

Analysis brief on the climate negotiations



Cancún, Mexico

November 29 – December 10 2010



Institut de l'énergie et de l'environnement
de la Francophonie
IEPF

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November 2010

ISBN : 978-2-89481-077-4

This analysis brief is aimed at facilitating understanding of the current state of the climate negotiations. It analyzes and suggests possible ways of moving forward in the negotiations in an educational format accessible to the general public.

This analysis brief comprises an executive summary followed by a full report.

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“Remember! We have only one thing to fear – the sky falling on our heads!”

Analysis brief on the climate negotiations

Cancún – COP 16 – 2010

EXECUTIVE SUMMARY

Principal message:

Progress can be made on certain themes in Cancún, which will reinforce the implementation of concrete actions in developing countries and be a very positive message for all those working on on the ground initiatives. This offers an excellent chance to emerge from the fantasy of a “balanced package” and the numerous thorny subjects it is composed of with heads held high.

1. Progress can be made on certain themes in Cancún ...

Thanks to ongoing negotiations and the determination of many people around the world, especially the UNFCCC Executive Secretary Mme Figueres and Mexico, the host country of the conference, progress has been made on several subjects since Copenhagen. With the support of many others, they organized a range of debates, voluntary initiatives and high-level meetings on key themes (MRV, forests, finance, adaptation, etc.) in order to help prepare decisions on certain sectors in Cancún.

It is thus possible to reach decisions on several themes. The two most mature themes are forests (REDD+) and finance (creating a Green Fund to finance the fight against climate change in developing countries).

- **On forests:** a negotiation text was already well-advanced in Copenhagen and contained real progress towards building consensus. This included a clear description of the principles which should guide actions, confirmation of a broad vision of forestry activities (i.e. a REDD+ vision concerning almost all forests between the tropics which account for half of the world's forests), respect for forest-dwelling populations and taking into account biodiversity considerations. Negotiations must recognize the energy spent on taking these steps forward and capitalize on them to avoid the risk of resuming discussions on an essentially finalized text.
- **On finance:** progress in 2010 more or less built a consensus around the decision to create the Green Fund proposed in the Copenhagen Accord. All countries have shown flexibility on this matter and it seems that it will be possible in Cancún to start work on the operational terms of the fund's functioning, such as the "balanced" composition of the fund's governance bodies. The fund would deal with financing of around the same scale as current official development assistance (US\$100 billion per year). A strategic choice will need to be made on the way funds will be allocated: will the fund act as a bank centralizing action on climate change, which will probably take a long time to get off the ground and marginalize smaller actors, or a fund with a more flexible structure with the ability to create synergies with a wide range of current actors involved in financing climate change projects: national development banks of developing countries, the private sector and multilateral and bilateral donors? Work on these operational aspects should be launched at Cancún, to show off a spirit of international solidarity in fighting climate change, with undeniably positive effects on the negotiation process.

Decisions are also possible in Cancún, in particular on technology transfer, adaptation and agriculture.

2. ...which will reinforce developing countries in implementing their actions...

The decisions which may be reached at Cancún concern important matters for the world of tomorrow and for disadvantaged populations:

- Deforestation is responsible for around 17% of greenhouse gas emissions in the world, and so **reducing deforestation and preserving forests potentially represents 17% of the solution to climate change**. Forests also provide basic goods and services (water resources, firewood, food). Furthermore, many are home to rich biodiversity which should be better protected. **A decision on REDD+ in Cancún would be a first echo of the conclusions of the recent Nagoya Conference on biodiversity**. Ambitious progress in Cancún on forests in industrialized countries (LULUCF) would complement this decision on REDD+.
- **Launching the Green Fund at Cancún can strengthen and inject dynamism into financial flows to support projects and programs of action in all developing countries.** This decision would complement progress expected in Cancún on the process of building NAMAs projects and plans.

This would also be a way of moving forward in implementing the Copenhagen Accord. Although admittedly imperfect, 139 countries, including the world's largest emitters, have now officially associated themselves with the Accord. This is the sign of an understanding that all categories of countries must participate in the fight against climate change. It also shows that consensus is progressively being built in certain areas and being addressed as a top priority in countries. The development of projects at the local level, supported by national and international financing is evidence of this. Examples of countries moving forward at the national level abound: Indonesia, Vietnam and Mexico are implementing national climate plans, China is integrating climate change into its 12th Five Year Plan, South Africa has just published its integrated energy resource plan, Kenya is developing investments in geothermal energy, Columbia is undertaking ambitious urban projects, the Central African Republic is moving forward in sustainably managing its forests, and so forth.

But this is not yet sufficient to halt the ongoing increase of CO₂ concentrations in the atmosphere. More needs to be done, and faster.

3. ...and will be a very positive message for all those working on on the ground initiatives...

Closing the Cancún Conference with official decisions on forests and finance would have a major impact. **Progress on these areas would send a positive message:**

- **to those already implementing and financing projects** for climate change and for development: private corporations, countries implementing climate plans, local authorities taking concrete action and all the NGOs involved.
- **to developing countries**, which have lost faith in industrialized countries' often unfulfilled pledges to take action and provide financial support.
- **to all those working progressively to build and consolidate a coherent set of actions** on the road to an overarching agreement.

4. ...and a chance to emerge from the fantasy of a “balanced package” and the numerous unripe subjects it is composed of.

Despite the fact that most countries are now fully aware of the urgency of the situation, negotiations can still be blocked by those who continue to stand firm on their positions, refusing to make the smallest concessions and once again shifting discussions onto the points of deadlock. Making progress on specific themes could come up against certain countries' determination to see the negotiations as one whole indivisible package. Indeed, this approach would block progress on all fronts without coming to a decision on the thornier issues, such as the future of the Kyoto Protocol, developed countries' emissions reduction commitments and the legally binding framework.

But deferring possible decisions on certain themes to after Cancún in an “all or nothing” approach to the balanced package would severely disadvantage the poorest countries, most notably in Africa, which urgently need new financing to be put into place.

Negotiations on the “balanced package” need to be revitalized. This requires putting forward a serious calendar for future negotiations for all the themes which are not yet mature, and applying the same methods to these themes as those which have allowed negotiations to advance on others. The method used to progress on finance in 2010, for example, could be applied to other themes. Led by the support of the UNFCCC Secretariat, this involved a subtle blend of discussions in negotiation sessions, supplemented with meetings between representatives of groups of countries, and above all ministers and other political leaders. Mexico along with a few other countries thus played a discreet but highly effective role in leading the negotiation process on finance. **A decision at Cancún on the negotiation calendar and on a method to allow groups with balanced representation of countries to pursue work on each of the subjects would give fresh visibility to the process and give assurance to countries that certain contentious issues were not being definitively set aside.** In the end, this should allow countries to come to a balanced and coherent regime capable of meeting the first ever challenge which calls for solidarity at the international level that mankind has ever faced.

Countries are aware of the need to move forward in this critical phase in which the negotiation process finds itself, in particular due to the deadlock in the US. Several subjects are not yet mature and demand increased efforts in the negotiations.

Progress can be made on these matters at Cancún – on MRV, adaptation, technology transfer, developed countries' commitments, legal form, fast start finance, and so forth. **The full report of this analysis brief presents these themes and analyzes them in a pedagogical manner to allow everyone in the general public to understand, to make proposals and to act on climate change.**

For the first time in history, the international negotiations at Copenhagen were opened to the wider public, under the credo of transparency and democratization, shattering their image as a process restricted to an inner circle of people. Finding the answers to the numerous questions which will be debated in Cancún will depend on all participants constructively engaging in discussions, from ministers and ambassadors to scientists, local representatives, business leaders, NGOs, journalists, and so on and so forth.

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Financed by the French Development Agency (AFD), the International Francophone Organization (OIF), the French Environment and Energy Management Agency (ADEME) and the Walloon Government (Belgium).
Thanks to Xing FU-BERTAUX and Alix MAZOUNIE for their contributions.

On the eve of the United Nations Climate Change Conference in Cancún, Mexico (COP16), disarray in the negotiation process still lingers from the Copenhagen Conference in December 2009. Many left Copenhagen with a sense of failure, resulting from the inability to resolve two key issues: mitigation commitments of industrialized countries and the legal framework of the future climate regime. But COP15 did also open new paths on financing and developing actions on climate change.

Though the Cancún Conference may not see the dawn of a new treaty, it will need to represent a decisive step towards restoring confidence between Parties and imagining a new future for humanity. This Conference will need to allow for certain values and ideas to gel in people's minds. This will be instrumental in progressively putting into place a long-lasting regime to fight climate change and, eventually, new development pathways.

In order to understand the negotiation process, we must first return to a few key questions.

- *Why did the Copenhagen Conference give rise to such turmoil in the negotiation process?*
- *What has happened since this Conference?*
- *What have been the advances and the real achievements of 2010?*
- *And what, finally, can we now reasonably expect from the Cancún Conference?*

This analysis brief was produced with three goals in mind:

- **Helping a wide public understand the stakes of the negotiations, avoiding as much as possible the use of technical terms and jargon;**
- **Describing the process, the state of its progress, the topics being debated and the points of deadlock;**
- **Shedding light on the possible points of convergence, and the possible ways of moving the process forward.**

For this reason, the document takes a historical approach: mastering the past to better understand the present and forecast the future. The first part of this brief is thus takes us back to the Copenhagen Conference, the “founding failure” (I) which left an indelible mark on this year’s negotiation session (II). We will then give an overview of the topics in debate on the opening of the Cancún Conference and analyze the possible outcomes of the conference (III). Finally, and because this COP is anchored within a long and arduous negotiation process, it is useful to consider what the potential future negotiation calendar could be, and in particular how we may eventually reach the final, ultimate goal of these negotiations: putting into place new development models (IV).

I. Copenhagen, a founding failure

A historic process such as the climate negotiations should be understood in the light of all of its different phases. Copenhagen was a conference without precedent. It has left an indelible mark on everything that has followed – the positions and dynamics between countries, the gridlocks and the ongoing debates in the current negotiation process. We must thus first return this “founding failure”.

A. The Conference that carried the world’s hopes

It is only at the end of a novel that we can understand the story. Yet the Copenhagen Conference was not the end of the novel, but more the closing of one chapter – and the opening of the next. We should therefore be prudent in drawing conclusions on the failures and successes of Copenhagen.

The inability to explain and decode experiences in the heat of the moment is a common feature of historic events. It is only with the benefit of hindsight that their meaning and impact can be fully felt and that we can analyze and understand the errors made to avoid making the same ones again and again.

1. High hopes were invested in Copenhagen in the desire to make it an exceptional event.

Many people held high expectations for COP15 in December 2009. They expected a clear signal of countries' commitment to fighting climate change and a vision of the post-2012 regime. But the negotiations in Copenhagen, presented as one single package, failed on two crucial points:

- Emissions reduction targets from industrialized countries consistent with limiting warming to under 2°C from pre-industrial levels. This was absolutely essential to secure the involvement of emerging powers;
- The legal framework, with the US still outside (and opposed to) any legally-binding agreement, whether a new convention, protocol, etc.

The Copenhagen Conference ended on a note that was hugely out of step with the initial hopes. The fact that participants and observers held such high hopes – perhaps too high in hindsight – led to a frenetic level of activity that was often more focused on the staging of the event rather than the expected outcomes.

The script for the conference was in fact already implicitly written at the beginning of 2009. The current round of negotiations was launched in Montreal in 2005. In Bali in 2007, countries agreed on a list of key themes to be addressed, thus structuring the work program around the five “building blocks” of the Bali Action Plan: shared vision, mitigation, adaptation, finance and technology transfer.

As a result, two parallel negotiation tracks were launched in Bali:

- the AWG-KP, on decisions to be taken in relation to the Kyoto Protocol (in particular regarding further emissions reduction commitments for developed countries), and thus without the US, which has not ratified the Protocol;
- the AWG-LCA, on long term action to be taken in relation to the 1992 Framework Convention, involving all signatory countries.

The Copenhagen Conference was supposed to be the culmination of an intensive negotiation cycle, marked by the return of the US a year after Barack Obama's election.

However, in their desire to succeed, participants failed to sufficiently take into account the difficulties of the negotiations. After all, how could four years of lost time, in which little progress had been made in the two negotiation tracks or in bringing them together, be made up in just two weeks? These two harsh realities paralyzed the process in Copenhagen, despite all the efforts made throughout 2009. Given the high hopes, the huge sense of disappointment at the conference's failures was inevitable.

○ A phase of intensive preparation

The program for 2009 should have ended with two negotiation texts – one from the AWG-KP to determine quantified emissions limitation and reduction commitments for the second commitment period of the Kyoto Protocol, the other from the AWG-LCA with clear conditions for rapid ratification to enable enhanced implementation of the Framework Convention, as set out in the Bali Action Plan.

○ Increasing levels of pressure

All the participants wanted for the Copenhagen Conference to be a decisive meeting:

- The UN, to ensure that the Kyoto Protocol continues to be effective beyond 2012 and reinforce the implementation of the Framework Convention, keeping in mind that it would take at least two years for national parliaments to ratify any new legally binding agreement adopted;
- NGOs and the media, in order to further increase public awareness of this issue, to put pressure on reluctant countries and create a positive dynamic;
- The EU, which had programmed a decision to unilaterally raise its emissions reduction target from 20% to 30%, to lead the way for other countries ;

- The Danish Government, hosts of the conference, to take credit for the success.

The combination of these factors raised the conference a level that escaped the organizers' control.

- **A historic level of mobilization**

With 47 000 registrations – around four times the usual number – expectations were met in terms of the scale of participation. The Copenhagen Conference thus made history as the meeting with the greatest concentration of decision-makers and media around the world, from heads of state and government, ministers, negotiators, members of parliament, elected government officials at sub-national levels, CEOs, union leaders, NGOs and journalists of all kinds. As a symbol of a democratic and transparent process, COP15 opened in a positive mood and a sense of strength given the huge level of participation and the general enthusiasm of contributing to this historic event.

- **A possible meeting of heads of state and government**

The conference culminated in a meeting of 119 heads of state and government on Friday December 18, the last day of the conference. This highly symbolic session was supposed to pave the way for the adoption of a treaty, or at least a political declaration indicating a sufficiently clear and precise commitment which could be quickly be transcribed into a legal text before any other attempt to blockade the process could arise.

2. The discussion points in Copenhagen

Before going into the final phase of negotiations in Copenhagen and drawing conclusions from it, we will first return to the main subjects which the negotiations focused on.

- **A shared vision of the Convention's ultimate objective**

The entry point to the negotiations stemmed from the conclusions of the IPCC's Fourth Assessment Report: global warming must be limited to 2°C above pre-industrial levels. Stabilizing the Earth's climate will require worldwide greenhouse gas emissions to be at least halved by 2050, bringing an end to the current development model of using of fossil fuels and destroying forests for industrialization and to improve living conditions. Other development paths must be invented. The poorest countries in the world will need to receive strong technological and financial support from industrialized countries to deal with these constraints. The Copenhagen Conference was thus supposed to decide, by unanimous vote of the Conference of the Parties, the Earth's climate for the 21st century. But faced with the uncertainty over whether they would still be allowed to develop, the G77 (composed of developing countries and emerging powers) opposed all efforts in Bali and then in Poznań to adopt a shared vision of goals relating to the Earth's climate.

Zoom on: The IPCC's 4th Assessment Report, which represents the views of the worldwide community of experts on climate science, analysing the anthropogenic causes of climate change and its current and future impacts. In this 2007 report the IPCC underscores the urgent need to fight climate change and the actions to be taken:

- Global warming should be limited to 2°C above average pre-industrial levels. A temperature rise of more than 2°C would have disastrous impacts on the world's ecosystems and food production systems, endangering the food and water security of people in the most population areas of the world.
- In order to limit temperature rise to no more than 2°C, world greenhouse gas emissions must be halved by 2050, implying a reduction of on average 85% for industrialized countries.
- Finally, in order to stay on track on this emissions pathway, developed countries must reduce their emissions by 25-40% by 2020. As greenhouse gas emissions continue to accumulate, their concentration in the atmosphere will increase to rise by inertia even after annual emissions have peaked. As a result, emissions must rapidly fall between 2010 and 2020 to avoid exceeding the long-term limit of 450 ppm CO_{2eq} (parts per million of carbon dioxide equivalent).

However, recent developments in climate science point to even more serious scenarios than those

presented in the 4th IPCC Assessment Report. It seems no longer sufficient to limit global warming to 2°C above pre-industrial levels and stabilize greenhouse gas concentrations in the atmosphere at 450 ppm. Climate models now study effects not only for the end of the century (2100) but also for the end of the millennium (3000), revealing more serious consequences than previously envisioned. As such, it will probably be necessary to limit temperature rises to 1.5°C, corresponding to stabilizing greenhouse gas concentrations at 350 ppm. This will require more stringent targets on the year of peak global emissions and on emissions reductions for developed countries for 2020 and 2050.

○ **Emissions reduction commitments from industrialized countries**

The 2007 IPCC report specified that industrialized countries would need to collectively reduce their emissions by 25-40% by 2020 to remain on a pathway to limit global temperature rise by no more than 2°C. Many industrialized countries made announcements of their proposed emissions reduction commitments to reflect this, occasionally increasing the stringency of their targets as Copenhagen approached. But the emissions of some countries had grown so much between 1990 and 2007 that it had become impossible for them to make up the lost ground. As such, the targets put on the table would neither meet the level of action recommended by the IPCC, nor persuade emerging powers to take real action on their part. The calculations of the UNFCCC Secretariat revealed that the numbers proposed by all countries at Copenhagen would in fact probably lead to a warming of around 3°C.

○ **The legal framework**

Countries will, in general, only respect their commitments to reduce emissions if they are sure that others will follow suit. Indeed, this process is vital to building confidence between countries and allowing negotiations to progress. This also points to the reasons for the current difficulties on the question of the legal framework for the future regime. There must be the possibility of penalizing countries for non-compliance, an issue on which the Kyoto Protocol is proving to be rather weak.

Zoom on: The difficulties in enforcing international law obligations

The main obstacle to enforcing countries' obligations in international law is the sovereignty of the nation-state. An international treaty is often intended to apply universally, but it only binds States that have signed it. As a result the US, which has not ratified the Kyoto Protocol, is not bound by its provisions, even though the protocol is supposed to apply to all developed countries as the major emitters of greenhouse gases. In the end, a country's obligations in international law are thus determined by its willingness and degree of commitment.

Sanction mechanisms in international law

1. There is a basic form of sanction for non-compliance with an international obligation, common to all international treaties: moral pressure, in the form of the international community's opinion of a country not in compliance with or in violation of its commitments. This kind of judgment is behind Japan's rejection of a second engagement period to the Kyoto Protocol. Japan knows it is too far off course to take on new commitments, so does not want to be labeled as an international law "offender".
2. The second level of sanction corresponds to penalties directly provided for in the provisions of an international treaty, such as the penalties incorporated in the Kyoto Protocol for not meeting commitments. Parties which exceed their quotas for the first commitment period will have to make up the difference in the following period, with an added penalty of 30%.
3. In the event of a major violation of the rules of international law, in particular another State's national sovereignty, the UN Security Council can adopt resolutions to impose economic sanctions (trade embargoes, etc.), or in extreme circumstances, authorize the intervention of a coalition of Member states against a failed state.

In the case of international law, as there is no "international environmental tribunal",¹ sanctions are primarily of a moral character. The major difficulty with environmental law, in particular on climate

¹ The ALBA countries support the creation of an International Climate and Environmental Justice Tribunal, which would be in charge of judging countries on their compliance with their obligations to Mother Earth.

change, is that it must involve international consultation to be effective. At the same time the capacities to act lie with countries themselves, with solutions implemented above all at a local level. The lack of a body to settle disputes and sanction countries for not complying with the rules in force is another obstacle to effectively enforcing environmental treaties.

- **Securing the participation of emerging powers**

The inability of the developed countries parties to the Kyoto Protocol to agree on emissions reductions matching the recommendations of the IPCC, coupled with the US dragging its feet were major stumbling blocks to getting emerging powers on board. In general, they continued to put off announcing targets, preferring to give immediate priority to economic growth. This explains why China, India and other emerging powers refused any kind of differentiated treatment between them and other developing countries. In addition, they had little to gain in the negotiations. Whilst they were the main beneficiaries of the CDM, future financial support was to be directed in priority to the least developed and most vulnerable countries. As a result, they were slow to propose actions to reduce emissions domestically. Nevertheless, it should be noted that China, in its 11th Five Year Plan, set sectoral targets to reduce emissions or improve production/energy consumption ratios. China announced new emissions reduction and reforestation targets at the G20 Pittsburgh summit before Copenhagen. Similarly, Mexico and Indonesia have adopted “climate and development” action plans, with quantified emissions reduction targets against a business as usual scenario.

3. The sequence of events: from euphoria to despair

- **The way negotiators function**

Despite periods of intense discussions, talks had progressed little between June and December 2009. The deadlocks in the negotiations were in part due to the fact that governments had not given negotiators a clear political mandate. Maintaining two parallel negotiation tracks was also an obstacle to synthesizing discussions.

- **Enriching texts, sorting out options and blocking progress**

Negotiators are for the most part civil servants in ministerial positions and ambassadors receiving expert advice. As such, their main role was to nourish the negotiation process with proposals, but they did so often with such a degree of precision that too many constraints were placed on the conditions of their actual implementation. In theory, the negotiation process consists of structuring the negotiation text and trimming it of redundant proposals. But negotiators unfortunately tended to return constantly to their original positions, and so sessions are often fruitless. Without a clear political mandate that allows for the exchange of concessions, negotiators reverted to behavior and tactics that seek to block discussions, not helping to synthesize options. Unblocking this situation would require real political bartering on matters of substance.

- **Five different levels of negotiations**

These chronic difficulties were compounded by another, relatively new one: the several fold increase in the number of participants in the negotiation process, each with very different levels of understanding of the different topics. By the end of the Copenhagen Conference, the negotiations had passed through five different levels of responsibility:

- Until Sunday of the first week, the usual negotiators were in charge.
- At the end of this phase, an agreement was agreed to adopt the text proposed by the AWG-LCA chair, Mr. Michael Cutajar, as the basis for further negotiations.
- From then on, negotiations moved to the ministerial level, but as most lacked a clear mandate, ministers could make no progress on a chaotic text containing hundreds of points of discord.
- With ministers having barely started their work, negotiations were transferred to the level of heads of state and government and their aides. Many of them expected, as was usual, to arrive to sign in a flourish an almost finalized agreement with just a few major issues to be resolved. In fact, 28 of them spent the last day in marathon sessions drafting a new text after

those used in the negotiations up until then had been scrapped. Thus the Copenhagen Accord was produced and adopted between them.

- This text still had to be adopted by the plenary session of the UNFCCC, and so was resubmitted to all the countries, via their ministers or negotiators, but in the absence of the heads of state and government who had just drafted it.

These successive transfers, compounded by strict time constraints, disrupted the rhythm of the conference, blurring choices and lowering the quality of the final agreement. There was also a downside to the unprecedented media coverage, wholly justified by the desire to make the event as transparent and democratic as possible. The huge level of participation, the sidelining of NGOs, the accumulation of expectations and the symbolic weight given to the event led to it spiraling out of the organizers' control and added to the tension in the air.

- **Closing the doors on transparency**

The decision-making process was disrupted with the arrival of the heads of state and government. Negotiations promptly shifted from being open to all 192 countries to a very limited number of "Friends of the Chair". Naturally, negotiators from countries who had been swiftly excluded as well as NGOs banned from the conference center in the closing stages harbored feelings of injustice. Though it was clear that the process had to be streamlined for clear decisions to be made, the transition from one level of participants to another was poorly handled. This explains why it was difficult for the Copenhagen Accord, drafted with limited consultation behind closed doors, to be positively welcomed.

- **Concluding in confusion and frustration**

The final phase of negotiations had started well, with a significant offer from the US to accept, for the first time, to commit to official development assistance a number of years into the future. Hilary Clinton had proposed US\$100 billion in climate finance from developed countries every year from 2020 onwards, scaling up sources from now with a number of undecided sources of innovative finance. But this was the only progress made. In the end, this rather mediocre text, despite remaining ambiguous on several points and in retreat from previous formulations in the negotiation texts, was adopted by 28 heads of state and government. As a result, there was little surprise when attempts to have the text adopted in the closing plenary session of the UNFCCC failed due to opposition from certain countries and the various procedural blunders committed.

4. The US roadblock

The US position was a key influence on the preparation of the Copenhagen Conference and the way it unfolded.

- **Return of the prodigal son**

Barack Obama's arrival at the White House in January 2009 aroused a huge wave of hope amongst the signatory countries of the Kyoto Protocol. Yet few were surprised by the United States' announcement in March that it still refused to ratify the Kyoto Protocol. Indeed, US emissions had continued to soar and the Kyoto Protocol remained a discredited treaty within the country.

Negotiators spontaneously came to the conclusion that a new protocol would be drafted in Copenhagen, essentially a replica of the Kyoto Protocol with a few minor modifications. However, it became clear by the end of August that the United States would also refuse to sign any new protocol, and that the process was heading towards a simple political declaration accompanied by rules governing the implementation of actions under the Framework Convention. So the long-awaited return of the US actually had the effect of throwing negotiations in Copenhagen into disarray.

- **Stalled progress in the US Congress**

The Obama administration clearly stated its position from the beginning that its priority was to pass legislation through Congress. Only after a national climate policy had been adopted, could there be any consideration of changing its position on the international stage. But time was too short; the House of Representatives had passed a climate-energy bill but a Senate vote could not have come before

Copenhagen. It was clear from early December on that any major concession in the negotiations at Copenhagen granted in anticipation of the Senate vote ran the risk of jeopardizing its success.

- **One chance, one shot**

It then became clear that everything would be decided in Copenhagen in the last days. Either no major concession would be granted by the US on the three key negotiation points: emissions reduction targets, the legal form of the agreement and the financial flows and technology transfers to the poorest and most vulnerable countries – which would lead to a failed summit. Or else the US would make major concessions, thus giving room for an agreement and at the same time generating enough enthusiasm from the success of the negotiations to lessen the oppositions within the US as well as building the international stature of Barack Obama. They chose the first option.

- **Linking up with the UN**

The difficulties of the US position do not end there. As the dominant power in today's world, they have no desire to sign up to any international treaty under which they might be subject to direct sanctions. In rejecting the Kyoto Protocol, the US also show their rejection of any possibility of international sanctions, much like their refusal to support the International Criminal Court. The vast majority of countries, however, including the EU, the emerging powers and least-developed countries refuse to sign a treaty that would not provide for mechanism to ensure countries comply with their obligations.

5. Obvious errors leading to Copenhagen

Irrespective of the constraints surrounding the negotiation process present from the outset, there were still large holes in the preparation of the Copenhagen Conference.

- **A lack of objective analysis**

Negotiations end on a positive note when each participant has an idea of the maneuvering room of his counterparts. In Copenhagen, each participant came with great uncertainty as to the adequacy of what was being negotiated in his own particular case. Not enough time was taken to sketch out the possible trajectories in addressing climate change at different rhythms of social acceptability, for each country or group of countries (developed, developing, least developed, most vulnerable, etc.).

- **A lack of serious analysis from an economic perspective**

The Stern report on the economics of climate change proved to be too isolated to adequately advance an understanding and a representation of all the facets of the economic mutation required to deal with the challenge of climate change, which many negotiators continue to associate with extra costs and a loss of economic competitiveness. The economic benefits associated with greater energy efficiency from measures to mitigate climate change have never really been adequately appreciated. The economic crisis and volatile oil prices have not helped to clarify the situation. But as long as fighting climate change continues to be seen as a handicap rather than an opportunity, countries will remain entrenched in their positions.

- **A failure to properly structure the topics in discussion**

There was also the need to better identify the main issues tying up the negotiations, search for possible compromises and move on to untying other topics in discussion. In contrast, there was no real discussion on each country's priorities to work out a step-by-step approach to the negotiations. Yet there were only two central knots tying up the negotiations, regarding the level of developed countries' commitments as well as the framework to ensure that they respected their commitments, and regarding ensuring that developing countries would not be stopped from developing.

Furthermore, on the points where agreement could be more readily found (such as the sources of financing) to show good will, no country was ready to make an early concession to kick start the process. Instead, the entire negotiation was conducted on the assumption that the issues would all be resolved at the last moment. With no guarantee that a concession on one point would be reciprocated, many negotiators saw making further proposals as strategically risky and a display of weakness.

B. Learning through the crisis

This conference witnessed a crisis of three dimensions: geopolitical, ethical and social. Never before have countries been confronted with the consequences of their failures and unfulfilled promises, and with the profound paradigm shift which has taken place. The awakening has been all the more brutal given the extent of the deadlocks encountered at Copenhagen. Developed countries have had to face up to the end of their supremacy; emerging powers flexed their newly acquired muscles and for the first time the poorest and most vulnerable countries spoke out so forcefully against any agreement which would deny them their right to develop.

Events of intense drama like the Copenhagen Conference can help to move history forward. Everyone came away with the very clear feeling that the climate change problem could not be resolved without a sense of solidarity uniting all the countries in the world.

1. Differences between countries' positions

The Copenhagen Conference revealed to the world the degree to which the credibility of developed countries' commitments had been undermined, both as their emissions had continued to grow and their promises to finance actions in developing countries had not been met. They were thus put on the defensive. Emerging powers, on the one hand, exploited this to justify their refusal to make any concessions or commitments. Developing countries, on the other hand, were distrustful and waited for assurances that they would not be denied access to development before committing themselves. The diametrically opposed positions and interests of countries led to a complete deadlock in the negotiations, with each country holding firm to its own position.

Differences between developed countries' positions

During the talks in Bonn during 2010, a rift formed between developed countries – mainly the EU – which were critical of the low level of ambition of the Copenhagen Accord and those which presented the Copenhagen Accord as a positive result and the basis of future negotiations. Though the EU has recognized the Copenhagen Accord as an important political outcome, it could not in any way replace the need for a global legally binding agreement for 2012. The US, on the other hand, presents Copenhagen as an advance in the negotiations. They highlight in particular the fact that two-thirds of countries have associated themselves with the Accord, which is more than in the Kyoto Protocol.

Zoom on: the United States of America

With an extremely high level of emissions per capita and an increase in overall emissions since 1990, the US has maintained a marginalized position with their refusal of any legally binding framework. At the same time, they have been engaged in an arm-wrestle with their main economic rival, China. The US continues to insist in particular on imposing measures to verify developing countries, even if they are voluntary actions undertaken with no international financing, and though developed countries themselves have never been subject to such conditions. The topic of MRV (measurement, reporting and verification) of actions and commitments has thus been at the core of the debate.

Zoom on: the European Union

The EU took the lead for a long time in the climate negotiations, but did not succeed in imposing its position in Copenhagen, due in part to its internal divisions and in part to its difficulties in integrating its new member states. In fact, the EU spends most of its time negotiating with...itself. This lack of coordination between member states is a stumbling block to the EU throwing its full weight around as a bloc. There is no denying that the EU was excluded from the final negotiation process – forced to accept a text resulting from a compromise between the US and China even though it fell far below its expectations. This was basically to avoid leaving Copenhagen with no agreement at all – which would have made a Conference a total failure. Though the EU's position is open to criticism, it managed at least to avoid sparking hostilities with the US or China.

Zoom on: the G77+China

Plagued by internal tensions and divergent interests, the G77+China appears less and less united. Sub-groups of the G77 have formed, such as OPEC, the African Group, the group of island states (AOSIS or SIDS), the least developed countries and, above all, the sub-group of emerging powers. The main tensions arise from the widening gap in development levels and greenhouse gas emissions between emerging powers (the BASIC group) and the remaining developing countries. In the Kyoto Protocol, emerging powers were not subject to any legally binding emissions reduction or limitation targets. Clearly, some 13 years down the track from Kyoto and 20 years after the Framework Convention, their emissions have considerably increased. These countries still refuse to be subject to obligations any different from those of least developed countries, though they are coming under increasing pressure from the most vulnerable countries, and especially small island states. After all, the increasing emissions from emerging countries also present a danger for the climate.

Zoom on: the BASIC group of emerging powers

The emerging powers share several common characteristics, including their demographic weight and the spectacular growth in their economies and greenhouse gas emissions. They now negotiate for their own interests, distinct from those of the least developed and most vulnerable countries. Though it is too early to speak of an official strategic alliance, a grouping between Brazil, South Africa, India and China became more evident during the Copenhagen Conference. The rapprochement, centered on increased cooperation between India and China, has a variable geometry. A meeting between BASIC countries took place in January 2010 in New Delhi with several more before Cancún. Matters such as increased cooperation and financing between developing countries were on the agenda.

In the negotiations, the emerging powers share a common position: maintaining two parallel negotiation tracks, keeping untouched the classification of countries in the Framework Convention and the Kyoto Protocol under developed countries (Annex I) and developing countries (non-Annex I, including the emerging powers), keeping emissions reduction actions strictly voluntary for non-Annex I countries, refusing to set a medium term global emissions reduction goal, and refusing to set a date for a peak in global emissions and a quantified long term goal of limiting temperature rise to 2°C.

China has shown that its primary concern is to avoid slowing down its economic growth, which would inevitably lead to internal social troubles. Like the US, China made clear the importance of preserving its national sovereignty, balking at the prospect of making binding international commitments and being held accountable for compliance, when these are already made domestically.

Zoom on: the ALBA group

The ALBA group ("Bolivarian Alliance for the Peoples of Our America", comprised of Equator, Antigua and Barbuda, Saint Vincent and the Grenadines, Venezuela, Cuba, Bolivia, Nicaragua, Honduras and Dominica) is a new opposition force in the negotiations. Their demands are based on a rejection of capitalism and current development models, leading them to oppose markets as a mechanism to fight climate change. These are broadly the same countries which rejected the Copenhagen Accord.

