions reductions could be achieved through REDD at relatively low cost.

Second, the conservation of biodiversity, as preserving forests is likely to preserve biodiversity. REDD has the potential for greater financial flows than existing biodiversity financing instruments.

Third, the development perspective. REDD could offer large financial flows to some of the world's poorest countries, with some estimates reaching \$53 billion per year for halving deforestation rates. It also offers a mechanism that encourages these flows to be channelled substantially towards the rural areas that are the most depressed and under-funded sectors of many least-developed countries. It places a value on environmental services that are, at present, undervalued financially or not valued at all.<sup>81</sup>

Before any agreement can be reached there are many issues that have to be addressed; in particular how to enable poorer countries to monitor and protect forests. The issues of land ownership and ensuring the protection of indigenous peoples rights have also been raised. There is also debate about how finance will be channelled to developing countries. Proposals vary from a direct funding to inclusion of forest credits in the carbon markets in various forms. Brazil in particular had expressed concerns about the impacts of any scheme on national sovereignty over its forests, although it has recently shifted its position.<sup>82</sup>

The Environment Audit Select Committee looked at REDD in a report published June 2009. It concluded:

Addressing deforestation is as essential as decarbonising electricity or transport if we are to avoid dangerous climate change. A failure to act on deforestation could double the cost of avoiding dangerous climate change to 2030.<sup>83</sup>

However, it was sceptical that the UN negotiations would lead to actual reductions in deforestation as they were "focused on the creation of a payment mechanism, even though deforestation will continue unless action is also taken on the supply- and demand-side causes". It also cautioned that there are significant risks associated with funding REDD through the carbon market:

At this stage we believe that forest credits should not be permitted in the EU Emissions Trading Scheme. The Government must look at alternative sources of funding, including the hypothecation of EU ETS [auction] revenues. A forest payment mechanism will fail to protect rainforests, and hasten the global extinction crisis, unless

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<sup>80</sup> HM Treasury, *The Stern Review on the Economics of Climate Change*, 30 October 2006

<sup>81</sup> ODI Opinion 118, *The REDD road to Copenhagen: Readiness for what?*, December 2008

<sup>82</sup> COP15 Copenhagen, *Brazil speeds up its Copenhagen homework*, 29 October 2009

<sup>83</sup> Environmental Audit Committee, *Reducing greenhouse gas emissions from deforestation: No hope without forests*, Fifth Report of 2008-09; 16 June 2009

effective safeguards exist to prevent primary forests from being converted to plantations.

Protection of biodiversity and local communities should be a precondition of a country being eligible for forest payments; robust environmental safeguards need to be built into any international agreement on deforestation.

### *Technology Transfer*

The issue of how to facilitate transfer of renewable and low carbon technologies to developing countries will also be discussed at Copenhagen:

Technology will be essential for both mitigating climate change and adapting to its impacts, but the developed countries have most of the advanced technologies and a larger capacity to develop new ones. Parties need to agree ways of transferring technologies to the non-Annex I countries, and a major barrier is disagreement about intellectual property rights (IPRs). The United States says any agreement must not undermine enforcement of IPRs, which it sees as essential incentives for innovation. Developing countries argue for a more flexible approach – such as exemptions from patent protection for vulnerable countries – to enhance the transfers of technology.<sup>84</sup>

## **8.2 Prospects of success**

Increasingly the view is being expressed that agreement of a full treaty will not be possible in Copenhagen. What many expect is for the broad principles to be agreed with the final details agreed in further meetings. In acknowledgement of this, Norway has called for a further meeting to be planned for early 2010, ahead of the next conference of the parties which is not scheduled until December 2010:

"I don't believe we will get a full, ratifiable, legally binding agreement from Copenhagen," Hanne Bjurstrøm tells Reuters, while adding that besides Norway, Sweden – currently holding the EU presidency – also favours a new UN conference in early 2010 if Copenhagen falls short.

Hanne Bjurstrøm emphasizes that both countries are still pressing strongly for a deal to be agreed in Copenhagen. However, most spectators have lowered their expectations. Firstly because it seems little likely that US legislation on climate change can be adopted by the Congress ahead of the Copenhagen conference and secondly since two weeks of UN negotiations in Bangkok last month only provided little progress.

