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briefing papers

Negotiating a robust climate policy

Overcoming national interests for the common good

Luc Werring, November 2009

What outcome can we expect from the Copenhagen negotiations?

The year 2009 was anticipated to be the year of major breakthroughs in the climate change negotiations. Instead, as a result of the financial crisis in 2008, it has been a year of deep international economic recession. Despite the fact that some government monies for economic stimulation have found their way to the energy sector's low carbon projects, the economic predicament that many countries are experiencing has deflected much attention away from the task of deciding on and taking the drastic steps necessary for reducing future global greenhouse gas emissions. In the face of the ongoing economic hardship in some OECD countries, the Copenhagen Climate Conference in December of this year will be a litmus test for the extent to which the world is prepared to take a major 'energy transition' to a future low-carbon world seriously.

Climate scientists around the world and those united in the Intergovernmental Panel on Climate Change (IPCC) agree that landmark decisions are necessary in order to mitigate the potentially severe adverse effects of global climate change. However, at the time of writing (autumn of 2009), the likelihood that such decisions will be made at the upcoming conference does not appear to be very great. Whereas the seriousness of the climate problem is now widely recognized, nations are divided as to what measures have to be taken and how the burden of these measures should be shared.

The fundamental problem of climate change is that most of us still hardly notice it; several more decades will probably pass before we see the real consequences of the decisions we make today (or the lack thereof). Decisions that have more immediate visible effects in related policy areas such as energy supply, competitiveness, foreign policy and economic relations have a much greater political impact, especially since many of these effects will be felt during the political lifetimes of current decision-makers. Therefore, politicians who hold a firm position regarding making early sacrifices to combat climate change, along the lines of the Stern report, may take a higher risk with regard to their political careers than politicians who allow shorter-term energy, economic or foreign policy interests to prevail[1].

With these 'other interests' featuring high in the negotiation process, there is a tendency to play it safe, treading slowly rather than quickly, which in Copenhagen may result in a vague agreement with very long-term targets. Many observers expect an outcome of some commitments being made by industrialized as well as developing countries, but that these commitments will remain far below that what the IPCC considers as necessary now. It seems that the domestic political deliberations in the US and China, among others, mean that these countries are simply not yet ready to make the necessary fundamental steps. Also, given the complexity of the current negotiations and the state in which many of the issues still are, it seems fair to expect that 'Copenhagen' will only present a framework, in which many remaining issues will still need to be resolved in future negotiations. Some NGOs even think that it is better to have such a framework than a quasi agreement that will seal the negotiations for another ten years like Kyoto did.

It will depend crucially on the positions of some key players in the Copenhagen negotiations as to whether a global climate change middle ground will be found at all, and whether such a middle ground will begin to bring about the changes to the global energy system that are suggested by the climate scientists. As such, agreement on a framework could help to continue the engagement of

[1] It appears that the only way to overcome this risk averse tendency to prioritize short-term interests over the longer-term climate change issue is to mobilize public opinion with horrifying stories and exaggerated scenarios about short-term effects of climate change, for instance like Al Gore did in his movie.

countries in the discussions. Also, when a framework is coupled with an agreement about 2050 targets, however vague, if it is combined with the G-8 commitment to limit warming to 2°C, ongoing negotiations are required to realize these. As argued above, the negotiating positions of the key players are not only determined by their *specific* concerns about climate change; behind nations' formal positions in the climate change negotiations, other underlying main interests play an important role. Once firmly engaged in the framework, it could become possible for the parties to overcome some of their major concerns regarding national political and economic interests and to achieve more concrete results in the next climate summit.

Who are the key players in Copenhagen and what drives them?

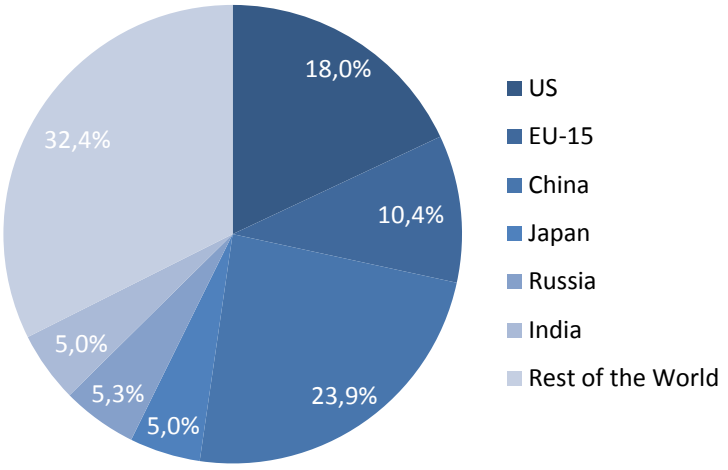
The most important emitters

The key players in the climate change negotiations are those nations that currently have the largest share in greenhouse gas emissions and those that are expected to be the main emitters in the future.

The available data on current greenhouse gas emissions are rather volatile and sometimes difficult to compare. As regards the CO_2 emissions caused by energy and cement production, the Netherlands Environmental Assessment Agency (PBL) recently published a data set from which the following main data can be extracted:

Contribution to global CO_2 emissions

Global CO_2 emissions	*X 1000 mln tonnes*
US	5,69
EU-15	3,28
China	7,55
Japan	1,58
Russia	1,69
India	1,58
Rest of the World	10,23
Total World	31,6



The figures reflected in the graph above show clearly that any agreement without commitments from China, the US and the EU would be pointless.

Source: PBL 2009

Global emissions are anticipated to rise in the future, in particular due to emission increases in developing countries. Overall emissions in China and India are projected to rise most strongly in the coming decades. This is because of their economic development as well as their sheer size in geographic and demographic terms. In 2030, China might be responsible for one-third of global emissions and by far overtake the traditional position of the United States and the EU as the world's largest emitters[2]. India by that time could be world's fourth largest emitter of greenhouse gases.

An argument frequently used by developing countries, including emerging economies such as China and India, is that historic cumulative emissions should be taken into account when sharing the burden of reductions. Indeed, measuring from the industrial revolution, the United States and Europe (EU-25) are currently the parties with by far the largest cumulative overall emissions, at respectively 29 and 27 percent. China and Russia are the third and fourth largest historical emitters, both having a share of approximately 8% in cumulative emissions[3]. China could potentially face having to share this burden if its emissions continue to grow unchecked.

Commitment to climate change policy

The interests nations have in climate change are determined in a narrow sense by their commitments in previous climate change negotiations, by the damage they expect to experience from climate change and by their sense of accountability for the climate change already underway.