Africa's place in climate negotiations

With more than half of the least developed countries in the world, the African group is in a complex situation in the negotiations. Having made its presence felt during COP15, it felt excluded from the process on the last day. The priority for this group, currently presided by the Democratic Republic of Congo, will be to restore confidence by reaffirming the central role of the UNFCCC, the only legitimate forum for discussion. Resolving the issues of access to the financial mechanisms and making concrete progress towards a new development path hold the keys to future success.

Countries aim in the negotiations to preserve their national sovereignty and their gains rather than moving together to a common goal. They are faced with several difficulties – the difficulty of engaging on a multilateral level, of developing mutual trust and of perceiving other countries as partners in a challenge that will have to be confronted, one way or another. Suspicion reigns supreme, with countries tending to justify the lowering of their own commitments by pointing out the mediocre

performances of others. The absence of leadership, particularly obvious in Copenhagen, allowed prior antagonisms to resurface. But the game of cat and mouse will go on and the situation will get more and more serious if, in the future, emissions trajectories become incompatible with the goal of stabilizing the climate at levels prescribed by the science. This could then fuel a dangerous sense of fatalism. Developed countries must first get serious about respecting their own commitments and other countries will then follow suit.

2. A new playing field

In contrast to their usual silence, poor countries from Africa, Latin America, as well as the most vulnerable countries and small island states spoke out against the Copenhagen Accord, a document vague on details drafted by a select group of world leaders. They marked their refusal to accept the rules of the game set out by the traditional decision-makers of the process (US, EU, Japan and co.) by letting off a number of warning shots over the course of the two weeks. Copenhagen witnessed a profound rebalancing of powers. For the first time ever, Africa spoke with one voice to defend its positions and interests, representing the majority of the world's least developed countries and expressing itself independently from the G77. Their action marked a shift in geopolitical forces, proving that a select number of countries will no longer be able to make decisions on behalf of the rest of the world. The fight against climate change will succeed with the participation of everyone, or will not succeed at all. This requires greater attention to considerations of equity and development in fighting climate change. For climate negotiations to be successful, countries will need to get over their usual animosity and prepare for a new development model for all countries, rich and the poor alike.

3. Discussion of climate change now at the highest level

At Kyoto, climate change was discussed at the level of environment ministers. In Copenhagen it reached the level of heads of state and government.

○ Climate change became a major issue in international politics

The intervention of heads of state and government shook up proceedings considerably, but in conditions that made any in-depth resolution impossible. From now on, the fight against climate change will be at the heart of major political issues, interlocking with issues such as relations between rich and poor countries, official development assistance, the regulation of the global economy, development models, the role of markets and the system of world governance.

Now that the fight against climate change has risen to the highest level as a political issue and has become a major issue of international diplomacy, it will be impossible to take a step back, no matter the difficulties which yet lie ahead.

○ A democratic and transparent process

It was the opening up of the negotiations to a wider audience, under the credo of transparency and democratization, which brought greater awareness of the process. The media was especially active, helping to inform civil society and move beyond the image of the negotiations as being restricted to an inner circle of people. The drama and rising tensions helped to focus attention and provoke debate on the negotiations at a global level. Without this tension, countries have been too reluctant to grant the required concessions and undertake the required actions and operations.

4. A dysfunctional UN system

The feeling that the Conference had failed in attaining its objectives is largely attributed to the failure to determine a solid legal framework for future action: the closing plenary only “took note” of the Copenhagen Accord.

However, having a legally binding framework is all the more important given that:

- Being legally binding, this could restore confidence in the system after the multiple cases of unmet commitments made at Kyoto;
- An agreement would open the path to a new development model;

- Industrialized countries would commit to new funding for developing countries; this commitment would only be credible if recorded in a binding agreement.

These three elements could restore faith in the ability of collective action to generate ambitious commitments, pushing forward for more ambitious commitments from other stakeholders, including corporations, local governments and citizens, in a virtuous circle.

An announcement in the final stages of the Copenhagen Conference that indicated that countries were “willing to work together to adopt a treaty at a later date” would have sufficed to shift the mood from a feeling of failure to one of enthusiasm. Putting into place a calendar on the most difficult subjects of the negotiations would have further enhanced the credibility of this declaration. The conclusion to be drawn from Copenhagen is not that the Kyoto Protocol is too onerous, as the US would have you think, but more so that it is not onerous enough, meaning that many countries are getting off scot free from not meeting their commitments. The feeling of unease upon leaving Copenhagen pushed some countries to move towards a system of voluntary agreements between countries as the basis for taking further action, whilst others repeated the need to reform the UN system.

○ **The unquestionable need for a new treaty**

The results of the Copenhagen Conference point to the need to move towards the solid framework of a treaty. In practice, until formal agreement on a new treaty is reached, increased pressure will need to be placed on countries so they respect their commitments to a degree which enables trust be restored and to follow an ambitious collective emissions trajectory consistent with stabilizing the climate. This is why former UNFCCC Executive Secretary Yvo de Boer insisted in the closing plenary of the Copenhagen Conference on the need to prepare a treaty with legally binding commitments.

But 2010 will be another year of little progress in preparing a new protocol, without the passage of energy-climate legislation in the US Congress. The negotiations will have to search for dynamism in the implementation of concrete action before these crucial governance questions can be taken up again. It will probably take years to build a governance framework to allow for an effective management of the Earth's climate.

Nevertheless, certain criticisms addressed at the UN system should be put into context. We should not forget that this is the first time that humanity has faced a global threat of this magnitude. It is thus not that surprising that the institutions and the working methods of diplomatic corps in place have proved to be poorly suited to this new challenge, which calls for a reformed system of international relations.

5. From national sovereignty to international solidarity

Climate change is the first issue in human history on which international solidarity is a must. It cannot be addressed solely through the actions of individuals; it must be taken on board by the entire international community. Indeed; the climate of any single country is determined not only by the biosphere, but also of the emissions resulting from all of mankind's activities. As no country can control its own climate, the evolution of the climate becomes an issue of shared sovereignty between all the countries of the world.

Rising to this challenge requires a complete transformation of international relations. They must now transcend the framework set up by the Treaties of Westphalia, signed in 1648, which founded the modern international relations system. By giving rise to the concept of national sovereignty and setting up a system of international rules, the Treaties brought an end to the Thirty Years' War, the religious wars which had brought so much bloodshed to Europe.

The Copenhagen Conference pointed towards the need for world governance in the UN framework to stabilize the Earth's climate. It also demonstrated the extent to which countries defend their own national interests to the detriment to the common interest. We must acknowledge the significant transformation of the world which has occurred, the end of an era.

At Copenhagen, the Treaties of Westphalia became effectively obsolete. Indeed, the deadlocks resulting from Copenhagen highlight the need to take fresh steps down a new path of human history,

one in which the need for collective management of the Earth takes precedent over national sovereignty. With the recognition of the need for a common trajectory comes the need for:

- The expression of a sense of global citizenship,
- The ability for countries to make international commitments on the reciprocal basis that others can be trusted to follow through with their announcements,
- The ability to penalize countries which do not respect their promises, whether it be commitments on emissions reduction or finance (Annex I) or announcements of mitigation and adaptation actions (non-Annex I).
- A stable legal framework in which economic actors may operate,
- Systems to allow actions to be monitored with precision and thus build confidence.

This crisis had the effect of confronting countries with their responsibilities and the reality of the challenge they face. Climate change can only be successfully addressed if all countries participate in and reach a global and balanced deal. Developed countries have little choice but to accept that negotiations with developing countries and emerging powers will be centered on the issue of providing finance and technology transfer to ensure their development prospects are not jeopardized. A new global agreement will only be possible if progress is made towards a new development model for all the world's countries.

C. The progress made at Copenhagen

Whilst the Copenhagen Conference was a serious failure on the two key issues of the commitments of industrialized countries and a legally binding agreement, it did allow for progress to be made on two fundamental points:

- Recognition of the need for all countries to get to work on implementing mitigation and adaptation actions, to move towards new development pathways;
- Determination to commit to increased financial transfers from rich countries to poor countries, with visibility from now until 2020.

1. Towards new development models

○ Moving towards new development pathways for all countries

Only very late in the negotiations was the importance of the issue of development recognized. Over the last few years, questions relating to access to technology, financing and economic opportunities had never been considered at the heart of the discussions. As a result, developing countries had adopted a very defensive mindset, even going as far as deliberately blocking the negotiations. With the support of many NGOs, they set down the recognition of their right to develop, and the promise of financial and technological support, as absolute conditions for them to accept an agreement. The lack of progress until the last days of the Conference on the issue of financial contributions from developed countries prevented progress being made on other matters, including adaptation, deforestation, mitigation policies and technology transfer.

It became apparent that an agreement to stabilize the climate would only be possible if all countries had access to low-carbon development meeting the needs of their populations. This constitutes a huge challenge and work program, recognized for the first time in COP15, and visible in the Copenhagen Accord, which underlines the importance of economic and social development and eradicating poverty.

2. Fast start finance

Finance was the issue at the heart of the discussions in 2010. Indeed, the main step forward made in the Copenhagen Conference was the pledge by developed countries recorded in the Copenhagen Accord to provide fast start finance of US\$30 billion over 2010-2012, with balanced allocation between

mitigation and adaptation. All countries, even those which have not signed the Copenhagen Accord, now recognize this pledge, though it does not have the status of a legally binding commitment. These funds should be “new and additional” and be prioritized for the most vulnerable developing countries, such as the least developed countries, small island developing States (SIDS) and Africa.

The most recent analyses of the pledges give an estimation of the sums pledged for the fast start finance period by different countries during the year. The total of US\$30 billion should be reached as a sum of individual countries’ pledges, with around US\$10 billion for 2010. However, it is difficult to identify the portion of funding which will be genuinely new and additional. Indeed, many contributions consist of simply redirecting existing official development assistance.

| Source | Climate Analytics² | WRI³ | Reuters⁴ |
|--|--------------------------------------|--|--|
| Total sum (\$US) | 32,6 billion | 28,0 billion | 29,8 billion |
| Japan | 15 billion | 15 billion | 15 billion* |
| European Union (EC and Member States) | ≈10 billion | 10,41 billion | 9,59 billion |
| United States | 4,76 billion [§] | 1,3 billion (2010) 1,725 billion (2011) | 1,3 billion (2010) 1,9 billion (2011) |
| Canada | 1,2 billion | 392 million (2010-2011 fiscal year) | 377 million (2010-2011 fiscal year) |
| Australia | 599 million | 582 million | 504 million |
| Norway | 560 million (2010 budget) | 357 million (2010 budget) | 1 billion to fight deforestation |
| Switzerland | ≈130 million | 143,8 million | 136 million |
| Iceland | no information | no information | no information |
| New Zealand | no information | no information | no information |

- [§]\$2.18 billion are programmed for the 2010 and 2011 budgets; \$1.58 billion will be provided through credit guarantees via the US Import-Export Bank.
* \$11.87 billion are provided through the « Cool Earth Partnership ». \$5.3 billion had been allocated by the end of April 2010.

Europe’s contribution as a whole, the sum of European Commission and member states pledges, should total US\$2.7 billion for 2010 and US\$10 billion over the entire fast start period. 61% of the announced finance should be channeled through existing bilateral mechanisms (of which 63% to African countries) and the remaining 39% through multilateral institutions, such as:

- the Global Environment Facility (€108 million);
- the Adaptation Fund (€72 million);
- the Climate Investment Funds (€208 million);
- the Inter-American Development Bank (€28 million);
- The Forest Carbon Partnership Facility (€20 million);
- The Consultative Group on International Agricultural Research (20M€).

Though it is still difficult to analyze the content of fast start finance, it seems that the majority of multilateral finance corresponds to commitments already made at Copenhagen or automatic contributions from Annex I countries to multilateral funds or initiatives (such as the GEF, CIF, etc.). On the contrary, a significant portion of bilateral project finance was decided after Copenhagen and represents a real effort towards increasing “climate change” projects.

² <http://www.climateanalytics.org/> Briefing papers > Assessment of progress on fast-start finance commitments. (Accessed August 3 2010)

³ <http://www.wri.org/publication/summary-of-developed-country-fast-start-climate-finance-pledges> (Accessed October 2 2010)

⁴ <http://www.reuters.com/article/idUSLDE67O1AA>
<http://www.reuters.com/article/idUSTRE67P36J20100826> (Accessed August 26 2010)

○ **The role of fast start finance**

Fast start finance will only be genuinely useful and innovative if use of the funding is optimized and directed to specific targets. Its main role should be to support developing countries in preparing the implementation of projects, plans and programs for mitigation and adaptation over the longer term.

The funding will need to be used to compensate for the failings of the CDM⁵. Though originally intended to support mitigation actions in all developing countries, it was mainly used to finance large-scale industrial projects in the emerging powers. Though least developed countries should have been the main beneficiaries of the mechanism, they ended up with very limited access, disadvantaged by weak capacities in project design as well as the CDM's excessive administrative complexity.

The 2010-2012 period should thus be used as preparation to ensure that countries can build solid projects to attract international finance and use long term finance in the most optimal way possible. Funding over this time should be directed towards:

- reinforcing countries' human, technical and institutional capacities;
- identifying projects to be implemented in priority;
- implementing pilot projects with rapid evaluation and feedback;
- drafting mitigation and adaptation action plans, implemented on local and national levels.
- giving priority to replicable projects in develop value chains, for the greatest leverage effect.

Making adequate finance available over the 2010-2012 period will thus represent a crucial point in preparing the implementation of concrete actions on the ground, and in fine in reconciling development and the fight against climate change in the long term.

3. Financial flows and innovative sources of finance to reach US\$100 billion in 2020

Climate change financing received a major boost with industrialized countries' commitment, recorded in the Copenhagen Accord, to mobilize further funds for mitigation, REDD+, adaptation, transfer technology and transfer and capacity building. The Accord commits to progressively increasing levels of finance with the goal of reaching \$100 billion in 2020, scaling up from fast start finance.

With this commitment came an analytical exercise to find innovative sources of finance. This mission was assigned to a working group of personalities known for their expertise in this area, with their report being released shortly before Cancún⁶. This is a way of making the financing announcements more credible, and to defuse criticisms of the impressive but empty declarations that mark the poor experiences of the past in regards to official development assistance.

○ **Monitoring and verifying financial flows and commitments**

Scaling up financial flows raises two questions, one regarding the quality of the contributions of funds by developed countries and the other regarding the quality of the implementation of projects financed in developing countries. This spurred the desire to create a system to measure, report on and verify (MRV) actions as well as a registry to record finance and actions. It is yet to be decided how they will be put into place.

4. Walking the talk: NAMAs and REDD+

○ **Synergies between the national and international spheres**

The negotiations are not an end in themselves, but rather act as a catalyzer of a broader movement to transform our societies. National borders will have to be transcended to give way to a framework for action and consultation of all the people in the world. After scientists and environmentalists, it is now up to agents in global civil society and the global economy as well as public authorities to take up the fight against climate change.

⁵ See the section on the Kyoto mechanisms in long term finance.

⁶ See the section on the High-level Advisory Group on Climate Change Financing.

The international negotiations must also be conducted in tune with policies at the national level. In other words, the decisions made in international conferences must give rise to debates in national parliaments and filter down to the different instances at the local and territorial level. Until now, this has hardly been the case. There is even the very real concern that the difficulties in international negotiations may be used as an excuse to water down national policies which are already largely inadequate. Indeed, the real risk is not so much that we end up with mediocre international agreements, but that the implementation of policies on the field is insufficient. The international process must therefore show progress in implementing actions and concentrate on the operational aspects – REDD+, NAMAs, adaptation – as well as climate finance.

The negotiation cycle ending in Copenhagen made one big step forward from the Kyoto Protocol; it recognized the importance of bottom-up initiatives central to the process of building mitigation projects and programs in all countries around the world. The proposal to draft mitigations actions on a national basis, raised two years ago by China and South Korea, was thus a decisive step forward. This shows that the international process is entering a new phase, moving on from the feelings of resentment and frustration that plague current discussions.

The invention of **NAMAs** (Nationally Appropriate Mitigation Actions) opened the door for all countries to participate in the mitigation effort. Even the least developed and the most vulnerable countries can take action with the aid of financial support from developed countries. These NAMAs would take the form of national plans and actions presented for funding before a yet to be created Copenhagen Green Climate Fund under the UNFCCC, with implementation then to be passed on to development banks in terms which are also yet to be defined.

The practical details of the implementation of NAMAs are yet to be specified:

- How NAMAs will be registered to distinguish them from voluntary, unilateral actions, i.e. distinguishing between mitigations actions carried out by countries with their own means and those requiring the support of international funds.
- The structure of the projects, plans and programs and the scale at which they will be drafted. This means going beyond the project by project and sector by sector approaches characterized by the design of CDM and even programmatic CDM activities to develop programs cutting across several sectors.

The Kyoto Protocol set up one pillar of the fight against climate change around emissions reductions pledges. Now the Copenhagen Accord has, in one of the decisive advances, set up a second pillar around the actions of developing countries supported by financial flows and technology transfers. This is the decisive advance made in the Copenhagen Accord, which can allow for full-scale mobilization on mitigation and adaptation.

Zoom on: the mechanism to reduce emissions from deforestation, forest degradation, as well the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries (REDD+)

All countries agree on the importance of reducing deforestation which, in its different forms, accounts for almost 20% of world greenhouse gas emissions. Papua New Guinea, supported by Costa Rica and eight other countries, proposed to put into place a REDD mechanism at COP11 in 2005. Since then, a significant number of submissions have been made on this topic.

The Bali Action Plan officially recognized the need to incorporate a REDD+ mechanism in the post-2012 regime. Negotiations appear to be most advanced in this area, even if some disagreements on various points remain. All parties have an interest in quickly coming to a consensus to initiate a “transitional phase” of the REDD+ mechanism. The REDD+ mechanism will be primarily defined through four criteria – scope, reference scenario, scale and sources of finance. The institutional arrangements and allocation and distribution of funds will be put into place once this has been settled. Global climate goals forming the Convention’s shared vision should also be translated into targets for reducing deforestation. Several submissions have been received on this matter, including:

- **Halving tropical deforestation by 2020,**
- **Stabilizing world forest cover from 2030 onwards.**

Brazil's and Indonesia's commitments announced just before Copenhagen, aiming to reduce deforestation by 80% and 26-41% respectively by 2020, the explicit mention of the importance of the REDD+ mechanism in the Copenhagen Accord and the launch of the Paris-Oslo initiative⁷ are very positive signs for the prospects of future negotiations.

Without waiting for an overall agreement, it is necessary to quickly implement a battery of REDD+ actions, which would be then reintegrated into a post-2012 agreement with similar status as other actions recognized in the Kyoto Protocol. Implementing pilot actions should allow for countries to progress on a voluntary basis supported by fast start finance. Text on a decision on REDD+ was close to being finalized at Copenhagen.

Restoring confidence is essential to ensuring that negotiations run smoothly. Implementing concrete actions on the ground with clearly visible results is a crucial step towards achieving this. This will have a positive knock-on effect as countries will have the proof that implementing actions at a reasonable cost is not only feasible, but also beneficial – and they will have the incentives to act.

The year 2010 has thus been marked by a reversal of the driving force in the governance of climate change. The degree of mobilization and the implementation of voluntary national action plans will determine the progress of the political process at the international level. The process, until now exclusively top-down, now also has a force working from the bottom up.

This took the form of a call for developing countries to present the NAMAs they intend to implement. These have since been compiled in Appendix II of the Copenhagen Accord.

Some countries decided to go further than simple announcing attenuation measures and also announced reductions in their emissions levels or in the carbon intensity of their economies. These proposals are presented in the table on the next page.

○ **The variety of projects in Appendix II of the Copenhagen Accord**

The Copenhagen Accord arranged for a first call to non-Annex I countries to display their intentions to implement NAMAs by the end of January 2010. Several other proposals have been submitted to the UNFCCC Secretariat have been submitted during the year. These project listings give quite a complete coverage of the fields which will need to be prospected to move forward in new development pathways, especially in the areas of energy production, energy efficiency, forestry, agriculture and waste management. At this stage, however, projects involving industry, water management and transport are proportionally less well-represented.

The actions presented here correspond to projects which are already mature and for which often some concrete action has already been taken. As for the “missing” actions, usually either the preparatory work has not been executed, or their implementation seems too arduous or delicate (especially for urbanism projects). However, these will need to be taken into account for populations to adapt to future conditions relating to energy and climate change. It is therefore absolutely essential to start preparatory work on these areas in the 2010-2012 fast start finance period so that the projects can be deployed en masse post-Kyoto.

Certain actions can contribute to both mitigation and adaptation and be inscribed both in the list of NAMAs as well as PANAs. Programs should thus be conceived in a holistic way, by gradually building up national low carbon strategies. This initial analysis highlights several aspects: the wide range of possible actions, differences in the size of projects and in their maturity, as well as the need to ensure that they form coherent elements of a sustainable development strategy.

⁷ Cf : Part II – the four sessions from Bonn to Tianjin: the post-Copenhagen disarray; B) Setting up two separate paths: launching voluntary initiatives

| COUNTRY | NAMA BY 2020 | BASELINE | SPECIFIC ACTIONS |
|---------------------|---|---------------|--|
| Brazil | - 36.1 – 38.9% reduction in emissions below BAU | BAU | <ul style="list-style-type: none"> - Reduction in Amazon and Cerrado deforestation and restoration of grazing land - Increase use of biofuels, hydro power and alternative energy, no till farming, energy efficiency |
| China | 40 – 45% reduction in carbon intensity of GDP | 2005 | <ul style="list-style-type: none"> - Increase the share of non-fossil fuels in primary energy consumption to around 15% - Increase forest coverage by 40 million hectares and forest stock volume by 1.3 billion cubic meters; all by 2020 |
| India | 25 – 30% reduction in carbon intensity of GDP | 2005 | - Actions are voluntary in nature and will not have a legally binding character |
| Indonesia | 26% emission reduction | Not specified | Focus areas: peat land, forestry, agriculture, industry, waste, energy and transportation |
| Mexico | 30% reduction in emissions below BAU | BAU | Total annual reduction of 51 million tons of CO ₂ e by 2012 |
| South Africa | - 34% reduction in emissions below BAU | BAU | <ul style="list-style-type: none"> - 42% reduction below BAU by 2025 - Implementation will depend upon the provision of financial, technological support and capacity building by developed countries. |
| Republic of Moldova | -25% by 2020 | 1990 | Through implementation of global economic mechanisms focused on climate change mitigation |
| Republic of Korea | - 30% reduction in emissions below BAU | BAU | |
| Maldives | Achieve carbon neutrality as a country by 2020 | n/a | <ul style="list-style-type: none"> - The government is undertaking detailed work on implementation of this action - The submission of the present mitigation action is voluntary and unconditional. |
| Costa Rica | Implement long-term economy-wide transformational effort to achieve carbon neutrality | BAU | Significant deviation by 2021 |
| Ghana | Range of actions in various sectors with no numerical reference to emission reduction | n/a | Range of measures identified in electricity, transport, residential, industrial sectors, as well as related to liquid and gaseous fuels, metal production, crop production, forestry, solid waste disposal and waste handling. |

Source: "The Outcomes of Copenhagen: The Negotiations and the Accord", Climate Policy Series, UNDP Environment and Energy, February 2010, p. 12

It will be important to search for potential synergies between sectors. Coherence on a strategic level is especially important in the strategies the following areas:

- agriculture, forestry, water and adaptation;
- transport, energy and urbanism;
- energy, housing, comfort and adaptation.

It will be particularly important for the most vulnerable countries to succeed in the phase of design of NAMAs, as they are often among those who have the most difficulty in accessing funding.

Zoom on: NAMAs presented by African countries

An overall analysis of projects submitted by African countries reveals the following:

- African countries have presented projects in very diverse areas, pointing to significant pool of potential projects which can be implemented rapidly and at little cost.
- This would enable them to overcome the hurdles they faced with the CDM and to developing the right conditions to incubate projects.
- Pooling projects of a small size in packages (or programs, plans, etc.) would help to attract more funding.
- It is obvious that companies, local governments and national governments have numerous projects in the pipeline that were not officially submitted in the list of NAMAs in Appendix II of the Copenhagen Accord in the short period of time between COP15 and the end of January.

Projects from African countries address the following priorities:

- **Fighting deforestation**, restoring degraded forests, reforestation (increasing forest cover), sustainable management of forests and the certification of harvesting methods, increasing the number of protected areas, improving agricultural productivity to avoid clearing forests for cropland.
- **Energy efficiency**: improving the use of energy-efficient light bulbs, distributing energy-efficient stoves and encouraging alternative cooking methods, developing renewable energy.
- **Urbanism and the quality of buildings**: actions taken in this sector in Africa will be crucial, especially given the forecasted demographic growth. Development in African countries calls for a reorganization of towns and cities. This will help combat the problem of informal and insanitary housing, and also facilitate travel and access to vital services. Higher quality of construction will also bring about a reduction of GHG emissions often linked to construction that is unsuited to the local climate.
- **Training and capacity building**: this component is a priority for African countries and an essential basis for any sustainable development strategy. Only training and on-the-job learning will ensure that the local people appropriate the projects and technologies for themselves, an absolute condition for actions to be effectively followed and monitored.
- **Governance**: creating a strong and stable legal and institutional framework will be essential to establishing sustainable development strategies.

Local and sub-national authorities have also shown a great deal of dynamism. Their initiatives, which complement those presented above, are essential to addressing mitigation and adaptation. Adaptation actions in particular are sourced from on-the-ground initiatives presented by individuals, corporations and local governments.

5. Recognition of the role of sub-national authorities

The Kyoto Protocol does not explicitly mention the importance of bottom-up initiatives in designing and implementing emissions reductions projects and programs. There was a greater sense of recognition in Copenhagen, thanks mainly to active engagement from authorities at sub-national levels (governments and agencies at a local and state level). In practice, these authorities are the most

closely involved in preparing and implementing policies and measures for mitigation and adaptation, in both developed and developing countries.

Their role in addressing climate change should be underscored for two reasons:

- Unblocking the international negotiations will only be possible by building confidence and by demonstrating that countries are acting to implement mitigation and adaptation actions. Actions on sub-national levels will help to move forward this process and revive the international negotiations.
- Developing countries, and in particular the most vulnerable and least developed countries, are much more dependent on the progress of the international negotiations to move to actual implementation. This is because, unlike developed countries, they do not have sufficient financial resources to implement their intended actions on their own. Developing countries will need to present ready-to-go projects to access fast start finance over the 2010-2012 period as set out in the Copenhagen Accord. Though the institutional role of sub-national authorities varies between countries, actions and programs for mitigation and for adaptation are drafted for the most part at the local level. Responsibility for adaptation actions in particular lies at the local level, as the impacts of climate change and vulnerabilities of communities are tied to the specificities of local conditions.

Authorities at sub-national levels have a central role to play in mitigating climate change. The sectors responsible for the major sources of greenhouse gas emissions all lie within their scope. With their capacity to intervene in town and country planning, these authorities are also responsible for managing transports and the emissions they generate. They have several levers at their disposal, detailed below.

- **Designing emissions reduction policies**

Decisions taken at an international level only become operational when they are translated into concrete policies and actions on the ground. Depending on their level of ambition, sub-national authorities can thus have a considerable impact on the success or failure of the fight against climate change. They are already responsible for designing policies on transportation networks, the management of public buildings, energy production and consumption and water distribution. The ongoing process of decentralization will increase their range of competencies in the future.

Through town and country planning on a range of areas such as transport and tertiary services, local authorities can have a direct influence on emissions in their ambit. Possible levers include:

- improving the quality of building construction,
- promoting savings in energy consumption in buildings,
- developing active modes of transport,
- improving access to public transport services,
- reducing speed limits on roads,
- encouraging car-sharing and telecommuting initiatives,
- developing renewable energy,
- optimizing waste management practices,
- developing forms of agriculture suited to local conditions,
- improving the management of natural resources (forests, in particular),
- integrating town and country planning

Sub-national authorities are the right level for designing and implementing integrated action plans, covering all sectors and harmonizing different existing actions. Climate change is one consideration which they are increasingly obliged to take into account when drafting documents for town and country planning, urban transportation, and so forth. Furthermore, in countries with federal systems, it is at the level of local and state governments that climate change policies are first implemented, to spur on action at the national level.

- **Monitoring and verifying actions**

Sub-national authorities have an active role to play in putting into practice the system of measurement, reporting and verification (MRV) of implemented actions. Indeed, an international MRV system will only be effective if it is also supported at the local and national levels. To address all the aspects of the issue, it will need to combine a technocratic approach under the control of international experts, and a local approach giving greater political and democratic control over the implementation of actions. This will require efforts in terms of capacity building, as well as educating and raising awareness in the general public. Local authorities will thus be encouraged to be more actively involved and to take greater responsibility for the activities taking place in their sphere of influence. Thus, implementation at a sub-national level must be coherent with decisions taken at a national level in order to successfully tackle climate change.

- **Educating and raising awareness in the general public**

Individuals, through their choices and habits in their homes (heating, air conditioning, use of hot water, cooking, lighting), transportation, eating preferences, waste management, and as consumers in general contribute to around half of the a country's greenhouse gas emissions. This means that putting into place a policy to fight climate change is an issue of significant democratic importance requiring the active involvement of citizens. Their involvement can only be secured through education and awareness-raising to help them access information on the causes and effects of climate change and the possible solutions. Local governments, which have a closer and more concrete bond with individuals, will thus have a major role in bringing them into the heart of the fight against climate change. Going further, the general public will need to understand the need to progress towards new development models and be persuaded that it is the best path to take. Individuals will only make active efforts themselves if they can see the changes in their behavior as being linked to a new and successful vision of what their future could look like. A transformation their behavior will come above all from a push towards changing their daily habits. It is crucial for people to rally to policies to tackle climate change; without a change in attitudes these efforts will remain isolated in time and in space.

- **Drafting territorial climate plans**

Authorities at sub-national levels have not waited for their national counterparts to make progress in the negotiation process to take action. Indeed, they have been long involved in designing and implementing climate plans that aim to reduce emissions and adapt to climate change impacts at the territorial level. This initiative is supported by UN Development Program (UNDP) through a guide it has produced to help authorities in developing countries to develop similar plans.

Zoom on: Territorial Climate Plans, an essential tool for sub-national authorities to organize their mitigation and adaptation actions. To act effectively on the direct and indirect emissions within the scope of local governments' actions, internal departments must be closely involved in drafting climate plans. Local politicians and elected representatives should also be educated and mobilized to get other stakeholders and the wider public involved. Implementing territorial climate plans provides the chance to take concrete actions in the short term with specific goals (the 3x20 targets of the EU's energy-climate package, for example) inscribed within a long-term strategy (e.g. France's goal of an 80% emissions reduction by 2050).

In France, the Grenelle 2 law, adopted in June 2010, makes it compulsory for local and regional governments with more than 50 000 inhabitants to adopt a territorial climate plan by the end of 2012, thus highlighting their fundamental role in the fight against climate change.

At the international level, a joint partnership between UNDP, UNEP and other associations of regions through the world has been put into place to help with capacity building in regional governments in developing countries to draft and implement integrated territorial climate plans.

Zoom on: Initiatives, networks and associations of sub-national authorities

Authorities on sub-national levels are increasingly active in joining together to draft and implement ambitious energy and climate policies. In 2009, the European association Energy Cities and the European Commission thus launched the Covenant of Mayors initiative. Cities which sign up to the Covenant voluntarily commit to submit an action plan to reduce their greenhouse gas emissions and go beyond the EU's energy and climate goals. The Sustainable Energy Action Plans (SEAP) that they produce focus in particular on the ways cities intend to improve their energy efficiency and use less polluting sources of energy. To this day, over 1600 European cities have signed the Covenant of Mayors.

At the international level, the C40, launched in August by the Clinton Foundation, is a network of large cities from the global north and south which serves as a forum for exchange on best practices in particular in the areas of energy efficiency and clean energy. The C40's programs facilitate decentralized cooperation to build capacities in developing countries, through technical assistance on projects and procurement procedures, financial advice, and so forth.

Created in 2004, the association the Climate Group has since grown to bring together a group of countries, regions, cities and corporations in North America, Europe, China, India and Australia. It aims to create the technical, financial and regulatory conditions to bring about a "clean energy revolution" on a large scale.

Inspired from the G20 model, California Governor Arnold Schwarzenegger proposed at COP15 in Copenhagen to put into place the R20, sending out a call to regions in the world which wanted to be leaders in climate action. This new club, formally launched at the Governors' Global Climate Summit in November in California, is aimed at encouraging and accelerating the implementation of mitigation and adaptation actions, in particular through public-private partnerships.

- **Technology transfer, sharing experiences and solidarity**

Finally, a fabric of cooperation between cities in the global north and south and the growing importance of international networks of local authorities (ICLEI, Covenant of Mayors, the C40 group of large cities, the R20 group of regions, etc.) show off authorities at the sub-national levels as key players in international solidarity. By sharing their knowledge, technologies and best practices they play a key role in spreading information to facilitate the implementation of effective mitigation and adaptation actions. Networks of local and regional governments have thus been created, to allow experiences and savoir-faire to be shared, most notably through the pairing of cities from the global north and south. Their actions were initially disparate but are increasingly being pooled together and promoted as best practices. By creating the "Climate Neutral Network", for example, the UN Environment Program has helped spread the concept of carbon-neutral cities, leading to current-day flagship projects such as Dongtan (China) and Masdar (United Arab Emirates).

All this can make a significant contribution to building confidence between actors in the negotiations. Guided to a lesser degree by strategic and geopolitical motives, these authorities are freer to experiment with actions and act more rapidly and effectively. There is scope for them to build partnerships on matters such as climate action plans and financial mechanisms, which will play a major role in developing countries' implementation of their NAMAs and PANAs. Of course, for all actors to be fully committed to taking action, adequate mechanisms to provide funding and technology need to be set up.