"We need to have a realistic level of ambition. We have only five days of negotiations left [November in Barcelona]. To assume you can negotiate a full-fledged treaty in five days is unrealistic," Yvo de Boer, Executive Secretary of the UN Framework Convention on Climate Change (UNFCCC) said after the Bangkok negotiations.<sup>85</sup>

UN officials have also been reported as privately holding similar views in as much as it is unlikely that a legally binding deal on reducing greenhouse gas emissions will be clinched at the Copenhagen conference.<sup>86</sup>

EU Commission President José Manuel Barroso has also acknowledged that progress before the Copenhagen conference was likely to be limited and told reporters that there is

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<sup>84</sup> iied, [COP15 for journalists: a guide to the UN climate change summit](#), November 2009

<sup>85</sup> Cop15 Copenhagen, [Norway pushes for "COP 15.5"](#), 28 October 2009

<sup>86</sup> Reuters, [U.N. lowers expectations for Copenhagen climate deal](#), 26 October 2009

not going to be a full-fledged binding treaty, Kyoto-type, by Copenhagen: "There is no time for that."<sup>87</sup>

Following this the Danish Prime Minister was reported to have called for a Copenhagen agreement that mandates continued legal negotiations and sets a deadline for their conclusion. He also travelled to Singapore to discuss the issue with world leaders:

Denmark's prime minister, Lars Lokke Rasmussen, the host and chairman of the climate talks, flew overnight to Singapore to pitch the deferral plan to 19 leaders, including Obama and China's president, Hu Jintao, at an unscheduled event during the Asia-Pacific Economic Cooperation summit. He insisted that the Copenhagen talks could still set political targets and outline commitments.<sup>88</sup>

However since then there has been a more positive statement from President Obama when he visited China in mid-November. In a joint press release, President Hu made the following comments:

We also agreed to act on the basis of the principle of the common but differentiated responsibilities and consistent with our respective capabilities to work with other parties concerned to help produce positive outcomes out of the Copenhagen conference.<sup>89</sup>

President Obama followed on by stating:

Our aim there, in support of what Prime Minister Rasmussen of Denmark is trying to achieve, is not a partial accord or a political declaration, but rather an accord that covers all of the issues in the negotiations, and one that has immediate operational effect. This kind of comprehensive agreement would be an important step forward in the effort to rally the world around a solution to our climate challenge. And we agreed that each of us would take significant mitigation actions and stand behind these commitments.

John Prescott, who was the chief negotiator for the UK in Kyoto, wrote in the Guardian:

My recent discussions in the US with Obama's people and Congress members in September, talks in Europe with the Council of Europe, my meetings with China's environmental team as well as discussions in Abu Dhabi with ministers from the Arab oil producing countries last week, convince me all the more that my earlier judgment was right – that we will get an agreement in principle.

I also believe that the EU/China summit, which takes place in a fortnight, has the potential, especially after China's bilateral discussions with Obama, to help secure that agreement at Copenhagen.<sup>90</sup>

Since then President Obama has made statements calling for "an accord that covers all of the issues in the negotiations and one that has immediate operational effect"<sup>91</sup> In addition, at a recent joint press conference of President Obama and the Indian Prime Minister Manmohan Singh in Washington both made a commitment to significant mitigation action:

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<sup>87</sup> *Guardian*, [US puts climate debate on hold for five weeks despite plea by Merkel](#), 2 November 2009

<sup>88</sup> *Guardian*, [Copenhagen climate talks: No deal, we're out of time, Obama warns](#), 15 November 2009

<sup>89</sup> The White House, [Joint Press Statement by President Obama and President Hu of China](#), 17 November 2009

<sup>90</sup> *Guardian*, [Why the Copenhagen conference will be 10 times more difficult than Kyoto](#), 16 November 2009

<sup>91</sup> *Times*, [New emissions deal must go into effect immediately, says Obama](#), 18 November 2009

India and the United States, consistent with their national circumstances, resolved to take significant national mitigation actions that will strengthen the world's ability to combat climate change. They resolved to stand by these commitments.<sup>92</sup>

### ***Heads of State attending***

Over 65 heads of state have confirmed they will be attending the meeting. The Danish hosts have not said who these are but leaders from Australia, Brazil, France, Germany, Indonesia, Japan, Spain and the United Kingdom have already confirmed their attendance.<sup>93</sup> President Obama had said he will attend if his presence could help achieve a deal.<sup>94</sup> He has since announced that he will be attending the beginning of the meeting on his way to collect his Nobel Peace Prize. The timing of his arrival has been criticised by some:

"It will be hugely disappointing if he just turns up in the first week and then disappears," said one official. Another senior official described the timing as "awkward".