Regarding the Kyoto commitment period from 1990 to 2012, it is important to make a distinction between Annex I countries[4] (i.e., countries that have a quantitative emissions reduction obligation) and non-Annex I countries (those that do not have such an obligation). Annex I countries consist of OECD countries and Economies in Transition in Europe. Whereas this first group has to make a serious emissions reduction effort in the commitment period, the latter group, due to the economic downturn after the fall of the Soviet Union, generally easily meets its obligations. The United States is an exception as an Annex I country, because it has signed but not ratified the Kyoto protocol, which formally exonerates it from any emissions reduction obligations.

With regard to expected damage, the IPCC judges the Arctic, Africa, small islands and African and Asian mega deltas to be the most vulnerable to climate change[5]. Looking at these most affected

[2] International Energy Agency, World Energy Outlook, 2008.

[3] Tim Herzog and Jonathan Pershing, *Navigating the numbers*, World Resources Institute, December 2005.

[4] Australia, Austria, Belarus, Belgium, Bulgaria, Canada, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Latvia, Liechtenstein, Lithuania, Luxembourg, Monaco, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Russian Federation, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, United Kingdom, United States of America.

[5] IPCC, 2007: *Climate Change 2007: Synthesis Report*. Contribution of Working Groups I, II and III to the Fourth Assessment; Report of the Intergovernmental Panel on Climate Change [Core Writing Team, Pachauri, R.K. and Reisinger, A. (eds.)]. IPCC, Geneva, Switzerland.

areas, two groups of countries stand out as active players in the negotiations: the small island states and the least developed nations, particularly in Africa, have formed coalitions in the negotiations that represent common positions. However, it seems that the main emphasis of these two groups of countries in the negotiations is now on adapting to the impact of climate change and the necessary funding (an estimated € 80 billion) for adaptation measures.

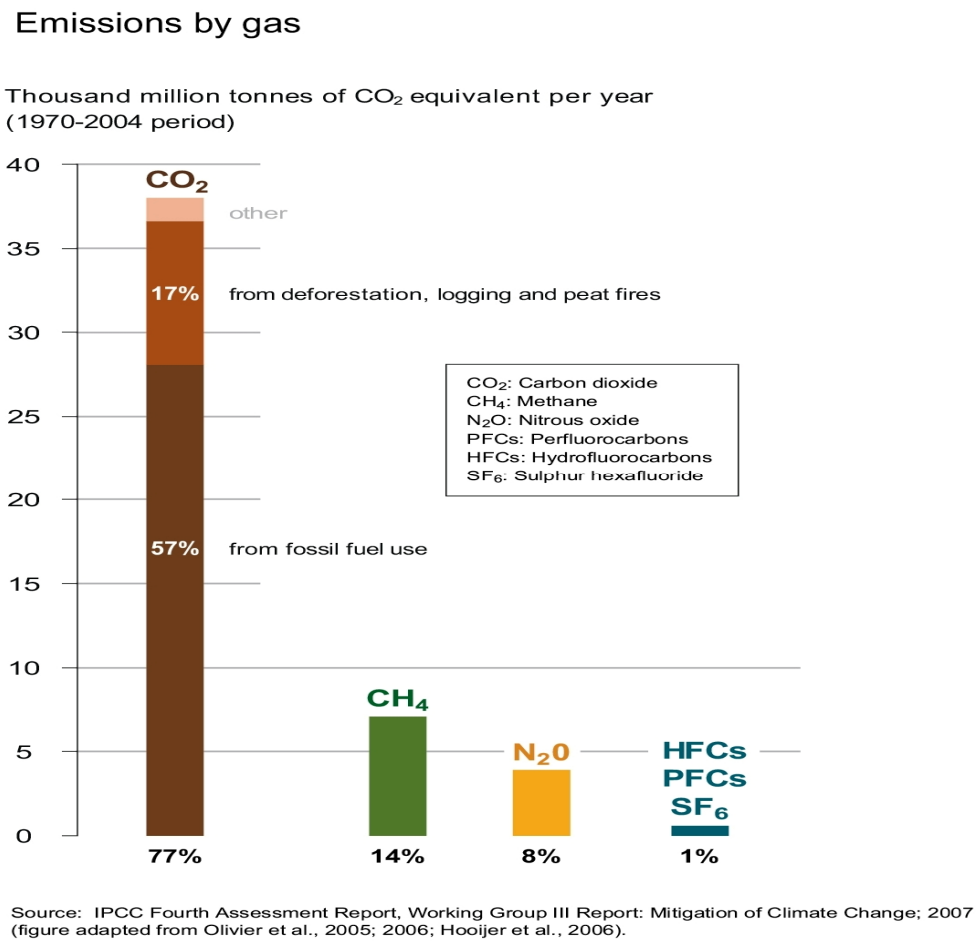
In addition to the concerns of those deemed most vulnerable, other developing and emerging countries are increasingly worried about the effects of climate change. This is not primarily based upon altruistic feelings for the most affected nations, but on self-interest in preventing a great loss of biodiversity, massive immigration from other areas and other long-term effects that will influence their own living conditions. Public opinion in most Western countries is now demanding action, and several governments already take firm positions, albeit without many clear commitments. For these countries, mitigation still has priority, although here, too, a shift in attention towards adaptation can be noticed.

Energy policy interests

The climate change negotiations are a crucial arena for determining the future role of fossil fuels in the energy mix and are therefore of particular importance to the main oil and gas exporting countries, but also to importers. As the figure below shows, the share of energy-related CO_2 emissions in global greenhouse gas emissions is currently near 60%, and this is expected to rise to 68% in 2030[6]. The close relationship of climate change to energy issues is therefore obvious. Fossil fuels currently make up 80% of total energy demand and are projected in a base-case scenario to maintain a similar share until at least 2030[7]. Hence, analysis of energy policies of key nations should provide us with clues about the underlying motivations behind their climate change positions. This concerns interests of consumer countries in security of energy supply as well as interests of producer countries in the stability of demand for fossil energy sources.

[6] International Energy Agency, World Energy Outlook 2008, Paris.

[7] ibid.



Source: IPCC Fourth Assessment Report, Working Group III Report: Mitigation of Climate Change; 2007 (figure adapted from Olivier et al., 2005; 2006; Hooijer et al., 2006).

The current issues in *security of supply*, in the context of global external relations, are mainly focused on dwindling domestic reserves of fossil fuels, in particular oil and gas, and a growing dependency on imports from the Middle East, Russia and other countries, among which politically instable regimes.

The mirror image of security of supply is *security of demand*. Countries that have access to domestic primary energy sources and export at least part of these resources are in need of (stable) markets. This is true in particular for Russia and also many OPEC countries, which depend on the export of oil and gas for up to 95% of their export income and up to 50% of their GDP[8]. This interest is shared, though to a lesser extent, by gas exporters with middle-sized reserves like the Netherlands, and by coal exporters like Australia[9].

