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ECONOMIC AND SCIENTIFIC POLICY

Economic and Monetary Affairs

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Internal Market and Consumer Protection

The Development of Climate Negotiations in View of Warsaw (COP 19)

STUDY

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Abstract

This report provides an overview of the development of the negotiations within the UNFCCC since COP 18 in Doha. It summarises the key developments in 2013 and provides short overviews for all negotiation areas. The overview also includes a state of play of the Doha Climate Gateway and explains the position of the main Parties and negotiation groups. It is supplemented by short overviews for individual countries and stakeholder groups.

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LIST OF ABBREVIATIONS

AAU Assigned Amount Unit

AC Adaptation Committee

ADP Ad Hoc Working Group on the Durban Platform for Enhanced Action

AGF High-level advisory group on finance appointed by the United Nations Secretary General

AILAC Association of Independent Latin American and Caribbean States (Colombia, Peru, Costa Rica, Chile, Guatemala, Panama)

ALBA Bolivarian Alliance for the Peoples of our Americas

AOSIS Alliance of Small Island States

ARD Afforestation, reforestation, deforestation

AWG-KP Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol

AWG-LCA Ad Hoc Working Group on Long-term Cooperative Action under the Convention

BAP Bali Action Plan

BASIC Brazil, South Africa, India and China

BAU Business as usual

BMF Business Model Framework (of the Green Climate Fund)

BR Biennial report

CA Copenhagen Accord

CAF Cancún Adaptation Framework

CBDR Common but differentiated responsibilities

CBDRRC Common but differentiated responsibilities and respective capabilities

CCAC Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants

CCS Carbon capture and storage

CDM Clean Development Mechanism

CER Certified emissions reductions

CFU Carbon Finance Unit (World Bank)

CO_2eq Carbon dioxide equivalent

CMP	Conference of the Parties serving as the meeting of the Parties
COP	Conference of the Parties
CP1	First Commitment Period of the Kyoto Protocol (2008-2012)
CP2	Second Commitment Period of the Kyoto Protocol (2013-2020)
CTCN	Climate Technology Centre and Network
DP	Durban Platform
EB	Executive Board of the CDM
EIT	Economies in transition
EC	European Commission
ERT	Expert Review Team
ERU	Emission Reduction Unit
EU	European Union
EU ETS	European Union Emissions Trading System
FAA	Framework for Action on Adaptation
FMRL	Forest management reference level
FVA	Framework for various approaches
G-77	Group of 77
GCAP	Global Climate Adaptation Partnership
GCCA	Global Climate Change Alliance
GCF	Green Climate Fund
GDP	Gross domestic product
GEF	Global Environmental Facility
GHG	Greenhouse gas
Gt	Giga tonnes
GW	Giga watt
HFC	Hydrofluorocarbons
IAR	International assessment and review
ICA	International consultation and analysis
ICAO	International Civil Aviation Organization
IEA	International Energy Agency

IMO	International Maritime Organization
IPCC	Intergovernmental Panel on Climate Change
IPR	Intellectual property rights
IRENA	International Renewable Energy Agency
JI	Joint Implementation
JISC	Joint Implementation Supervisory Committee
KP	Kyoto Protocol
LDC	Least Developed Country
LEG	Least Developed Countries Expert Group
LMDC	Like-Minded Developing Countries
LULUCF	Land Use, Land-Use Change and Forestry
MARPOL	International Convention for the Prevention of Marine Pollution from Ships
MBM	Global Market-Based Mechanism
MDB	Multilateral Development Bank
MEPC	Marine Environment Protection Committee under the IMO
MRV	Measurement, Reporting and Verificaton
NAMA	Nationally Appropriate Mitigation Action
NAPA	National Adaptation Plans of Action
NC	National communication
NDRC	National Development and Reform Commission (China)
NGO	Non-governmental organization
NMA	Non-market-based approach
NMM	New market-based mechanism
NWP	Nairobi Work Programme on impacts, adaptation and vulnerability
ODA	Official Development Assistance
OECD	Organisation for Economic Co-operation and Development
OECD DAC	OECD Development Assistance Committee
OPEC	Organization of Petroleum Exporting Countries
QELRCs	Quantified Emission Limitation and Reduction Commitments
QELROs	Quantified Emissions Limitation and Reduction Objectives

RCP	Representative Concentration Pathways
RD&D	Research, development and deployment
REDD	Reducing emissions from deforestation and degradation
REDD+	Reducing emissions from deforestation and forest degradation and for promoting conservation, sustainable management of forests and enhancement of forest carbon stocks
RMU	Removal Unit (on the basis of LULUCF activities)
SCF	Standing Committee on Finance
SBI	Subsidiary Body for Implementation
SBSTA	Subsidiary Body for Scientific and Technological Advice
SIDS	Small island developing state
SRES	Special Report on Emission Scenarios
t	Tonne
TC	Transitional Committee
TEC	Technology Executive Committee
TM	Technology Mechanism
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
WS 1	Workstream 1 (of the ADP)
WS 2	Workstream 2 (of the ADP)

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EXECUTIVE SUMMARY

The main objective for Warsaw is to make progress in the negotiations under the Durban Platform for Enhanced Action to establish the foundations for developing a global and comprehensive legally binding instrument for all Parties under the Convention in 2015 and to ensure that mitigation action before 2020 is enhanced.