"It shows the US is still to one side of the debate - not fully engaged in it," said Henry Derwent, chief executive of the International Emissions Trading Association and former UK special envoy on climate change. "I don't think [other leaders] will enjoy the prospect of not being able to share the limelight with the US president." Greenpeace said it was "the right city, wrong date" and showed Mr Obama was "just not taking this issue seriously".

Some analysts suspect Mr Obama is seeking to gain credit for any success at the summit while being able to distance himself from any failure, but others said it boosted the prospects for a deal.

"We really need a target [on emissions] and financial commitment [to provide help for poor countries] - the earlier the better," said Yvo de Boer, the top United Nations official on climate change. "If he comes in the first week to announce that, it would be a major boost."<sup>95</sup>

The Chinese Premier Wen Jiabao has announced that he will attend the conference.<sup>96</sup>

### **8.3 Business and NGO views**

The Corporate Leaders Group on Climate Change which was set up by the Prince of Wales and is run by the University of Cambridge has issued a Copenhagen Communiqué setting out what they would like to see from an agreement:

- The agreement must establish a global emissions cap and long-term reduction pathway for all greenhouse gas emissions and sources, for the period 2013 to 2050 (with interim targets). These targets will need to be guided by science to ensure global greenhouse gas concentrations are stabilised below critical thresholds [...]
- Developed countries need to take on immediate and deep emission reduction commitments that are much higher than the global average, and which are backed up with credible strategies to de-carbonise their economies. The developed countries need to demonstrate that low-carbon growth is both achievable and

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<sup>92</sup> The White House, [Joint Statement between Prime Minister Dr. Singh and President Obama](#), 24 November 2009

<sup>93</sup> COP15, [Copenhagen conference attracts world leaders](#), 22 November 2009

<sup>94</sup> *Guardian*, [Barack Obama will go to Copenhagen if he can clinch climate deal](#), 10 November 2009

<sup>95</sup> *Financial Times*, [Obama to attend summit but cuts plan disappoints](#), 26 November 2009,

<sup>96</sup> COP 15, [China sets target to cut carbon intensity](#), 26 November 2009

desirable. They must also support the institutions and frameworks that will provide the necessary financial and technological assistance to developing countries.

- Developing countries will need to play their part by drawing up their own emission reduction plans in line with their common but differentiated responsibilities and capabilities. Advanced developing countries should continue to develop low-carbon growth plans, building towards the adoption of appropriate and economy-wide commitments by 2020.<sup>97</sup>

The Group called for strong action without delay:

A strong, effective and equitable international climate framework will stimulate the domestic policy interventions, bilateral and regional deals that are needed as a matter of urgency to deliver on intermediate and long-term reduction targets and accelerate construction of the low-carbon economy. This will unlock the potential of business to do what it does best: to invest profitably, to innovate, and make affordable low carbon products and services to billions of consumers around the world. The more ambitious the framework, the more business will deliver.

The problem of climate change is solvable – many of the technologies required are available today while others can be developed if the right incentives are in place. The policies needed are relatively clear, and the costs of transition are manageable, even in the current economic climate. The one thing we do not have is time. Delay is not an option.<sup>98</sup>

The 806 signatories include companies such as AXA, Skanska, Coca Cola, Dong Energy, Legal & General, BAA and Ferrovial.

The CBI has called for a comprehensive climate change agreement:

The conclusion of a comprehensive global climate change agreement to replace the Kyoto Protocol which expires in 2012 is essential. If well designed, it will ensure the long-term competitiveness of British business and unlock the potential of a low-carbon future. A robust agreement will create a market for low-carbon technologies that could be worth \$1 trillion in the first five years of its implementation.<sup>99</sup>

It also highlighted what it views as the priorities for negotiations:

1. Creating business opportunity by providing long-term confidence
2. Improving and expanding market mechanisms to deliver efficient low-carbon growth
3. Building a level playing field to enhance UK competitiveness
4. Unlocking investment to deliver low-carbon innovation.<sup>100</sup>

The International Chamber of Commerce also called for a deal to be reached at Copenhagen:

Tania Baumann, Director of ICC's UK operations, said: "We welcome the Government's continued commitment to securing a deal at Copenhagen. For international business it is imperative that we get an agreement that provides real

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<sup>97</sup> Corporate Leaders on Climate Change, [The Copenhagen Communiqué](#) on Climate Change, as of 30 November 2009.