II. Moving from the post-Copenhagen disarray to preparing Cancún

These are the lessons to be learnt from Copenhagen. Moving on to 2010, we may ask ourselves: Does the specter of COP15 in Copenhagen still hang over the negotiation process, or has it succeeded in emerging from behind the conference's shadow? What have been the concrete achievements of this year? What can we expect from the negotiation sessions to come? How could the negotiation process build on these bases in 2010 in the lead up to Cancún?

A. The sessions from Bonn to Tianjin: a process tied up in knots

A number of questions dominated discussions during the different sessions:

- *What had become of the promises of fast start finance from the Copenhagen Accord?*
- *The importance of bottom-up actions, in particular via NAMAs (Nationally Appropriate Mitigation Actions) was recognized at Copenhagen. How was this taken forward?*
- *What would be the future of the Kyoto Protocol? What were the possible solutions to avoid a legal void after 2012?*
- *What could be the sources of long term finance?*
- *What new solutions could emerge to move on from the feeling of failure experienced at Copenhagen?*

Following on from Copenhagen, it became clear that negotiations had to start afresh, starting with new faces at the UNFCCC secretariat, underpinned by the fundamental principles of transparency, equity and effectiveness.

This was amplified by the fact that the Copenhagen Conference was immediately followed by a new offensive from “climate skeptics” attacking in particular the IPCC. The quality of the IPCC's work was confirmed, but the motives of those behind these attacks remains uncertain, contrasting with the rigor of the work supervised by the leaders of the scientific community.

Zoom on: the controversy surrounding climate scientists and the IPCC

Three events upset the world of climate science, damaging the public's confidence in their work.

- The email accounts of climate scientists from the Climate Research Centre at the University of East Anglia in the UK were hacked, revealing suspicions of censorship and data manipulation. But multiple inquiries from police and university authorities cleared the scientists of any intentional dishonesty.
- The IPCC Chairman, Rajendra Pachauri, was accused of a conflict of interest raising doubts as to the impartiality of his work for the IPCC. However, an audit conducted by Ernst & Young concluded that he had derived no personal monetary gain from his position as IPCC Chairman or from the Nobel Peace Prize which he was awarded on behalf of the IPCC.
- Finally, the discovery of an error in the 4th IPCC Assessment Report, which repeated the flawed prediction of a non-academic source that the Himalayan glaciers would melt by 2035 (instead of 2350), damaging the credibility of the IPCC's work. The InterAcademy Council, subsequently placed in charge of reviewing the IPCC's procedures, did not find that the validity of the conclusions of the 4th Assessment Report was affected by this error.

Several independent investigations into the work of climate scientists have absolved them of the charges laid on them, thus reaffirming the solid bases of scientific theories on climate change.

1. Demands for transparency and open participation to remedy the lack of confidence

○ **Reorganization of the UNFCCC Secretariat and other changes**

Confidence in the UNFCCC Secretariat was shaken by the disorder and opaqueness of the end of the negotiations at Copenhagen. UNFCCC Executive Secretary Mr. Yvo de Boer's announcement on February 18 that he was stepping down was understood both as an admission of the failure of Copenhagen as well as a way to start afresh.

On May 18, Mr. Ban Ki Moon designated the Costa Rican Christina Figueres to take over from Yvo de Boer. The nomination of Ms. Figueres, a diplomat from a country which is vulnerable to the effects of climate change but also particularly active in its efforts to combat it (with the aim of going carbon neutral by 2020), is a clear sign from the UN which signals the will to regain the confidence of developing countries, and especially the most vulnerable amongst them.

○ **The question of the UNFCCC Secretariat's mandate**

At the launch of the negotiation process in 2010 the key words expressed were "transparency" and "effectiveness". During the three sessions in Bonn (April, June, August), the legitimacy of the chairs of the ad hoc working groups was questioned. Several countries were reluctant to grant a wider mandate to the chairs to enable them to take the initiative in drafting negotiation texts. Two texts to facilitate negotiations prepared by the AWG-LCA Chair, Ms. Margaret Mukahanana-Sangarwe (Zimbabwe) were rejected, even though her nomination had been accepted by consensus. This was proof of the difficult balance for the new Secretariat to strike to gain the confidence of the countries whilst also moving the process forward. Many countries insist that negotiation texts should be entirely composed of countries' propositions, with the UNFCCC Secretariat's role limited to organizing discussions.

○ **The work program for the Ad Hoc Working Group on Long Term Cooperative Action (AWG-LCA) and the Kyoto Protocol (AWG-KP)**

At the end of COP15, the two ad hoc working groups received a mandate from the UNFCCC plenary to continue their work. The main question during 2010 concerned how the Copenhagen Accord would be integrated into this mandate. The real issue behind this is whether all countries will recognize the Copenhagen Accord.

Two kinds of reasons are behind certain countries' reluctance to accept the Accord:

- *the Copenhagen Accord's lack of ambition, which if officially adopted as a basis for future work could bring about further backward steps, such as abandoning the Kyoto Protocol;*
- *the refusal to allow the negotiations to shift from the UN framework to a restricted circle of countries largely dominated by developed and emerging countries, thus marginalizing the least developed countries;*

And yet 139 countries, responsible for the vast majority of current and future CO₂ emissions (88% of global emissions in 2006), have officially confirmed their support for the Copenhagen Accord. They recognize certain advances of the Copenhagen Accord, such as the announcements on financing (US\$30 billion over three years in fast start finance, US\$100 billion per year starting from 2020), the priority given to adaptation for the most vulnerable countries, and the importance of forests (REDD+).

The question of how and whether to integrate the Copenhagen Accord into the negotiation text further complicates the debate, accentuating differences in views between countries. Some countries, such as the US and Japan, maintain that the Copenhagen Accord is a legitimate text and should be used as a basis for further negotiations. This is a position which is rejected by developing countries, and countries from Latin America and small island developing states in particular. In addition, developed countries' pledges, recorded in Appendix I to the Copenhagen Accord, have value on a political level, little more. The question of how to make the promises legally binding is entirely up in the air. It is clear that the approach of adding up voluntary promises from countries will be neither acceptable to developing countries, nor sufficient to meet the challenge of fighting climate change.

Another question raised concerns whether the Kyoto Protocol could be amended to include the emissions reduction pledges announced at Copenhagen and thereafter. This seems rather unlikely and in any event hardly desirable. Firstly, the US would be exempted from any commitments because of their refusal to ratify the Kyoto Protocol. Moreover, the pledges made so far have not been ambitious enough, by a long stretch, by the standards of the IPCC.

To overcome these difficulties, the AWG-LCA Chair took the initiative at the end of the April session to synthesize the different texts by taking extracting points of consensus from the Copenhagen Accord and the documents of the working groups. Furthermore, it was decided that the AWG-KP and the AWG-LCA would continue their work separately. But several countries (including the EU) push for increased cooperation between these two paths and for a continuation of the Kyoto Protocol.

As a consequence, the four sessions held since Copenhagen have managed neither to resolve the procedural issues, nor to unify the negotiation process.

2. Persisting points of gridlock

In theory, two options appeared to be emerging for 2010:

- **Either the negotiation package stayed in one single, indivisible block, with the obvious risk of getting trapped in the same deadlocks and of slowing down the negotiation process in its whole;**
- **Either the two points of disagreement (emissions reduction targets and the legal status of the future agreement) would be set aside for the moment to move forward on more urgent topics of greater consensus: mechanisms for finance, support for mitigation and adaptation projects (including REDD+), technology transfer, etc.**

Given the current state of the process and the urgency of the situation, the most rational way to proceed would be to try to move forward on certain issues, to return later to the more delicate issues. The possibility of compartmentalizing the negotiations was the approach retained in Tianjin and vigorously defended by Ms. Figueres, and will be used to lead discussions going into Cancún. Indeed, all countries are aware that they have reached a major turning point in the negotiations, and of the dramatic consequences that of a new failure at Cancún. They thus appeared to support efforts to move forward on the most mature aspects of the negotiations. With some refinements, they could be operational by early 2011.

However, the sessions in Bonn were marked by the very palpable tension and anxiety of developing countries. Countries have been aware that they could not hope for a legally binding agreement at Cancún, but merely a set of decisions attached to the Framework Convention. In reality, however, they continued to view the negotiation process and the various topics as an indivisible whole, under the pretence that the negotiations should remain “balanced”. As the sessions passed, it became clear that countries had no intention to set aside these two key issues, the emissions reduction targets and the legal status of the future agreement, the source of all the tensions in the negotiations. In Cancún countries would thus be faced with the same insurmountable obstacles as at Copenhagen.

○ The future of the Kyoto Protocol

The question which constituted the main stumbling block at Copenhagen and will be at the center of the Cancún Conference, is that of the future of the Kyoto Protocol. This text is the only agreement which contains legally binding emissions reduction commitments for industrialized countries, with the first commitment period ending in 2012.

However, at the Copenhagen Conference countries were unable to come to a consensus on a text for the post-2012 period. Whilst the Copenhagen Accord is an important document in political terms, it can in no way replace the Kyoto Protocol. The legal structure of the future climate change regime and the future of the Kyoto Protocol are two issues which will not be resolved in Cancún. However, it became clear during the year that countries were not prepared to set aside past achievements, and maintained their demands.

○ **Countries' positions regarding the future of the Kyoto Protocol**

Countries have very clear, distinct positions, as befits their varied interests. On the one hand, there are the countries in opposition to the Kyoto Protocol. They are led by the US which has never ratified the protocol and have reaffirmed this year that they will never ratify it, pointing out that the agreement only covers countries representing 30% of the world's emissions today. Japan is also opposed to a second engagement period, as expressed in its submission leading up to the Tianjin session. In reality, Japan is not opposed to the protocol itself, which it has ratified, but against the idea of extending it, for two main reasons:

- The US and emerging powers are not subject to any binding commitments;
- Japan knows that it cannot meet its engagements in spite of its best intentions, and does not want to break any promises it may make.

On the other hand, there are fervent supporters of the Kyoto Protocol. They are led by developing countries, which see it as the only way of putting pressure on industrialized countries. With the support of the EU (though its position remains flexible), they demand that the protocol be revised to allow for emissions reduction commitments for a post-2012 period.

These divergent positions lead to a complete deadlock in the negotiations, both on the issue of countries' commitments and on the possibility of a legally binding agreement in the future. This brings us ever closer to the danger of a "legal void", with dramatic consequences as disruptions in the climate make it ever more urgent to put into place an effective regime to fight climate change. This also jeopardizes the future of the mechanisms created under the Kyoto Protocol. If there is no amendment of the protocol to ensure that it continues to be effective in the post-2012 regime, the COP will need to take decisions to prolong the flexibility mechanisms and funds linked to the protocol until another binding agreement is adopted.

But even in this case there will still be uncertainty – will carbon markets have confidence in a system which is not tied to an obligation for Annex I (i.e. developed) countries to respect their emissions reduction commitments?

○ **The Kyoto flexibility mechanisms**

Zoom on: the flexibility mechanisms of the Kyoto Protocol

The Kyoto flexibility mechanisms advance one answer to a fundamental question: how can the economy take into account the finite limits of the planet (greenhouse gas emissions or other resources) in the framework of an open market? Until now, the market economy has been unable to integrate a global and long-term constraint.

The flexibility mechanisms are a synthesis between two paths as follows:

- Firstly, international negotiations between countries brings into play a system of overall limits and distributes emissions reduction targets country by country for a specific deadline. Countries then redistribute emissions quotas between their major corporations in the industry and energy sectors, with penalties for non-compliance. This is clearly a scenario of a market economy with political regulation.
- Then, economic actors can exchange emissions quotas depending on their progress in reaching their targets. These transactions give a value to CO₂ emissions, thus stimulating innovation and lowest cost emissions reductions in different sectors and helping to enforce the overall constraint. These transactions are not centralized through national accounts, but take place directly between economic actors via market instruments who have their emissions recorded on registers maintained by public authorities.

To this day, the Kyoto flexibility mechanisms have had two main applications:

- In the European emissions trading system (EU-ETS), the only market in operation today of significance, allows corporations with heavy-emitting industrial and energy installations to trade emissions permits and import offsets from the flexibility mechanisms (CDM and JI) to

respect their emissions quotas. This market is in operation since 2005, but with weak constraints, a low carbon price and thus a weak incentive to reduce emissions

- The Clean Development Mechanism was progressively implemented, with large-scale industrial projects in emerging powers being the main beneficiaries. Although the CDM was primarily directed towards least developed countries, they were severely disadvantaged by their weak institutional capacities in project design as well as the CDM's excessive administrative complexity.

- ***Assessing the mechanisms***

Important conclusions can be drawn from experiences with the Kyoto mechanisms since 2005:

- Weak results in terms of actual emissions reductions, as emissions trading systems in developed countries have been flooded with cheap carbon credits.
- One-off actions in developing countries, without any leverage effect on the value chain or the sector. Numerous projects have been abandoned due to the CDM Executive Board being overloaded.
- The banking sector is heavily involved in these mechanisms. This is a positive sign, but which is testimony more to its attraction towards sophisticated financial mechanisms than to a real desire to contribute the necessary financial sums. Progressively, most banks and put into place climate funds, but often funding only isolated, small-scale activities.
- These mechanisms have very high transaction costs. These represent significant fixed costs for countries and the private sector in particular, meaning that, apart from large-scale industrial projects, few others are viable.
- It has proved impossible to create mechanisms which are compatible with each other, i.e. which generate carbon credits (exchanges of assigned allowance units between States, exchanges of permits between corporations in emissions trading systems, credits from CDM, JI, REDD+, etc.) which are fungible between the different mechanisms. Full fungibility would lead to a sway towards the most profitable projects away from interventions with long-term structural benefits but at with higher carbon abatement costs. This explains why the CDM was mainly used for large-scale projects with greater short-term profitability, to the detriment of energy efficiency projects. A solution will need to be found to address the issue of having widely varied CO₂ abatement costs between sectors (industry, transport, agriculture and forestry in particular) within one single instrument.
- Countries with the greatest needs (especially in Africa) received little benefit from the CDM, for several reasons, including: weak institutional capacity, procedural complexity, insufficient project-building capacity, few industrial operations of sufficient size.

Experience with carbon market mechanisms reveals that:

- The only market with reasonably high volumes of exchanges is the EU ETS, covering large-scale industry and energy installations, as it is strongly regulated (by European directive, with possible sanctions for non-compliance).
- Activities which have benefited from the CDM are in value chains with large-scale, profitable projects (industry, waste combustion, HFC production), to the detriment of energy efficiency, renewable energy (except for wind and hydro) and transport projects.
- Countries which have benefited the most are those with strong project-building capacities with a minimum level of legal security (essentially the emerging powers).
- The spill-over effect to generating new projects remains weak. This system supports projects on a one-off basis, and is not suited to structuring activities within an economic sector. The goal of scaling up the CDM has not really been met.

- ***Unpredictable instruments founded on once-off payments***

The subprime mortgage crisis pointed out the danger of financial mechanisms with positive feedback loops, such as the calculation of the value of real estate based on its resale value. When the market collapses, the value of all of these kinds of goods fall at the same time, amplifying all the losses rather

than having some losses compensated by gains elsewhere. This reasoning can also be applied to the Kyoto mechanisms, as:

- The entire system is built on the principle that countries will feel compelled to meet their obligations at each deadline. The value of a carbon credit is determined by the relationship between the demand for emissions permits to meet a legal obligation to reduce emissions, with fines for non-compliance, and the supply of carbon credits, in particular through the CDM market.
- Unfortunately, it must be recognized that this kind of pressure will be weak in the lead-up to 2012, especially in a time of economic and financial crisis, since the majority of developed countries are not in a position to meet their Kyoto obligations. However, the value of a carbon credit is determined by developed' countries emissions reductions, but only to the extent that they feel a (largely moral) obligation to meet their commitments.
- Trading on carbon markets are made necessary by emissions reduction obligations on developing countries at fixed deadlines, for 2012 and then 2020. The majority of transactions will take place in the lead-up to these deadlines, and it is only at these times that the value of carbon credits can really be known.
- Until then, corporations will have to make provisions in their accounts, several years in advance, for the estimated value of these transactions, introducing a risk of over- or underestimation in their balance sheets.
- The volatility of the value of carbon credits blurs economic forecasts. What should be the price assigned to carbon in drawing up the financing plan for a future project? This uncertainty tends to disrupt any ability for a carbon price to spark private sector investment when returns are not high enough.
- This results in a loss of confidence in the use of financial instruments

The effects of the financial crisis have strong knock-on effects onto carbon finance. Since mid-2008, the value of emissions permits has nose-dived. Thrown into a panic by the financial crisis, banks sought to consolidate their balance sheets by jettisoning assets of an uncertain value. Even now, in November 2010, emissions permits are trading at around \$14 per ton of CO₂, a value much too low to have any significant economic leverage effects.

This means that there is a significant risk that the US will refuse Kyoto-type mechanisms if auditing, verification and validation procedures on an international level (as opposed to regional or national levels) are not strong enough. This risk has grown since the November elections.

• ***Strengthening the CDM?***

The future of the CDM was not really an issue in Copenhagen. Indeed, the CDM had recently been enlarged to include programmatic activities, though it is too early to assess their progress.

Proposals for a CDM-type mechanism in the post-2012 agreement include:

- Leaving the current CDM system unchanged;
- Extending the international carbon market to developing countries;
- Putting into place a sectoral approach to the CDM, whilst ensuring that this does not weaken the environmental integrity of each project;
- Formalizing a "CDM Gold Standard" integrating sustainable development considerations.

If it was decided to continue with the CDM, there were further questions about changing the terms of its functioning:

- Limiting the number of credits that could be obtained by each project, to limit the chances of the market being flooded by credits from the most profitable projects;
- Setting up country quotas for the number of CDM projects they could host;
- Pre-assessing projects on the basis of sustainable development indicators;
- Creating a "clean transport mechanism" (CTM) on the model of the CDM;

- Taking into account, if applicable, an adaptation component in assessment criteria for projects.

Of course, there is also the question of the importance to be given to carbon market finance in mobilizing resources for the Copenhagen Green Climate Fund.

- ***Status update on the Kyoto mechanisms going into Cancún***

Since Copenhagen, the debate on NAMAs seems to have absorbed the debate on the CDM. The EU proposes to integrate the Kyoto mechanisms, including the CDM, to implementing sectoral programs as a way of obtaining project finance for NAMAs. This will probably consist of voluntary mechanisms such as “no-lose targets”, with quantified emissions reduction goals at set deadlines within well-defined sectors, and the possibility of reselling credits for emissions reductions above and beyond the targets set to other developing countries on the international carbon market.

It will probably be necessary to move towards a distinction between carbon markets in countries with strong control mechanisms (real verification and sanction capacities, like the EU ETS) and those with weak control mechanisms governing carbon trading on the international level.

The successive failures of bills introduced into the US Congress seems to mean that setting up a “cap and trade” system in the US will have to wait until after 2012. The EU ETS will thus remain the main purchaser of carbon credits. Offer will probably be much higher than demand if projects in developing countries continue to develop. This would result in a very low carbon price, probably lower than its current level and thus with low knock-on effects. However, the UN Secretary-General’s High-level Advisory Group working on new and innovative sources of financing had counted on a value of \$20-25/t CO₂.

- ***Lessons to be learned for financing developing countries’ actions***

A number of lessons may be learned from experiences with the CDM as a guide to building the architecture of the new financial mechanism:

- A development process cannot be built up from a set of isolated actions; only by clustering multiple actions within a sector to develop technical skills, provided a market to local companies in developing countries and progressively reduce costs.
- Ensuring a sufficiently stable value of carbon in the long term is essential to allow investors and other financial organizations to take into account in project-building.

- **Emissions reduction commitments**

As in Copenhagen, the major deadlock on the future of the Kyoto Protocol comes back to the question of emissions reduction commitments of developed countries.

Developing countries insist on sufficiently ambitious emissions reduction commitments from developed countries, at an individual and global level, as the starting point for any progress on other topics. Developed countries insist that binding commitments from the US as well as emerging powers is essential to fighting climate change.

Current negotiations are thus confronted with the same obstacles as at Copenhagen: the inequality of efforts between developed countries and their inability to commit to an emissions trajectory commensurate with the IPCC’s recommendations. But the real problem is not so much that developed countries refuse to commit to future emissions reductions, as their commitments leading up to Copenhagen show. It is more that their emissions in the previous period have continued to soar. Apart from European and ex-Soviet bloc countries, the emissions of other developed countries have not fallen enough since 1990 for them to commit to a 25-40% reduction by 2020, the targets recommended by the IPCC. But these commitments, which consist of simply making up for their emissions reductions in arrears to return to their 1990 emissions levels in 2020 would be considered in the eyes of the public as a stinging failure and would definitively block any progress from developing countries and emerging powers. At the same time, an agreement between Annex I countries on extremely ambitious commitments for the 2012-2020 period in the realm of completely unachievable targets will hardly be believable either.

These observations complicate the situation for countries which are now members of the OECD (Turkey, Mexico, South Korea), which will have to take on binding targets in a second commitment

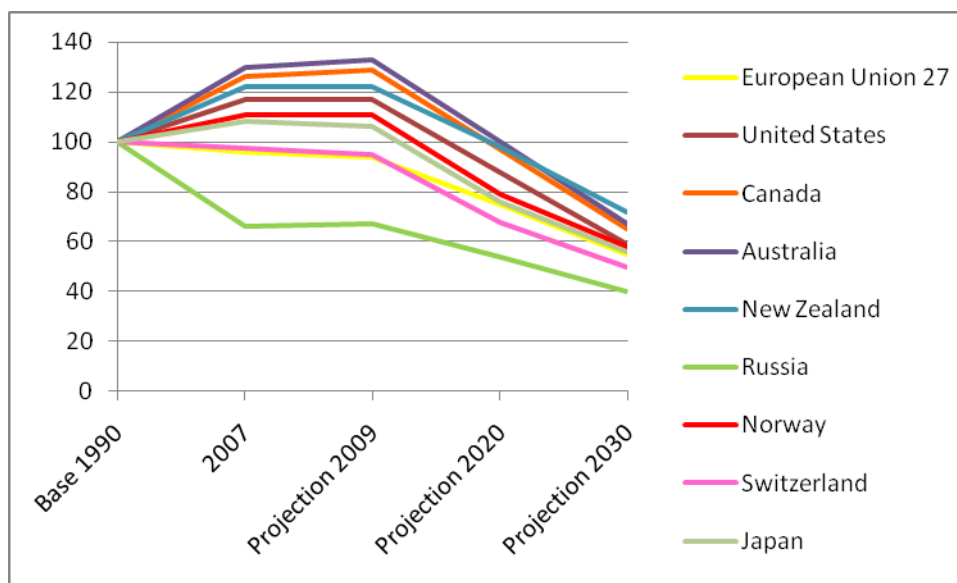
period. There will be similar expectations for non-Annex I to the Kyoto Protocol with GDP per capita at levels comparable to industrialized countries (OPEC countries or Singapore, for instance) especially since countries with lower standards of quality of living are already subject to them (e.g. Kazakhstan).

With the indefinite deferral of climate-energy legislation in the US, it is clear that nothing can intervene to lift the deadlock on these two key issues industrialized countries' emissions reduction commitments and the legal framework at Cancún.

The equation to be solved in the negotiations must involve:

- **Avoiding imposing unattainable obligations on countries which have failed to reduce their emissions since 1990. This would force them out of the negotiations and break down a sense of solidarity. Likewise, forcing them to accept unrealistic targets would also damage the credibility of the final agreement.**
- **Finding a solution to return to satisfactory emissions levels. This must involve a dual engagement period until 2020 and then until 2030, to allow the effects of long-term asset investments to be felt. This was the method proposed at one stage by the US President Barack Obama. The US commitment to reducing emissions by 42% in 2030 in comparison with 2005 was the maximum possible effort they could agree to, even if it is only the equivalent of a 22% reduction by 1990 taking into consideration their lack of action in past years.**

Developed countries' emissions trajectories for 2020 and 2030 in a scenario of ambitious reduction targets of 3% per year from 2010 onwards.⁸



Source: *Climate Change – Negotiating the post-2012 regime: Analysis of the stakes on the eve of COP-15 in Copenhagen*, Institut de l'énergie et l'environnement de la Francophonie, December 2009

One way of strengthening current targets could be to recognize firm emissions reduction commitments until 2030 to allow certain countries to catch up. This could allow thus developed countries to reach overall emissions reductions in the ballpark of 50% by 2030 that would lead them on the way to 80-95% reductions for 2050. For this proposition to successfully kick-start the negotiations, further progress will need to be made on the figures presented at Copenhagen.

⁸ The trajectories presented here are for the six Kyoto Protocol greenhouse gases, excluding LULUCF.

- **Emissions reduction pledges by selected Annex I countries in their submissions to the Copenhagen Accord (as at 8 February 2010).**

We should note that this table presents targets in some cases as a range, proof that some countries' targets are still conditional on the level of commitment of others. This only adds further uncertainty to the prospect of attaining real results.

| | EMISSION REDUCTION BY 2020 | BASE YEAR | REDUCTION TO 1990 LEVELS ¹⁸ |
|----------------------|--|-----------|--|
| <i>Australia</i> | -5% up to -15/25% | 2000 | - 3.89 - 24.1% |
| <i>Belarus</i> | - 5 - 10% | 1990 | |
| <i>Canada</i> | - 17% | 2005 | + 0.25% |
| <i>Croatia</i> | - 5% | 1990 | |
| <i>EU-27</i> | - 20 -30% | 1990 | |
| <i>Iceland</i> | - 30% | 1990 | |
| <i>Kazakhstan</i> | - 15% | 1992 | |
| <i>Japan</i> | - 25% | 1990 | |
| <i>Liechtenstein</i> | - 20 - 30% | 1990 | |
| <i>New Zealand</i> | - 10 - 20 % | 1990 | |
| <i>Norway -</i> | - 30 - 40% | 1990 | |
| <i>Russian Fed.</i> | - 15 - 25% | 1990 | |
| <i>United States</i> | Around - 17%, the final target to be reported in light of enacted legislation The pathway in pending legislation is a -30% by 2025 and -42% by 2030, and -83% by 2050 | 2005 | -3.67% |

Source: "The Outcomes of Copenhagen: The Negotiations and the Accord", *Climate Policy Series*, UNDP Environment and Energy, February 2010, p. 12

Countries also have not succeeded in agreeing on emissions accounting rules in the Kyoto Protocol, especially regarding carbon stocks in forests and soils (LULUCF).

Zoom on: LULUCF

In the Kyoto Protocol LULUCF is defined as the sector that covers emissions and removals of greenhouse gases resulting from direct human-induced land use, land-use change and forestry activities in industrialized countries. The accounting of LULUCF emissions is not mandatory, and is very complex as it allows for many emissions to be masked, especially those from the burning of wood to produce energy. Negotiations have not succeeded in closing the loopholes in LULUCF accounting, due to the opposition of certain countries, in particular those in northern Europe which benefit from generous accounting methods. And yet the Bali Action Plan clearly states that Annex I countries must simply reduce their emissions against historical levels. The conclusions reached in the negotiations on LULUCF will have direct consequences on what could be requested from non-Annex I countries on REDD+. NGOs keep a careful lookout on this part of the negotiations, fearing that reducing the environmental ambition of this subject may lead to weakening commitments on other fronts.

- **The inapplicability of provisions of the Kyoto Protocol**

The mechanism to penalize countries for non-compliance with their emissions reduction commitments in the Kyoto Protocol (an additional 30% penalty on their excess emissions carried over from the first to the second commitment period) is proving to be ineffective.

Countries have made submissions proposing to strengthen compliance rules by introducing financial sanctions on Annex I countries which do not respect their binding emissions reduction commitments. The proceeds from these sanctions would be assigned to the Adaptation Fund.

But there is more serious question at hand. As countries make more and more stringent emissions reduction commitments, the risk of inequality between countries which respect their commitments and those which do not will rise. To settle this, it will probably be necessary to go beyond the climate

negotiations and search for a mechanism for economic sanctions or a conflict resolution body convergent with what is already in place in the UN and WTO systems.

3. The US stalemate

After the House of Representatives voted the Waxman-Markey bill in June 2009, hopes were high that the Senate would follow suit in 2010, thus finally allowing climate-energy legislation to be passed in the US. This legislation would incorporate quantified emissions reduction targets for 2020, 2030 and 2050, and thus confirm the President Barack Obama's announcements in Copenhagen on this area. Though the target of reducing emissions by 17% compared to their levels in 2005 would only stack up to a reduction of 4-7% compared to 1990, it would nevertheless mark a significant turning point in US climate policy. Indeed, the mitigation target would be formally registered in national legislation and thus be binding at a domestic level.

Reaching a concrete outcome in this process all the more crucial as it would have kick-started the international negotiations. The change in the US situation would have contributed to restoring confidence and give new energy and dynamism to the proceedings, encouraging other countries to raise their targets in step. Furthermore, the centerpiece of the legislation was the plan to set up a national "cap and trade" system paralleling the EU emissions trading scheme, which would have served to reinforce the effectiveness of flexibility mechanisms created under the international climate regime and give further support to a price on carbon.

But this process spluttered, stalled and stopped. After the Senate rejected the bill introduced by Senators Kerry and Boxer in November 2009, a second text drafted by Senators Kerry, Graham and Lieberman was introduced to the upper house on May 12, 2010. This second bill, entitled the *Clean Energy Jobs and American Power Act*, closely mirrors the Waxman-Markey bill voted by the House of Representatives in June 2009. However, the situation was complicated by the withdrawal of Lindsey Graham, one of the co-authors of the bill, thus depriving it of its support in the Republican camp. After Senator Graham withdrew his support, the bill was revised to give further concessions to all corporations in the energy sector in an attempt to garner more support from Republicans. But to no avail, with the bill still failing to gain the required number of votes.

The White House and the Democrat Senate Majority Leader Harry Reid tried to make fresh progress in the Senate by redrafting the text to limit the cap and trade system to electricity corporations. This bill also failed on the Senate floor. On July 22, 2010, Senator Reid took another backward step and abandoned the idea of cap and trade legislation, emissions reduction targets and a renewable electricity standard. The new bill focused on managing the oil spill in the Gulf of Mexico, placing new regulations on offshore oil drilling, improving the Home Star energy standard, as well as incentives to convert freight fleets to natural gas. However, the chances of adopting energy legislation were weakening by the day, with the Democratic Party losing popularity and the Tea Party movement, hostile to government intervention and climate change skeptics, growing in power.

Against all expectations, on September 20, 2010 the Senators Jeff Bingaman (Democrat) and Sam Brownback (Republican) announced a new bill to introduce a federal renewable electricity standard requiring utilities to produce at least 15% of their electricity through renewable sources from 2021 onwards. It was anticipated that with the support of the Republican Senators Brownback and Susan Collins the new bill would benefit from more bipartisan support than its predecessors. A vote is planned for the "lame duck" session after the midterm elections, with the hope that the Senators, freed from their electoral concerns, would this time vote in favor.

Without more ambitious legislation confirming President Obama's emissions reduction commitment for 2020, adopting a federal renewable electricity standard would be an important asset for the Obama administration as a concrete means of helping to meet its commitment.

○ **The outlook for climate legislation after the midterms**

The November 2 midterm elections saw a heavy defeat for the Democratic Party, casting grave doubts on the prospects of passing climate-energy legislation in the second half of President Barack Obama's term. In the new composition of the US Congress, power will be shared between Republicans, with an

absolute majority in the House of Representatives, and the Democrats, with a slim majority in the Senate. Division on the issue of climate change will thus continue to widen.

Following the Democrats' loss of their majority in the House of Representatives, it will be very difficult for them to pass any climate legislation with emissions reduction targets. This is all the more so as the official position of the Republican Party is to deny human responsibility for climate change, a view shared by the likely future Speaker of the House of Representatives, the Republican John A. Boehner.

- **Prospects of a national carbon market dead in the water**

In a press conference on November 3, 2010, the day after the elections, President Barack Obama stated his view that he no longer believed that passing climate-energy legislation would be possible in the next two years.⁹ Opposition from industry and the Republican Party in the Senate killed the prospects of unifying the regional initiatives (Regional Greenhouse Gas Initiative, Midwest Greenhouse Gas Reduction Accord, Western Climate Initiative) under a national cap and trade system. As Obama declared: "Cap and trade was just one way of skinning the cat; it was not the only way. I'm going to be looking for other means to address this problem."

This defeat does not imply, however, that President Obama has lost all control over the country's energy and climate policies. He will still have the option at his disposal of vetoing any bill proposed by the Republicans which is too divergent from his vision and goals in these matters. And the chances of a supermajority, i.e. two thirds of the members of Congress, emerging to override the President's veto are very low. President Obama has also announced his intention to move forward on "pieces" of legislation on particular areas (incentives for electric and GPL cars and for energy efficiency in the building sector, investment in nuclear energy, etc.). However, any attempt to move forward in these areas could be blocked by a refreshed Republican party, insisting for its part on developing offshore drilling for oil.

Consensus on certain points may still be possible. The bill on renewable energy currently being debated in the Senate is supported by Democrats and Republicans alike. Likewise, efforts to reduce emissions of other pollutants (SOx, mercury, NOx) from industrial facilities, support to the nuclear industry as well as R&D for carbon capture and storage could be examined. These measures would all have significant incidental effects on greenhouse gas emissions.