Specifically, important elements in a Warsaw package from the perspective of the EU would include the following elements:

- A roadmap for steps towards a new international, legally binding agreement until 2015 including ambitious pledges by all Parties in the negotiations under the Ad Hoc Working Group on the Durban Platform for Enhanced Action (ADP). It is important to obtain all Parties' support for the new agreement and to define a process for mitigation commitments to be put forward and reviewed. Also, it will be important whether all Parties with substantial emissions will adopt such mitigation commitments;
- The raising of the ambition level so as to close the gap between the currently pledged mitigation targets and the emission reductions necessary to achieve the 2°C objective, and to identify concrete options on how to close the gap and build political momentum for increased ambition for all, e.g. through support for the concept of international cooperative initiatives;
- The further development of the work programme to identify accounting rules to make mitigation commitments comparable and trackable;
- The finalisation of reporting and accounting rules for the second commitment period of the Kyoto Protocol;
- Achieving progress on individual topics that are negotiated primarily under the Subsidiary Body for Scientific and Technological Advice (SBSTA) such as the clarification of mitigation pledges for 2020 and accounting rules for targets of the non-Kyoto Annex I Parties and the design of new market mechanisms, the work related to the implementation of the REDD+[1] mechanism, financing of REDD+ activities and a review of the achieved action in 2013-15;
- The development of a clear roadmap for how to mobilise USD 100 billion annually by 2020 after the conclusion of the work programme on long-term finance in September 2013 as promised by developed countries;
- The further implementation of the Green Climate Fund and a decision on the relations between the Fund and the COP;
- The further development and implementation of the Nairobi Work Programme on impacts, adaptation and vulnerability, the work of the Adaptation Committee, the Durban Forum on capacity building and the Technology Mechanism;
- The further development of institutional arrangements to address loss and damage as agreed in Doha;
- The further implementation of the decisions taken in Doha related to monitoring, reporting and verification (MRV) of mitigation action and finance for developed and developing countries.

[1] REDD+ = Reducing emissions from deforestation and forest degradation and for promoting conservation, sustainable management of forests and enhancement of forest carbon stocks.

1. GENERAL ISSUES IN CLIMATE NEGOTIATIONS BEFORE WARSAW

1.1. Introduction

The aim of this study is to prepare the European Parliament delegation and other interested persons for the upcoming UNFCCC Conference of the Parties (COP 19) in Warsaw, Poland, from 11th to 22nd November 2013. In addition, it can be used as a reference document for individual topics which might come up during meetings, discussions or other documents related to the climate process. It has been commissioned by the European Parliament's Committee on the Environment, Public Health and Food Safety and prepared by the Öko-Institut e.V. (Institute for Applied Ecology).

Chapter 1 of the study gives an overview of the negotiation situation in 2013, starting with the results from the previous COP in Doha and looking at the progress made during 2013 prior to the conference in Warsaw. It focuses in more detail on progress made on implementing the Durban Platform for Enhanced Action and amending the Kyoto Protocol. Chapter 2 addresses the main issues in the negotiations, which relate to the work on mitigation commitments, monitoring, reporting and verification, finance, deforestation, LULUCF, flexible mechanisms, emissions of international transport, technology transfer, adaptation, capacity building and loss and damage. The third chapter gives an overview of the positions of the main negotiating Parties apart from the EU. Chapters 4 and 5 describe key negotiation groups and stakeholders. The last chapter provides explanations of terms used in the climate negotiations which are not self-explanatory (in addition to the list of abbreviations) and gives an overview of how elements negotiated under the Ad Hoc Working Group on Long-term Cooperative Action under the Convention (AWG-LCA) until Doha will be addressed in the UNFCCC negotiations thenceforth.

1.2. Main outcomes of COP 18 in Doha

The decisions adopted as the "Doha Climate Gateway" (Decisions 1 to 7/CP.18 and Decisions 1 to 5/CMP.8 as well as the ADP report and the AWG-LCA report) include the following political agreement:

- Negotiations under the Ad Hoc Working Group on the Durban Platform for Enhanced Action (ADP), which had been established at COP 17 in Durban, were continued. The first mandate of the Working Group to increase mitigation ambition prior to 2020 was emphasised.
- Governments also strengthened their second commitment under the ADP to negotiate a new legally binding international climate agreement by 2015 that should come into effect from 2020 onwards, and set out a timetable for the adoption of such an agreement until 2015. UN Secretary General Ban Ki-moon announced that a heads of state summit will be convened in 2014 to help ensure that the 2015 deadline is met.
- An amendment of the Kyoto Protocol was adopted with quantified emission reduction targets for a second commitment period. Yet, four major emitters, namely Canada, Japan, New Zealand and Russia, have announced that they will not participate in the second commitment period any more.
- Further progress was made towards establishing and implementing new infrastructure to channel technology and finance to developing countries. Specifically, gov-

ernments endorsed the selection of the Republic of Korea as the host of the Green Climate Fund (GCF) and the work of the Standing Committee on Finance. Furthermore, a UNEP-led consortium was confirmed for an initial term of five years as the host of the Climate Technology Centre (CTC), which is the implementing institution of the UNFCCC Technology Mechanism.