<sup>98</sup> *ibid*

<sup>99</sup> CBI, [Opportunity knocks: business expectations for a global climate change agreement in 2009](#), December 2008

<sup>100</sup> *ibid*

certainty for climate-friendly investments and safeguards international trade. There is a risk that Copenhagen is beginning to echo the Doha trade round”.

The business organisation—which represents companies in some 130 countries worldwide—voiced its concern regarding possible ramifications for the world economy of a failure to reach a global deal at Copenhagen.

Ms. Baumann added: “Beyond the direct impacts of climate change, there is a danger that variances in national climate policies will lead to the fragmentation of the global economy. An ambitious and inclusive deal is required to safeguard international trade and promote sustainable long-term growth”.

For ICC, a deal at Copenhagen must include: mid- and longer-term commitments for all countries taking into account differing national circumstances; finance from rich to poor countries for emissions reductions; frameworks to promote innovation and protect IP; and governance mechanisms to monitor delivery.

“The commitments agreed by EU leaders last year provide the perfect footing for the Government to take a lead in forging a successful deal in Copenhagen. We urge all countries to show a level of ambition commensurate with the EU’s emissions targets. The sooner the international community gets its act together to seal a deal, the better”<sup>101</sup>

A group of international NGOs including Greenpeace and WWF have put forward their view on what shape an agreement would need to take to limit return emissions to 1990 levels by 2020 and therefore minimise the risks of a temperature increase above 2°C:

- The annual global carbon budget in 2020 from all sources of greenhouse gases (not counting those controlled by the Montréal Protocol) would be no higher than 36.1 Gt CO<sub>2</sub>e, roughly equal to 1990 levels, and would need to be reduced to 7.2 Gt CO<sub>2</sub>e in 2050, in other words by 80 % below 1990 levels.
- To keep the annual reduction rates between 2010 and 2050 achievable, total global greenhouse gas emissions would need to peak in the 2013-2017 commitment period and decline thereafter.
- To achieve this, Annex-I fossil fuel and industrial greenhouse gas emissions would have to drop from present levels rapidly and be almost fully phased out by 2050. Deforestation emissions would need to be reduced globally by 75% or more by 2020. Non-Annex-I fossil fuel and industrial greenhouse gas emissions would need to peak prior 2020 before beginning to decline, which underlines the large scale MRV support required to make such a peaking possible.<sup>102</sup>

Following proposals by the US and Australia to restructure any ongoing proposals Greenpeace called for any new agreement to follow on from the Kyoto architecture:

An additional linked ‘Copenhagen Protocol’ would set legally binding targets for the USA (which is not part of Kyoto) that would be subject to accounting, verification and compliance procedures comparable to other industrialised countries. This new Protocol would also describe the actions that developing countries should take, defining the financial and technological support industrialised countries must provide to them, as well as set out how adaptation and forest protection will be funded. This kind of two-

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<sup>101</sup> ICC, Business lobby welcomes renewed climate commitments in Queen’s Speech, 18 November 2009

<sup>102</sup> [A Copenhagen Climate Treaty](#): A Proposal for a Copenhagen Agreement by Members of the NGO Community, June 2009

protocol approach was first introduced by Tuvalu and has since been endorsed by the African group.<sup>103</sup>

#### **8.4 How the Conference will work**

The conference at Copenhagen will be the venue for two parallel meetings that come under the umbrella of the United Nations Framework Convention on Climate Change (UNFCCC). The first is the Conference of the Parties (COP) who are signatories to the UNFCCC. The second is the Meeting of the Parties or COP/MOP which is the grouping of members who are signatories to the Kyoto Protocol. The meeting in Copenhagen will be COP 15 and MOP/CMP 5:

The negotiations are in fact two parallel sets of talks. Those covering the UNFCCC as set out in the Bali Action Plan occur in the Ad Hoc Working Group on Long-term Cooperative Action under the Convention (AWG-LCA). Negotiations under Kyoto take place in the Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol (AWG-KP).

A common misconception is that governments are negotiating a replacement for the protocol, or that it is going to expire. In fact, it is just the protocol's first commitment period which ends in 2012. Its structural elements, like carbon markets and compliance mechanisms, as well as the Adaptation Fund (funded mainly by the CDM [Clean Development Mechanism]), have no expiry date.<sup>104</sup>

Participation in meetings is restricted to nominated representatives of Parties, observer States, observer organizations and accredited media. The sessions are not open to the public.