[8] Energy Information Administration, Country Analysis Briefs, www.eia.doe.gov/cabs, accessed March 2009.

[9] Countries like the United States, China and India have important coal reserves, but these are mainly used for domestic purposes. The political importance of the latter reserves would therefore probably have to figure under *security of supply*.

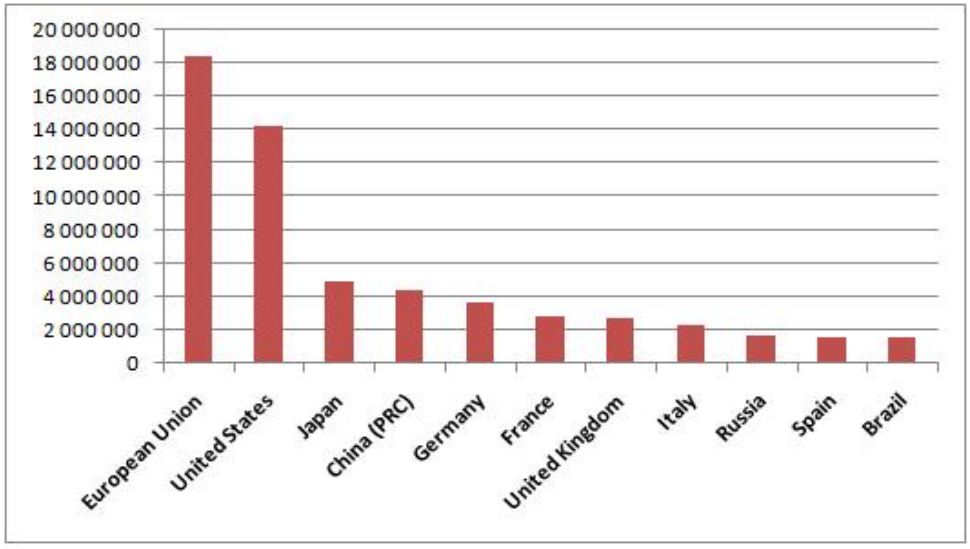
The current constellation of main players in the energy market is shifting. The Caspian Sea region, with newly independent states such as Azerbaijan, Kazakhstan, Turkmenistan and Uzbekistan, is becoming an important oil and gas exporting region. Although the reserves in this region are not as large as those of the Middle East, their independence after the fall of the Soviet Union has made these countries a playing field of Russian, European and United States' interests to secure new flows. Another development is the exploitation of unconventional and deep offshore resources, which has elevated the importance of Canada and Brazil as new oil exporters.

On the demand side, too, large changes are ahead. Historically, the United States, the European Union and Japan have been the largest fossil fuel importers. The bulk of future energy demand growth, however, will come from developing countries. Two key emerging markets, in which energy demand is expected to grow very rapidly in the years to come, are India and China.

Economic policy interests

The first four pre-eminent economic blocks in the world in terms of GDP are the EU, the US, Japan and China, who together produce approximately 70 % of the total global GDP.

GDP in millions of US $ in 2008



A strong climate change agreement would have a very different impact on each of these large economies. Notably, the perceived negative impact of a climate agreement on industrial production and international competition could be one of the stumbling blocks in reaching such an agreement.

The EU is probably prepared to go rather far in committing itself, but just before the G-20 meeting on 22 September 2009, German Chancellor Angela Merkel and French President Nicolas Sarkozy informed Ban Ki-moon of South Korea – just in case not all countries play the same game – that they are considering setting up a form of carbon border tax to protect European industry from unfair competition from countries not working as hard to combat climate change and those refusing to agree to accept their fair share in the collective efforts to reduce greenhouse gas emissions.

Also in the US, the Waxman-Markey bill that passed the House back in June imposes a mandatory carbon tariff on imports from countries that do not adopt their own climate programmes by 2020. It is unclear how the Senate will deal with this issue, as the more ambitious Kerry-Boxer draft that recently was submitted to the House leaves open how to deal with China, India and other developing countries. China and India have clearly prioritized their economic development, although China did indicate that it wants to reduce its energy intensity and is also positioning itself to become an important player in the green industry.

Foreign policy interests

Foreign policy interests encompass a very broad range of issues, including geopolitical position, strategic, competitive and trade relations. Since the 1990s, the traditional bipolar world of the post-World War II period in which a Soviet Union dominated block was struggling for hegemony with a US dominated block has given way to a more complex world order. First, Francis Fukuyama's book "The End of History" seemed to signal the unavoidable advance of the market system towards a "strong globalization". In this system, the US was the only remaining hegemony and was determining the mores of the international world order[10].

However, only two decades later, a rather 'weak globalization' is emerging, in which the US must increasingly compete with China and others. In addition, Russia has awakened from a deep economic crisis, mainly due to its large oil and gas reserves, and now participates as a third player that wants to set the rules in its own sphere of influence. In this geopolitical game the European Union is, although a strong economic power, perhaps too divided to play a major political role. Rather, it is a 'rule follower' in a geopolitical sense. From a foreign policy perspective, therefore three main parties emerge: the United States, China and Russia.

The link between climate policy and general foreign policy is clear: a global shift away from fossil fuels is good for the climate but would reduce the economic perspective of those fossil fuel sectors,

[10] F. Hoogeveen and W. Perlot (eds.) *Tomorrow's Mores: The International System, Geopolitical Changes and Energy*, Clingendael International Energy Programme, 2005.

making the political position of the main consumers (China and the US) stronger and that of producers (Russia and the OPEC countries) weaker.

The key players

Combining the various perspectives discussed above, and in particular the contribution that countries have in current and future climate change emissions, seven countries/regions arise as 'the most important players' to be examined in more detail for a deeper understanding of their climate policies and the underlying drivers behind national positions in the climate negotiations. These are indeed the identified high emitters: the EU, the United States, Japan, Russia, China, India and additionally, because of its strategic relevance, Saudi Arabia as a representative of OPEC. It is also interesting to assess the response of these countries to the current economic crisis in the context of their climate policies.

Positions of key players in the climate negotiations

The European Union

- *Formal position*

The EU has committed itself to a 20% emissions reduction target by 2020 and to a 30% emissions reduction if an international agreement is obtained. In line with the IPCC recommendations, the Union aims at a 30% emissions reduction obligation for industrialized countries and a 15 to 30% deviation from the baseline for developing countries[11].