- **Actions of other public authorities**

For the time being, domestic action in the US on reducing emissions will be reliant on measures taken by the Environmental Protection Agency (EPA), individual states, cities and corporations. The EPA recently confirmed the 2007 decision of the US Supreme Court which found that CO₂ and the five other greenhouse gases recognized by the IPCC constituted a danger to the public health and welfare of the American people. By recognizing that greenhouse gases enter into the definition of "atmospheric pollutants" under the Clean Air Act, the EPA now has the authority to regulate their emissions wherever they occur in the country. Thus, in May 2010 the EPA published tailoring rules to regulate greenhouse gas emissions from industrial sites (power plants, cement production facilities, refineries, etc.), which will apply from July 2011 onwards to new and existing installations emitting over 100,000 et 75,000 teqCO₂ respectively, which make up 70% of national emissions from fixed sources. In addition, earlier in the year the EPA and the Department of Transport fixed fuel efficiency and greenhouse gas emissions standards for passenger cars and commercial trucks, extending also now to medium and heavy-duty vehicles.

But the agency is handicapped by the attempts of members of the Republican Party to strip it of its recently acquired regulatory powers. The Republican Senator Lisa Murkowski submitted a resolution in the US Senate to this effect, though this was narrowly rejected by a margin of 53 to 47 votes. There is still the risk that the EPA's regulatory capacities may be limited in the process of approving the

⁹ "I think there are a lot of Republicans that ran against the energy bill that passed in the House last year. And so it's doubtful that you could get the votes to pass that through the House this year or next year or the year after. But that doesn't mean there isn't agreement that we should have a better energy policy. And so let's find those areas where we can agree."

agency's budget. This was supposed to have been discussed in the Senate Appropriations Committee on September 16, 2010 but the reunion was pushed back.

Reaching the 2020 emissions reductions target will also rely on the actions of the 50 state governments. In this respect, the defeat of Proposition 23, aimed at suspending (indefinitely, in practice) the application of the AB32 climate policies in California, as well as the election of the Democrat Jerry Brown to the Governorship, whose campaign was centered around an ambitious clean energy policy, are positive signs.

Indeed, recent analysis conducted by the World Resources Institute (WRI) showed that ambitious action from the EPA and the 50 state governments could contribute to a 14% reduction of greenhouse gas emissions for 2020, i.e. almost enough to attain the 17% federal target.¹⁰ These as well as other measures (investing in clean technologies, renewable energy and energy efficiency in the American Recovery and Reinvestment Act of 2009, regional cap and trade systems, etc.)¹¹ show that the US is not completely powerless to invert their emissions trajectory, even though their efforts remain hereto insufficient.¹² Evolutions in their situation in future months will be crucial in determining their ongoing credibility in climate negotiations.

○ **The consequences of the US deadlock on climate negotiations**

Moving on, it seems that we can rule out the US passing ambitious climate legislation in the next two years. Yet the US wanted to show that they were serious, by making a domestically binding commitment in place of ratifying the Kyoto Protocol. This delay in adopting energy-climate legislation sends a very negative signal to the negotiations, with three major consequences:

- Continuing with the Kyoto Protocol becomes a real possibility, but with the same countries as in the first commitment period. US participation will only be an issue at least two years after the presidential elections in November 2012, given the time needed to prepare a vote on any kind of climate legislation. By then the second commitment period will already have started.
- The failure to create a national carbon market in the US significantly reduces the growth potential of the global market, now re-centered on the EU-ETS, cutting off a large part of the expected new financial resources for the Copenhagen Green Climate Fund to be created in Cancún.
- These circumstances could lead the US to return to a “pragmatic” approach, very different from what is taking place in current negotiations: sectoral targets of varied nature (energy efficiency, energy intensity per unit of GDP, reductions relative to a business as usual scenario, absolute reductions, etc.). These targets may be revised according to changing circumstances and technological progress, a kind of flexibility that could progressively build towards a more ambitious overall target.

B. Launching voluntary initiatives

Countries were conscious of the need to advance on certain points considered to be mature enough to lead to rapid implementation. They thus launched various initiatives in 2010 to pave the way for decisions to be taken by consensus in the UNFCCC framework.

Meetings were held throughout the year to assemble funds and bring projects closer to implementation.

They addressed the following themes:

- finance (High-level Advisory Group on Climate Change Financing),
- MRV methodologies (Germany, South Africa, South Korea),

¹⁰ <http://www.wri.org/publication/usclimatetargets>

¹¹ <http://www.wri.org/publication/green-global-recovery>

http://www.hsbc.com/1/PA_1_1_S5/content/assets/sustainability/090522_green_recovery.pdf

¹² <http://www.wri.org/stories/2010/09/fact-sheet-us-climate-action-2009-2010>

- adaptation (Spain, Costa Rica, US),
- forests and the REDD+ mechanism (France, Norway)

The idea of these meetings is to allow groups of interested parties to move forward at a different rhythm and in different ways to the UN negotiations. For example, the partnership on forests aimed to move faster than the UNFCCC and World Bank's FCPC processes to put into place fast start finance for REDD+ actions. But several difficulties soon emerged:

- Because participation is limited, these groups pose a dilemma between effectiveness and inclusivity. As a result, the advances they make are not easily recognized by countries not represented in the discussions.
- Despite the desire to work in different ways than in the negotiations, participants in these groups are the same negotiators and their old habits of distrust and fastidiousness on the details of texts get the better of them. The partnership on forests has been stuck for the last eight months on discussions of its program and its budget. The partnership's secretariat lies at the World Bank despite being a critic of the slowness of its procedures.
- Given the urgency of the situation, taking discussions forward outside the UNFCCC framework may be justified, but on the proviso that these initiatives remain open to all interested parties, are conducted transparently and may be clearly and rapidly reintegrated into the multilateral negotiation process.
- Participation in these groups cannot be opened to all countries. Some countries fear that their interests may be poorly or not at all defended and that the process will not be subject to oversight or be coherent on an international level. There is the risk that the poorest and most vulnerable countries, with little to offer in negotiations but significant needs in terms of support and finance, would be the big losers from this. Each of these groups must therefore report back publicly on its work in negotiation sessions to soothe these concerns.

Expectations of greater efficiency from working in smaller groups (e.g. the G20 compared to the G192) can thus be rapidly dented by distrust and the return to standard negotiation practice.

One of two options may be considered to keep political dynamism in these initiatives:

- Keep meetings closed to a limited number of high-level participants (ambassadors, ministers), which would allow talks to move forward in a less technical manner. This is what Mexico succeeded in doing in several informal meetings in 2010, especially on the topic of finance.
- Open meetings to participants with technical expertise, but who are not countries' usual negotiators, and should thus be less inclined to reproduce the usual deadlocks.

C. Rewind to the major gatherings of 2010

Summit on the Millennium Development Goals in New York

The heads of the 189 parties to the UN gathered for the Millennium Summit in 2000, reaffirming the role of the UN in the world. The summit defined the priorities in confronting the great challenges of the 21st century, on development, peace and security, the environment, globalization, solidarity, health, sustainable development and governance. Ten years later, in September 2010, a review was conducted on the progress towards achieving these millennium development goals. This summit was attended by 144 heads of state and government and involved an assessment of the efforts undertaken to date, leading to the announcement of a set of recommendations to make up lost ground in reaching the goals set for 2015.

The Millennium Development Goals

- ***Eradicate extreme poverty and hunger and promote gender equality;***
- ***Achieve goals in health and education;***
- ***Promote sustainable development***

- ***Address new difficulties and adapt actions;***
- ***Respond to the needs of the most vulnerable populations;***
- ***Enlarge and strengthen partnerships for development.***

The UN report ***The Global Partnership for Development at a Critical Juncture*** published this year highlighted the gaps in implementation. Indeed, 1.4 billion people still live under the poverty line. Between 1990 and 2005, malnutrition and poverty rates declined, but recent crises induced by climate change (e.g. drought in Australia) and their effects on food prices wiped out the progress made. A record of 1 billion persons affected by famine was reached in 2008.

In New York, countries restated their promise to allocate 0.7% of their GDP to official development assistance by 2015 and to reach 0.5% by the end of 2010, with at least one-third of the funds allotted to the least developed countries (LDCs).

Major Economies Forum (MEF)

The world's 17 largest economies meet regularly (with other 'invited' countries) to move forward on the thorniest issues within a smaller group of countries. After a number of meetings in 2009 in preparation for the Copenhagen Conference, these "major economies" met again three times in 2010, in April (Washington), in June (Rome) and in September (New York). A meeting was also held in July at a ministerial level on the topic of clean energy.

The April meeting was dedicated to assessing the outcomes of Copenhagen and the work to be accomplished for Cancún. A consensus emerged on the importance of reaching a balanced set of decisions at Cancún.

In July, discussions focused on three points:

- The need for clarity and transparency in the implementation of fast start finance for 2010-2012, with the proposition to create a website dedicated to tracking financing (launched by the Netherlands in September);
- The issue of transparency and accountability of countries' actions and commitments (MRV). Countries made proposals on the way of conducting "international consultation and analysis" of mitigation actions in developing countries, whilst respecting their national sovereignty;
- The integration of actions and commitments recorded in the Copenhagen Accord into the UNFCCC process.

In September, discussions moved on to the elements which could form part of a balanced package of decisions in Cancún, including adaptation, mitigation, REDD+, MRV, financing and technology transfer. The future of the Kyoto Protocol was raised in debates, as well the progress made in real and transparent disbursement of fast start finance.

G20

The G20 summit in June in Toronto gave little in terms of concrete results on climate change. Participants reiterated their commitment to the UNFCCC negotiation process, and to implementing the Copenhagen Accord, for those which had associated themselves with the document. They confirmed their intention to progressively eliminate fossil fuel subsidies, but no further measures were taken in this direction. Nor was any progress made towards introducing a tax on international financial transactions (Tobin tax).

The Seoul summit held on November 11 and 12 was equally disappointing, with energy and climate low on the list of countries' priorities.

Meetings between the BASIC countries (Brazil, South Africa, India, China)

After a first meeting in 2009 to prepare COP15 in Copenhagen, ministers of the BASIC countries met four times in 2010, in January, April, July and October, to assess the results of the Copenhagen

Conference and adopt a common position on crucial points in the negotiations. They have thus (re-)affirmed:

- their support for the Copenhagen Accord;
- their commitment towards a central process, as transparent and inclusive as possible, to reach concrete results in Cancún;
- the importance of sticking to the official negotiation texts. Though parallel negotiation groups with limited participation can help advance discussions on certain points, these advances must be presented to the plenary session of the UNFCCC, the only legitimate forum for negotiation;
- the importance of criteria for equity in any agreement. The goal stated in the Copenhagen Accord to limit global temperature rise to 2°C compared with preindustrial levels implies a cap on global emissions, with equitable access to “carbon space” to be defined to give each country its “carbon budget”. This demands an ambitious program of financing, technology transfer and capacity building.

Concerning countries’ actions and commitments, the BASIC countries reaffirmed:

- their intention to undertake voluntary mitigation actions, communicated to the UNFCCC Secretariat as set out in the Copenhagen Accord. Nevertheless, the extent of their efforts will be determined by those of industrialized countries, both in their own emissions reductions and their level of support;
- the need to progress in negotiations without “waiting indefinitely” for the US, after the US announcement that that ambitious climate-energy legislation was off the table;
- the importance of meeting the obligation to provide US\$30 billion in fast start finance over the 2010-2012 period and to mobilize US\$100 billion over the long term, with a balance between mitigation and adaptation. Developed countries should provide detailed, complete and official information on flows of fast start finance.

On other subjects of the negotiation, these countries reaffirmed:

- their support for G77+China’s position on the Copenhagen Green Climate Fund which would operate the Convention’s financial mechanism. They expressed their view that public finance should constitute the major part of sources of long term finance, with the expectation that the High-level Advisory Group put into place by the UN Secretary General would come to similar conclusions.
- the differentiation between MRV of developed countries’ emissions reduction commitments, linked to questions of compliance and comparability, and MRV of developing countries’ NAMAs, linked to questions of transparency. They argue that MRV rules should only apply to NAMAs which receive international finance, whereas they would be responsible for applying MRV to those implemented domestically. To foster transparency, a multilateral forum for discussion could also be created to exchange information and analysis on these matters.

On the potential outcomes of the Cancún Conference, these countries reaffirmed:

- their support for two distinct decisions, one to record developed countries’ emissions reduction commitments in the second commitment period of the Kyoto Protocol, the other to decide the future regime for long-term cooperative action under the Framework Convention.
- their desire to make progress on the following areas: implementation of fast start finance and the REDD+ mechanism, the institutional architecture for technology transfer and MRV rules, with in particular a uniform format for reporting on developed countries’ financial contributions.
- the importance of meeting the commitments for fast start finance as the cornerstone of a positive result in Cancún. This implies deciding on precise operational details for the implementation of this financing, in compliance with the terms of the UNFCCC and the Copenhagen Accord.

Ministerial-level meeting on finance organized by Mexico

In early September ministers and ambassadors from some 47 countries met behind closed doors in Geneva to discuss climate change financing, and in particular the future financial mechanism which will need to be created in Cancún. This followed on from an earlier meeting in May in Mexico, aimed at facilitating the preparation of the Cancún Conference. A consensus formed around the need to formally launch the “Copenhagen Green Climate Fund” at COP16.

Discussions also turned to the proposals from Mexico, the US and France on the fund's financial architecture, as well as the Pakistani proposal to put into place a standing committee on finance. This committee would be in charge of monitoring flows, coordinating actors and providing guidance to the COP, functions currently executed by the Subsidiary Body for Implementation (SBI). These proposals were clarified in the course of the sessions, but the meeting did not come to a consensus on the terms surrounding the operationalization of the future fund.

Finally, the issue of fast start finance was not really raised, with participants simply welcoming the initiative of the Netherlands to put into place an internet site (www.faststartfinance.org) detailing the announcements and disbursements of funds and the projects, programs and funds supported. To date, 14 countries have provided information on their contributions to fast start finance. Amongst developing countries, only the Marshall Islands, Peru and Niger have provided information. Countries also highlighted the need for transparency and the importance of rapid disbursement of financing in the short term.

The Paris-Oslo process on REDD+

The most heavily-forested developing countries in the world and the main developed countries financing the fight against deforestation joined together to form the “Paris-Oslo” process, to put into place a pilot partnership and make progress towards a REDD+ mechanism (reducing emissions from deforestation, forest degradation, as well the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries). This partnership is not intended to take the place of discussions in the UN framework, but rather to facilitate coordination and transparency on the implementation of actions already underway (FCPF, UN-REDD, FIP, etc.) and parts of the REDD+ mechanism in place in the UNFCCC, to make further progress in the negotiations.

The process kicked off in Paris on March 11, 2010, allowing countries to clarify their commitments of fast start finance towards REDD+. Australia, the US, France, Japan, Norway and the UK confirmed a collective commitment of US\$3.5 billion. They were joined by Germany, Spain, Slovenia and the European Commission, as well as the Global Environment Facility, which declared its intention to mobilize a further US\$300 million per year. These countries invited other actors to make further contributions to reach the goal of US\$6 billion, i.e. 20% of the amount of fast start finance decided at Copenhagen. Australia, Brazil, France, Norway, Papua New Guinea and the Democratic Republic of Congo are behind the creation of a steering committee open to all interested countries, and a small secretariat has been put in to place, with the responsibility of taking an inventory of the needs, existing actions and available resources on REDD+.

A second meeting took place in Oslo on May 27, at which the global partnership on forests announced two months earlier was formally launched. The provisory REDD+ partnership puts into place a voluntary, non-binding framework open to all countries to implement and support REDD+ actions. Funding was revised to US\$4 billion over the 2010-2012 period.

France (via the French Development Agency (AFD)) and Australia have put into place a voluntary database, with public access, on the funding, actions and results of REDD+ in order to improve the transparency and coordination of actions and support. Despite several meetings, participants in the REDD+ partnership have not, however, come to an agreement on issues surrounding the work calendar, budget and NGO participation.

The Africa-EU Energy Partnership (AEEP)

The Africa-EU Energy Partnership was launched in Lisbon in December 2007 by all heads of state and government of Africa and Europe. The AEEP is one of eight partnerships forming the joint UE-Africa Strategy.

The first AEPP high-level conference took place in Geneva on September 14-15 2010, bringing together representatives of the European and African Union Commissions, national energy and foreign ministers, representatives of regional economic communities and energy pools and other specialized international institutions and organizations, as well as academics, business leaders and members of civil society. An action plan, aiming at bringing access to modern energy to 100 million people in Africa by 2020, with an EU contribution of €5 million over the first three years was launched. A number of targets were set out in the common declaration:

Access to energy: bringing access energy services to at least an additional 100 million Africans, focusing on sustainable models, to provide energy for basic services (health, education, water, communication), power productive activities, and provide safe and sustainable energy services.

Energy security: doubling the capacity of cross border electricity interconnections, both within Africa and between Africa and Europe.

Renewable energy and energy efficiency: building 10 000 MW of new hydropower facilities taking into consideration social and environmental standards, building at least 5 000 MW of wind power capacity, building 500 MW of all forms of solar energy capacity, tripling the capacity of other renewables, such as geothermal and modern biomass, and improving energy efficiency.

US-China Strategic and Economic Dialogue

The second meeting of the Strategic and Economic Dialogue between Chinese and American leaders took place on May 24-25, 2010 in Beijing. Discussions ended with the signature of several memoranda of understanding, mainly on energy and climate change. In these areas, China and the US affirmed their desire to:

- with the G20, stabilize the world energy market, in particular by improving the transparency of information, progressively eliminated subsidies, stimulating investments in renewable energy and energy efficiency;
- diversify their energy supply, in particular by launching a task force to cooperate on the exploitation of shale gas resources, and strengthening their cooperation in nuclear energy, renewable energy and electric cars;
- cooperate to implement action plans for renewable energy.

These meetings gave rise to a series of encounters between decision-makers, academics and business leaders in the above sectors. They demonstrate willingness from China and the US to cooperate and progress on implementing actions on energy. But the issue of climate change was only addressed indirectly, no doubt to avoid discussions being hindered by disagreements in the international negotiations.

With these observations in mind, the question turns now to Cancún, and what we can reasonably expect from this conference.

III. The state of the negotiations at the opening of the Cancún Conference

A new treaty will not be created in Cancún. Yet this does not mean that, after the tremendous expectations placed in Copenhagen, and with negotiations in a total deadlock, we should abandon all hopes for Cancún. Fighting climate change will be the outcome of a long process of small, progressive steps forward.

First and foremost, Cancún could give real impetus to building projects, especially in developing countries, strengthened and rewarded by facilitated access to financing. It will also be necessary to come to an agreement on a realistic negotiation calendar for the years to come, particularly on matters which are still contentious.

Two diametrically opposed scenarios are possible:

- Negotiations in Cancún end on a group of decisions on the most mature subjects, with action taken on the ground using available fast start finance from January 2011 onwards. Little by little, confidence in the multilateral is rebuilt, allowing the most difficult issues on emissions reductions and the legal framework to be unblocked at COP17 in Johannesburg in December 2011 and the Rio+20 Conference in 2012.
- At the Cancún Conference, the advocates of an indivisible “balanced package” including subjects which are not mature (Annex I countries’ emissions reductions, future of the Kyoto Protocol) block any possible partial decision (REDD+ and Copenhagen Green Climate Fund). Negotiations toughen and deadlocks intensify. The multilateral process loses its credibility and crumbles, several countries disengage, giving way to isolated, paltry initiatives. In the meantime, of course, disruptions in the Earth’s climate continue.

However the negotiations in Cancún end, we must ensure at all cost that actions on the ground emerge, especially in the world’s poorest countries. In the pessimistic scenario that Cancún is another failure, these actions alone can help to rebuild, little by little over the years, an ambitious and secure international system that is desperately needed.

A. Continuing discussions on the all the subjects in the negotiation process

With their mandate renewed in Copenhagen, the two parallel working groups continued to move forward on key topics set out in the Bali Action Plan and the Kyoto Protocol. Progress was made on certain subjects in the different sessions, now mature enough for decisions to be taken in Cancún. Other, thornier issues, have not really advanced. The challenge in Cancún will be to not, as was the case in Copenhagen, view the negotiation package as a single, indivisible whole.

The chairs of the two working groups have drafted texts to facilitate negotiations, synthesizing the work accomplished during the year.

The Ad Hoc Working Group on Long-term Cooperative Action (AWG-LCA)

The AWG-LCA document is a compilation of “draft texts” produced by each drafting group at the Tianjin session, as well as notes by facilitators of each drafting group on the points that should be discussed at Cancún.

Zoom on: The new text to facilitate negotiations

The drafting groups worked on:

- A shared vision for long-term cooperative action;
- Enhanced action on adaptation;
- Various approaches, including opportunities for using markets, to enhance the cost-effectiveness of, and to promote, mitigation actions
- Economic and social consequences of response measures;
- Development and transfer of technologies;
- Review (reporting and analysis of progress)

The notes by the facilitators are on:

- A shared vision for long-term cooperative action;
- Enhanced action on adaptation;
- Enhanced action on mitigation;
- Enhanced action on finance: establishment of a new fund and a new body;
- Enhanced action on technology: considerations on the composition and mandate of the Climate Technology Centre and Network;
- Enhanced action on capacity-building.

Overall, the draft texts of the AWG-LCA for Cancún differ little from those of Copenhagen. The structure still exactly adheres to the Bali Action Plan. The 57-page text, designed to prepare negotiations, is riddled with brackets and options, most of which will not be eliminated in Cancún.

However, the topics are at very different degrees of maturity, with some sufficiently advanced for a decision to be made in Cancún. Adaptation, technology transfer, REDD+ and above all finance can all become rapidly operational.

1. NAMAs and REDD+

Emissions reductions and adaptation actions are sourced from on-the-ground initiatives presented by individuals, corporations and local governments. This will bring obvious carry-on effects: countries will have the proof that implementing actions at reasonable costs is feasible and has concrete benefits, and will be encouraged to take further actions and commitments.

But the most vulnerable and least developed countries are much more dependent on the international negotiations. This is because, unlike developed countries, they do not have sufficient financial resources to implement their intended actions on their own.

It will therefore be important in the 2010-2012 period to focus on capacity building, preparing, gathering funds for and implementing concrete mitigation and adaptation actions. A COP decision is expected on these actions so projects may benefit from fast start finance.

○ Providing support to bring projects to maturity

Transversal conditions are necessary to build successful NAMAs and REDD+ projects include:

- Quantifying emissions reductions in an accepted carbon accounting framework, thus ensuring that the project is compatible with MRV rules;
- Assisting countries in finalizing project-building through capacity building and regional cooperation between countries. Many projects are of the same nature and so would benefit from increased cooperation.
- Knowledge of possible sources of financing and their rules and criteria, given the huge increase in public and private funds with widely varying and undisclosed characteristics (financial capacities, financing criteria, etc.);
- A precise classification of the different kinds of actions, allowing the financing needs of value chains to be identified in terms of their economic viability;
- A precise description of projects to allow them to be quickly processed in decision-making and financing bodies;

- A precise presentation of the project managers (public bodies, public or private companies, local governments, NGOs, etc.) and their capacity to finance investments, to provide guarantees to financial backers.
- Precise conditions on project management, to ensure they respect MRV rules which will be in operation and may be recorded in project registries;
- Assisting countries in putting together plans and programs, in particular on the economic aspects;
- Drafting national climate plans to ensure coherence between projects.

Ways of dialoguing and working together must be urgently created to allow developing countries to build quality projects and plans for mitigation, adaptation and to fight deforestation. Drafting sectoral policies is a powerful way of attracting financing. Once countries have identified their priorities, they will need to set out the conditions to successfully build and implement projects.

2. Adaptation

There is now unanimous recognition of the importance of adaptation and the link between adaptation, development and eliminating poverty is upheld in the texts. There is consensus on the need to take measures to curb the impacts of climate change on people and the environment. This is becoming increasingly apparent as countries around the world are hit with climate-related events. 2010 was another dramatic year, with droughts and fires in Russia and floods in Pakistan.

Henceforth, financing for adaptation, the main concern of many developing countries, will be the issue at the centre of discussions. Indeed, though it is agreed that mitigation and adaptation complement each other, adaptation is a much greater concern for recipient countries than donor countries. Developed countries have shown a preference for financing mitigation policies over adaptation policies in developing countries, as they will have benefits for all countries with a direct influence on the Earth's future climate. Adaptation, on the other hand, adaptation responds above all to social concerns in recipient countries (in the immediate future, in any event).

One of the most significant advances this year on this topic was the fact that the Adaptation Fund entered into operation.

Zoom on: the Adaptation Fund

The Adaptation Fund established under the Kyoto Protocol entered into operation, after a long period in which it lacked funds to support National Adaptation Programmes of Action (NAPAs). Two projects were approved in 2010, financed to the tune of US\$14 million.

The first project is from Senegal, the first country to have its National Implementing Entity accredited. The project is aimed at combating coastal erosion exacerbated by climate change and rising sea levels. It insists on the importance of the participation of local authorities and vulnerable populations in managing the project and in decision-making processes.

The second project is from Honduras, aimed at reducing the vulnerability of the poorest households in the capital region of Tegucigalpa by improving water management.

For the moment only UN organizations and multilateral banks have access to the fund. Bilateral agencies such as the KfW, Afd and USAid are not authorized to access the fund, even though they could help to improve the leverage effect of the fund by using its resources to complement their own activities.

○ **The points of disagreement**

Certain points of disagreement remain, but they should not prevent a decision to be taken quite rapidly on adaptation.

○ **Recognition of countries' degree of vulnerability**

Countries disagree over the definition of "vulnerability", and therefore de facto on the scope of adaptation. Saudi Arabia argues for a broad definition of vulnerability, including adverse impacts of

mitigation measures, whereas other countries (led by the EU) want to delimit adaptation to impacts only from climate change.

The definition of “the most vulnerable countries” divides developing countries:

- some countries wish to limit the definition to that retained in the Bali Action Plan (least developed countries, small island developing states and Africa), an approach supported by most developed countries;
- other countries (such as Pakistan and countries from Latin America) also want their interests to be taken into account.

This tension over what constitutes a “vulnerable” country was accentuated by the fact that the Copenhagen Accord stipulated that fast start finance would be directed in priority towards them. This is an issue which must be resolved.

○ **The future of National Adaptation Programmes of Action (NAPAs)**

Debate in Tianjin was focused on the issue of the provision of financial support for the most vulnerable countries to prepare their NAPAs, something which they had, until now, been exempted from doing. At the present time, the Kyoto Protocol only obliges least developed countries to prepare NAPAs, providing them with funds to do so. Some countries propose for adaptation strategies to be generalized (via PANAs or in other forms) to all developing countries. In addition, a large number of developed countries insist that all countries are concerned by adaptation, and that they should therefore all develop adaptation strategies. Generalizing adaptation strategies in this way would help to better identify countries’ real needs, collectively prepare the necessary strategies and benefit from sharing their experiences.

Least developed countries are very critical of the level of funding for PANAs: of the US\$1.7 billion pledged by Annex I countries, only \$172 million have been delivered until now to finance countries in developing and implementing their programs.

Several propositions have been made on ways of developing adaptation strategies:

- reemploying PANAs drafted thanks to fast start finance;
- developing new adaptation strategies, which may even be integrated into a wider development strategy;
- preparing a section on adaptation in national sectoral plans.

In practice, however, the majority of PANAs lack precision on the exact nature of the investments to be undertaken, the priorities, financial structures and timelines, and will need to be reviewed.

○ **Estimation of the financial needs for adaptation**

There is a significant imbalance between developing countries’ needs and the paltry voluntary contributions of industrialized countries. There are considerable differences between the numerous estimates in recent years. These are due to differences in the types of actions counted as adaptation actions, and the difficulty in distinguishing between costs and incremental costs.

| | |
|---------------------|----------------------|
| UNDP | \$86 billion/year |
| World Bank | \$9-41 billion/year |
| UNFCCC | \$28-67 billion/year |
| Oxfam International | \$50 billion/year |

The Africa Group considers that US\$67 bn/yr will be needed for adaptation from now until 2020.

○ **Risk management and insurance**

The negotiation text contains a specific section on proposals on managing and reducing risks. The main proposal is to establish an international mechanism with a component on insurance and a component on compensation. AOSIS in particular requested a mechanism with several components. Other countries requested that a component on adaptation be included in the overall financial

mechanism. The post-2012 regime will have to decide on the actions to be taken, the countries which will benefit from financing and the necessary financial means.

- **Creating a new body for adaptation**

The issue of whether to create a new body for adaptation is still a point of difference, but the options on the table (a new institution or reinforcing existing and regional bodies) are not incompatible. The most critical point concerns the role of a new body, if created, in attributing financing to support projects.

- **Response measures**

There is still divergence over the effects of climate change policies on other countries – the issue of response measures. Certain countries want to treat these issues together in the adaptation framework, others want to address them under mitigation policies. Venezuela announced its intention to reintroduce a proposal first raised in 2009 to take into account the impacted country's "capacity to respond", rather than the origin of the impact (climate or response measure).

Zoom on: the need to take into account variable needs

Needs vary strongly between countries depending on the extent to which they are exposed to risks, but also their level of development, geographical conditions, type of economic activities, and so forth. As a result, it is impossible to reach a uniform classification of possible actions. Certain actions to strengthen training or organizations are easy to put into place at low cost. But other actions are expensive, without the prospect of a financial return at usual economic horizons.

It is essential to identify the situations, eligibility criteria and potential support:

- Rescue operations in the event of a major catastrophe;
- Reconstruction operations in the wake of catastrophes;
- Actions to prevent catastrophes, e.g through investments in equipment and infrastructure;
- Training officials and educating populations to reduce their exposure and help them with self-protection;
- Actions to protect against droughts, heat waves and desertification;
- Actions to adjust buildings to climatic conditions;
- Building works to protect the coastline against sea-level rise;
- Cautious management of water resources
- Taking into account gender inequalities;
- Transforming agricultural practices;
- Recognizing and taking into account specific vulnerabilities of indigenous communities.

3. Agriculture

Under pressure from environmental NGOs, the agriculture sector was set aside in Kyoto for fear of a manipulation of emissions calculations. They are particularly wary of having agriculture used as a carbon sink or a mechanism through the CDM to compensate for emissions from other sectors. Their arguments are, strictly speaking, quite legitimate. There is the risk of fraud in the accounting of emissions reductions in sectors where the process of quantifying emissions is full of holes (the importance of non-market exchanges, lack of information on land use in developing countries, technical and scientific uncertainties, and lack of data on the role of soils as carbon sinks according to different agricultural practices). Their fears only increased in the final hours of negotiations in Marrakech (leading to the Accords on the implementation of the Kyoto Protocol) on the amounts of CO₂ absorbed in carbon sinks, after certain countries had been subject to rather excessive demands in terms of their emissions reductions for the first engagement period.

But the refusal to include agriculture had a rather problematic side effect: the exclusion of all incentives to invest in agricultural practices with positive mitigation effects in countries with the

greatest needs, namely the poorest countries whose populations directly depend for the most part on agriculture.

Today, all countries are in favor of including agriculture in climate policy and the negotiations. Discussions are focused on:

- Improving scientific knowledge;
- Making progress on emissions accounting methods,
- Managing the way emissions from agriculture are taken into account in national inventories;
- Identifying the practical benefits of climate-friendly agricultural practices;
- Supporting actions in the agricultural sector via the financial mechanisms;
- Supporting a return of international organizations, especially the World Bank, in financing agricultural policies;
- Identifying ways of penalizing countries for clearly exaggerating or underestimating greenhouse gas emissions and sinks.

4. Technology transfer

Returning to prior negotiations (Berlin Mandate, Kyoto Protocol, Bali Action Plan), since Copenhagen countries agree on the need for efficient transmission of the best technologies to reduce greenhouse gas emissions and adapt to the inevitable impacts of climate change. The progress made in the negotiation text has now clarified the way in which technology transfer could be envisaged in a multilateral climate regime, and it may be possible to make a decision in Cancún to quickly put into place a Technology Executive Committee and a Climate Technology Center and Networks. The issue is not so much whether or not an Executive Committee should be created, but more its composition and its mandate. Certain institutional arrangements also have to be clarified, such as the relationship between the Technology Center and the Networks.

Nevertheless, the debate on transfer technology is far from over. The definition of what should be considered as “technology transfer” varies between countries, and continues to evolve as use of the internet spreads.¹³ The goal is not simply to provide access to a catalogue of available technologies, but to remove obstacles encountered in countries which hinder access to and diffusion of technologies. For the time being, the issue of technology transfer is poorly framed in the negotiations. It is focused on cutting-edge technologies and patent rights, which are relevant to very few cases, even if they present the trickiest issues in the negotiations. But in practice technology transfer is much more about gaining access to expertise and professional training, with priority given to technologies largely in the public domain, to support adaptation, for instance.

○ The points of disagreement

- Intellectual property rights (IPR): for most industrialized countries (especially the US, Canada, Australia and Japan), IPR are not a barrier to accessing technology, whereas for the G77, they are an insurmountable obstacle. The debate is polarized on this issue.
- Investments needed for the diffusion of technologies for carbon capture and storage (CCS): this issue is particularly important for the emerging powers;
- The role of Technology Needs Assessments (TNAs)¹⁴ and plans to prepare for implementing and follow-up of technology transfer;
- The form and scale of capacity building to be undertaken;
- And of course, the recurring issue of financing.

¹³ It covers: identifying technology needs, deployment, diffusion and transfer of technologies, removal of obstacles and provision of financial resources, and cooperation and research and development.

¹⁴ Preparatory work on Technology Needs Assessments (TNAs) was undertaken in a number of countries to identify their precise technology needs, but they mainly consisted of lists of necessary technologies and were not detailed enough to precisely identify the difficulties and obstacles of each country.

This issue should not be addressed in a static perspective, but rather tied to defining research themes and leading joint research programs that are closest to countries' needs.