##### *Conference of the Parties (COP)*

This is the governing body of the UNFCCC and has representation from all signatories. It usually meets on a yearly basis and it is responsible for taking all the major decisions with regards to the UNFCCC. The Kyoto Protocol was agreed at COP7 and the decision to move towards a post-2012 agreement was made at COP13 in Bali.

##### *COP/MOP*

The full name of this body is Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol. It consists of all the member countries who have signed the Protocol. The countries that have ratified the UNFCCC but not the Kyoto Protocol, such as the US, can take part as observers. It is the body responsible for making decisions with regards to the Protocol. Meetings take place concurrently with COP meetings.

COP/MOP 3 in Bali resulted in the creation of an Adaptation Fund Board with the role of distributing funds for adaption.<sup>105</sup> The Board has representation from all the different COP groupings and has been meeting since March 2008. The fund is partially financed by 2% of the money raised through the Clean Development Mechanism.<sup>106</sup>

##### *Subsidiary Bodies*

The Subsidiary Body for Scientific and Technical Advice (SBSTA) advises on science and technology and works in areas such as the promotion of the development and transfer of

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<sup>103</sup> Greenpeace briefing, [Keeping Kyoto Kyoto architecture: the US and Australia proposals](#), November 2009

<sup>104</sup> iied, [COP15 for journalists: a guide to the UN climate change summit](#), November 2009

<sup>105</sup> [Adaptation Fund Board website](#)

<sup>106</sup> The CDM allows emission-reduction or removal projects in developing countries to earn certified emission reduction (CER) credits, each equivalent to one tonne of CO<sub>2</sub>. These CERs can be traded and sold, and used by industrialized countries to a meet a part of their emission reduction targets under the Kyoto Protocol.

environmentally-friendly technologies and working to improve the guidelines for preparing emission inventories. It also works closely with the IPCC and functions as a link between the IPCC and the UNFCCC.

The Subsidiary Body for Implementation (SBI) provides advice on all matters regarding implementation. It assesses the overall effectiveness of the convention, and provides advice on financial mechanisms and assistance to non Annex 1 Parties. These two bodies meet at the same time, twice a year and work for both the UNFCCC and the Protocol. Both will meet at Copenhagen and will be SBSTA 31 and SBI 31 respectively.

#### *Ad Hoc Working Groups*

Copenhagen will also be the tenth session of the Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol (AWG-KP 10) and the eighth session of the Ad Hoc Working Group on Long-term Cooperative Action (AWG-LCA 8).

[Resolutions](#) made by all these bodies in Bali can be found on the UNFCCC website as can provisional [agendas](#) for Copenhagen.<sup>107</sup>

#### *The Process*

Currently the negotiating text, on which some progress has been made in recent meetings, consists of pages of square bracketed text which includes the various proposals from different groups. An example of text to be discussed follows:

Option 1: [the obligation of Annex I Parties] [the need for Annex I Parties] [to strive] [that Annex I Parties shall strive] to design policies and measures under Article 2 of the Kyoto Protocol [carefully], consistent with the provisions and principles of the Convention, [in particular its Article 3.5,] in order to [strive to] minimize [the] [negative potential consequences] [adverse effects] [of those policies and measures].<sup>108</sup>

The aim in Copenhagen was, although this may not now be fully achieved, to end up with a single agreed text:

Much of the negotiating text is still comprised of various alternative pieces of wording that are presented in square brackets [like this]. These brackets mean that countries still disagree about the contents. The European Commission's president, José Manuel Barroso, said in September 2009 that: 'If we do not sort this out, it risks becoming the longest suicide note in history.' As each negotiator aims to maximise their country's gain and minimise their concessions, we are left waiting to see who blinks first in the world's biggest poker game.<sup>109</sup>

#### *Meeting schedule*

- Preparatory meetings of some of the country groupings, such as least developed countries (LDC), small island states and the G77, are scheduled to take place between 1 and 6 December.
- Formal proceedings begin on Monday 7 December and are scheduled to last until Friday 18 December. The first half of the first week is allotted to meetings of all the groups mentioned above, with the second half allocated to the meetings of informal

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<sup>107</sup> [UNFCCC website](#)

<sup>108</sup> UNFCCC, [Consideration of information on potential environmental, economic and social consequences, including spillover effects, of tools, policies, measures and methodologies available to Annex I Parties](#), 16 November 2009

<sup>109</sup> [iied, COP15 for journalists: a guide to the UN climate change summit](#), November 2009

groupings. The second week will see a day of meetings by informal groupings followed by the closing session of the working groups and their reports to COP and COP/MOP. This will be followed by a day and a half, starting on 16 December, of a joint high level meeting of both COP and COP/MOP during which countries will make their national statements.