- *Climate policy*

From a historical perspective, the EU member states are the largest cumulative emitter worldwide after the United States. The EU recognizes this historical responsibility and in recent years has aimed to be a global leader in climate policies. It has committed itself to 8% emissions reduction over the Kyoto period, which is translated into sub-targets for individual member states. Showpiece of European climate policy is the 2005 Emission Trading System, which is to be adapted and expanded from 2012 onwards[12]. Also, the EU is the first party that became active in Joint Implementation and Clean Development Mechanism. So far, the European Union is the only major party that is on track towards fulfilling its Kyoto Commitments: total GHG emissions, without Land Use, Land-Use Change and Forestry (LULUCF) in the EU-27 decreased by 9.3 % between 1990 and 2007 (519 million tonnes

[11] European Commission, *Towards a Comprehensive Climate Change Agreement in Copenhagen*, COM (2009) 39 final, January 28, 2009.

[12] Directive 2009/29/EC, Official Journal of the European Union L140/63, 5 June 2009.

of CO_2-equivalents)[13]. These emission reductions, however, are only to a limited extent caused by deliberate climate policies: the main reasons of the reduced emissions over this period are the economic decline in Eastern Europe and East Germany after the 1990s and the fuel switch from gas to coal in the United Kingdom after liberalization of the electricity and gas sectors[14].

As a response to the current global economic crisis, the EU has dedicated 5 billion euros to energy infrastructure and the internet. Energy funds are directed toward offshore wind, carbon capture and storage, and gas and electricity interconnection projects[15]. Parallel to the EU funds, many individual member states have also published national recovery plans reflecting national policy priorities. A study by HBSC that has measured percentages of the budget allocated to low carbon power, energy efficiency or waste and water states that 64% of the EU recovery budget can be labeled as 'green'[16]. However, a more sophisticated study by Ecofys – one that applies weight factors and also takes into account measures that have a negative climate impact – says that the weighted budget allocated to climate-related issues amounts to only 33% of the total package and equals 1.3% of the total EU budget[17].

- *Underlying drivers*

The EU claims in its policy documents that of the three energy policy themes identified (climate change, competitiveness and security of supply), climate change is the most pressing. With its economic development having been built in the past on fossil fuels, and with domestic fossil fuel reserves now nearly exhausted, building up a domestic low-carbon energy industry indeed is in line with climate change objectives. On the other hand, short- and medium-term security of supply considerations create a drive for the continuation and expansion of relations with fossil fuel exporting countries. With regard to the economic aspects, there is a clear fear that 'carbon leakage' will move energy-intensive industry to regions that have less stringent climate policies. Although the European Union is economically very important due to the size of its market, in foreign politics the EU is mainly a follower of the international 'rules' set by the United States[18]. EU policy-making is fundamentally hampered by the political, economic and cultural differences between its 27 member states. Climate change is one of the policy fields in which differences between the original EU-15 member states were relatively small, and a field that until recently was not occupied by the United States on an international level. The EU 'leadership' in climate change on the international stage is

[13] EEA Technical Report, *Annual European Community greenhouse gas inventory 1990–2007 and inventory report 2009*, No. 4/2009.

[14] ibid.

[15] European Commission, *The Commission proposes € 5 billion new investment in energy and Internet broadband infrastructure in 2009-2010, in support of the EU recovery plan*, IP/09/142, 28 January 2009, Brussels.

[16] N. Robins, R. Clover and C. Singh (2009), *A Climate for Recovery*, HSBC Global Research.

[17] Höhne, N. , J. Burck, K.Eisbrenner, L.van der Straeten and D. Phylipsen (2009), *Economic/climate recovery scorecards*, Ecofys, April 2009.

[18] F. Hoogeveen and W. Perlot (eds.) *Tomorrow's Mores*, Clingendael International Energy Programme, 2006.

pursued by the European Commission as a way to stimulate internal integration and to raise the international profile.

The United States

- *Formal position*

The US did not ratify the Kyoto Protocol, using the argument that in the absence of reduction obligations for the large developing countries a quantitative US emissions reduction target would "seriously harm the US economy"[19]. Everybody expects the Obama government to come forward with a much more positive attitude, but Copenhagen may come too early for that to be seen.

- *Climate policy*

At 29%, the US has the largest historical share in cumulative global emissions[20]. Nevertheless, for a long time the US did not consider climate change policies to be important. In 2006, the US was surpassed by China as the world's largest greenhouse gas emitter in absolute terms[21]. Under President Obama the tone of US policies towards climate change has changed substantially. Still, over the period 1990 to 2006 US greenhouse gas emissions increased by 14%[22], and energy-related CO_2 emissions by as much as 17%[23]. The US is now in the process of passing domestic legislation regarding emissions reduction. The so-called Waxman-Markey bill aims to reduce emissions to 17% below 2005 levels in 2020 and to 83% below 2005 levels by 2050[24]. This would in 2020 equal a 4% emissions reduction compared to 1990 levels[25]. The new Kerry-Boxer draft that was submitted to the Senate this autumn aims to reduce CO_2 emissions even further , to 20 percent below 2005 levels by 2020. It introduces a cap and trade system with a fixed floor and a ceiling in the CO_2 price.

In order to surmount the present global financial crisis, the US adopted a $787 billion Stimulus Plan in February 2009. Many of these investments are aimed at the energy field, including funding for transforming the US energy grid and for weatherizing low-income homes. According to HSBC, this spending on green measures amounts to 12% of the total fund. According to Ecofys, the weighted

[19] Byrd Hagel Resolution, 105th Congress, S RES 98, July 25, 1997.

[20] K.A. Baumert, T. Herzog, J. Pershing, *Navigating the Numbers: Greenhouse Gas Data and International Climate Policy*, World Resources Institute, 2005.

[21] Netherlands Environmental Assessment Agency, *Chinese CO_2 emissions in perspective*, Press Release, 22 June 2007.

[22] FCCC/SBI/2008/12.

[23] Energy Information Administration, World CO_2 emissions from the consumption and flaring of fossil fuels, http://www.eia.doe.gov/pub/international/iealf/tableh1co2.xls, Accessed June 2009.

[24] A. Pasternack, Waxman-Markey Bill Moves Forward, After Arrests and a Speed Reading, The Huffington Post, 23 June 2009.

[25] Fresh News Theme, Waxman Bill Climate Change Legislation Fails to Impose Necessary Reductions, May 16, 2009, http://www.ecoficial.com/waxman-bill-climate-change-legislation-fails-to-impose-necessaryreductions-474/.

spending on climate-friendly measures amounts to 7.5% of the total package and to 0.4% of the GDP[26].

- *Underlying drivers*

Moving from a previous climate-sceptic position, the US now claims to strive for global climate leadership. However, despite the changed tone, there is also much continuity in US policies related to climate change: the leading principle remains security of supply, which in practical terms means reducing dependency on oil imports from Venezuela and the Middle East.