Zoom on: The obstacles to technology transfer

- Insufficient tertiary and professional training, leading to a lack of competencies;
- Shortage of specialized research centers, or their isolation;
- Missing links in value chains, especially in terms of implementation and maintenance;
- Absence of companies capable of spreading technologies;
- Lack of public or private contracting authorities able to take on the inevitable risks that come with initial operations;
- Abandoning the development and diffusion of indigenous technologies and know-how;
- Lack of public or private funds to finance projects;
- Protected access to patents, blocking access to technologies;
- Barriers to private investment, which are a powerful way of promoting technology transfer.

○ **Differences between countries' needs**

Developing countries and the least developed countries in particular:

- request that technology centers be created at the regional level, with a boost to cooperation between poor countries with similar climatic conditions, and priority given to the local level and the most vulnerable populations (education, etc.);
- have important needs in terms of increasing capacities to gather and analyze climate and socio-economic data, especially at the community level;
- request a review of adaptation techniques indicating their level of maturity.

Emerging powers are in a very different situation. Often with an educated population and high-quality universities and engineering schools, they have few difficulties in accessing common technologies. China and India have little need for direct financial support to implement these technologies. Instead, their expectations are focused on more advanced technologies. This is one of the points on which the emerging powers have strong demands, as they aim to expand their industrial development from low-level manufacturing to state of the art technologies.

Each developing country has needs and demands specific to its physical and climatic conditions, energy resources, social and cultural customs, and so forth. Not all countries need complicated and elaborate technologies. Many African countries, for example, have very basic technology needs, such as design and construction methods for low-energy buildings suited to local climate conditions. The negotiations should decide on a sufficiently flexible mechanism or institution to respond in a coordinated and equitable manner to the full range of technology demands.

Zoom on: Access to patents and intellectual property rights

Access to patents is a very important issue because research and development for clean technology is very burdensome and often needs a certain level of protection to be profitable. The main problem concerns patents for technologies which are not in the public domain. Countries' positions on this issue remain inflexible for the moment. The G77 demands a revision of the system of intellectual property rights as they impose high costs, forming a barrier to technology transfer and less polluting development. The US refuse any reform of the system, which according to them stimulates research and innovation, but also private investment in these areas.¹⁵ Studies show that patents issued in the emerging powers are rarely spread. This is unlike those issued in industrialized countries, however, with technology transfer occurring when the private sector invests abroad.

¹⁵ These are the same difficulties which prevent an agreement being reached on the intellectual property rights regime in the WTO negotiations.

Important questions need to be resolved. Is an equitable distribution of benefits from technology transfer based on the financial value of the technologies in question? On the quantifiable impact of the transfer? Or on the number of technologies transferred? Is technology transfer intended to massively disseminate a number of critical technologies, and if so, which ones?

- **Possible advances on the issue of technology transfer**

- ***Capacity building and training***

On the basis of the Technology Needs Assessments, it will be necessary to identify needs in terms of training and competencies in each value chain as soon as possible, targeted at small and medium-sized enterprises.

- ***Putting into place energy efficiency standards***

Discussions should be extended towards the possibility of adopting international energy efficiency standards for the production of common consumer goods (cars, household appliances including for heating and air conditioning, lighting, etc.). Spreading best practices would thus represent a lowest-cost mitigation strategy. The most efficient way of achieving this would be to introduce international programs on key value chains designed to heavily reduce the costs of the best technologies by ensuring them access to the largest possible markets.

- ***Real coordination between research programs***

Research programs undertaken at the international level would bring greater coherency to sectoral programs of worldwide importance. As it has repeated since Kyoto, the US has lifted its refusal to coordinate research programs on the international level. In 2007, they thus put into place a voluntary partnership with countries from the Asia-Pacific (APEC) aimed at supporting collaboration, diffusion, development and transfer of clean technologies. Other initiatives involving the world's major economies are also moving in this direction. At the Major Economies Forum in May 2009, the US and China signed an agreement to cooperate on areas such as energy efficiency, clean coal, carbon capture and sequestration (CCS), renewable energy, fuel efficient cars, and so forth. This process will succeed in pushing forward action if it opens itself up to the international community and is accessible to the least developed countries.

These proposals have disappeared from the last negotiation texts. But defining key themes for cooperation on research programs is crucial. They should be targeted at the needs of developing countries, on certain value chains (agriculture, recycling, renewable energies, transport, construction, etc.) and on CCS (particularly to attract countries such as India and China for which fossil fuels form the basis of most of their economic activities).

5. Implementation of fast start finance

The Copenhagen Accord stipulates that fast start finance of US\$30 billion would be provided over 2010-2012, with balanced allocation between mitigation and adaptation. These funds should be "new and additional" and be prioritized for the most vulnerable developing countries, such as the least developed countries, small island developing States (SIDS) and Africa.

Announcements from developing countries in the course of the year show that they will by and large meet their commitment of providing \$30 billion over the three years. In Cancún they will be expected to present a report of the implementation of this financing for 2010.

The decisions which could be made in Cancún on the matter of fast start finance concern putting into a place a registry for developed countries' funds and its access for developing countries. The discussion on MRV rules will also touch on fast start finance, looking at the issue of traceability of industrialized countries' funding via a common reporting format to follow the actual disbursement of sums, as well as examining the use of these funds by developing countries.

- **The share of new and additional funds in fast start finance**

Of the US\$30 billion fast start finance pledge over 2010-2012 recorded in the Copenhagen Accord, transparency unfortunately remains a key issue even though industrialized countries pride themselves

on having met their commitments. It is still difficult to judge what part of the funding is additional to pre-existing official development assistance, but it is probably represents less than \$10 billion, or a third of the total. Studies show that donor countries have in large part simply relabeled already-committed ODA as “fast start finance”. Indeed, as this was decided in Copenhagen in December 2009, it was impossible for developed countries to modify their national budgets to add additional flows to ODA that was already planned for 2010. Several studies from academics and NGOs have attempted to analyze what the terms “new and additional” mean. Yet for the time being no attempt has been made to verify whether the projects financed have a real and quantified impact on mitigation (emissions reduced or avoided) or adaptation (number of people affected, quantity of water or land impacted, etc.).

Developing countries have reiterated their demand to obtain a common definition of “additionality” and numbers and information on the sources and allocation of funding, the channels used (bilateral or multilateral) and the sums disbursed.

6. Long term finance

Question on finance and financial architecture will be the main issues in Cancún. Much will depend on successfully adopting a decision on this point – the credibility of the UN process, as well as project building and implementation. Annex I countries providing financial and technical support to developing countries is essential to implement mitigation and adaptation actions. The level of financing required for fighting climate change is enormous approaching that of official development assistance - \$100 billion per year. The current institutional architecture through which funds of all kinds are managed is scattered, poorly coordinated and inefficient. It should be improved by institutional reform, which would increase its legitimacy with respect to both donor and recipient countries.

The broad political orientations for long term climate finance were set out at the Copenhagen Conference via the Copenhagen Accord:

- The goal of US\$100 billion a year by 2020 of funding for developing countries;
- Fast start finance of \$30 billion between 2010 and 2012 to help countries build projects and action plans for implementation with long term finance;
- The UN Secretary General mandated a High-level Advisory Group to propose possible sources of new and additional finance which could be mobilized;
- The creation of a Copenhagen Green Climate Fund¹⁶ through which a significant portion of the \$100 billion per year of long term flows would flow, to be finalized at Cancún.

All countries, even those in opposition to the Copenhagen Accord, have come to recognize these aspects. Since the two Bonn sessions they now form part of the new AWG-LCA negotiation texts. This has paved the way for views to converge on the need to quickly create the new Copenhagen Green Climate Fund.

But views still diverge on the conditions in which it is to be implemented: what will be the fund’s governance? The role of the COP? The institutional arrangements? The links with existing fiduciary structures? The question of the design of the overall architecture is far from decided.

The debate on financing oscillates between two necessities:

- ***Renforcing the decision-making process to maintain political control over decisions taken in the UNFCCC framework,***
- ***Ensuring financing is effectively implemented as quickly as possible, by allowing for decentralization and flexibility.***

¹⁶ Though the name of the fund varies in different texts of the LCA chair, for reasons of clarity we will refer to the fund with this name to designate the fund mentioned in the Copenhagen Accord.

- **A common interest**

Although the majority of actions taken to combat climate change contribute to developmental goals, financing for climate change and for development continue to have different justifications and follow parallel processes.

- Justification for official development assistance (ODA) resides in concerns over equity, solidarity and the search for peace and social justice. There is also an economic motivation in helping countries develop, which increases access to trade. Ideally, ODA should be more in the interests of recipient rather than donor countries. The history of ODA shows that its evolution is often tied to geopolitics between rich and poor countries.
- Fighting against climate change implies a stronger and more direct bond between donor and recipient countries. As GHG emissions have the same effect irrespective of their geographical location, reducing them makes similar contributions to stabilizing the climate wherever this takes place. Reducing emissions through international financing thus becomes as beneficial for the donor country as it does for the recipient country. As the benefits which fighting climate change brings are shared between all, we can it is the first challenge in human history requiring solidarity between all the peoples of the world. A global public good, in other words, at the junction of the interests of all countries.
- In contrast, justification for financing adaptation, based in part on developed countries' historical responsibility for emissions that have led to climate change, is closer to the justification for ODA.

- **The main questions being debated**

This debate on finance is comprised of four distinct, though interlinking kinds of questions

- ***The question of financial needs***
 - What are the financial needs for mitigation, adaptation, capacity building, technology transfer, and so forth?
 - Which actions are dependent on financial support for their implementation?
- ***The question of the conditions to obtain financing***
 - Which process of project building would give the best access to finance for countries with the greatest needs?
 - What are the conditions for private sector intervention?
 - How can we ensure that projects are of high quality and that funds are rapidly approved?
 - Which mechanisms are necessary to verify that money is well spent?
- ***The question of the financial architecture***
 - How should the Green Fund proposed in the Copenhagen Accord be managed, and what will be its link with the UNFCCC?
 - What should be the respective place given to developed and developing countries in the governance of the Green Fund?
 - What decision-making processes should be developed?
 - How should public and private resources be mixed in a complementary way?
- ***The question of the sources of finance***
 - What is the right balance between ODA and private resources?
 - What should be the role of carbon markets?
 - Which new sources of finance can help reach the expected level of \$100 billion in 2020?

These four questions will be addressed in this chapter in this order. Starting from countries' needs, we will then identify the best conditions to satisfy them, moving on to the financial architecture and the sources of finance to meet these conditions. This is an unusual order to approach the issue, but it is

the best way of linking with the process of project building in developing countries, and thus gives assurance to donor countries that the funds will be well used.

It does not help to tackle the problem from the perspective of potential financiers by giving a check-list of the conditions to be satisfied for a project to be recognized as “bankable”. We should put ourselves in the shoes of developing countries to determine what makes a project sustainable. For international aid to have a lasting impact on development and to help move towards a low-carbon economy, it must satisfy one foremost condition. It must give rise to wealth creation, especially by developing local renewable resources, and this must allow economic actors to become solvent. This should lead to emphasis being placed on creating economic activities (agriculture, craft and cottage industries, basic services) as well as meeting household needs.

Elements of context to take into account

It is essential to grasp a few elements of context before entering into the description of the financing needs, systems of management, institutional architecture and sources of finance.

o **Gaps in the economic discussion**

Questions on finance cannot be properly addressed without an understanding of the economic conditions surrounding developing actions. But the financial negotiation is complicated by the fact that negotiators do not share a common economic background on these issues.

- Some industrialized parties consider that financial transfers are useless expenditures, when in fact investments in energy efficiency are those which increase productivity the most and form the motors of the world economy.
- The private sector will get involved based on signals by the public sector: the private sector will back out if public investments decline and get more involved if the public sector creates a favorable climate for investment in developing countries.
- Poor countries' economic development would bring booming new markets for industrialized countries and drive forward the entire world economy.
- The Stern report's conclusion that the cost of inaction was far greater than the cost of taking action was accepted. But these costs are borne are not borne by the same people in the same timeframes. As a result, this understanding did not lead to actions to anticipate future costs.

o **Unstable trends in energy prices**

Economic incentive to invest in mitigation actions is strongly linked to the price of energy resources. 2008 wreaked havoc, with oil prices peaking in August at \$147/barrel and then drastically dropping after the financial crisis to fall to \$40/barrel in November 2008, only to recover to current levels of above \$80/barrel.

Yet the fact that we have entered into a period in which supply of energy resources will have more and more difficulty in meeting increases in energy demand is one of the key factors of current negotiations. In fossil fuel-importing countries, actions to increase energy efficiency and develop renewable energy which are at the heart of mitigation policies will become more profitable. The current price of oil is now three times higher than it was at the Rio and Kyoto conferences (and six times higher than in the summer of 2008). The historical coincidence of high energy prices and the need to fight climate change makes short-term profitability and long-term environmental demands compatible.

Nevertheless, highly volatile prices make it difficult to forecast future trends. This will not affect in any way long-term trends of high energy prices and the profit margins of long-term investments. But countries are not encouraged to make investments without projected profitability, and this makes it even more difficult to assess profitability of their long-term mitigation targets. The lack of predictability means that public intervention and case by case matching of financial instruments (ODA, Kyoto mechanisms, funds, public-private partnerships) will be necessary and often quite profitable. Negotiations must take into account the increased profitability of actions in the very likely event of

continued rises in oil prices until 2020. But the volatility of prices blurs trends and makes it difficult to plan for a reliable distribution of modes of finance with a massive mobilization of the private sector.

○ **The unfavorable context of the debate**

This debate is taking place in an unprecedented crisis of public finance in developed countries, which went into heavy debt before seeing tax revenues fall from weak economic growth and budget deficits rapidly widen. These difficulties are reflected in the provision of fast start finance, with little in terms of additional funds, and weigh heavily on the debate on new sources to serve the new climate fund.

● **Understanding the needs of developing countries**

○ **The key notion of “value chains”**

A chain always breaks at its weakest link. Defining what constitutes successful development first requires identifying and strengthening weak links (e.g. users' needs, corresponding services, the appropriate technology, professional structures, building markets, production methods). We will use the concept of “value chain” to describe this sequence. Furthermore, as the perspective adopted is one of successful development, we must adopt an upstream approach, i.e. starting with satisfying the population's needs to work towards building the necessary production methods. Moving from the project-based CDM to programme-based NAMAs allows us to work with a value chain approach.

The dilemma characteristic of development processes is well known. On the one hand, weak revenues undermine the long-term viability of projects, even when they benefit from significant financial support to cover initial investments. On the other hand, a project supported by international aid will not always succeed in establishing itself if it does not bring sufficient benefits to local populations.

It is thus essential to apply an approach using the logic of value chains. This involves:

- Starting from the needs of populations, in particular in terms of the economic initiatives they expect;
- Identifying the possible solutions available to build a low-emission economy;
- Mapping out the territory's current and future supply of resources (integration in networks);
- Taking into account the needs of climate change adaptation;
- Determining the level of energy production necessary to meet the needs of economic activities, household consumption and public services;
- Identifying which sources of energy production can form an energy mix to provide a sufficiently constant level of production also capable of meeting the needs of peak demand;
- Bringing together the entire chain of professional competencies to implement these solutions;
- Identifying public and private actors able to manage and direct these projects and provide guarantees to banks and other financial institutions.

A “value chain” approach is essential for the following five reasons:

- It links supply and demand, thus responding to expectations of local populations in the development process and the creation of economic activities this stimulates;
- It allows for production methods to be chosen to best respond to the needs of the local population; a vertical approach which consists of proposing a single technology for all conditions must be avoided;
- It allows different strategies to be formulated according to local conditions in developing countries, in particular between urban and rural areas;
- It allows for projects to be distinguished by their relative profitability, thus helping to prepare the phase of financing between international aid, national financing, local price setting and private sector involvement;
- Finally, it takes into account and integrates the different trades and professions, allowing for operations to be replicated, a vital condition to set the development process in motion.

- **A process based on increasing users' solvency**

This is an absolutely fundamental point. Taking the example of guaranteeing access to energy from low-carbon sources in developing countries, this implies:

- Giving preference to methods of electricity production working at regular intervals to enable the proper functioning of the equipment of small industries (agricultural machines, pumps, etc), and thus support economic activities. This should be followed by a transition towards an energy mix with renewable sources but also ensuring a stable level of energy production.
- Introducing fees for electricity which pay for the maintenance and renewal of equipment, even if initial investments in equipment benefit from international financing;
- Giving preference to small projects meeting the needs of local communities, rather than large, oversized infrastructure in relation to their needs and ability to pay for the services;
- Partnering projects to develop electricity production with those to develop other economic activities in the relevant area, as well as services for companies and local populations (and thus in close connection with local authorities);
- Striving for the most efficient use of energy as possible, a requirement for the service provided to be financially accessible to a large number of users.

The same approach may be applied to develop agricultural production resilient to the impacts of climate change, to reduce deforestation, to recycle household waste, to develop buildings with low energy consumption and suited to local climate conditions.

- **Giving close attention to the economic conditions for projects to succeed**

To have a maximum leverage effect, the financial structure of projects should be calibrated according to the different economic conditions for them to succeed. Projects should thus be broadly classified within the various value chains. Four broad categories can be distinguished:

- ***Actions for which it is easy to assess the costs and emissions reductions***

This is possible for actions involving new buildings, energy production, investments in energy savings, renewable energy, waste management, forest plantations, vehicle selections, and so forth, provided that the necessary technical competencies are available. This makes it possible to formulate actions ordered according to their efficiency (ratio of emissions reductions vs. cost). This also makes it possible to calculate the time taken for the initial investment to be paid back and the financial needs to implement the project (the share of grants, concessional loans, private corporations, national banks, local savings, etc.). This classification is essential to have access to international financing.

- ***Actions for which the emissions reductions may be easily calculated but with widely varying costs***

Using average values is not very constructive in these cases, which include renovating existing buildings, combating deforestation, very specific industrial actions or developing short circuits in food supply and distribution. It is only possible to obtain a ratio of emissions reductions vs. cost with case by case technical studies. It is therefore important to be able to learn from experience and post hoc evaluations to identify the financing needs of different projects and to find the right balance between the different possible sources of financing.

- ***Actions for which the investment costs may be easily calculated but with impacts which are difficult to ascertain***

This concerns many different kinds of actions to combat deforestation or put into place transport infrastructure, for which it may be difficult to evaluate the modal shift. This makes it necessary to establish proxies for different types of REDD+ projects. This also concerns many investments to adapt to climate change, with effects which are known but hard to foresee, whether qualitative or quantitative. The same can be said of benefits from initiatives taken to educate and raise awareness amongst populations. Official development assistance will have to make an important contribution in these cases.

- ***Other equally vital actions, with both costs and effects which are difficult to ascertain***

This category covers changes in behavior and lifestyle, sustainable forest and land management, optimization of logistical chains in freight transport and policies in urban areas aiming to make housing more dense or increasing the mix of urban functions, as well as some measures to adapt to climate change. Methodological difficulties abound and become more severe the further one looks into the future. These cases require continued research efforts as well as contributions from ODA.

- **Dividing finance between mitigation, REDD+, adaptation, technology transfer and capacity building**

The debate on the distribution of long term finance is still completely open, but a consensus is emerging on the need to undertake the following actions:

- Making an estimation of the needs by theme and by sector;
- Making an inventory of the projects currently being built by theme and their financing needs;
- Making provisions for different sectors' abilities to absorb financial flows;
- Taking account into the cost-effectiveness of projects in reducing emissions to establish priorities for implementation;
- Evaluating the capacity of different sectors to leverage other sources of finance according to the profitability of actions.

A certain volume of financial flows will need to be reserved for adaptation projects and programs for which it is difficult apply economic calculations to determine investment returns. There has been a first step taken in this direction through the proposition to reserve 20% of finance for REDD+ actions.

The top priority is thus to ensure that the new financial architecture meets the multiple needs presented above. The key aspect of this is to undertake a thorough analysis of projects to match them with funding which corresponds best to their needs.

● **Estimation of the costs of mitigation and adaptation and the sources of finance under consideration**

Numerous estimations of financial needs¹⁷ have been produced in recent years. They are based on very different methods, especially on the issue of measuring costs or additional costs and so produce very different results.

- **Estimation of the costs of mitigation and adaptation**

According to UNFCCC estimations, developing countries require between US\$100-150 billion per year by 2030. After Copenhagen, the G77 estimated that developed countries should give transfers to developing countries to the tune of 1.5% of the GDP each year, or around US\$600 billion¹⁸. NGOs demand transfers of the order of US\$100 billion per year until 2020 solely to meet adaptation needs.

- **Overview of the current state of implementation**

According to the estimations of the UNFCCC, international aid for environment and climate change amounted to US\$103.7 billion per year in 2007. These funds are disbursed via:

- Several hundreds millions of dollars per year via the financial mechanisms of the UNFCCC (Global Environment Facility, Adaptation Fund, LDCs Fund, Special Climate Change Fund);

¹⁷ Adapted from "Transfert financiers Nord/Sud : des propositions éparées », appearing in : *Le sommet de Copenhague tiendra t-il ses promesses ?* La note de veille n°149, Centre d'analyse stratégique, September 2009.

¹⁸ Calculation performed using the GDP of Annex B countries (Annex I countries minus those in transition to a market economy) in 2008, using World Bank data (Accessed November 22 2010).

<http://data.worldbank.org/indicator/NY.GDP.MKTP.CD/countries/latest?display=default>

- 10-20 million of dollars per year via multilateral initiatives (UN-REDD, the World Bank's Forest Carbon Partnership Facility (FCPF) and Climate Investment Funds (CIF), etc.);
- Bilateral initiatives put into place by bilateral cooperation agencies, mainly the JICA, AFD, KfW and EIB (Japan's Cool Earth Partnership, Climate and Forest Initiative, Germany's International Climate Initiative, the European Commission's Global Climate Change Alliance (GCCA), etc.).

Estimates indicate that funds from four bilateral cooperation agencies (JICA, AFD, KfW, EIB) represent between 50 and 65% of public climate finance.¹⁹

No estimations have been made of current contributions of international financial institutions in developing countries, the private sector, NGOs or private foundations to fighting climate change. However, this is essential to shed light on the debate on climate finance, and should form part of efforts to strengthen monitoring and supervision of financial flows to fight climate change which could be decided in Cancún.

● **Combining the different sources of financing**

○ **The respective roles of public and private resources**

Amongst all of the essential points regarding the architecture of the Copenhagen Green Climate Fund, the roles of public and private resources is at the center of the debate, with predictable results:

- The countries asked to make the biggest contributions want the market to play a crucial part in providing financing;
- Experts insist the private sector will not be able to take on responsibility for implementing actions to structure, prepare and monitor the creation of value chains;
- Recipient countries demand stable and sustainable resources— in other words, public funds;
- The countries with the most urgent needs are more pragmatic: they want private resources in addition to public resources;
- The most radical demands imply only counting public resources as market-based resources are not predictable, and as developing countries have a “historical debt” to repay. Seen in this way, the carbon market would be a way of reneging on their responsibilities.

The question is not which is the superior source of finance, but rather how their use can be optimized. This leads us to the issues of profitability and the quality of governance of financial flows (addressed below). With the ongoing financial and economic crisis, confidence is low. So it is all the more important for the negotiations on finance to strive for optimized use of the limited funds available.

○ **Coordinating and prioritizing public and private sector intervention**

The different public and private instruments can be used in complementary ways, thus simplifying the debate:

- Certain fundamental actions which have structural effects but do not lead to immediately quantifiable emissions reductions should be supported by public aid;
- The private sector has a crucial role to play in financing profitable actions with which it has experience. This will free up tax revenues for other purposes;
- Between these two paths, a range of solutions are available. Depending on each country's situation, this will involve varying parts of concessional public money to leverage private funds.

With these clarifications, we can now analyze more closely the characteristics, assets and drawbacks of each of the sources of finance.

● ***Issues with public sources***

- Complexity of rules governing the allocation of funds,

¹⁹ Aaron Atteridge, Clarisse Kehler Siebert*, Richard J. T. Klein, Carmen Butler, and Patricia Tella, Bilateral Finance Institutions and Climate Change: A Mapping of Climate Portfolios, Working Paper, Stockholm Environment Institute, 2009.

- Difficulties in collecting funds from donor countries,
- Complex administrative procedures to access multilateral resources.
- **Prerequisites for private sector involvement**
 - The project must be profitable: if necessary, the public sector must make up the gap (subsidy or subsidized loan) or enable the initial investments to leverage private sector participation;
 - The legal and institutional framework around which public policies are built must be stable;
 - The legal and financial structure of the project must be strong and secure, or else the private sector will not intervene. This is particularly the case of Kyoto mechanisms which are not subject to adequate oversight;
 - Infrastructure must be sufficiently developed and reliable, with political stability and limited corruption (cf. submission of the International Chamber of Commerce, US Chamber of Commerce and Japan Business Federation);
 - The issues of import/export barriers must be dealt with in conjunction with the WTO;
 - There must be sufficient visibility to mobilize funds in time.

The conditions must be right to attractive private sector investment: building structured frameworks to develop value chains (identifying projects, technology transfer, skills training, start-up funds, policies for the industrial sector, maintenance capacities).

The conclusions to be drawn from the above discussions are somewhat paradoxical and at odds with the usual ideological positions. Indeed, private sector involvement is in a sense proportional to public investment, necessary to stabilized investment conditions in the least developed and most vulnerable countries. But to reinforce this link, public investment must give priority to private investment structures on every possible occasion. This will ensure that public money (from precious tax revenues) is not uselessly squandered on areas which the market can take charge of. In fighting climate change, the absolute priority is to ensure that the mechanisms put into place have stable, predictable conditions of use (amount, deadlines, allocation, rules of approval).

○ **Lessons learned from the use of international funds**

The design of the Copenhagen Green Climate Fund should incorporate the lessons learned from the difficulties developing countries have encountered in accessing international financing.

Zoom on: the obstacles to the effectiveness of a centralized fund

The administrative complexity of gaining access to multilateral resources

- Least developed countries encounter further difficulties in the stage of preparation of projects due to their lack of statistical and technical capacities.
- Developing countries require support in project building in the form of project sponsors capable of offering guarantees to secure finance (public companies, local governments, etc.)

The strong interference of multilateral bodies in developing countries' governance structures

- This is a very sensitive issue. Multilateral bodies tend to set conditions on the way funds will be managed before granting them. This is not well received by recipient countries, all the more so because these demands have often had disastrous effects (austerity measures with harsh social effects, requirement to privatize public services, etc.).

A strong demand for stable political goals

- A recent study by the OECD shows that vertical, centralized funds have never managed to be scaled up, and warns against their use in combating climate change.²⁰
- The priorities and criteria of attributing multilateral aid often vary too often to be compatible

²⁰ *Development Perspectives for a post-Copenhagen Climate Financing Architecture*. OECD, October 2009

with the timescales of project building and the need for stakeholders in implementation to have visibility on the conditions of granting funds.

- It may seem more practical to improve existing financial channels by strengthening and reforming them. This solution would also respond to developing countries' calls to reform the system of official development assistance.

The fear of a poor use of funds

- Developing countries are confronted with such difficulties in functioning on a day to day basis that strong tensions often arise at the stage of allocating multilateral financial contributions to projects. They may be forced to react to more urgent needs arising from emergencies, which will tarnish their credibility.
- En réponse, le souci de sécuriser l'utilisation des fonds par les pays donateurs débouche sur la multiplication de critères administratifs et techniques à satisfaire. Ces « filtres » deviennent vite des obstacles infranchissables pour les pays destinataires des financements. Ces contraintes d'attribution se traduisent par des coûts administratifs excessifs et des délais insoutenables.
- In response, donor countries multiply the technical and administrative criteria necessary to obtain funding in an effort to ensure that the funds they provide are well spent. These "filters" quickly become insurmountable barriers for countries which are their intended recipients. These restrictions result in excessive administrative costs and delays.
- Countries generally do not have the funds on hand necessary to kick start projects.
- The weakness of monitoring and evaluation processes makes it difficult to simplify attribution criteria and improve procedures.

These difficulties aggravate developing countries' distrust of international funds and this weighs heavily on the negotiations. It is thus essential to improve the equity, the effectiveness and the governance of the financial mechanisms to resolve this dilemma.

● Assessment criteria for the new financial architecture

We can conclude from the above analysis that the second major issue is the quality of procedures to process projects and allocate funds efficiently in a transparent environment with serious monitoring to create necessary confidence between actors.

We can thus enunciate the essential criteria for the design of the Copenhagen Green Climate Fund:

○ Quality of project building

This involves:

- Clear expression of the nature of projects requiring support and their goals;
- Clear definitions of the costs and additional costs of projects to facilitate the processing phase.

○ Appropriateness and adequacy of funding supply compared with needs

Financial bodies are often specialized in different types of financing: grants, concessional loans, refinance for the banking sector, carbon finance and leveraging private sector investment. But in real life, projects and programs, especially if complex, require a mix of these diverse kinds of financing. The architecture of the Copenhagen Green Climate Fund must therefore, from the very beginning, facilitate the mixing of these different types of financing for each project applying for funding.

○ Governance and accessibility

Climate negotiations must produce a mechanism immunized against the pathologies observed in mechanisms for international finance until now. It must therefore feature:

- greater proximity between financial bodies and recipient countries, as well as better overall coordination of sources of finance;
- clarity in the eligibility criteria to avoid the proliferation of administrative procedures;
- resistance against the obstruction of administrative circuits, and reduced timeframes to approve and disburse funding.

○ **Transparency and coordination**

To ensure a level of transparency, as well as a monitoring of the progress made towards meeting commitments, it is important to find a format for common and complete reporting so that:

- developing countries may observe that developed countries' are meeting their financial commitments;
- developed countries may improve the programming and coordination of funding to suit the needs of developing countries' action plans;
- financial bodies and developing countries' national authorities are both involved in monitoring and verification.

The complexity of the rules involved in international finance often has the effect of excluding the countries with the greatest needs.

The major challenge will be to put into place a financial architecture to integrate the diverse sources of finance and allow for recipient countries to be better represented, have simpler access to funding and be in charge of the operational management of these funds through improved coordination with their national policies.

Deciding which channels projects will be financed through will be a major issue because it will determine the speed and scope by which funds are disbursed. Actions of developing countries' national financial institutions should be supported in priority. This should be used to develop rather than substituting for their activities, as they are responsible for financing over the long term. The proximity of certain development banks with the field (regional development banks and bilateral agencies – JICA, AFD, KfW, USAID, EIB, EuropeAid, etc.) should also be leveraged to attract private sector investment. Finally, funds managed by international institutions (World Bank, Global Environment Facility, UNEP, UNDP, UNFCCC funds) should be used to complement the financing and activities implemented by the other above-mentioned actors.

● **Transparency, coordination and synergies between sources of finance**

It will be vital to quickly develop a system to coordinate and track funding and a single basis to monitoring funding for climate change, which will form the “GPS system” of the UNFCCC's financial mechanism. To this day, no database of international climate finance recording the destination and the conditions of attribution of the funds exists, though it should be recognized that the Netherlands has developed a tool to track the disbursement of fast start finance.

• ***National Communications***

Financial flows from Annex I countries are detailed in their national communications to the UNFCCC Secretariat. However, the Secretariat itself outlined the gaps in this method in the addendum to the Compilation and Synthesis Report of Annex I communications²¹:

- Countries did not all use the same categories provided in the tables, making a comparison of projects by sector difficult; and they reported on financial contributions using different years;
- Countries reported data on their contributions to multilateral institutions without distinguishing between funding which is related to climate change and that which is not;
- Countries declared information on bilateral contributions in different formats (budgetary assistance, capacity building, etc.).

• ***The Creditor Reporting System (CRS) of the OECD***

²¹ (FCCC/SBI/2007/INF.6.Add2).

The OECD has developed a centralized format to record official development assistance (ODA CRS). This system constitutes the largest database of information on ODA. However, it only records contributions from member states of the OECD and does not include contributions from the private sector (banks and industry). In addition, the contributions of multilateral institutions are not broken down by country. Furthermore, ODA is recorded at the moment when assistance is granted, and neither the efficiency nor the effectiveness of the projects are recorded.

- ***Procedures governing project quality and the use of funds***

Certain conditions must be guaranteed irrespective of how the project is financed:

- Financing through the different channels (bilateral, multilateral, market mechanisms) must be tracked via a registry;
- Amongst countries' various contributions the portion actually aimed at fighting climate change must be well identified.

On procedural matters, developing countries want funds to be made available before implementing actions, whereas developed countries prefer to base their payments on the results obtained once actions have been implemented. This is a particularly relevant question for “no lose targets”, as it is difficult to make provisions for funds without being able to anticipate emissions levels in developing countries. The lack of information on the range of emissions reductions and hence funding targets makes it hard for donor countries to manage their budgets, and in turn they are more reluctant to commit to financing actions.

● **Putting into place the Copenhagen Green Climate Fund**

The Green Fund is presented as an “operational entity of the financial mechanism of the Convention”. The way it will function is at the center of debates, with countries having difficulty in coming to a common vision of what its future architecture could look like. It is clear, however, that putting into place a centralized fund will have to avoid committing certain errors which will limit its effectiveness. Funds must in particular be disbursed efficiently, quickly and in a broad scope as set out above.

● **The positions of different countries on the financial architecture**

Over the course of the sessions countries clarified their conception of the fund's functioning. For the most part their proposals are not complete and countries do not attach the same level of importance to the same functions. Discussions are focused on the following points:

- The sources of finance for the fund;
- The fund's relationship with the COP;
- The fund's governance: voting process and decisions to approve funding;
- The role of expert advice and NGOs;
- Activities and sectors supported;
- The fund's accessibility;
- Evaluation of the results of the fund's activities;
- Traceability of the actions financed;
- Coordination with existing structures.