- The final day, on the 18<sup>th</sup>, is scheduled as plenary sessions for COP and then CMP, followed by the adoption of conclusions and decisions by both bodies.

A full [schedule](#) for the meetings for COP15 is available on the UNFCCC website.

## 9 Bilateral agreements

The difficulties that have become apparent in the lead up to the Copenhagen meeting have highlighted the potential role that may be played – in the short term at least – by bilateral agreements. This was recently set out by John DEXHAGE from the International Institute for Sustainable Development recently in one of his briefings:

The real action may be taking place outside the UNFCCC regime. One day after the talks in Barcelona, China met with African countries in Egypt to significantly increase its aid support in Africa, including a strong commitment to invest in clean energy projects across the African continent. So while the U.S. and other developed countries continue to be criticized for not being able to indicate how much they will provide to developing countries to address climate change under the provisions of the UNFCCC, China works outside the regime and enjoys wide-spread and positive publicity on its bilateral ventures.<sup>110</sup>

And:

When all is said and done, at least for the foreseeable future, we are likely to see actions and financing for climate change initiatives being provided through forums outside of the UNFCCC regime as much as inside it. Despite the warnings of Sudan, as Chair of the G77 and China, that the only legitimate forum for negotiating and implementing multilateral actions on climate change is the UNFCCC, the reality is likely to be much different. And over the short term, that might not be the worst of results. It may be the only way we have to move forward toward a stronger international regime over the long term.

A further example of this is the agreement recently announced by the Norwegian Government which will be providing aid and development funding to Guyana that is conditional on it preserving its rainforests:

Guyana and Norway yesterday hailed a historic agreement that will see the Scandinavian country invest \$250m (£150m) to preserve the rainforests of the Latin America nation. With world leaders warning that no legally binding agreement will be possible at the climate summit in Copenhagen next month, the two comparative minnows completed one of the biggest forest conservation deals ever signed.

Both sides signalled their intention to "provide the world with a working example of how partnerships between developed and developing countries can save the world's tropical forests," they said in a joint statement<sup>111</sup>

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<sup>110</sup> IISD, [The Barcelona Negotiations on Climate Change: Where the Spirit is willing?](#), November 2009

<sup>111</sup> *Independent*, [Norway and Guyana sign rainforest deal](#), 19 November 2009

[...]

Under the terms of the agreement with Norway, Guyana will accelerate its efforts to limit forest-based greenhouse gas emissions and protect its rainforest as an asset for the world. Norway will provide financial support of up to \$250m over five years in line with the Jagdeo administration's success in implementing limiting emissions and halting deforestation.<sup>112</sup>

The US has also been having bilateral discussions with India and China as previously mentioned. As part of the recent US Chinese summit an agreement was signed to help improve China's ability to monitor its greenhouse gas emissions:

The two nations will cooperate on developing an inventory of China's greenhouse gas emissions, the Environmental Protection Agency announced Wednesday, according to the Washington Post.

The initiative appears to be a response to criticism of Beijing's data collection, the newspaper writes, mentioning that several US senators have questioned whether they will be able to trust any greenhouse gas reductions that China reports to the international community.<sup>113</sup>

The US has also recently announced a clean energy pact with India to enhance cooperation on energy security, energy efficiency, clean energy and climate change and which would involve establishing research facilities in both countries.<sup>114</sup>

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<sup>112</sup> *ibid*

<sup>113</sup> COP 15, [China and the US sign deal on monitoring emissions](#), 19 November 2009

<sup>114</sup> CBNews, [India, U.S. Clean Energy Sign Agreement](#), 25 November 2009

## Appendix 1: Country Groupings

Taken from the UNFCCC website.<sup>115</sup>

**Annex I** Parties include the industrialized countries that were members of the OECD (Organisation for Economic Co-operation and Development) in 1992, plus countries with economies in transition (the EIT Parties), including the Russian Federation, the Baltic States, and several Central and Eastern European States.