President Obama strives toward "renewing US alliances in order to meet the challenges of the 21st century". Two nations that are very important from a climate change perspective are China and Saudi Arabia. China is likely to become the biggest competitor to the US in the political and economic arenas and will perhaps become a new geopolitical rule setter[27]. Climate change is one of the priorities in the US-China relationship. "The US – as the largest historic emitter of greenhouse gases – and China – as the largest emitter going forward – need to develop a strong, constructive partnership to build the kind of clean energy economies that will allow us to put the brakes on global climate change."[28] Saudi Arabia, on the other hand, is the key US ally in the Middle East, as it is the only state that "has the geographic position, military forces, strategic depth and common interests to be a key strategic partner"[29]. Despite the announced plans for reduction of dependency on Saudi oil, the United States needs Saudi Arabia as a partner for many political purposes in the Middle East, including the fight against terrorism. From a foreign policy point of view, reducing Saudi oil exports to the US may therefore not be pushed so far as to endanger this relationship.

Japan

- *Formal position*

In June 2009, the Japanese government presented a 15% reduction target for the coming 11 years, which is equal to an 8% reduction from 1990 levels by 2020. However, the new Japanese government has recently issued a surprising goal of 25 % emissions reduction by 2020 as compared to 1990 levels. It is yet unclear how this proposal will be materialized. In the preparatory negotiations Japan has actively pursued the issue of 'sectoral targets', aiming at global benchmarks per industrial sector in addition to national targets.

- *Climate policy*

[26] ibid.

[27] ibid.

[28] Special envoy Todd Stern in US – China climate change negotiations, http://www.chinaenvironmentallaw.com/2009/02/05/us-china-climate-change-negotiations/, 5 February 2009.

[29] A. Cordesman, Saudi National Security and the Saudi-US Strategic Partnership, CSIS, December 4, 2008.

At 4% of the global total, Japan has only a limited share in cumulative historical emissions[30]. As host of the Kyoto Protocol meeting in 1997, Japan committed itself to an emissions reduction target of 6%. However, until 2006 emissions had increased by 5% rather than decreased[31]. It is therefore unlikely that Japan will meet its present Kyoto obligations. The main reasons for increased emissions are, according to the government, a temporary major decline in nuclear power production as a result of accidents, more need for air-conditioning by an increase in the annual mean surface temperature and a higher energy use due to demographic factors such as an ageing society, and an increase in the total number of households[32]. Nevertheless, the Japanese society is very emission-efficient in terms of GDP.

Japan officially entered into recession in November 2008. Japan's huge government debt, which already totalled 170% of GDP at the end of 2008, and the aging of the population are two major long-term problems. After a first package in December 2009, a new stimulus plan of 50,000 billion yen (about 3% of Japanese annual gross GDP) was announced in April 2009. The latter included measures to make society more 'elderly friendly', incentives for energy efficiency and electric cars, as well as a plan to regain its number one position in solar energy by increasing solar energy production levels 20-fold by 2020[33]. According to HSBC, who assessed the first package, only 2.6% of the Japanese recovery fund could be marked 'green'[34].

- *Underlying drivers*

In Japan energy security of supply has traditionally been a main policy. This has led the country to concentrate on nuclear energy and energy efficiency as main solutions to the lack of domestic energy reserves.

Japanese foreign policy interests and climate objectives seem not yet well aligned. Apart from the strategic, trade and security partnership it has had with the United States since World War II, China is the key focus of Japanese foreign policy. In recent years, China has emerged as Japan's main economic competitor in the East Asian region. Strengthening economic and political ties with China itself, and with other parties such as South Korea, the United States and Russia are ways in which Japan can address the changing balance. However, Japan's proposals for sectoral action in the

[30] ibid.

[31] FCCC/SBI/2008/12.

[32] UNFCCC, *Report of the centralized in-depth review of the fourth national communication of Japan*, 15 February 2007, FCCC/IDR.4/JPN.

[33] M. Nakamoto, *Japan unveils $154bn stimulus plan*, Financial Times, 9 April 2009, http://www.ft.com/cms/s/0/776a14fa-24b0-11de-8bb2-00144feabdc0.html.

[34] N. Robins, R. Clover and C. Singh (2009), *A Climate for Recovery*, HSBC Global Research.

climate negotiations met with strong resistance from China. Furthermore, the potential for export of Japanese energy efficiency knowledge to China seems not to be fully exploited.

China

- *Formal position*

China points to the historical responsibility of developed countries to lead the way in reducing emissions. It aims to contribute to emissions reduction by 'nationally appropriate' actions, without specifying quantitative targets for these reductions. Still, China does pursue active energy efficiency and renewable energy policies.

- *Climate policy*

Since 2006 China has been the largest emitter of CO_2. However, at 8%, China's share in accumulated historical CO_2 emissions is far less than that of the United States and the European Union[35]. China has ratified the Kyoto Protocol, but as a developing country does not have emissions reduction obligations under the Protocol. Mainly due to prosperous economic development, emissions have soared in recent years: greenhouse gas emissions doubled and CO_2 emissions grew by 160% over the period 1990 to 2006[36]. Emissions per capita are about equal to the global average, whereas emissions intensity in terms of GDP amounts to 143% of the average world emissions intensity[37]. In 2007 a first climate change policy plan including quantitative goals set for energy efficiency and renewable energies was launched that clearly signalled Chinese concerns about the issue. Recent efforts in China to move towards a more sustainable energy system are quite significant. China's pragmatic approach to the climate change discussions could offer opportunities for progress in Copenhagen, as illustrated by Chinese President Hu Jintao's commitment to a Chinese carbon intensity target at the UN summit in New York in September 2009. However, the enormous challenge to limit Chinese emissions in the face of continuing economic growth makes success improbable without sufficient support from the global community.

Being confronted with a sharp decrease in product exports as a result of the crisis, the Chinese government, similar to many Western governments, also initiated an economic recovery plan. The four trillion RMB stimulus package (equivalent to US$586 billion) launched in November 2008 in the wake of the financial crisis concentrates on funding for housing, rural infrastructure and rebuilding communities devastated by May's earthquake, but also aims at stimulating a 'green economy'. It also

[35] K.A. Baumert, T. Herzog, J. Pershing, *Navigating the Numbers:Greenhouse Gas Data and International Climate Policy*, World Resources Institute, 2005.

[36] FCCC/SBI/2008/12.

[37] International Energy Agency, World Energy Outlook 2008, Paris and K.A. Baumert, T. Herzog, J. Pershing, *Navigating the Numbers: Greenhouse Gas Data and International Climate Policy*, World Resources Institute, 2005.

partly focuses on environmental and energy-saving projects and includes $50 billion for direct energy efficiency and environmental improvements. In addition, the program doubles investment in rail transport to $85 billion and adds $70 billion for new electricity grid infrastructure[38]. Thirty-four percent of the investments in the Chinese stimulus plan are labelled 'green' according to HSBC[39].