● **The way funds are managed**

Continuing the process of moving from demand to supply, the next question to be addressed concerns the access to the Copenhagen Green Climate Fund.

- **Direct access**

The question here is whether developing countries will have direct access to the different funds. They demand the possibility of obtaining funds without having to go through the intermediary of an international agency such as the World Bank, UNDP or UNEP. This requires recipient countries to put

into place a structure at a national level with precise terms of reference enabling it to perform this role²². These countries consider that direct access to funding gives them greater ability to choose their own priorities and greater responsibility in project design and implementation.

Amongst developed countries, some – like the UK, Norway or Australia – also support the principle of direct access. In the negotiation text from August 2010 direct access is retained as one of the ways of ensuring improved access to financial resources for developing countries. Until now, the only funds which have employed this distribution method are the Adaptation Fund and the Global Fund to Fight AIDS, Tuberculosis and Malaria. Regarding the Adaptation Fund, which recently started operations, the main difficulty encountered was the lengthy time period for the accreditation of “National Implementing Entities”.

Direct access is only viable if funds are well-managed. Whether it is adopted will also depend on the quality of MRV rules which are eventually decided and implemented.

o **Conditions surrounding a decision to approve funding**

The rules governing decision-making will be a mix of technical, geographical, politically and of course financial criteria (capacity to pay back the loan). Their complexity presents a major obstacle to actually approving funding to projects. The process of preparing a project proposal is complex and the period of time taken to make decisions is extremely lengthy. National NAMAs plans will be much more complex to prepare than one-off CDM projects. Bringing together multiple actions inevitably leads to situations in which all the pieces have to be in place before starting the next step. Developing countries will thus have to ensure that enough competent teams are put into place to prepare the implementation of projects.

Other difficulties arise from the practices of developed countries. The priorities of different sources of finance vary each year from theme to theme and rarely last. The difficulties international cooperation agencies also have in collaborating amongst each other complicates the task for developing countries and further stretches already limited administrative resources.

Severe difficulties are being encountered in the search for a balance between donor and recipient countries in the decision-making process. Recent progress has been made with the emergence of a collaborative process such as the Forest Carbon Partnership Facility (FCPF).

o **The role of technical boards and their ties with the decision to allocate funding from the Copenhagen Green Climate Fund**

It is proposed to create technical boards in the UNFCCC framework to perform financial and technical analysis of projects prepared by countries. They should therefore determine, *inter alia*, the project's viability and its impact in emissions reductions, and ensure that adaptation projects are climate-proofed (resistant to future climate variations).

The UNFCCC technical boards could have one of two roles:

- Either they are directly involved in allocating funding for projects (as is the case of the CDM Executive Board), with the inevitable problem of being flooded with applications;
- Or they draw up a corpus of principles, rules and conditions for approval, and then delegate responsibility for managing applications and allocating funds to financial bodies at lower levels.

Countries' positions over this role remain very varied. The G77 proposal limits the role of expert technical bodies to lending its technical expertise in selecting projects, with the final decision taken by the Fund Board. In this way, political factors take precedence over technical considerations in the final reckoning.

However, technical rules must not be allowed to impose too stringent conditions. This will require:

- creating separate bodies to give technical assistance to the preparation of NAMAs for each field of action (capacity building, adaptation, mitigation, energy, buildings and urbanism, REDD+, technology transfer);

²² National Implementing Entity (NIE) for the Adaptation Fund.

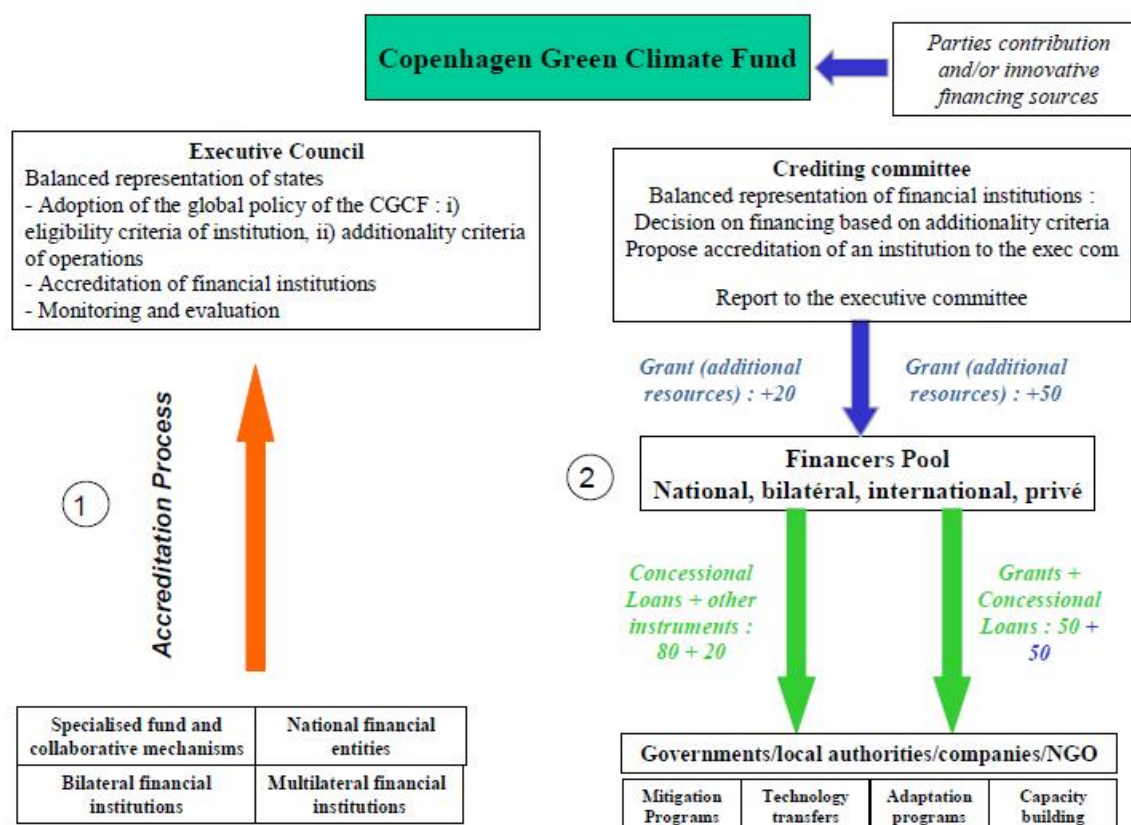
- setting out precise terms for delivering finance (baselines, methodologies, MRV rules) through COP decisions, if applicable via the SBSTA or SBI, published and widely accessible;
- ensuring equal representation of countries in these technical bodies, so that they can take into account feedback from experiences to regularly update and improve the rules.

This is a key issue. The details of the way these issues are resolved will determine whether the fund is a success or a failure. A body of rules which is too stringent could set up such a precise framework that it would eliminate high quality projects with very specific or innovative content or structure. This would have effects quite different from those originally intended.

○ **The five major options on the financial architecture**

- The G77+China propose a centralized fund under the authority of the COP. This fund would have thematic financing windows. The fund's Financial Board would be directly elected at COP17. The composition of the Board would be equitable and balanced. The submissions also mentions the creation of an ad hoc or permanent Committee comprised of members of the COP, responsible for supporting the COP in managing the financial mechanism. This Committee would also be in charge of making the fund operational by determining, *inter alia*, the procedures and criteria for approving funding, as well as the strategic and operational priorities of the new fund. This Committee would report on its work to the Subsidiary Body for Implementation (SBI).
- The World Bank's proposal to create a "Low-Carbon Development Facility", endowed with US\$68 billion in capital, which would allow it to grant \$100 billion per year in loans for climate change. The World Bank would thus become the main international financial institution of centralized climate change finance. This facility would grant \$100 billion per year in loans, but uniquely to public multilateral or national banks.
- The EU, in contrast with most developing countries, wants to use existing institutions to support the implementation of the financial mechanism. The functions of ensuring the matching of needs and offers as well as implementing the MRV mechanism would be entrusted to the UN.
- The US proposed the creation of a complementary international fund under the guidance of the Convention, to be funded by voluntary contributions. The detailed design of this green fund would be entrusted to a group of financial experts. The US have clarified some aspects of the design of this fund:
 - ✓ The role of the fund's "Financial Trustee" – in charge of the fund's financial management and disbursements – could be entrusted to the World Bank.
 - ✓ The Secretariat of the Green fund, as well as its Executive Board, would be independent of all other international financial institutions and would be accountable only to the COP.
 - ✓ International, bilateral and also national financial institutions would have direct access to funding from the Green fund.
 - ✓ The US is insistent that the green fund should be placed under the guidance of the COP and not under its authority. The US underlined that the majority of current climate finance is performed by existing institutions, which should remain major blocks of the future architecture. In order to improve coordination and coherency between actors, the US suggest establishing a collaborative platform bringing together the functions of, *inter alia*, matching projects, ensuring coherence between projects and collecting information to feed into the supervisory mechanism of the entire financial mechanism (overview). Finally, they highlight that the above characteristics show that this green fund would not a continuation of the Climate Investment Funds of the World Bank. This US proposal, pragmatic in its institutional approach, allows for a new climate fund to be put into place without creating new financial actors, whilst leaving the door open to taking further action.

- ✓ A proposal from the French Development Agency (AFD) for a fund acting in a decentralized manner.²³ AFD proposes that the Copenhagen Green Climate Fund be a fund which brings complementary resources to existing financial operators, both national and international to maximize the leverage effect through synergies between instruments. The fund could mix its resources with those of existing operators in line with the principles of efficiency and additionality, capitalizing on the experiences of existing European funds. This approach is reflected in the term of “complementary green fund”, as its resources would complement those of different national and international financial institutions. Each financial operator would be thus responsible for the implementation of funding which the Green Fund has accorded to it and report back regularly to it.



AFD has highlighted the importance of giving financial operators from poor countries (banks, local development agencies, the private sector) access to the fund's resources under preferential terms in order to develop their activities. The idea is to dynamize all national and international financial institutions and facilitate the implementation of public-private partnerships through a light, easy to start up structure. AFD also proposes to create a mechanism to support developing countries in building their NAMAs and to launch a forum between financial operators at Cancún to improve coherency between their actions and in meeting developing countries' demand for funding. This forum would also allow them to capitalize on existing practices, methods and innovations in financial tools and instruments, much like the Consultative Group to Assist the Poorest (CGAP).

○ The link between the COP and the Financial Board

The AWG-LCA negotiation text of July 2010 proposes that the new fund shall be established as “an operating entity of the financial mechanism of the Convention, under the guidance of and accountable to the Conference of the Parties.” This definition remains relatively vague, but the use of the term “guidance” rather than “authority” announces a weaker link than that demanded by the G77.

²³ “The Copenhagen Green Climate Fund – How would it work?” Agence Française de Développement, January 2010.

Indeed, the functioning of the fund could suffer if it were too closely linked to the political decisions of the COP, blocked by differences in the overall negotiation process. If the functioning of the fund depends entirely on COP meetings or meetings of the Subsidiary Bodies, the calendar for financial decisions would be determined according to the calendar of UNFCCC meetings. This could have the effect of considerably slowing down the process, if the length of time taken to put into place the Adaptation Fund and the Special Fund for Climate Change is any indication.

On the contrary, the lessons learnt from the functioning of the Global Environment Facility (GEF)²⁴ point toward a financial mechanism held accountable before the COP, in particular in respect of the nature of the investments, the efficiency of disbursements and the effectiveness of the investments. It would thus be up to the COP to set guidelines for the Financial Board without directing its action. Similarly, it would be up to the fund's financial board to report back to the COP on its activities to show that it has followed its instructions.

○ **The criteria for the Financial Board's composition**

The level of representation of developed and developing countries on the Financial Board is clearly sensitive point.

- Certain developed countries demand majority representation in decision-making instances, on the basis that as the providers of the funds. They also argue that this would avoid distributing funds without regard to the quality of the projects and the way funds were used.
- Developing countries demand "balanced" majority representation to ensure that criteria for disbursement are determined above all according to their development needs.

A governance method for the fund could be found to represent the interests of the different parties to the COP, without necessarily subjecting it to the COP's authority. The Global Environment Facility, the Convention's financial mechanism, was criticized for being overly tied to developed countries' interests and not sufficiently including recipient countries in the process of selecting and approving projects and distributing funds.

The fund's financial board will have to ensure an "equitable and balanced" representation of countries (AWG-LCA text of July 2010) which is representative of the interests within the Conference of the Parties. The new LCA text of August 2010 complicates the proposals on the criteria for the Financial Board's composition. In the same paragraph in brackets indicated above, the text proposes that the Board be composed of 19 members, including 3 from each UN regional group, 2 for small-island developing states and 2 for the least developed countries.

● **Possible sources of public and private finance**

The Copenhagen Accord calls for the mobilization of \$100 billion per year of "new and additional" funds from developing countries from 2020 onwards. But there is no precise agreement over what these two terms mean.

○ **What could be the criteria for additionality?**

Article 4.3 of the Framework Convention stipulates that developed countries should provide "new and additional" funds. These terms have been reused in successive negotiation texts without any clear definition of additionality ever having been given. There have been announcements of "fresh" financial contributions and discussions around a more rigorous framework for the measurement, reporting and verification of financial flows. It is thus an important time to clarify the different conceptions of additionality which are currently being debated. This is all the more important as developing countries are wary of promises of financial contributions which haven't been kept in the past ("pledge fatigue").

²⁴ The current relationship between the COP and the GEF is set out in a memorandum of understanding. Under this agreement, the GEF is only held accountable to the COP in a weak form, with only the requirement to submit reports annually to the COP.

There is an intrinsic difficulty in identifying projects which are exclusively concerned with climate change. Development projects or programs, for instance, have goals and effects which are not solely concerned with reducing GHG emissions or adapting to climate change. Climate change adaptation often intersects with poverty reduction, but also with improved design of urban infrastructure, for example. Similarly, mitigation projects aiming to develop a less GHG-intensive industry are often closely linked to economic planning and development. As it is difficult to determine what is exclusively concerned with climate change, it is necessary to develop additionality criteria to be able to really measure financial flows.

In the last few months, countries have put forward several definitions of additionality:

- Norway and the Netherlands: climate change finance would be counted in ODA, but only sums exceeding the goal of 0.7% of GDP would be counted as additional. But only 5 OECD countries (including Norway and the Netherlands) have reached the goal of 0.7% of GDP. Nevertheless, this definition has the merit of being simple and coherent.
- Germany: contributions made on top of the funds allocated to climate change finance in 2009 could be counted as “additional”. However, taking 2009 as the baseline is rather arbitrary. Moreover, the OECD does not have all the data on financial flows for climate change for 2009, even for its member countries.²⁵ It is also difficult to determine with only the Rio markers what part of development projects are oriented towards climate change. Finally, the definition would need to specify whether it is concerned with commitments or actual disbursements.
- Other proposal from Germany: Funding from innovative sources may be counted as “additional”. Germany has established a fund financing mitigation projects with revenues from auctioning emissions permits to its industries. The problem with this definition is that innovative funds from carbon markets is a very unpredictable source and depend on the price of credits.
- United Kingdom: A percentage of ODA exclusively allocated to mitigation actions would be counted as “additional”. The UK which claims that it wishes to dedicate 10% of its ODA to finance climate change action, whilst making it clear that it is important to use ODA to leverage other sources of finance.
- The European Commission has also started work on harmonizing ODA for climate change amongst its member states. It has launched a Joint Working Group on the Economic and Financial Aspects of Climate Change between the Economic and Financial Affairs Council (ECOFIN) and the Economic Policy Committee (EPC) in order to, *inter alia*, compile and eventually harmonize the different definitions of “additionality”.

○ **The High-Level Advisory Group on Climate Change Finance**

A High-Level Advisory Group on Climate Change Finance was created to formulate recommendations on the way(s) to reach this goal of US\$100 billion a year by 2020. This Advisory Group was co-chaired by Messrs Gordon Brown²⁶ and Méléès Zélawi, with the role in particular to report to the United Nations Secretary-General, Mr. Ban Ki-moon.

It was decided in April 2010 to separate the Advisory Group’s work into two parts, one on public sector finance and the second on private sector finance.

The “public finance” group is divided into six sub-groups:

- Revenue from carbon markets;
- Revenue from international transport;
- Other sources from carbon finance;
- Revenues from international institutions;
- Revenues from taxes on international financial transactions;
- Revenues from direct fiscal subsidies.

²⁵ BROWN, J et al., “Climate Finance Additionality, Emerging Definitions and their Implications”, *Climate Finance Policy Brief n°2*, HBF/ODI, June 2010.

²⁶ Subsequently replaced by Jens Stoltenberg, Prime Minister of Norway.

The “private finance” group is divided into two sub-groups:

- The use of public funds to leverage private investments;
- Carbon markets.

The final report was submitted to the UN Secretary-General on November 5, 2010.

Zoom on: The High-Level Advisory Group on Climate Change Finance (AGF)

- ***Its missions***

The work of the High-level Advisory Group focused on the following points:

- The potential sources of finance (public resources, instruments of multilateral development banks, carbon finance and the use of public funds to leverage private sector investments);
- The criteria to evaluate the contributions (revenues, efficiency, incidence/equity, practicality, acceptability, additionality and reliability);
- The way the mobilized may be used (combining and synchronizing sources and instruments).

- ***Uncertainty over the means weakens the report's conclusions***

The AGF concluded, after assessing the potential sources of finance, that the goal of mobilizing US\$100 billion per year was “challenging but feasible”, requiring implementation of new public sources and scaling-up existing public sources and increased private flows. Indeed, no source will suffice on its own to mobilize the necessary flows. It will therefore be necessary to combine several instruments (loans, grants, direct investments, etc.) to meet the various needs for mitigation and adaptation. But opinions diverge amongst the Group's members on the relative importance of public and private sources to reach the ultimate goal.

There is even wider disagreement on the methods used to calculate the flow, thus generating large uncertainties over the volumes in question. On the one hand, only public sources of finance can be directly measured and ensure that they are additional. They are also the only sources capable of financing adaptation actions in developing countries. On the other hand, hundreds of billions of dollars will have to be invested by the private sector to help the spread of technologies for low-carbon development. But should flows tied to flexibility mechanisms, which contribute to compensating developed countries' emissions via carbon markets, be counted? If so, how should they be counted – net or gross flows? How the real contribution of public sector intervention in leveraging direct private sector investment in developing countries – in new and additional flows – be counted? Should we try to calculate the net flows generated by these methods of public sector intervention, or keep accounts separate for public and private flows? How can we take into account the diverse range of instruments (grants, loans, equity investments, offset payments) through which funds may be mobilized?

These difficulties are compounded by uncertainties over the actual implementation of the proposed sources of finance. Many of the sources identified by the AGF rely on the hypothesis of a price on carbon in developed countries by putting into place market instruments or mechanisms (carbon tax, emissions trading system, auction of permits, offset mechanism, etc.). The volume of revenues generated this strongly depends on the carbon price in 2020. With a low price of \$15/tCO₂, for example, financial flows from rich to poor countries resulting from emissions trading on carbon markets would reach between \$8-12 billion in 2020, whereas with a medium price of \$25/tCO₂ they would rise to \$38-50 billion, i.e. a fourfold to fivefold increase. But US President Barack Obama's announcement that plans to introduce legislation to create a national emissions trading scheme in the US had been indefinitely postponed reduces the chances of such a scenario arising.

These uncertainties and unresolved issues put into perspective the conclusions of the AGF on the possible ways of reaching the final goal.

- ***A list of ingredients in search for a recipe***

The AGF's report, failing to come to an agreement on the combination of sources and instruments, contents itself with providing a list of possible sources of finance with their potential contributions and an analysis of the conditions surrounding their implementation.

A major part of revenues from public sources (\$30 billion per year) should come from auctioning emissions allowances, whether those attributed for the second commitment period of the Kyoto

Protocol or for regional or national emissions trading systems. Revenues may also be generated via national fiscal measures (redistributing taxes and subsidies on energy and CO₂), on the condition that they are earmarked for financing climate change actions and not recycled for other uses.

On the contrary, mechanisms which rely in international cooperation (Tobin tax, tax on international aviation and shipping) pose greater problems in terms of incidence on developing countries and acceptability for all countries involved.

The options regarding instruments of multilateral development banks are more limited. Though large sums may be mobilized (and the report foresees an important role for regional development banks and the World Bank), the margin for further progress is reduced due to the difficult situation for public and private finances around the world.

The AGF emphasizes the important role of flows from the private sector, either indirectly via carbon markets, or directly via foreign direct investment with support from public instruments to create the necessary conditions for investments to be attractive.

Apart from the proposal to adopt a “system approach” to analyze and implement the required policies and a few recommendations to maximize the leverage effect of private sector investment and the coherency of public instruments, the AGF report gives few suggestions on a roadmap to move towards operationalizing the different sources of finance it identifies. Many of these questions are thrown back to other bodies (UNFCCC, G20, International Maritime Organization, International Civil Aviation Organization) for further deliberation and negotiation.

○ **Reinforcing existing sources**

This is the cornerstone for attracting private finance because it gives greater security to investments and lowers risks, thus also lowering the interest rates on loans. Existing sources include:

- Official development assistance (ODA) in grants;
- ODA in concessional loans;
- Funds allocated by UN or other international institutions, in particular regional and bilateral development banks, the Global Environment Facility and the World Bank.

There have been no real discussions since Copenhagen on increasing their allocations in capital.

○ **The possible new sources of finance under consideration**

• ***Funds from auctioning Assigned Amount Units (AAUs)***

This is a proposal to deduct 2% of emission permits (AAUs) for developed countries and auction them to raise new funds to finance actions in developing countries. Part of the revenues would go to the Copenhagen Green Climate Fund. Norway originally forwarded this proposal in 2008. This option entails the creation of a body within the UNFCCC responsible for organizing the auction and channels to distribute the revenues towards the funds and programs on adaptation and mitigation.

• ***Extending deductions on the Kyoto mechanisms***

In 2008, Norway proposed to extend the 2% deduction on the share of proceeds on CDM transactions to the other two Kyoto Mechanisms. This proposal was rejected; the reasons for it were not based on Joint Implementation per se but more because it would have created an “automatic deduction” on internal transactions between industrialized countries, as with the EU ETS. This would involve not only auctioning AAUs but also raising deductions on CDM transactions and including JI transactions.

• ***A tax on international aviation***

The absence of a tax on kerosene, long deplored, induces distortion of competition compared to other modes of transport that is all the more serious as emissions at a high altitude have a greater contribution to global warming. Flights to and from the least developed countries would be excluded (as per Bangladesh's proposal). This taxation could only be decided by the International Civil Aviation Authority, which has proved to be hostile to the idea.

• ***A tax on international shipping***

As in the previous case this would be an emissions-based tax. Responsibility for deciding on it lies with the International Maritime Organization. This tax would impact particularly on countries which export raw materials and geographically isolated countries, especially in Oceania.

- ***Extending carbon markets***

This idea has already been raised above. It mainly depends on extending the Kyoto Protocol and on signatory countries meeting their commitments.

- ***Public-private partnerships***

All countries agree that, in a context of strong social resistance to new taxes, the public sector alone cannot shoulder the burden of financing large investments. But little follow-up was made on calls to develop private investment (such as at the 2002 Johannesburg summit).

The Copenhagen Accord highlights the role of the private sector which should, if the UNFCCC estimations are to be believed, count for 85% of long term finance, compared to 15% for the public sector.²⁷ The gap between the current situation, in which around \$8 billion per year of private capital is used to finance climate change actions in developing countries and the goals set out in the Copenhagen Accord is huge, and even larger taking into account the World Bank's estimation of needs of between \$90 and 210 billion per year.²⁸

- ***The Swiss proposal of a universal carbon tax***

The possibility of introducing a carbon tax returned to the debate with Switzerland's submission. It set the tax at USD 2/t CO₂, corresponding to \$0.5 per liter of petrol. This tax would apply to all countries except those with yearly emissions of under 1.5t CO₂ (corresponding to the goal of halving global emissions by 2050). This tax would levy US\$48.5 billion per year. It was supported by the G77 and China, but was rejected at Copenhagen and was not considered by the High Level Advisory Group.

- ***A tax on greenhouse gas emissions***

Despite some countries' strong opposition to the principle and preference for market mechanisms, a tax presents indisputable unquestionable advantages compared to other options:

- It has a stable future revenue base and avoids automatic application of levies;
- Modulating the tax offers the chance to make several adjustments in favor of equity (modifying the base and the rate, granting exemptions) and to stimulate changes in sectors according to their sensitivity to price changes (households, heavy industry, tertiary sector, transports, etc.).
- It gives a reliable economic signal to market players who can take it into account in their economic calculations;
- The administrative transaction costs are lower than for other market-based mechanisms;
- Once the decision is taken to introduce a tax, decisions on the allocation and use of revenues and rate adjustments can be made within the same multilateral decision-making bodies.

Mexico had proposed to introduce this kind of mechanism to generate revenues for a fund, which eventually inspired the creation of the Copenhagen Green Climate Fund.

- **The priorities on climate finance**

Strong conclusions emerge from the work of the High-level Advisory Group, the preparatory meetings for the Cancún Conference and the results of the midterm elections in the US:

- Financing should first be backed up by strong increases in official development assistance;
- A high and relatively stable carbon price a prerequisite for many mechanisms to function;
- Focus on the issue of new sources of financing shifts to auctioning emissions permits;
- It will take longer to come to a decision on sources of financing requiring unanimous political agreement (Tobin tax, tax on aviation) or presenting real equity issues (tax on shipping).

At this stage of the negotiations, it is clear that it is too early to make estimates of:

²⁷ Investment and Financial Flows to Address Climate Change, UNFCCC, 2007.

²⁸ World Bank 2009, Development and Climate Change. World Development Report 2010.

- Volumes of financial flows proposed for mitigation, adaptation, REDD+ or technology transfer
- The sources of financing which will provide the funds (budgetary contributions, taxes, financial mechanisms under negotiation, private investment, new sources of financing, etc.).

A 2008 UNFCCC report estimates that \$200 billion will be needed per year from now until 2030, with 46% in developing countries. In reality, we still lack reliable studies allowing us to clearly distinguish additional costs for different countries, sectors and according to future changes in energy prices.

○ **A mechanism to inform on or coordinate funding**

To ensure greater coherency and coordination between donor countries and financial institutions, there are proposals in the negotiation texts to establish a registry or a “forum” between all entities which supply financial support. The main role of this forum should be to share information about funding and to serve as a platform to discuss and eventually harmonize procedures to approve and monitor funding.

○ **Setting up a registry of financial contributions**

The negotiation text drafted by the Chair of the AWG-LCA in July 2010 (Finance, paragraph 14) proposes to establish a registry or a “forum” to harmonize donors’ financial initiatives with the supply of recipient countries’ projects. However, the functions of this registry or forum have not yet been defined. The following questions remain open:

- Would it only serve to record projects and initiatives? In other words, would it be just a database?
- Would it be a platform for different sources of finance and programs to be mixed as a function of their economic characteristics?
- Would it have the function of attributing funding - by comparing project supply and demand?
- Would it serve to verify the contributions of Annex I countries?
- How would project finance be counted taking into account variations in the importance and the nature of international assistance?

Creating a “coordination registry” would allow for a comparison between finance, technology and technical expertise from developed countries and actions, policies and measures for mitigation in developing countries (including REDD+). After an independent panel had conducted a technical and economic analysis of these actions, they would be recorded on the registry and linked to the technical and financial support necessary for their implementation. The choice of criteria to match support and actions remains open. It could include elements such as the emissions reduction potential, the cost, the type of action and the priorities and implementation capacities of developing countries.

This coordination registry could form part of the UNFCCC’s financial mechanism by linking supply and demand for projects without directly intervening in the decision to approve financing. Indeed, giving the registry decision-making power would risk politicizing its functioning. Decision-making powers and informational functions should remain separate. Mixing the two would also impair the Financial Board’s ability to execute its main function of ensuring that the right financing is quickly and efficiently granted to the right projects.

○ **Coordination with existing structures**

To save on institutional resources and ensure efficient functioning, the new financial mechanism must also be able to coordinate the actions of existing structures. It must therefore look to develop:

- pooling of resources between financial institutions to leverage additional funding, simplicity in the procedures for managing and implementing projects and sharing risks, and fast mobilization of funds;
- mixed funds modeled on European examples (FIV, infrastructure funds, etc.) combining funding from public and private sources;
- delegation of management of projects approved through the Copenhagen Green Climate Fund to organisms responsible for executing financing.

This presents a delicate area of work as there is a real risk of funds for ODA being diverted to climate change, but draining resources from other equally vital needs for sustainable development in developing countries.

● **Moving forward at Cancún on finance**

We cannot afford to lose more precious time. Countries must move forward with operational and financial terms in order to start establishing concrete actions, projects and programs for mitigation and adaptation. Everyone recognizes the need to move to full-scale mobilization. It is essential to clarify as quickly as possible the questions surrounding the financial mechanism.

○ **Putting into place a system to recognize fast start finance**

At the pre-COP at the start of November, views converged on the need for transparency (including defining “new and additional” finance) and a balance between mitigation and adaptation. But there were still disagreements on how to achieve this, in particular on the nature of a decision in Cancún.

A compromise will have to be found to meet the following priorities:

- ***Organizing the implementation of fast start finance for the 2010-2012 period;***
- ***Putting into place procedures to process demands for fast start finance from different kinds of projects, via a registry.***

○ **Creating the Green Fund and quickly adopting rules on its functioning**

The possibility of rapidly setting up the Green Fund at Cancún was raised by the Mexican foreign minister Patricia Espinosa in September. Such a decision would without a doubt give fresh impetus to the negotiation process by sending a clear signal of industrialized countries’ goodwill towards developing countries and would thus increase confidence between countries.

Convergence emerged from the pre-COP over the need to create a new fund under the authority of the COP (though the US seemed to be in opposition on this point) as part of a wider package and to set out a process to make the fund operational at COP17. Views nevertheless diverged on the details, such as the composition of the fund’s Financial Board, the number of thematic windows to be created and whether the ongoing process would be managed within the UNFCCC or at other levels.

At the pre-COP all parties highlighted the importance of defining the sources of finance, but not everyone agreed on the goal of \$100 billion per year by 2020. Certain proposed intermediate targets between 2012 and 2020, whilst others wanted to maintain a higher target of between 1.5% and 6% of developed countries’ GDP. More thought is needed on how to carry forward the High-level Advisory Group’s report. LCA-chair Margaret Mukahanana suggested, for her part, to bring together a “strategic” group or process after Cancún with representatives of environment and finance ministers to analyze the different options, on which a decision would be made at COP17.

To achieve this, the creation of the Green Fund will have to be accompanied by an architecture which allows it to become immediately operational.

This could be accomplished by a process with four steps:

- Adopting a COP decision in Cancún to set up the Copenhagen Green Climate Fund;
- Setting up a working group represented by experts in finance (and perhaps also development as proposed by the G77) in charge of developing a reference framework for the fund (criteria to allocate funding, types of financial instruments to use, role of the Secretariat, equity in access to funding, etc.).
- Setting up a standing committee on finance for the Green Fund;
- Drafting a memorandum of understanding establishing the link between the Green Fund and the COP.

These last two steps would be reviewed and a decision would be taken at COP17 in Johannesburg.

Political decisions will need to be prepared at Cancún on the following points:

- the choice of architecture for the Green Fund and its link with the UNFCCC;
- the technical and organizational terms of the Green Fund's functioning;
- the nature of the different sources of finance (existing and new, public and private) which will flow into the Green Fund, setting up channels to collect funds and the ways for instruments to be mixed;
- setting up transparent processes to track funding (MRV rules);
- making modes of governance more democratic by directly negotiation financing priorities with the partners of recipient countries.

A strategic choice will also need to be taken on the way funds are allocated, with two main options:

- A large bank centralizing action on climate change, which will probably take a long time to get off the ground and marginalize smaller actors;
- A more flexible structure with the ability to create synergies with a wide range of current actors involved in financing climate change projects: national development banks of developing countries, the private sector and bilateral donors.

Kick-starting work on implementing the fund at Cancún will undoubtedly help to carry forward the negotiation process.

7. MRV: rules for measurement, reporting and verification

Recorded in the Bali Action Plan in 2007 (*article 1, para 1 b (i) & (ii)*) and taken up again in the Copenhagen Accord, the principle of "MRV" rules is without a doubt one of the most difficult issues of the negotiations. This acronym is used in several places in negotiation texts and yet it is never given a precise definition.

MRV in the Bali Action Plan

The Bali Action Plan, adopted in 2007 as the roadmap for future negotiations, stipulates that the future agreement should include:

- **Measurable, reportable and verifiable** nationally appropriate mitigation commitments or actions, including quantified emission limitation and reduction objectives, by all developed country Parties, while ensuring the comparability of efforts among them, taking into account differences in their national circumstances;
- Nationally appropriate mitigation actions by developing country Parties in the context of sustainable development, supported and enabled by technology, financing and capacity-building, in a **measurable, reportable and verifiable manner**;

This formulation implies at least three operational steps:

- One or more decisions of the COP which give precise meaning to the terms "measurable, reportable and verifiable" and the ways in which they will be applied to countries' actions (establish rules and obligations, etc.);
- Measures taken by countries to ensure that their actions are in fact being measured, reported and verified according to the terms set by the COP;
- Putting into place instances at an international level (committees, expert groups, registers, etc.) under the authority of the COP to implement the rules on MRV.

○ **The premises of MRV rules**

The desire to put into place systems to measure and verify actions is far from new. Arrangements were made in the Kyoto Protocol for the reporting and review of the state of implementation of developed countries' commitments and developing countries' actions. They are currently in force. Furthermore, discussions continue in the AWG-KP on the conditions surrounding the accounting of developed countries' quantified emissions limitation and reduction objectives (QELROs) for the second

commitment period (LULUCF, “hot air” from excess quotas assigned to ex-Soviet bloc countries, emissions from international aviation and maritime transport, etc.)