**Annex II** Parties consist of the OECD members of Annex I, but not the EIT Parties. They are required to provide financial resources to enable developing countries to undertake emissions reduction activities under the Convention and to help them adapt to adverse effects of climate change. In addition, they have to "take all practicable steps" to promote the development and transfer of environmentally friendly technologies to EIT Parties and developing countries. Funding provided by Annex II Parties is channelled mostly through the Convention's financial mechanism.

**Non-Annex I** Parties are mostly developing countries. Certain groups of developing countries are recognized by the Convention as being especially vulnerable to the adverse impacts of climate change, including countries with low-lying coastal areas and those prone to desertification and drought. Others (such as countries that rely heavily on income from fossil fuel production and commerce) feel more vulnerable to the potential economic impacts of climate change response measures. The Convention emphasizes activities that promise to answer the special needs and concerns of these vulnerable countries, such as investment, insurance and technology transfer.

The 49 Parties classified as **least developed countries** (LDCs) by the United Nations are given special consideration under the Convention on account of their limited capacity to respond to climate change and adapt to its adverse effects. Parties are urged to take full account of the special situation of LDCs when considering funding and technology-transfer activities.

### Party Groupings

Each Party to the Convention is represented at sessions of the Convention bodies by a national delegation consisting of one or more officials empowered to represent and negotiate on behalf of their government.

Based on the tradition of the United Nations, Parties are organized into five regional groups, mainly for the purposes of electing the Bureaux, namely: African States, Asian States, Eastern European States, Latin American and the Caribbean States, and the Western European and Other States (the "Other States" include Australia, Canada, Iceland, New Zealand, Norway, Switzerland and the United States of America, but not Japan, which is in the Asian Group).

The five regional groups, however, are not usually used to present the substantive interests of Parties and several other groupings are more important for climate negotiations. Developing countries generally work through the **Group of 77** to establish common negotiating positions. The G-77 was founded in 1964 in the context of the UN Conference on Trade and Development (UNCTAD) and now functions throughout the UN system. It has over 130 members. The country holding the Chair of the G-77 in New York (which rotates every year) often speaks for the G-77 and China as a whole. However, because the G-77 and China is a diverse group with differing interests on climate change issues, individual developing countries also intervene in

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<sup>115</sup> UNFCCC, [Party Groupings](#), as of 1 December 2009

debates, as do groups within the G-77, such as the African UN regional Group, the Alliance of Small Island States and the group of Least Developed Countries.

The **Alliance of Small Island States** (AOSIS) is a coalition of some 43 low-lying and small island countries, most of which are members of the G-77, that are particularly vulnerable to sea-level rise. AOSIS countries are united by the threat that climate change poses to their survival and frequently adopt a common stance in negotiations. They were the first to propose a draft text during the Kyoto Protocol negotiations calling for cuts in carbon dioxide emissions of 20% from 1990 levels by 2005.

The 49 countries defined as **Least Developed Countries** by the UN regularly work together in the wider UN system. They have become increasingly active in the climate change process, often working together to defend their particular interests, for example with regard to vulnerability and adaptation to climate change.

The 27 members of the **European Union** meet in private to agree on common negotiating positions. The country that holds the EU Presidency - a position that rotates every six months - then speaks for the European Community and its 27 member states. As a regional economic integration organization, the European Community itself can be, and is, a Party to the Convention. However, it does not have a separate vote from its members.

The **Umbrella Group** is a loose coalition of non-EU developed countries which formed following the adoption of the Kyoto Protocol. Although there is no formal list, the Group is usually made up of Australia, Canada, Iceland, Japan, New Zealand, Norway, the Russian Federation, Ukraine and the US. The Umbrella Group evolved from the JUSSCANNZ group, which was active during the Kyoto Protocol negotiations (JUSSCANNZ is an acronym for Japan, the USA, Switzerland, Canada, Australia, Norway and New Zealand).

The **Environmental Integrity Group** (EIG) is a recently formed coalition comprising Mexico, the Republic of Korea and Switzerland.

Several other groups also work together in the climate change process, including countries from the **Organization of Petroleum Exporting Countries** (OPEC), a group of countries of **Central Asia, Caucasus, Albania and Moldova** (CACAM), and countries that are members of organizations such as the League of Arab States and the Agence intergouvernementale de la francophonie.