- *Underlying drivers*

Economic development is the main underlying driver of Chinese policies. With very high economic growth rates in recent years, meeting the rapidly rising domestic demand by increasing internal production and by a larger import of primary energy sources from abroad has priority over other policy targets. Policies that have successfully achieved better access to energy in the past years have substantially reduced the number of people without access to modern energy sources, but the country still has to find an answer to its increasing local and regional pollution problems. The Chinese leadership is determined to strive for a position for China as one of the great powers in global politics. China seems to concentrate on economic development and on stimulating external trade for that purpose. Actions in the field of climate policy fit the Chinese ambitions to show a 'modern face'. However, in the discussions related to climate change, China also strategically emphasizes its 'underdeveloped side' in an attempt to attract foreign investments and transfer of knowledge and technologies.

India

- *Formal position*

India takes a 'hard line' position in the climate negotiations: it believes that Annex I countries should take key responsibility for emissions reductions, and convergence of emissions per capita should be a guideline for a new agreement. Given its very low per capita emissions, India currently does not feel the need to agree to any national emissions reduction obligations.

- *Climate policy*

India has contributed only a 2% share of global historically accumulated emissions, and as a developing country it does not have any emissions reduction obligations under the Kyoto Protocol[40]. Still, CO_2 emissions more than doubled over the period 1990 to 2006[41]. Presently, per capita

[38] World Resources Institute, *A "Green Lining" in China's Economic Stimulus Plan*, 26 Nov 2008. Retrieved at http://www.wri.org/stories/2008/11/green-lining-chinas-economic-stimulus-plan on 20 Jan 2009.

[39] N. Robins, R. Clover and C. Singh (2009), *A Climate for Recovery*, HSBC Global Research.

[40] K.A. Baumert, T. Herzog, J. Pershing, *Navigating the Numbers: Greenhouse Gas Data and International Climate Policy*, World Resources Institute, 2005.

[41] Energy Information Administration, *World CO_2 emissions from the consumption and flaring of fossil fuels*, http://www.eia.doe.gov/pub/international/iealf/tableh1co2.xls, Accessed June 2009.

emissions are one-tenth of the global average and per GDP emissions are slightly above this average[42]. Climate change is a topic of minor importance in Indian policies. Rather, poverty eradication and development are overriding policy targets – also of the 2008 Climate Change Action Plan[43].

In India there are fears that the economic crisis will hit the country's large poor population particularly hard. Although the Indian economy continues to grow at rates far above those of OECD countries, growth figures came down from an easy 9 to 10 per cent a year to 5% in 2008[44]. As a response to the financial crisis, the Indian government announced three economic stimulus packages at the end of 2008 and the beginning of 2009. Measures were directed primarily at stimulating exports by reductions in tax and customs[45]. HSBC labels none of the announced measures as explicitly 'green'.

- *Underlying drivers*

With high economic growth rates similar to that of China and the associated rapidly rising energy demand, along with increasing local and regional pollution and a population which is still largely deprived of any access to modern energy sources, economic development is the main priority.

India's foreign policy can be described as one of 'concentric circles', with a traditional focus on its neighbours and on South East Asian relationships[46]. However, its high growth rates in recent years have also given it the status of an emerging economic power, of which the increasing economic importance also leads it to reconsider its role on the international political stage. In that respect, Mr Radjiv Sikri, former Secretary of the Indian Ministry of External Affairs, states that India now has to decide "whether it wants to be co-opted into the existing West-dominated international structures or strike an independent path"[47]. The ambitions for an Indian 'third way' as a leader among developing countries lead India to show a hard face in the climate negotiations. On the other hand,

[42] International Energy Agency, World Energy Outlook 2008, Paris; and K.A. Baumert, T. Herzog, J. Pershing, *Navigating the Numbers: Greenhouse Gas Data and International Climate Policy*, World Resources Institute, 2005.

[43] Government of India, National Action Plan on Climate Change, June 2008.

[44] Kranti Kumara and Deepal Jayasekera, *Indian economy hammered by world economic crisis*, world socialist website, Accessed May 2009, http://www.wsws.org/articles/2009/mar2009/inec-m12.shtml.

[45] Economy Watch, *Indian Economic Stimulus Package*, http://www.economywatch.com/economic-stimulus-package/indian.html, Retrieved June 2009.

[46] Indian Embassy in Washinghton D.C. website, Accessed May 2009, http://www.indianembassy.org/policy/Foreign_Policy/fp(intro).htm.

[47] R. Sikri, *India's foreign policy priorities over the coming decade*, 08 October 2007, Opinion Asia, http://www.opinionasia.org/IndiasForeignPolicyPrioritiesovertheComingDecade.

closer US-Indian relations in recent years as expressed e.g. by a bilateral nuclear agreement show that India does not want to isolate itself from the industrialized countries, either[48].

Russia

- *Formal position*

After a long silence on climate change, in May 2009 Russia endorsed a draft climate plan and in June 2009 announced an emissions reduction target of 10 to 15% below 1990 levels by 2020[49].

- *Climate policy*

Russian cumulative historical emissions amount to 8% of the world total[50]. As an 'Economy in Transition' and Annex-I country under the Kyoto Protocol, Russia has a target of zero percent emissions growth in the Kyoto period. Due to the large economic downfall after the dissolution of the Soviet Union in the early 1990s, it will easily meet this target. Although Kyoto arrangements foresaw a financing of Russian climate action via Joint Implementation, action in this field has been severely delayed by Russian bureaucracy[51]. The recently announced emissions reduction target was met with reservations by observers, as it would imply a 30% rise of emissions above present levels[52]. Furthermore, announced measures in the draft climate plan that is yet to be made public seem to be more directed at adaptation than at mitigation measures[53].

- *Underlying drivers*

Russia's main energy interest lies in securing demand for export of its fossil energy sources now and in the future, as the country's economy is dependent to a substantial extent on the economic proceeds of these resources. Climate change has so far been an area of very little policy interest, although energy efficiency and renewables in the lead-up to Copenhagen are receiving some policy attention.

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[48] Green Diary, *India criticizes West on climate change*, 14 June 2007, http://www.greendiary.com/entry/india-criticises-west-on-climate-change/.

[49] Speech by Russian President Dmitri Medvedev, 19 June 2009, www.kremlin.ru/eng/speeches/2009/06/19/1744_type82916_218123.shtml.

[50] K.A. Baumert, T. Herzog, J. Pershing, *Navigating the Numbers: Greenhouse Gas Data and International Climate Policy*, World Resources Institute, 2005.

[51] Planet Ark, *Russia passes Kyoto Joint Implementation*, 31 January 2008.

[52] Speech by Russian President Dmitri Medvedev, 19 June 2009, www.kremlin.ru/eng/speeches/2009/06/19/1744_type82916_218123.shtml.