MRV in the Framework Convention and Kyoto Protocol: reporting and review procedures

Countries which have signed and ratified the 1992 Framework Convention and the Kyoto Protocol are subject to obligations to report on their greenhouse gas emissions and their mitigation and adaptation efforts through “National Communications”. The Conference of Parties adopted guidelines (in 1996, updated in 1999) to assist countries in drafting them. Countries rely on the IPCC guidelines and good practice guidance to prepare their national inventory reports.

REPORTING. Obligations differ between developed and developing countries. Developed countries must maintain emissions inventories and submit them to the UNFCCC Secretariat every year. They must provide National Communications, every 3-5 years on average, on their national circumstances, emissions inventories, the policies and measures they have taken to reduce emissions and respect their Kyoto Protocol commitments, projections of their future emissions, as well as the support they have provided to developing countries for mitigation and adaptation.

Given the developing countries’ weak financial, human and institutional capacities, drafting national communications is voluntary and they do so only occasionally.

REVIEW. Developed countries’ emissions inventories and national communications are submitted to “in-depth” reviews (every year and every two years respectively) by expert review teams under the COP’s authority. These reviews aim at evaluating the quality of a country’s implementation of its commitments, including an in-country visit. The process ends with a review report which is used to complete and update the reviewed national communication. As for developing countries, they benefit from the support of a consultative group of experts which assists them in preparing their national communications.

But the issue of MRV rules goes beyond the technical questions discussed in the AWG-KP and now assumes dimensions of a broadly strategic nature, as the political compromise reached in the Copenhagen Accord language clearly shows. The key will be to reflect on the ways in which the current procedures can be expanded to feed into the construction of the future MRV system.

○ **Rewind to the terms M, R and V: what do they really mean?**

We sometimes tend to forget that the three components of MRV are distinct, though interdependent. We should therefore return to these terms: what do they mean? To what objects do they apply? What kinds of actions do they imply?

• ***M for measuring/measurable/measurement***

Measuring countries’ mitigation actions and commitments is the basis of the MRV system. One can only report on – and a fortiori verify – actions if the indicators for their measurement have been defined in advance. This poses a number of questions: what are the precise objects which are to be measured? What are the metrics (i.e. indicators) to use to measure them? The answers to these questions should ensure two things: firstly, that the objects, metrics and calculation methods are matched in such a way that actions are comparable between countries, whilst taking into account different development levels in terms of their technological capacities, and secondly, that the system is coherent in its entirety.

Overall, we can distinguish three types of objects:

- emissions reduction targets and commitments, which can apply to the emissions of a sector or that of the whole country;
- policies and measures aiming to reduce or limit emissions;
- financial and technological support and capacity building.

For each of these actions, commitments and forms of support, the Subsidiary Body for Implementation (SBI) and for Scientific and Technological Advice (SBSTA) are in charge of defining the measures taken and indicators used for their measurement. The metrics adopted may be indicators of means (e.g. sums disbursed), intermediate outcomes (e.g. additional renewable energy capacity) or final outcomes (e.g. avoided greenhouse gas emissions). It is then up to each country to decide on the content of its actions and commitments and the support it provides. Relevant local and national authorities are responsible for implementing and monitoring, whilst ensuring that the indicators used comply with the conditions set out by the decisions of the subsidiary bodies, as approved by the COP. Specific provisions were adopted setting out criteria to determine the eligibility of projects submitted for the Kyoto Protocol's flexibility mechanisms (in particular Joint Implementation and CDM), and defining the methodologies to calculate the results obtained through these projects.

- ***R for report/reportable/reporting***

In the interests of transparency, and to build confidence between stakeholders, countries should then report on the actions they have implemented, the results, the progress obtained, the degree to which their commitments are met (if applicable), as well as the financial and technological support provided.

The policies and measures implemented by countries to contribute to the implementation of the Framework Convention are collected and synthesized in National Communications. They thus give a qualitative and quantitative presentation of a country's mitigation efforts, though the fact that they are produced only every three to five years is insufficient to effectively monitor their ongoing efforts. There are existing systems to collect information on public financial flows for multilateral development banks and through the Development Assistance Committee of the OECD (Creditor Reporting System). But this is far from constituting a unified system of monitoring and recording flows for climate change.

- ***V for verify/verifiable/verification***

Verification is without a doubt the most complex component of the MRV system. It normally takes place post-implementation to ensure that the actions taken and results obtained correspond with parties' declarations and communications and, if applicable, conform to their legal obligations.

The verification system places checks and controls at several levels. First, there is a kind of "soft" control of an essentially political nature, exerted by the public, NGOs and the civil society in its broad sense, which depends on the availability and the diffusion of information through media channels. Remaining at the national level, the administration and public institutions exert control over other public and private actors, of a political and technical nature. This control can be direct, such as by inspecting emissions registers held by corporations, or indirect, such as by regulating emissions trading markets. In some cases, it can be facilitated by an independent external auditor, such as in the verification mechanism of the Clean Development Mechanism. This control operates in a vertical direction, as it is up to the national administration to centralize and verify information collected locally, for which it will be held accountable at the international level.

Finally, it is verification at the international level which is at the heart of debate in the negotiations. In the current regime under the Kyoto Protocol, this consists above all in a process of technical review of the information communicated to the UNFCCC Secretariat (national communications and emissions inventories) by a specific body (Expert Review Teams for developed countries, Consultative Group of Experts for developed countries). This review has the role of a "quality control" to check that the information provided is accurate and reliable and that the methodologies used conform to those set by the COP. In regards to developed countries, the expert review team can refer any implementation problems to the Compliance Committee if it considers that the country has not fulfilled its reporting obligations. All of these aspects will need to be reconsidered in building a new MRV system.

Zoom on: the debate between China and the US on the question of transparency

The US and China have engaged in a verbal joust over the question of transparency, which intensified during 2009. The duel reached its climax in the last days of the Copenhagen Conference during the meetings between heads of state and government. Only after very spirited exchanges took

place between these major players was an agreement reached on terms for MRV and ICA (international consultation and analysis). But despite the compromise brokered in the Copenhagen Accord, tensions remain lively on this topic.

On the one hand, the US condemns the governance system in China for its opacity, questioning the reliability of the information communicated on the China's economy and its emissions. They are particularly wary of the declarations of the Chinese government of its mitigation targets for 2020 (a 40-45% reduction of the carbon intensity of the country's economy), fearing that this may just be a hollow declaration without any real actions undertaken in support. The US thus demands a system to review, or even verify the results of actions taken by the emerging powers, and China in particular.

On the other hand, China tenaciously defends its right to national sovereignty, arguing that actions and commitments of developed countries have never been subject to verification measures. Like the US, China considers that a commitment taken at the national level, made legally binding by through domestic legislation, should be considered as having the same value as a commitment recorded in an international treaty. On this last point, it must be recognized that China is ahead of the US, with domestically binding targets to reduce its carbon intensity by 2020. It is in fact expected that this commitment will be recorded in its next Five-Year Plan at the next National Congress of the Communist Party in March 2011.

○ **Designing the future MRV system**

Building the future MRV system is at the heart of discussions: which objects will we MRV, with which instruments, and which body will be in charge of surveillance? But before entering into the details of the tools, mechanisms and legal forms, we should first remind ourselves of the objectives of an MRV system. If these are not kept in mind, the negotiations run the risk of producing a system which is incoherent or full of holes, does not meet countries' expectations or is unsuited to the needs of the future climate regime.

• ***Designing the system on the basis of clearly defined goals***

The MRV system should target both collective and individual goals. Whilst all the talk is about transparency and accountability, it is essential to come back to the fundamentals:

- "Information": countries will have to collect, process and circulate information on their actions and commitments (and those of other actors under their control) and on the results obtained in the public domain.
- "Credibility": countries will have to ensure that the information they provide comes from reliable sources and are produced using confirmed methodologies. In this way, the credibility of countries' declarations can be tested and validated to build confidence.
- "Comparability": the compilation and analysis of information should allow the respective efforts of countries to be compared, in terms of ambition, economic efficiency, leverage effect (for financial and technological instruments), and so forth.
- "Effectiveness": increasing experience will reinforce the credibility of information and help move towards more effective actions which have the expected results.
- "Compliance": through the analysis of published information we can assess whether parties have implemented measures that are in keeping with their commitments. This should allow us to ensure that the overall emissions trajectory remains compatible with the end goal of mitigation (limiting warming to 2°C, 1,5°C, etc.)

Though the goals of the MRV system may be evident, it is much harder to decide on the balance to be found between them, knowing that each actor and each country attaches more or less relative importance to each goal. Broadly speaking, there are two main approaches: one founded on "soft power", playing on the reputation of the stakeholders. This conception of the MRV system would draw on the functions of "information" and "credibility", which would in turn ensure the functions of effectiveness and compliance. A more rigid approach would place greater emphasis on the latter two functions, possibly adopting if necessary binding terms to impose sanctions. These trade-offs will

have a strong impact on the conception of the MRV system and the formulation of the concrete terms to be adopted.

- **The “GPS system” of the climate regime**

The MRV system should be the GPS system which allows the implementation of all actions to be monitored and which guarantees the cohesion and robustness of the regime. An effective MRV system should be a tool for orientation and management purposes which allows role-players to understand where they are situated within the landscape in relation to others, but also allows progress to be tracked on all actions across the world. This system will only function if countries regularly transmit their information to the UNFCCC Secretariat, but also to neighboring countries (in their geographical vicinity for MRV of REDD+ actions, in their level of development, level of emissions, and so forth).

It is the role of the Secretariat, supported by technical and scientific experts of the subsidiary bodies (SBI and SBSTA) as well as the IPCC to define the rules and terms surrounding the functioning of the MRV system. This is important to ensure that countries use the same kinds of coordinates. They are also in charge of setting up a common framework of metrics and calculation methods for developed countries' emissions reduction targets and developing countries' mitigation actions. This includes considerations such as: choice of baseline year, definition of the business as usual scenario, accounting methods for LULUCF, choice and calculation methods of intermediary indicators (energy/carbon intensity, rates of deforestation, etc.) and support provided by developed countries (definition of “new and additional” financing, of technology transfer, etc.).

The obligation to monitor and review countries' performances can help and encourage them to raise their level of ambition. This may be the case if it turns out that the targets are easier to attain or the measures less costly to implement than expected or on the contrary if the actions currently being implemented will prove to be insufficient to meet their targets. From this point of view, a more flexible system may generate greater incentives to take action and be as effective as a rigid and punitive system, if not more so.

The central issue is to work out a verification system which allows a certain level of international control all whilst leaving the major share of responsibility to national authorities. This balance is particularly difficult to find for developing countries' mitigation actions which will benefit from the financial and/or technological support of developed countries. Cases such as this will raise the underlying issue of applying sanctions to countries which do not meet their commitments.

- **How can we verify and evaluate performance?**

The design of the future MRV system is confronted with two diametrically opposed models. On the one hand, there is the model which involves creating a powerful authority, in charge of making sure that everyone complies with their commitments and obligations and sanctions those who do not. But building this rigid, vertical model implies strong agreement on the terms and sanctions which can run into major political difficulties. On the other hand, the scientific model of peer review offers an alternative approach with numerous advantages, in political as well as practical and operational respects. Firstly, adopting this kind of model promotes an environment of cooperation rather than suspicion, and potentially stigmatization. Peer review is also an effective system for finding errors and inaccuracies in order to move forward scientific knowledge. This decentralized model fosters transparency and stakeholder participation, including NGOs and the civil society, who have an essential role in collecting, processing, analyzing and spreading information and on the ground capacity building. Finally, this model allows this system to evolve by integrating the latest scientific, technological and institutional advances as soon as they appear. This ability to evolve and adapt to changing circumstances is a fundamental element of ensuring the continued functioning of the future MRV system.

There is also a third model which complements the two presented above, based on control and verification on a national level. As it is countries which are parties to the Framework Convention which agree on decisions to be taken by the COP and which are held responsible for respecting these decisions, the lion's share of surveillance and verification activities will take place at the national level

by the relevant authorities. This is true not only for commitments taken at the national level (emissions reduction targets and commitments, REDD+ mechanism) but also for the implementation of actions which depend on other role-players (corporations, local governments, NGOs, individuals, etc.). in this case, it is up to national authorities to monitor and verify activities taking place within the country (with the assistance of an independent auditor if the activity involves some form of international support, as with the CDM) and to report on these activities to the international community.

The future MRV system will inevitably be a hybrid between these three conceptions, centered on the model of national control and verification which is at the heart of the MRV system of the current regime. A balance will need to be found between engaging countries' local institutions, a system of peer review and ensuring that the methods of gathering of information and the control exerted by national authorities are of high quality.

- **Guiding principles for the future MRV system**

- ***Indicators and methodologies suited to the objects they are designed to measure***

We should harmonize or adopt a common framework of definitions, indicators and calculation methods for each of the three following categories:

- emissions reduction targets and commitments, which can apply to the emissions of a sector or that of the whole country;
- policies and measures aiming to reduce or limit emissions;
- financial and technological support and capacity building.

The framework must ensure that within each type of object efforts are coherent, comparable and can be aggregated (see Appendix 1).

- ***A strengthened and enhanced reporting system***

The Copenhagen Accord proposes that developing countries as well as developed countries should maintain emissions inventories and report on the implementation of voluntary mitigation policies and measures in their national communications every two years. If this were to be validated by the COP, these conditions would impose quite arduous obligations on developing countries. This would require significant financial support and capacity building for these countries for them to successfully meet their obligations.

- ***Do we need new reporting instruments?***

There are large gaps in monitoring financial flows, especially in regards to the private sector. Strengthened cooperation between international institutions, development banks, the private sector and the UNFCCC Secretariat will be necessary to facilitate the compilation and analysis of information on financial flows. A similar monitoring function on support for technology transfer could be carried out by the future "Climate Technology Center".

The idea of setting up a registry, raised in the Copenhagen Accord and picked up on in subsequent negotiation texts, would only make sense if it was complementary to current reporting instruments. A registry to coordinate developing countries' mitigation actions seeking international support would have a declarative function on the actions that countries intend to carry out. But since the actions recorded on the registry are not finalized and are still liable to be modified, it would be difficult for MRV rules to apply directly to them. It makes more sense for countries to simply report back on the status of their actual implementation in their national communications.

- ***A robust verification system***

Measurement and reporting are above all topics of technical and scientific importance. Verification of actions and commitments, however, poses serious political and strategic issues. As a result, proposals on this issue are quite obscure (see the formula negotiated in the Copenhagen Accord of "international consultations and analysis under clearly defined guidelines that will ensure that national sovereignty is

respected"). It is often difficult to distinguish what is pure rhetoric and what are real contributions to the debate. As explained above, there will be a delicate trade-off to be made between "soft" verification mechanism designed to build confidence between countries and "hard" mechanisms with greater scope for intervention and thus more controversial.

To build confidence between countries, transparency on the implementation of their actions must be increased. This will mostly be accomplished by strengthening capacities – establishing emissions inventories, satellite surveillance of forested land, opening up to civil society, and so forth. This process should reinforce the control of national authorities over actions taken within their scope (via companies, local governments, etc.) and thus enhance the reliability of the information they communicate.

Mobilizing international support, however, requires going further than systems relying on voluntary declarations based on confidence. Indeed developed countries supply funds and technology transfers based on the assumption that there will be in return tangible results in terms of emissions reductions with global climate benefits benefiting all countries. As stakeholders in the process, developed countries are thus justified in requesting proof from recipient countries that their actions have the anticipated results as quid pro quo for their support. It will therefore be necessary to strengthen the process of information exchange and cooperation between countries.

The question of accountability in play here is amplified when the private sector is involved through market mechanisms. In this case, provisions will need to be made for a process of international verification, as with the CDM, carried out by independent external auditors on the actions and transactions performed.

It is thus necessary to build an international mechanism of regulation to add a more rigorous layer of control to the future MRV system, which would include provisions for sanctions if countries or other role-players do not comply with their obligations. Countries remain tight-lipped on such a sensitive topic. And the debate has barely begun to touch upon the nature of such sanctions.

- **Building the future MRV system, at Cancún and beyond**

- ***Current deadlocks and possible ways of moving forward***

The current deadlocks on two crucial points, namely developed countries' emissions reductions commitments and the legal form of the future agreement, impede current discussions on MRV rules. Developed countries' commitments are not ambitious enough to motivate developing countries to make concessions, and as long as this issue is not resolved, it will be difficult to make progress on building a new MRV system. Similarly, uncertainty over legal form hampers progress on the nature and status of the provisions to be adopted to introduce the future MRV system. Though it is essential to adopt a legally binding agreement (new treaty or extension of the Kyoto protocol), this will only be possible in 2013 at the earliest, after the US elections. But this condition is only one of three options to be considered to move towards a new MRV system.

The three following options are not incompatible; they could form three successive steps towards formalizing the system.

- Adopting a package of decisions at COP16 in Cancún. These decisions would allow the points of consensus reached in the Copenhagen Accord (reporting every two years through national communications and emissions inventories, MRV at the national level with international consultation and analysis, registry of actions and support) to be formally integrated into the UNFCCC process. This would also formalize countries' pledges recorded in the Appendices to the Copenhagen Accord.
- Reinforcing the Kyoto Protocol, possible at COP17 in 2011. This would involve developing countries (apart from the US, which has not signed the Kyoto Protocol) agreeing to enter a second commitment period, and could also be accompanied by a decision recognizing the actions of non-signatory and developing countries. The current provisions for monitoring and review would be extended and strengthened, in particular to reflect the advances of the Copenhagen Accord.

- Subsequently adopting a new legally binding agreement. This step would allow a complete overhaul of the current MRV system.

- **The decisions that can be taken at Cancún**

In Cancún it is essential to begin to make the MRV system operational, to give a strong signal to all parties involved in implementing plans, programs and projects for mitigation and adaptation (international institutions, national and sub-national authorities, development banks and agencies, corporations, civil society, etc.) on the framework for these actions to be recognized and financed. This will assist developing countries in making the decision to strengthen their human and institutional capacities with the support of fast start finance in order to build high quality projects and meet demands for transparency and accountability.

As a first step, the Conference of the Parties could entrust the SBI and SBSTA the task of drafting a guide (common reference framework) of definitions, metrics and calculation methods to use to measure countries' actions and commitments. This work could draw in part on the experience acquired by the IFC²⁹ and AFD³⁰ on the use of the "bilan carbone" carbon accounting framework, which gives a quantified estimation of the emissions or emissions reductions of a project. Important progress has also been made on drawing up methods to calculate avoided emissions and governance systems of programs to fight deforestation and enhance natural carbon sinks (REDD+), with pilot projects currently in operation. A COP decision should be made on the ways of connecting the REDD+ mechanism with parallel initiatives and potential use of market mechanisms, with terms clarifying applicable MRV rules.

The Copenhagen Accord also proposed to create a "registry" to record mitigation actions, which reappears in negotiation texts as a "registry" or "mechanism". There seem to be two different conceptions of the content of this registry and its role in the MRV system.

On the one hand, it could consist of an information registry, in which mitigation actions and commitments would be compiled. The advantage of this kind of registry, kept up to date by countries themselves, would be its flexibility and the ease with which it could be updated. Indeed, it could allow countries to report on the progress and the results of actions announced and recorded in the Copenhagen Accord and the progress in meeting emissions reduction commitments. But it would also seem that increasing the frequency at which national communications are prepared (every two years instead of every 3-5 years) would suffice without necessarily creating new instruments with little value added.

On the other hand, a register or mechanism could have a function of coordinating developing countries' mitigation actions (NAMAs) and international support (finance, technology transfer, technical assistance, etc.) needed for their implementation. The information provided by countries should include a description of the measures, their results in terms of quantified emissions reductions against a reference scenario, the timeline for implementation and the estimated costs. NAMAs would be subjected to assessment by a technical panel before being recorded in the registry. This kind of mechanism has obvious benefits, as it would contribute to meeting goals of transparency, visibility, coordination and accountability. Whilst countries are not far from reaching an agreement on such a mechanism, there are still a number of points of conflict that will have to be resolved, which will require balancing the following considerations:

- Ensuring that the actions submitted are of high quality, which requires strong technical and economic expertise;
- Avoiding the de facto exclusion of certain developing countries due to their weak project building competencies;
- Set up a democratic decision-making process to decide on and apply selection criteria for projects to be financed;

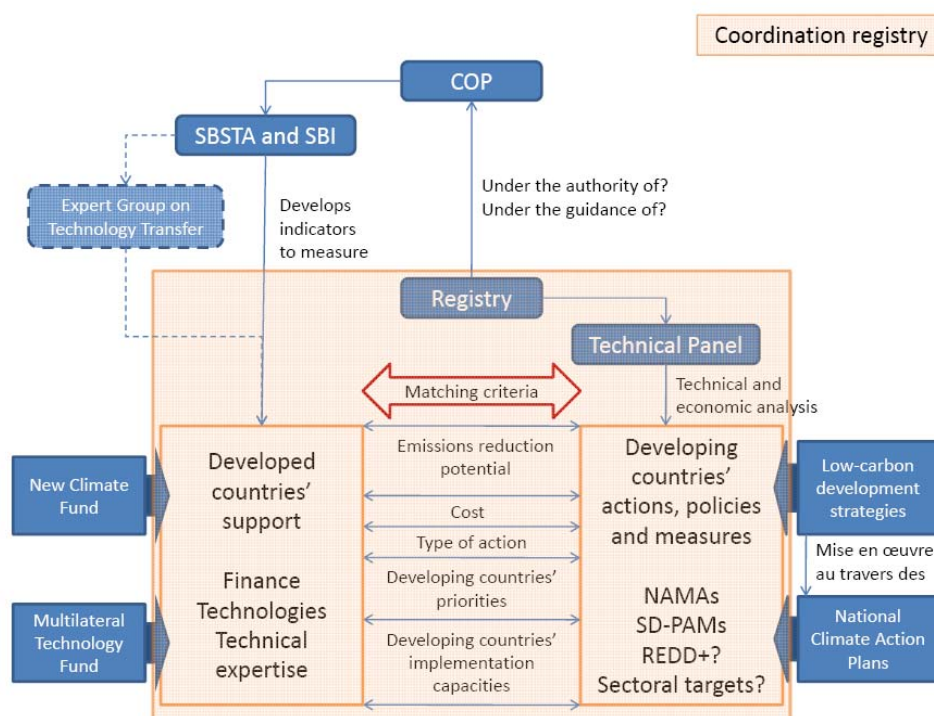
²⁹ International Finance Corporation, the private sector subsidiary of the World Bank

³⁰ French Development Agency. See <http://climat.afd.fr>

- Allow the largest possible number of high quality projects are rapidly financed to bring about the maximum amount of emissions reductions.

The Conference of the Parties should decide to create the mitigation registry/mechanism and put into place the related institutional architecture. The COP should, at the same time, launch a process to determine the functioning of the registry/mechanism so it can be made operational at COP17 in 2011.

At the end of the pre-COP at the beginning of November, it became clear that negotiations were having difficult advancing on this topic. Countries continue to disagree on whether it is necessary to create an instance of oversight. A consensus emerged, however, on the importance of putting into place an MRV system for finance.



8. Shared vision

Unsurprisingly, no consensus is emerging on what could and should be a shared long term vision. Considered the entry point into negotiations since Bali, shared vision is a central idea but will not crystallize until the other key points being debated are resolved. No agreement on a common long term future can be reached as long as actions and commitments remain insufficient and a process of low-carbon development is not kick-started through capacity building, finance and technology transfer. Shared vision is the culmination of the process and not the point of departure.

9. Mitigation measures

Many countries fear that the actions and commitments recorded in the Copenhagen Accord will not suffice to deflect emissions trajectories to limit global warming. It is for this reason that they refuse for them to be officially recognized.

The challenge is to set down the already announced proposals in a COP decision whilst sending a signal that their lack of ambition will not suffice.

The option which seems to be emerging would be to:

- Recognize the actions and commitments recorded in the appendices of the Copenhagen Accord;
- Make a clear statement that their level of ambition is insufficient;
- Decide to revise targets in 2015, taking into account both actions undertaken until then and the next IPCC report;
- Set a long term target including a target for a peak in global emissions.

But this process is confronted with two difficulties:

- The difficulty of recording actions and commitments in COP decisions, as those recorded in the Copenhagen Accord only refer to the Framework convention would have a different legal status those taken under a second commitment period to the Kyoto Protocol.
- Countries are concerned that the use of the term “pledges” will shift the system from one of commitments under the Kyoto Protocol to one of “pledge and review” with no legal obligations.

10.Capacity building

The disagreements over capacity building are not on matters of substance but on whether it is necessary to adopt a separate decision on this transversal theme.

Within the Ad Hoc Working Group on Further Commitments for Annex I Parties to the Kyoto Protocol (AWG-KP)

The KP negotiation text for the Cancún Conference brings together draft decision texts on:

- Amendments to the Kyoto Protocol,
- Rules on accounting for LULUCF,
- Emissions trading and the project-based mechanisms,
- Greenhouse gases to take into account,
- The sectors and sources of emissions,
- Putting into place common metrics to calculate the carbon dioxide equivalence of anthropogenic emissions by sources and removals by sinks,
- Various methodological issues and consideration of information on potential environmental, economic and social consequences, including spillover effects, of tools, policies, measures and methodologies available to Annex I Parties.

Three countries have made submissions on these issues: Japan, Saudi Arabia and Sri Lanka.

The key question of the KP process for Cancún is whether industrialized countries will agree to undertake a second commitment period.

Discussions have been focused almost exclusively on the question of the legal form of the results in Cancún and the balance to be found between those in the Framework Convention track and those in the Kyoto Protocol track. The UNFCCC Executive Secretary expressed her intention for the two working groups AWG-LCA and AWG-KP to move forward on content without addressing the issue of the final form of their decisions. There is always the risk that the debate on legal form will eclipse progress on technical aspects in the first week of Cancún. It is not clear how this will be avoided. Thus, for many developing countries (including small-island developing states and least developed countries) the final legal nature of developed countries' commitments, the actions of developing countries and the future of the Kyoto Protocol remain essential issues before they can accept to integrate these actions and commitments in a decision in Cancún.

The future of the Kyoto Protocol and the final legal form of the agreement are two of the most toxic questions which could prevent agreement being reached. Even within the EU, the conclusions of the Council of the European Union and of environment ministers have not allowed the door to be closed

on the question of whether it is necessary for a legally binding agreement to be reached in the Framework Convention track for the EU to accept a second commitment period to the Kyoto Protocol.

The meeting of the Cartagena Dialogue just before the pre-COP allowed this group of countries to come together as the “central group” in place to help reach an agreement between all parties. The question remains whether this group intends to engage other countries on the content of the broad lines of an agreement (especially mitigation and finance) or whether, like the others, it focuses its attention on the question of legal form.

B. In the shadow of Copenhagen: demands for a “balanced package”

At the Tianjin session, the tone was set by the UNFCCC Executive Secretary Christina Figueres: at Cancún countries will have to reach decisions on the key parts of the negotiations, in order to move to implementing concrete actions on the ground.

Countries, conscious of the dramatic consequences a failure on Cancún would have on the negotiation process, fell in line on the need to emerge with a balanced package of decisions. Yet once again, certain questions are at a lasting deadlock: agreement on a legally binding framework, coherent emissions reduction targets compatible with a trajectory of halving world emissions by 2050.

How can we resolve this dilemma between the need for a sufficient level of ambition and a realistic view of what might constitute a possible agreement? Whilst there may be a need for a package with a balanced level of importance given to each theme, not all are ready for decisions to be taken at this moment in time. This balanced package must be considered over time. This year’s sessions showed that moving forward on each of the themes at the same rhythm was impossible. Equally important is quickly mobilizing finance to move towards real implementation and rebuild the confidence which is so lacking between countries.

Yet at the Tianjin session numerous negotiators insisted on the fact that the package of decisions should address all the points of the negotiations, even though which could clearly not be unblocked. This strategy leaves us back at square one. Steps forward were made on certain matters such as financing, and decisions of the COP at Cancún on these matters could stimulate further efforts to build concrete projects and action plan. But countries now refuse to finalize any agreement of the issues of emissions reductions, MRV and so forth do not progress in a symmetrical way.

C. The possible content of an agreement at Cancún

1. The pre-COP hosted by Mexico

The pre-COP held in Mexico on November 4-5 did not make any great steps forward. It was more a political meeting than a meeting to draft texts and search for consensus on concrete points. It nevertheless showed the will of political leaders to arrive at Cancún with the most advanced draft decision texts as possible. The majority of the participants consider that the balance is to be found around the elements of the Copenhagen Accord, and in particular between mitigation actions and commitments with a credible MRV system and support to developing countries (the Green Climate Fund and the commitment to mobilize \$100 billion per year by 2020).

Zoom on: the pre-COP in Mexico

To build consensus on the negotiation text before the Cancún Conference, the Mexican minister of foreign affairs, Patricia Espinosa, brought together ministers from 59 countries for a preparatory meeting in Mexico on November 4-5.

This pre-COP meeting aimed to allow countries to share their expectations on the possible results of Cancún, and to focus on points of convergence to reach a balanced package of decisions at Cancún. The working groups focused on mitigation, finance, the future of the Kyoto Protocol and adaptation.

Zoom on: The Cartagena Dialogue for progressive action

This dialogue, involving several meetings throughout 2010, was put into place by a group of 28 countries. The goal of this informal process is to make progress on issues to put into place a global, ambitious and binding regime to fight climate change. The participating countries are committed domestically to move towards a low-carbon economy. Discussions were focused on the key themes of the negotiations on which decisions could be taken in Cancún. A set of concrete propositions emerged from the last meeting from October 31 to November 1 in San José (Costa Rica) on:

- Formal recognition by the COP of the announcements of mitigation targets of countries for 2020, without prejudging their legal status;
- Strengthening procedures to measure, report on and verify countries' mitigation actions and commitments;
- Integrating the advances on fast start finance and long term finance (the AGF report);
- Launching the process of establishing the Copenhagen Green Climate Fund with draft elements on the functions and the governance of the fund;
- The possibility of creating an "Adaptation Committee" to catalyze the large scale implementation of adaptation actions in developing countries.

Nevertheless if the negotiation process is to emerge from its standstill, countries must look forward in time and envision the package of decisions as being balanced, but only at the end of the process. A pragmatic approach would allow progress to be made step by step, starting with decisions on topics which are already mature (REDD+, finance, technology transfer). This would have a ratchet effect, safeguarding process and preventing further steps back.

With this in mind, we can now ask: what could a realistic calendar for negotiations look like?

○ **The order in which discussions on various topics may resume**

What is in question at Cancún is not just how to arrive at a legally binding agreement, but the viability of continuing the current negotiation process. Two successive failures would completely destabilize and take away all credibility from the negotiations. Focusing all attention on the negotiation process should not act as a smokescreen behind which the need for all countries to walk the talk. As they develop their national action plans, this will stimulate a positive dynamism within countries and in the negotiation process. If, in the worst case scenario, international negotiations remain deadlocked and no consensus is found on a second commitment period to the Kyoto Protocol, focus will shift to the actions voluntarily implemented by public authorities and the private sector. After the massive sense of failure felt at the end of COP15, we must remember that the ultimate goal is not to draft a treaty for the sake of drafting a treaty, but to enable real emissions reductions via concrete actions on the ground.

2. Possible decisions in Cancún

○ **A decision on fast start finance and the Green Fund**

To support developing countries in implementing their mitigation and adaptation actions, issues surrounding the financial mechanisms, and in particular the operational terms, must be clarified as quickly as possible. The theme of technology development and transfer is strongly linked to finance, and so ideally the institutional architecture would be synergized between the two themes.

At Cancún, decisions should be made to:

- Establish the Green Fund, which for the moment only exists in the Copenhagen Accord;
- Set up a working group composed of financial experts and put in charge of outlining the options in terms of the fund's institutional and technical arrangements. A decision would be made on these proposals at COP17;
- Put into place a framework to measure, report on and verify fast start finance pledges over the 2010-2012 period;
- Launch a process to reinforce existing structures or to create a new body to monitor and supervise the allocation of financial flows to fight climate change;

- Strengthen the transparency of flows and better coordinate the actions of financial bodies.
- **On the ground actions: NAMAS and REDD+**

Two decisions will have to be made in Cancún, to clarify:

- The order of developing countries' priorities;
- The nature of the support necessary to prepare and implement projects

Zoom on: A decision on the REDD+ mechanism

A negotiation text on the REDD+ mechanism was already well-advanced and close to consensus in Copenhagen. This included a clear description of the principles which should guide actions, confirmation of a broad vision of forestry activities also including conservation, sustainable management of forests and enhancement of forest carbon stocks, respect for forest-dwelling populations and taking into account biodiversity. This text was not officially approved in a COP decision in Copenhagen, despite its maturity. This was contested throughout the year, leading to a regression, and waiting any longer would only serve to accentuate differences between countries. The fact that there is no specific part on REDD+ in the text to facilitate negotiations is proof of the desire to show that the text is sufficiently advanced to not have to be completely re-discussed in Cancún and that it can be rapidly operational. If the text were to be adopted in Cancún, this would be a very positive message to all parties already acting in this area: for countries such as Indonesia, Guyana, Mexico and Gabon which have already committed to ambitious REDD+ actions, for NGOs and the private sector working on the precursor of a future REDD+ mechanism; for Annex I countries which have increased their financing of REDD+ actions; for a large part of public opinion in both rich and poor countries who believe in the importance of preserving forests; and for the Stern report which underlined the role of forests in fighting climate change.

Finally, a decision on REDD+ would be a sign that the preeminent role played by natural capital represented by forests is progressively becoming recognized.