[53] Euractiv, *Russia's climate policy fails to raise hopes*, 25 June 2009.

High revenues from energy exports in recent years go hand in hand with an increasing profile in external politics, as demonstrated for instance in the 2008 Russian-Georgian conflict, the revolving Russian-Ukrainian gas crisis and the Russian stance on the planned nuclear missile shield in Eastern Europe. Similarly, the planting of a Russian flag in the seabed under the Arctic could also be interpreted as Russian claim for access to the supposed fossil reserves in this area that might become accessible due to climate change. Externally, the issue of climate change plays only a very small role in Russian policies, despite recently announced internal climate policies. Nevertheless, Russia is a strategic player in climate change. In the past it looked for ways to obtain concessions in other fields, as was the case with the Russian ratification of the Kyoto protocol, whereby the EU had to announce its support for Russian entry into the WTO in exchange for ratification.

In recent months, Russia has seen the proceeds of its main export products evaporating, unemployment rising and main industries having to substantially cut back production[54]. Also, the stock market came down almost 80% from its peak, and Russia's top 10 billionaires alone lost an estimated $150bn last year. Rather than focusing on new energy options, however, the $90 billion Russian stimulus plan aims to stimulate domestic demand as a substitute for reduced export income[55]. It places an emphasis on tax cuts and social welfare spending, as well as on subsidies for military industries[56]. This plan was not included in the HSBC assessment, as it appeared after the publication of the HSBC study.

Saudi Arabia

- *Formal position*

Saudi Arabia is opposed to any binding targets for non-Annex-I countries. A shared vision in an international agreement should not include a binding overall emissions reduction goal or a quantitative goal for developing countries.

- *Climate policy*

Saudi Arabia has a share of only 0.5% in global cumulative emissions[57]. It has ratified the Kyoto Protocol, but as a developing country it does not have emissions reduction obligations. Similar to in India, CO_2 emissions over the period 1990 to 2006 roughly doubled[58]. No integrated policy plan to

[54] The World Bank in Russia, *Russian Economic Report No 17*, November 2008.

[55] A.E.Kramer, *In Putin's Economic Plan, an Emphasis on Spending*, The New York Times, 6 April 2009.

[56] The Russian plan has not been rated by HSBC for its 'green' contents.

[57] K.A. Baumert, T. Herzog, J. Pershing, *Navigating the Numbers: Greenhouse Gas Data and International Climate Policy*, World Resources Institute, 2005.

[58] Energy Information Administration, World *CO_2 emissions from the consumption and flaring of fossil fuels*, http://www.eia.doe.gov/pub/international/iealf/tableh1co2.xls, Accessed June 2009.

combat climate change exists, although "the country is as worried about climate change as others"[59]. There are some energy efficiency policies, and a research centre for renewable energy sources has been founded.

- *Underlying drivers*

Saudi Arabia is even more economically dependent on the export of fossil energy sources than Russia is. Security of demand for its fossil energy exports is therefore the key principle of Saudi energy policies. Regarding climate change, the country pictures itself as a developing country whose main aim is to receive compensation for presumed income losses in the future due to international climate policies.

Since at least the late 1950s, three consistent themes have dominated Saudi foreign policy: regional security, Arab nationalism and Islam[60]. The preoccupation with regional security issues, including concern for both regime stability and the safety of petroleum exports, resulted in the kingdom's establishing a close strategic alliance with the United States. Yet this relationship complicates Saudi efforts to maintain solidarity with other Arab countries and to present itself as a political leader of the Arab world. Regarding climate change, however, other Arab countries generally hold a position similar to that of Saudi Arabia in that fossil exports come first, and emissions reduction only should play a role if this prime objective is not endangered.

Very high oil prices in recent times have cushioned the Saudi economy against the global economic downfall. Yet due to fallen oil prices and global energy demand reduction, GDP growth in Saudi Arabia is expected to fall from 5.5% in 2008 to 0.8% in 2009[61]. Lower oil prices and revenues are projected to reduce oil export receipts by almost 50 percent in 2009. This is likely to translate into a drop in government balances of some 36% in 2009. Most of the $127 billion in Saudi Arabian economic stimulus package funds are directed at stimulating oil production capacity[62]. Seven and a half percent of the package is marked 'green' by HSBC. All of these green funds are directed toward water and waste projects rather than toward energy projects [63].

[59] Arab Environment Watch, *Saudis slow to act on climate change*, April 12, 2009.

[60] Helen Chapin Metz, ed., *Saudi Arabia: A Country Study*. Washington: GPO for the Library of Congress, 1992.

[61] N. Dillon and H. Hakimian, *Global Economic Crisis: A Catalyst for Change in Saudi Arabia?* Brookings Institute, 13 May 2009, http://www.brookings.edu/interviews/2009/0225_saudi_arabia_dhillon.aspx.

[62] MENAFN Arab News, *Saudi Stimulus Plan to Boost Demand, Output*, 27 April 2009, http://www.menafn.com/qn_news_story_s.asp?StoryId=1093245693.j

[63] N. Robins, R. Clover and C. Singh (2009) A Climate for Recovery, HSBC Global Research.

Conclusions

Underlying interests of key players dominate climate change negotiations

Looking at the key players and their climate policies, it appears that the national goals presented so far, with the exception of the conditional 30% EU goal, fall short of the emissions reduction ranges recommended by the IPCC: 25 to 40% emission reduction for industrialized countries, 15 to 30% deviation from the baseline for developing countries.

Another striking feature when looking at emissions profiles is the importance of incidental factors for performances under the Kyoto period until now. The economic downturn in Eastern Europe, Russia and East Germany after the dissolution of the Soviet Union, the switch from coal to gas after market liberalization in the United Kingdom and the present economic and financial crisis have all positively influenced emissions, but they are by no means structural factors that were steered by deliberate climate policies. On the other hand, the neither planned nor foreseen shutdown of nuclear reactors in Japan after accidents has substantially negatively affected the emissions performance in this country and has led the Japanese government to formulate a very cautious Copenhagen target.

Apparently, for most key players, underlying national interests play a major role in the negotiation positions. The European Union seems to be the only party for which climate change considerations *per se* seem to be the leading principle. Yet the EU hopes to improve its international political profile, and its stance on climate change fits its desire to play a more important role in international policy.

The United States and Japan were identified as two nations for which security of supply is a main energy policy driver behind their climate change positions. For the United States, the important energy policy relationship with Saudi Arabia is also one of its key foreign policy relationships, as Saudi Arabia is a main US ally in the Middle East from the perspectives of security and anti-terrorism.