- **Organization of the work for the Cancún Conference**

- ***In the AWG-KP***

There will be two plenary sessions of the AWG-KP. Between them, the chair will organize a single contact group to deal with the two following issues:

- Whether countries which have ratified the Kyoto Protocol will agree to a second commitment period (between 2013 and 2020). It is clear that the US will not sign up, but other countries such as Japan have also shown their reluctance.
- The level of commitments. Will they be the same as those recorded in Appendix 1 to the Copenhagen Accord, knowing that they are hardly satisfactory and that certain countries have given a range of values continued by the level of other countries' commitments.

- ***In the AWG-LCA***

The LCA chair proposes to organize a single contact group so that the text which will be produced will give balanced treatment to the different topics in discussion. The goal is to end up with a single text to be adopted as a COP decision at the closing plenary. Moreover, the scenario note mentions that the work thus produced would not prejudge the legal form of the document.

Four drafting groups are also planned as in previous sessions.

IV. Subsequent phases of the negotiations, until and beyond 2012

1. New bases to resume discussions on the level of commitments

The failure of the Copenhagen Conference on the issue of emissions reduction commitments can be explained by two difficulties of substance and a methodological error:

- Developed countries' insufficient progress on reducing their emissions. This translated into continued emissions growth between 1990 and 2007, which it is too late to correct from now until 2020 to return to a trajectory compatible with halving world emissions by 2050.
- The lack of a serious basis to compare the countries' situations and margins for progress to redistribute mitigation targets in an equitable way. This issue concerns developed countries and attention will soon also turn to the emerging powers.
- The lack of negotiations on emissions levels for 2030 as well as 2020 to allow countries to make up for their gap.

To allow negotiations to be reopened on the issue of emissions levels in the medium and long term, progress must be made on the methods to compare the possible efforts and trajectories of countries' emissions. The COP should therefore create a working group with academics representative of all parties to advance on these issues.

○ Aiming for a net reduction of 3% per year

Zoom on: Net and gross reduction

A methodological point: a country which experiences economic growth of 3.5% per year and aims to reduce its greenhouse gas emissions will have to:

- Absorb the additional emissions induced by its economic growth, for example 2% increase in emissions for 3.5% economic growth (carbon intensity lower than 1);
- Develop activities (renewable energy, energy savings) to further reduce emissions.

Under the hypothesis of a goal of a 3% per year net reduction in emissions, the gross reduction to absorb the additional effects of economic growth will be $(1 - 0.97 \times 0.98) = 4.94\%$.

Experience shows that a net improvement of carbon intensity above 3% per year is very difficult, especially in the short term. Yet for industrialized countries, reducing emissions by 80-85% for 2020 corresponds to a net reduction of 4% per year compared to 1990 levels. With 2% economic growth per year, this would be the equivalent of an annual gross reduction of 5-6% per year, an unprecedented level of annual progress. Furthermore, countries which have allowed their emissions to increase some 20% since 1990 will, in the next 40 years, have to reduce their emissions at an annual net rate of 5% (even more if further energy demand to feed into economic growth is taken into account).

Meeting such targets requires immediate decisions to be taken on four types of policies, simultaneously put into place:

- A massive substitution of fossil fuels with less or decarbonated sources in electricity production, with development of carbon capture and sequestration;
- Widespread efforts in energy efficiency in all sectors, especially in buildings;
- Rapid actions on transports on vehicle fuel economy, changes in individual behaviors and massive modal shifts over time;
- Development of electricity production from renewable sources.

But it would appear that these two last options are rarely implemented, and the two first options very patchily so. In practice, it will be very difficult for countries to do better than a 20% reduction over the ten-year period from 2010-2020 if the necessary groundwork has not been laid. This timescale is too short for the effects of large investments in infrastructure and the emergence of new value chains to

be felt. To unblock the negotiations, projections for equitable burden-sharing between Annex I countries should be carefully analyzed (see below).

It is always possible to force matters ahead, but this will have very high costs for a small gain in time. This is less economically efficient than targeting investment in new infrastructure with long lifetimes or in energy efficiency.

This simplified presentation allows us to identify the following main timescales:

- Under 5 years: only soft measures and small investments have an effect. Professional training and energy efficiency should be prioritized to have modest, though rapid effects.
- Above 10 years: the capacity to implement actions opens up, with the implementation of all kinds of investments in infrastructure and the renewal of most common consumer goods.
- At 20-25 years: there is significant potential for society-wide transformations: large-scale networks are put into place and the fruits of research become widespread.

○ **The situation of the emerging powers**

Of course, for the emerging powers, a different approach must be used to distinguish between:

- Different social categories: in China, for example, there broadly speaking four kinds of populations: nearly 100 million experiencing a standard of life as in the West; several hundreds of millions forming the lower middle classes, poor urban workers and hundreds of millions of rural farmers. The same consumption and emissions figures cannot be used for each of these categories.
- The context of the energy and industry sectors for each country and sub-region.

Simulation of possible trajectories in developed countries over the 2020-2030 period

These are the hypotheses:

- **Average emissions reductions of 3% per year.**
- **Between 2010 and 2020**
 - Smaller progress for countries which have not yet committed to significant emissions reduction policies and thus will take time to start up.
 - Lower rates for the EU and Russia until 2020, as their trajectories are within the bounds of the IPCC's recommendations
 - The EU will redistribute its commitments between member states after a new agreement is reached. The value taken below is on the upper side of the range of its commitment (20-30% reduction).
- **Between 2020 and 2030**
 - Increased reductions from countries with particularly high levels of per capita emissions and which are behind in implementing energy efficiency policies.

| Country | Simulated rate 2010-2020 | Situation 2020 | Reduction obtained in 2020 | Annual rate 2020-2030 | Reduction from 2020-2030 | Reduction from 2010-2030 | Reduction from 1990-2030 | Level of reduction |
|---------------|-----------------------------|-------------------|-------------------------------|--------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------|
| EU-27 | -2,1 | 0,70 | 0,30 | -3,00 | 0,74 | 0,58 | 0,52 | 1,93 |
| United States | -2,5 | 0,87 | 0,13 | -4,00 | 0,66 | 0,50 | 0,58 | 1,73 |
| Canada | -3,0 | 0,99 | 0,01 | -4,00 | 0,66 | 0,48 | 0,65 | 1,53 |
| Australia | -2,5 | 0,84 | 0,16 | -4,00 | 0,66 | 0,50 | 0,56 | 1,79 |
| New Zealand | -3,0 | 0,87 | 0,13 | -3,00 | 0,74 | 0,53 | 0,64 | 1,55 |
| Russia | -2,0 | 0,61 | 0,39 | -3,00 | 0,74 | 0,59 | 0,45 | 2,21 |
| Norway | -3,0 | 0,78 | 0,22 | -3,00 | 0,74 | 0,53 | 0,57 | 1,74 |
| Switzerland | -3,0 | 0,71 | 0,29 | -3,00 | 0,74 | 0,53 | 0,52 | 1,92 |
| Japan | -3,0 | 0,79 | 0,21 | -3,00 | 0,74 | 0,53 | 0,58 | 1,71 |

We can thus observe that we would be very close to an overall reduction of 50% for all industrialized countries.

The only way out of the maze: making commitments for two time horizons: 2020 and 2030.

Negotiations will not reach a positive outcome without satisfying the two following demands:

- Reaching emissions trajectories convergent with the goal of stabilizing the climate as per the science. It is clear that any further failures from developing countries to reduce their emissions would be fatal and would bring about devastating human and ecological impacts.
- Developed countries which have failed to reduce their emissions must be able to return to the necessary emissions trajectory, which will be impossible for 2020 but more realistic for 2030.

The preceding table shows that it will be hard to make up the large gaps in emissions reductions accumulated since 1990. The situation is particularly critical for Spain, Greece, Portugal, Italy, Austria and Finland. Certain countries will have to reduce their emissions at an annual rate of 3%. They will have to commit to maintaining these rates for 2030 if they want to keep in the range of the trajectories set by the IPCC.

2. Resuming discussions on the nature of the legal framework

o The situation created by the failure of Copenhagen and the new US roadblock

There is a strong temptation for the US to withdraw into its cocoon. This would undoubtedly result in continuing to refuse any binding emissions reduction commitments in the Kyoto Protocol framework.

But this also opens up broader questions which must be addressed if the problem is to be solved:

- The debate on lifestyles in developed countries can no longer be sidestepped. Emissions reductions following the necessary trajectories will not be possible without adopting more simple lifestyles and more conscientious behavior. This will apply not only to the “American way of life” but to all developed countries and soon also to the emerging powers.
- The debate over the legal nature of a new treaty should be taken up at the highest political level, as it calls for a complete reform of international institutions. The ramifications of the end of the era of the Westphalia treaties must be taken into account to recognize the need to build a supranational framework for to collectively manage the planet. This also extends to other areas, such as managing the globalization of the world’s economy and financial transactions as well as harmonizing social protections across the world.
- A transitional phase needs to be conceptualized to move from a system centered on respecting national sovereignty to the construction of a new set of rules of global governance.

The foundations for this evolution have already been set up in the climate negotiations:

- The dynamism of the negotiations over many years, despite the difficulties encountered and the extent of expectations and participation of civil society from across the world;
- The harmonization and coordination of financing in an overarching framework, with the Copenhagen Green Climate Fund;
- The setting up of MRV rules and principles to ensure transparency;
- The recognition at each stage of the negotiations that new commitments needed to be made;
- Conversely, the devastating impact on confidence and collective commitment of failing to respect one’s commitments.

o The need to strengthen the UN

Firstly, the working methods must be reformed. Moving towards a treaty which doesn’t obtain everyone’s assent is out of the question. At the same time, the rule of taking decisions by consensus currently in effect in the UN gives a country, in practice, an exorbitant amount of power. This helps to create untimely deadlocks. We will need to quickly find rules which strike a balance between the search for transparency, democracy and equity and the need to quickly arrive at results.

Another point emerging from the Copenhagen Conference is the need for a strengthened role for the UN, in terms of its central role in making policy decisions but also in reinforcing the governance

framework and ensuring commitments are met. Indeed, only the UN, and not any other instance of this type such as the G20, is vested with the power to make law.

- **Building confidence by meeting commitments**

Conferring the power to issue sanctions (in the form of economic penalties) on the UNFCCC would involve two reforms: including such a power in a future treaty, and reconciling that power with the regime established under the World Trade Organization (by transforming the WTO into an International Trade Organization tied to the UN) with a process to resolve disputes which would apply to all economic, social and environmental issues. As for the idea of creating a World Environment Organization, this would strengthen institutional structure but would not resolve the real issue – economic sanctions for not respecting the terms of the agreements a country has signed.

3. Imagining a new future for humanity and access for all countries to new development models

Though the hopes for Cancún are nowhere near as high as for Copenhagen, this conference will still be important for one major reason: it must take one step towards new development pathways, imagining a new future for humanity, with a greater sense of solidarity and equity.

- **Opening the door to a “new” form of sustainable development**

It will be necessary to invent a new societal paradigm and to open the door to new development models, for countries both in the global north and south, and to initiate a form of sustainable development which matches the needs and expectations of our societies. In order to understand what has led us into our current predicament and to consciously lead ourselves towards new development pathways, we should first return – a flashback – to the long saga of “sustainable development”.

- **Difficulties in integrating economic and social considerations**

The industrial revolution allowed for a considerable acceleration in the creation of wealth, with growth rates in countries benefiting from it increasing five to tenfold, an unprecedented evolution in history. This rapidly posed the burning question of the distribution of this wealth, placing business leaders and workers’ unions in direct confrontation. Little by little, they came to a compromise over increased access to better living conditions, the right to strike and the implementation of social welfare and retirement systems. A new vision of development thus emerged, with access to mass consumption bringing an unstable compromise between economic and social considerations. This synthesis, most fully realized in European social democracies, was the first step on the path towards sustainable development.

However, the process of economic globalization is threatening to wind back these advances on the social front, acquired with great difficulty. Increasing competition between workers in developed countries, developing countries and emerging powers is leading to regular and largely irreversible systems of social welfare.

- **Environmental issues explode onto the scene**

Since the 1970s, a new consideration has emerged – environmental degradation and the depletion of natural resources, starting with oil. At first, these environmental concerns were placed in opposition to sectors of the economy exposed to heavy competition and a loss of jobs. Thus, certain leaders in economic and social fields feared that taking into account environmental issues would jeopardize economic growth and undermine the above-mentioned compromise between economic and social considerations. But this is ignoring the fact that the poorest populations are also those who will suffer the most from health and environmental impacts.

- **The emergence of the concept of sustainable development**

This new antagonism, particularly present in the 1970s and 80s, was met with two different responses. Firstly, those industrialized countries the most sensitive to environmental issues – most notably

Germany, Japan and Scandinavian countries – introduced less polluting manufacturing processes and started to make more long-lasting products, thus increasing their market shares. The Brundtland Report, commissioned by the UN in 1987, showed that environmental degradation and resource depletion would block the process of economic and social development, especially in the poorest and most vulnerable countries.

The report gives rise to the concept of “sustainable development”, giving shape to the desire to successfully integrate the three dimensions of economic development, improving living conditions for all the world’s people and ensuring the durability of living conditions on Earth by preserving our environment. This is encapsulated in the definition of the Brundtland Report and furthermore in the 1992 Rio Summit. This report was a major step forward in showing that environmental sustainability was a condition of long-lasting development. Indeed, all development – agriculture, forestry, mining, industry, and even tertiary, urban and tourist activities – is based on resources in our environment. The Millennium Development Goals, established in New York in 2000, reaffirm this bond by making environmental sustainability a condition of socio-economic development.

- **Affirming the demand for all world’s countries to develop**

The Rio Summit showed, without any ambiguity, that international environmental agreements would not be possible without ensuring access to development for all countries. Yet the period following decolonialization processes in many countries was quite despairing. There were several reasons for this: countries’ political instability, more serious effects than expected from the damage colonization did to moral and cultural values, strong demographic growth absorbing the fruits of economic growth, inadequate development strategies, and in particular developed countries’ failure to meet their commitment of allocating 1% of their GDP to development assistance. Despite being subsequently lowered to 0.7%, this target is still not met by a majority of countries.

- **Globalization of the world economy**

Developments in the last twenty years should lead us to reconsider the effects of these evolutions. Today we are confronted to huge upheaval in the world. Economic globalization, by integrating more and more people into industrial society, is behind the destabilization of social welfare systems in developed countries. But it is also responsible for reducing poverty for hundreds of millions of people, something that development assistance from developed countries has not succeeded in achieving.

- **Confronting the Earth’s limits**

At the same time that the world economy is in the process of unification under a single world market, we are being confronted with the limits of our planet, that of our mineral and energy resources and of the environment’s capacity to support the activities of the world’s population, which will likely have risen tenfold between 1800 and 2050. The conclusion is simple: a planet with inevitable limits to its physical resources cannot support an exponential growth in resource extraction and at the same time allow for equitable access to all these resources, with this being sustainable into the future. But our awareness of this problem is still incomplete: the extent of resources of different raw materials is poorly known and forecasts of their scarcity and increases in extraction costs vary according to the future demand. It is nevertheless clear that the situation will become critical for a number of resources, beginning with oil, by the middle of this century.

- **Entering into a finite world**

Mankind can no longer deem its impact on the planet as a secondary consideration. The transformation of the environment – ranging from the most visible forms (pollution with direct impacts on health), to those less perceptible – disrupt the world’s environment and is experienced today by the populations around the world. They are manifested most seriously in climate change and biodiversity loss. These two phenomena mark the limits which, henceforth, we must meticulously respect.

The Earth’s climate being a unique, indivisible whole, paying no attention to human borders, its protection represents the first planetary issue which demands solidarity between all people.

Furthermore, half of countries' greenhouse gas emissions are generated by activities of people in their everyday private life – domestic heating or air conditioning, transport (especially in cars), eating and general consumption practices. All this means that the issue of climate change cannot be resolved without everyone contributing. It thus represents the first all-encompassing political issue in human history, requiring commitment from the individual level to governance on a global level. Although less visible, increasing biodiversity loss is another process with effects that are just as serious, global and probably even more irreversible.

○ **Obligations and opportunities for democracy**

The standard conception of sustainable development is based on three inseparable pillars: the economic, the environmental and the social. But this conception proves to be insufficient as soon as the call is sent out to improve individual behavior. In fact, a fourth component of sustainable development was recognized at the 1992 Rio Summit: democracy. This can be explained by the following observations:

- Firstly, no international agreement on the management of the world's environment will be possible without ensuring access to development for the world's poorest countries. This comes back to the key question of equity.
- Secondly, reducing resource drain and pressure on the environment demands improvements in the behavior of individuals. This can only be obtained through large-scale efforts to educate people to secure their commitment, and thus to ensure they are directly involved in decision-making processes. Agenda 21 was thus launched in 1992 with the Curitiba Commitment, consisting of action programs to promote sustainable development at all levels, especially local. Yet it is clear that developed countries' insufficient progress in emissions reductions is due to inadequate level of the debate in these countries on the indispensable progress to be made in individual behavior and moderation in the most wasteful forms of consumption.
- Finally, the fight against climate change cannot succeed without putting into place international decision-making levels of jurisdiction such that countries may be disciplined for not respecting their commitments. This will imply using the UN's power to impose economic sanctions to full effect.

Making progress on the democratic front will need to be achieved through stabilizing institutions, carrying out a process of decentralization and ensuring people are actively involved in preparing decisions through a process of "co-construction".

○ **New development models urgently needed**

Climate change and biodiversity loss are two issues that must be addressed both by the international community and at territorial levels, which will have a crucial role to play in terms of education, training, capacity building and democratic processes.

It would appear that, in a time horizon around 2050, humanity will be at the crossroads between: the end of demographic growth, the need to halve global greenhouse gas emissions, and the confrontation with a decline in certain resources.

In such a situation, a new vision of the world will emerge, in which mankind will need to find a balance between its development and the protecting the planet over hundreds and perhaps thousands of years, starting off by closing the dramatic development gap inherited from the 20th century. Humanity is wed to its planet, their destinies inescapably tied together. We will need to live for centuries on finite resources which will need to be conserved and recycled. Furthermore, the financial and economic crises point to the need for measures to regulate the global economy, strengthen social rights and make provisions for a collective management of the planet, something that the market economy cannot achieve on its own.

- **Optimizing the use of resources**

Optimizing resource use will become the defining value of this century, in moral, technological, economic and financial terms. It means making the most out of each particle of raw material, each unit of energy, each element of nature's biological production. This will be the condition of social cohesion and each country and peace in the world.

The size of the challenge ahead of us is immense. It implies using resources as efficiently as possible, optimizing the use of transport, giving priority to the planet's biological resources and renewable energies, successfully building a new low-carbon economy and paving the way for everyone to benefit from sustainable development.

- **The bases of future development models**

Questions of development models and the reorientations of trajectories are relevant to industrialized countries, which have a historical responsibility as the largest polluters, and thus must change their way of lives, and of producing and consuming goods and services. These questions are also relevant to developing countries and the emerging powers, though they are of a slightly different nature as these countries have not yet reached the end of their development process. The challenge is to advance different trajectories from those previously pursued by industrialized countries, so they can match their level of socioeconomic development without becoming the world's future polluters.

It seems difficult to justify imposing on developing countries – which struggle to provide basic, vital services to their people – the obligation to look after a global interest far from their everyday priorities. Developing countries often do not have the financial, technological and structural means to ensure their environment is preserved and to access more environmentally friendly technologies. Biodiversity loss and deforestation often cost countries a part of the revenue they could have collected from their national resources. But they fear that fighting climate change could come at the cost of their own socioeconomic development. Looking further, the challenge is to use development to secure a world of greater stability and solidarity.

- **The trajectory for developing countries to follow**

As the priority of developing countries is to improve their peoples' living conditions, the question to be posed is whether the fight against climate change should be taken on at the beginning of the development process or at a later stage. The answer lies in a careful analysis of the relationship between development and emissions growth, which is not linear in nature. The development process can be presented in five major stages, each with very different contributions to greenhouse gas emissions.

Zoom on: The successive stages of development

1. The preindustrial phase of societies with stable demography, characterized by the absence of energy sources other than biomass. In these conditions, greenhouse gas emissions from cooking, agricultural and forestry activities are compensated exactly by the absorption of atmospheric CO₂ through plants' photosynthesis.
2. A phase when societies enter into a phase of demographic growth, with increased pressure on forests (clearing and slash-and-burn cultivation). CO₂ emissions can thus be higher than those captured by plants. Developing countries with deforestation problems can therefore have significant levels of CO₂ emissions.
3. The beginnings of economic growth translates into changes in consumption habits and expectations in terms of living standards: more comfortable housing, more diversified nutrition, motorized modes of transport and so forth, bringing increasing energy and infrastructure needs. This leads to very strong increases in greenhouse gas emissions, in general at an even faster rate than economic growth. This phase, involving the beginning of the construction and development of heavy infrastructure with very long lifespans, is the one on which most attention should be focused, as it

plays a key role in determining a country's long-term emissions trajectory.

4. The following phase gives priority to improving living conditions and extending manufacturing industries. Basic industrial equipment and heavy infrastructure are in large part already in place. Policies to control energy consumption and greenhouse gas emissions, coupled with more readily available access to technology and capital allow for these to increase more slowly than economic growth.

5. The final phase of development, in which the most advanced industrialized countries find themselves, is that of a progressive dematerialization of their economies, with an expansion of activities based on services and communication. Growth in their energy consumption and greenhouse gas emissions can be compensated with advances in energy efficiency. Progress in reducing emissions is focused on the transport sector, in which emissions continue to rise.

It may seem paradoxical to give priority to energy savings and fighting climate change in countries which are going through the first phases of development and so still have low levels of energy consumption and greenhouse gas emissions. Yet this recommendation is fully justified, for three main reasons:

- Entering into industrialization is the phase with the largest rise in emissions;
- The investment choices in heavy infrastructure in this phase (buildings, industrial facilities, transport infrastructure, energy production) have lifespans of up to a century, and will have large impacts in the future;
- The trend towards rises in energy prices will translate to an ever heavier burden on the economy if the consumption of fossil fuels stays at a high level. Exports agree on the prospects of acute tension between ever-increasing world demand and ever-increasing extraction costs, with production rates in decline for certain resources. With soaring energy prices, the expansion of development paths that are wasteful of energy resources could put a stranglehold on the development process of many countries.

It is therefore essential to give technological and financial assistance to developing countries to help them kick off their initial phase of development in less carbon-intensive trajectories than those formerly followed by industrialized countries. Committing to a more energy efficient development pathway from the earliest stages will thus become an economic asset and accelerate their development process.

The same can be said for countries with ambitious climate change policies. Indeed, with the world market oriented towards energy efficiency, clean technology and low-carbon production systems, these countries will export their know-how and their more efficient manufactured goods to others. This is also the implicit reasoning behind the strategies of the European Union and Japan, and countries which follow their lead will find themselves with an economic advantage. The poorest countries, however, are not yet in this situation as they are still unable to take advantage of world markets. Their initial steps towards sustainable development will be strongly dependent on international aid, bilateral or multilateral commercial agreements, political will and strong institutional support.

For the optimization of the use of resources to be fundamental value of the 21st century, progress towards low-carbon development will be at the heart of this process. As the stabilization of the Earth's climate is in everyone's interests, it is essential that developing countries benefit from all the assistance they need to find their place in this new project. Pursuing a low-energy and low-carbon development pathway will become the only way of ensuring their development is sustainable.

○ **Sweeping changes in human civilization**

Industrialized countries will also be confronted with a profound transformation in their development models, which have until now drawn massively on fossil fuels. This implies:

- A deep inflection in lifestyles to reduce waste and improve individual actions. This will only be possible through considerable cultural and educational shifts and progress in local democratic processes. Every citizen must move beyond the fear of being a victim of climate change to actively involve themselves in a huge mutation in human civilization.

- An equally profound change in technological systems for production and consumption, transports, agricultural practices, building construction, waste management, and so forth.

The path towards these mutations is paved with deadlocks and significant sources of inertia. These result from a defensive mindset in adopting behavior to reduce emissions, seen as an effort and not a step forward.

○ **Towards a relation-based society**

Projecting ourselves forward in time, the current four pillars of sustainable development explained above will not be enough. The vision that has spread consists of imposing new obligations on public authorities, corporations and citizens to find a balance between mankind and its environment and to guarantee the right conditions for the future generations to develop. Although this is essential, it does not yet promise anything in return, a vision of what could be a successful life in this new context. As such, the concept of sustainable development is perceived as an aloof, intellectual concern, generating hardly any public enthusiasm even though it is now at the heart of political discourse.

A fifth component must be integrated to remedy this deficiency. Whilst resources may and will become more and more rare, there is no limit to the possibilities offered by human relations. We can thus say that there is “an infinity in the finite world”, that of relations with others. With our mobile telephone and access to internet we each have access to more people, more knowledge and more forms of cultural expression than all those in previous generations, opening the door to a whole new world of possibilities. Culture, communication, contact with others – these are all elements of a new development pathway, a new field of exploration for human adventures. This is a transformation which will completely revolutionize our lives.

Sustainable development in the 21st century will consist in shifting from a consumer society with particularly pernicious impacts on the planet to a relation-based society, opening new doors to personal enrichment through human relations, knowledge and personal expression.

The negotiations on climate change is the flagship on which all the components of sustainable development are assembled, leading the way for the rest of the flotilla to follow. It will be impossible to overcome the stiff opposition ahead without building a new vision of future ways of life, without ensuring that all the world's people have access to new development pathways and without outlining the path for an equitable transition.

The Rio+20 conference in 2012 could well be the right framework for this issue to be raised once more, and for the climate negotiations to be re-examined in this light.

Appendix 1 – Problems and issues with defining MRV objects, indicators and calculation methodologies

| Type of object | Emissions reduction or limitation commitments and targets | Policies and measures aiming to reduce or limit missions | Financial and technology support and capacity building |
|----------------|---|---|---|
| Context | The submissions of 41 developed countries and a number of developing countries (covering more than 80% of world emissions) recorded in the Appendices of the Copenhagen Accord. | To meet the targets and commitments the countries have set for themselves, they have a wide range of policies and measures which can contribute to reducing or limiting their emissions. | Developed countries have committed to supporting developing countries in implementing their actions in these three ways. The Copenhagen Accord includes a pledge to mobilize US\$100 billion in financing by 2020. |
| Examples | EU: 20%/30% reduction in emissions in 2020 compared to 1990 levels. US: approx. 17% reduction in emissions in 2020 compared to 2005 levels. China: 40-45% reduction in the economy's carbon intensity in 2020 compared to 2005 levels. | Economic and financial instruments (taxes, tax credits, subsidies, loan guarantees, etc.) and direct regulations (sectoral performance standards, energy efficiency standards, renewable energy standards, etc.). | Actions to support research and technology development, educate and raise awareness in the general public, capacity building and institutional reforms. |
| Problems | The way of expressing developed countries' commitments varies according to the baseline year (1990, sometimes 2000 or 2005). Developing countries' targets (reductions in the energy or carbon intensity of the country's economy, emissions reductions against a "business as usual" scenario are also quite varied and with considerable uncertainty. | Progress has been made on metrics and calculation methodologies in terms of the public policies of both developed countries' (ex ante economic models, ex post evaluations) and developing countries (monitoring and evaluation of official development assistance), but this remains unfinished. Common methodologies set out for market mechanisms (measuring emissions reductions from projects, leading to attributing carbon credits) also need to be reconsidered. | These actions are more of a qualitative nature, with results that are sometimes difficult to quantify. The main problems lie in defining what is to be considered "climate change finance" (since climate change is a dimension which should be integrated into countries' development strategies and is often one but not the sole priority in actions and projects), how to measure it (overall flows, net flows, etc.) and what should be considered as technology transfer, etc. |
| Issues | Work must continue on calculation methods and measurement indicators to compare countries' efforts and analyze whether they suffice in sum to keep on a trajectory to limit warming as set out in the goals of the Framework Convention. | Very important work must be continued in this domain to ensure that actions are effective and comparable and mutual accountability between countries receiving support and donor countries. The legitimacy of methodologies currently used in the CDM is being contested, and new methodologies will need to be defined for the REDD+ mechanism. | At the macro level, the main issue is ensuring that developed countries respect their collective promise to mobilize finance. At the micro level, the issue is more ensuring that there is mutual accountability between countries receiving support and donor countries. |

Appendix 2 – The difficulties encountered in passing climate-energy legislation in the US

○ The bills presented before the US Congress

| House of Representatives | | |
|---|---|---|
| American Clean Energy and Security Act (H.R. 2454) | Passed on June 26, 2009 | Waxman-Markey |
| Senate | | |
| American Clean Energy and Leadership Act (S. 1462) | Introduced on June 17, 2009 | Jeff Bingaman (Democrat) |
| Clean Energy Jobs and American Power Act (S. 1733) | Introduced on October 1, 2009 | Kerry-Boxer |
| Carbon Limits and Energy for America's Renewal Act (S. 2877) | Introduced on December 11, 2009 | Cantwell-Collins |
| American Power Act | Introduced on April 26, 2010, reintroduced on May 12 following the withdrawal of Senator Graham | Kerry-Lieberman-(Graham) |
| Practical Energy and Climate Plan (S. 3464) | Introduced on June 9, 2010 | Dick Lugar (Republican) and Lisa Murkowski (Republican) |
| Energy and Oil Bill | Introduced July 29, 2010 | Reid |
| Renewable Energy Promotion Bill (S. 3813) | Introduced September 21, 2010 | Bingaman, Brownback, Dorgan, Collins |

○ The main energy-climate bills

● **The Waxman-Markey bill**

The main features of this bill are the following:

- A federal target of a 17% reduction in emissions by 2020 compared to 2005 levels (i.e. only around 3% reduction compared to 1990 levels), 42% reduction by 2030 and 83% reduction by 2050, all with 2005 as the baseline;
- Development of “clean coal” with carbon capture and storage;
- A focus on electrical utility companies;
- A carbon border tariff;
- Extensive use of carbon markets (“cap and trade”) to reach this domestic target; corporations were allowed to use up to a total of two billion tons of CO₂ of offsets, with up to half the carbon credits coming from outside the US;
- A percentage of the revenues from carbon markets (average 4% until 2027) were to be earmarked to finance adaptation in other countries. This would constitute approximately US\$750 million per year for a global adaptation fund and for technology transfer, out of the estimated US\$7 billion needed.

- **The Kerry-Boxer bill**

- A slightly higher federal target: a 20% reduction in emissions by 2020 compared to 2005 levels (i.e. a 7% reduction compared to 1990 levels), a 42% reduction by 2030 and 83% reduction by 2050;
- Development of nuclear energy and “clean coal”;
- A “Pollution Reduction and Investment Mechanism”, a carbon market targeting 2% of corporations responsible for 75% of the country’s emissions. The market would incorporate a Stability Fund to stabilize the carbon price and compensate low-income households. The system would be flexible, with financial incentives for the most active corporations;
- A carbon market: corporations were allowed to use up to a total of two billion tons of CO₂ of offsets, with up to 25% international offsets;
- Regulatory control in the hands of the Environmental Protection Agency (EPA).

Appendix 3 – the main characteristics of countries impacting on their levels of commitment

○ The main distinguishing characteristics

• **The baseline situation**

In theory, the greater a country's progression, the more its margin to improve shrinks. In practice, however, countries are still far from this situation as they still have considerable potential to reduce emissions, of similar scope in the transport, building and energy sectors.

• **The population density and the level of economic growth**

It should be recognized that countries with strong fertility levels or strong immigration, as well as low population density will have both stronger emissions growth and their economies higher carbon intensities.

• **Strong differences in the structure of electricity production**

Fossil fuels on the one hand – coal, natural gas and occasionally oil – and on the other hand hydropower, other renewable and nuclear power.

• **Individual behavior**

Potential for improvement is particularly high and prominent for countries with expansive lifestyles (US, Canada, Australia, Russia, etc.).

• **Types of agriculture and forests**

This has a large influence in respect of methane emissions and the ability to absorb and stock CO₂.

| | <2 year horizon, with stable efforts | 5 year horizon | 10 year horizon | 15-25 year horizon | 50 year horizon |
|--|--|---|---|--|--|
| <i>Soft measures:</i> Behavior, tariff-setting, regulations | Training, Awareness-raising, Working methods | Taxes and price mechanisms, Capacity building | Young graduates taking up high-level posts with new technical skills | | |
| <i>Everyday consumer goods</i> | Studies and projects for the construction of new buildings | Renewal of lighting and electronic equipment | Renewal of household appliances Massive diffusion of a new range of appliances on the market | Renewal of automobile fleets and heating equipment | |
| <i>Infrastructure</i> | | | Public transport systems | Structuring networks (water, waste, telecoms) | Complete renovation of building stocks Construction of heavy transport networks |
| <i>Electricity production</i> | | Significant development of renewable energy | Building equipment for energy production and distribution | Significant renewal of electricity production sites | |
| <i>Industrial sites</i> | Capacity building in professions, industries | Changes in fuel use Energy efficiency measures | Renewal of light industrial equipment | Changes in industrial processes due to advances in R&D | |

- ***Targets are further influenced by three external factors:***

- Evolutions in energy prices;
- Current and future offset mechanisms (CDM, etc.);
- Accounting for carbon sinks.

- **Leeway over different timescales**

This is an even more important dimension. One of the most serious problems in the negotiations is the weakness of negotiators' knowledge of the industrial sector. Not even the greatest resolve can overcome the physical limits of the time it takes to execute heavy investments, to renew industrial equipment, put into place infrastructure networks and pick the fruits of industrial R&D.

The table opposite helps to visualize the time taken for the effects of policies to be felt. These timescales apply to policies all launched in the first year concerned.