For Japan, most crucial energy security of supply relationships (Saudi Arabia for oil; Malaysia, Indonesia and Australia for gas; and Australia and China for coal) run smoothly. The fragile Sino-Japanese relationship is important and involves territorial disputes and historical sensitivities. Burdening this already difficult relationship even more with the climate change issues, for instance by pressure from Japan for Chinese climate actions, is therefore unlikely. The possibilities that do exist, particularly in the field of exporting Japanese energy efficiency knowledge and technology, so far seem not to be fully recognized and exploited.

China and India are two parties for which economic development was claimed to be the main driver behind their climate change positions. Despite objections against a quantitative goal for emissions for itself, China seems to be adopting a more cooperative view in the negotiations. India, on the

other hand, is taking a more ambiguous position, and its claims for developing countries' leadership give it a hard line climate change position.

Russia and Saudi Arabia have claimed that security of demand is a main driver behind their climate change positions. For these countries, the link between foreign, economic, energy and climate policies seems to be even stronger than for the other countries. The Russian economic and political revival in recent years is determined to a large extent by the economic proceeds gained from exports of its energy reserves. Equally, Saudi claims for leadership in the Arab world could not be sustained without the proceeds from its energy reserves.

No green response to the current economic crisis

If the recent measures to overcome the economic crisis are to be seen as an indicator about the real intentions of the key players in the field of the forthcoming climate crisis, then there is no reason for optimism. In GDP terms, the 'green' parts of the economic stimulus packages appear low: there is no ambitious 'green new deal' in sight. Indeed, the EU, as the party for which climate change is the main driver, has a higher percentage of climate change-related spending in its economic recovery plan than other parties. In the EU the main funds are directed towards energy infrastructure and innovation, spearheaded by CCS and offshore wind energy. Looking at the Chinese and Indian packages, funds in these countries seem to be mainly directed at development. However, the plans of these two countries have quite different foci. Whereas China's package includes a substantial green section, India strongly focuses on export stimulation and does not appear to attach much importance to the greening of its economy. In Japan, the main 'green' funds are directed at domestic energy strongholds, such as energy efficiency and solar energy. This is less the case in the United States, where energy infrastructure in a more general sense is given a central place. Fallen export income plays an important role in the motivation for the Russian and Saudi stimulus packages. Whereas Russia concentrates on domestic demand stimulation as a main substitute for reduced proceeds from exports, Saudi Arabia aims to stimulate the economy primarily by investments in oil infrastructure.

Some recommendations for Copenhagen and beyond

In their present form, the negotiations implicitly appear to be taken by many as a zero-sum game, in which it is taken for granted that some parties will win and other parties will lose from the negotiations' outcome. Nations that still have substantial fossil fuel reserves are the potential losers of tomorrow's low-carbon world. In a good case scenario the least developed countries might be compensated for their climate change actions taken and adaptation measures. The extent to which emerging economies will benefit in the short term in a development sense remains unclear.

OECD countries, on the other hand – which have relied in their development on the availability of domestic and foreign fossil fuels, want to reduce their dependence on fossil fuel imports and are very likely less severely affected by climate change than many developing countries – appear to be the potential winners in a low-carbon world, despite the fact that they have caused the climate change problem in the first place. Their main concern, namely the continued competiveness of their industries, will probably be eased by the prospect of relying on the so-called market-based cap and trade systems which give these sectors enough flexibility to postpone or to pay off the necessary carbon reduction measures.

Clearly, this is not a recipe for negotiation success.

The overall way out of this zero-sum game is simple and clear-cut: taking into account all underlying drivers for nations' negotiations positions should lead to a solution in which all can benefit, not only in a narrow climate change sense, but also regarding their energy, economic and foreign policies. Given the already very complex negotiation framework, at first hand it seems contradictory to advise integrating more issues than climate change alone into the Copenhagen negotiation process. Nonetheless, in order to accomplish the task outlined by the IPCC in a few decades, nothing less than a global energy and economic revolution is needed. If even the main underlying drivers of only the key nations' climate change positions were to be taken into account, a multilateral framework might materialize that would receive real support from all nations and therefore be robust to its core.

Obviously, in practice this situation will be very hard to accomplish, but the following conditions can be suggested for laying the groundwork for such a wider framework in the future.

First, a climate agreement should have real substance, especially with regard to the operational aspects. Targets, especially long term targets that go beyond the lifetime of most of us, can only serve as a point of orientation. It would be hypocritical to congratulate ourselves with an agreement for 2050 without having measurable and controllable short-term commitments *en route*. Without such commitments there will be mistrust between countries about sharing the burden of measures that are considered unpleasant for their economies. It is also dangerous to rely so much on market-based systems, even though they are perceived to be cheaper than clear regulations. As long as these produce no tangible results, it would be wise to complement them with globally accepted performance standards that everybody understands, are predictable, are easier to control and that create a level playing field, giving confidence to industries in both developed countries and emerging economies[64].

[64] Luc Werring, *The EU Emission Trading System: Too Little Too Late?* CIEP Briefing Paper, June 2009.

Second, in addition to climate change, also economic development, security of supply and security of demand should be integrated as equal objectives into a new international agreement. Therefore, a political commitment and generally accepted indicators are needed. To some extent, already existing multilateral frameworks and their indicators, such as the Millennium Development Goals, can be made use of. But in addition, new indicators would have to be developed and agreed upon, especially in terms of security of supply and security of demand[65].

Third, the interests of the main fossil fuel exporting countries have to be integrated into an agreement, as their economic power to undermine the whole agreement, if they consider themselves to be in a deprived position, should not be underestimated. Rather than condemning such responses from a superior, moralistic climate change viewpoint, they should be regarded as what they are: economic policies of countries that are to a large or very large extent dependent on income from these sectors. Perhaps the most feasible solution would be to initiate high-level talks between fossil fuel exporters and importers on security of demand, in combination with agreeing on margins for price or production levels further into the future. There have been some signals – though still weak – that a potential solution could be sought in this direction: the Jeddah conference, in which exporters and importers discussed a limited expansion of cooperation, a call for increased cooperation by the director of the World Bank, and a similar call for cooperation by Russian prime minister Putin[66] are some of the signs that show that the world community at least recognizes the existence of this route for transition.

Finally, the anticipated necessary and fundamental international climate change measures will not happen without a major shift in international relations. In order to be successful at the required level, climate change policies will have to be accompanied by a reduced income gap between developing and developed nations. And, perhaps most difficult to accept for the developed countries, in the future low-carbon world their leadership, with the United States in the forefront as a global rule setter, will no longer be able to be taken for granted. When these extremely difficult conditions are met, a global climate and cooperation revolution might come true.

[65] For security of supply, some indicators have been developed, including one indicator by the Clingendael International Energy Programme and ECN. However, all these indicators are still in an experimental stage.

[66] Russia Today, *Davos energy session looks beyond economic crisis to changing energy mix*, January 29, 2009.