- By completing work under the Ad Hoc Working Group on Long-term Cooperative Action (AWG-LCA) under the UNFCCC as well as negotiations under the Bali Action Plan, negotiations were streamlined to concentrate on the work towards a 2015 agreement under the ADP (see section 6.7 for an overview of how elements negotiated under LCA will be addressed under other bodies in the future).
- The decision was taken that loss and damage shall be considered through institutional mechanisms to address loss and damage in developing countries that are particularly vulnerable to the adverse effects of climate change.
- Parties also agreed on ways to implement National Adaptation Plans for least developed countries, taking into account the linking of funding and other support efforts. Ways were identified to improve planning in order to strengthen the adaptive capacities of the most vulnerable countries.
- Developed country Parties reaffirmed their commitment to deliver on promises to continue long-term climate finance for developing countries – amounting up to USD 100 billion annually – from different sources for both mitigation and adaptation by 2020. It was decided that climate finance between 2013 and 2015 should at least be equal to the average annual level of funds provided during the fast-start finance period (2010-2012) to ensure there will be no gap in continued finance support.
- A process was launched to review the long-term temperature goal between 2013 and 2015 in order to verify the magnitude of climate change and the possible need to mobilise further action.
- A new work programme to build climate action capacity through education and training, public awareness and public participation in climate change was agreed.
- It was decided to establish a work programme from 2013 until 2014 to further understand the diversity of Nationally Appropriate Mitigation Actions (NAMAs) under the Subsidiary Body for Implementation (SBI), and a web-based registry was established to record developing country mitigation actions (NAMAs) that seek recognition or financial support (see http://www4.unfccc.int/sites/nama/SitePages/Home.aspx).
- It was agreed to continue the process of clarifying developed country Parties' pledges for quantified economy-wide emission reduction targets and to identify common elements for measuring progress made towards the achievement of those targets.
- Work programmes were agreed to elaborate the new market-based mechanism under the UNFCCC and to develop a framework for elaborating the role of market mechanisms outside the UNFCCC, e.g. on the national level, in contributing to meeting countries' mitigation targets.
- On REDD+, no concrete decisions could be taken because of disagreements about the verification of emissions from the forest sector. Support for efforts to combat deforestation was announced.
- For the first time the oil-producing countries Bahrain, Saudi Arabia and the United Arab Emirates put forward their actions and plans to diversify their economy in such a way that it generates co-benefits such as emission reductions, adaptation to the impacts of climate change and response measures.

1.3. Implementation of the Durban Platform for Enhanced Action

1.3.1. Agreement achieved in Doha

In Doha, governments agreed to intensify work under the Ad hoc Working Group on the Durban Platform for Enhanced Action (ADP) in 2013. This group was established to launch a "process to develop a protocol, another legal instrument or an agreed outcome with legal force under the Convention applicable to all Parties" (1/CP.17, paragraph 2). Parties agreed to adopt the new instrument no later than 2015 and that it should come into force by 2020.

The ADP was established in Durban in 2011 with the mandate to work towards the new legal instrument (workstream 1); to raise the level of mitigation ambition in the process under the ADP, taking into account the outcomes of Fifth Assessment Report of the IPCC; and to launch a work programme on enhancing mitigation ambition aiming at identifying options and actions that can close the ambition gap through the highest possible mitigation efforts by all Parties prior to 2020 (workstream 2). The ADP was mandated to start its work in the first half of 2012 as a matter of urgency.

In Doha, Parties showed little political will to increase ambition as developed countries did not submit higher emission reduction goals for 2020. The US in particular advocated for deleting paragraphs from the ADP decision which highlight developed countries' obligation to take the lead in mitigating climate change and the importance of financial and technological support to mitigation activities in developing countries. Also countries like Saudi Arabia, Nigeria or Qatar, which had not submitted emission reduction commitments yet did not pledge any targets for 2020 in Doha.

Progress was made regarding the options for the increase of short-term mitigation ambition that were discussed in Doha. Proposals were made with regard to reducing hydrofluorocarbons (HFCs) (e.g. Costa Rica, Switzerland, USA), reducing subsidies for fossil fuels (e.g. Philippines, New Zealand, Switzerland) or tackling short-term elements that are harmful to the climate such as carbon black (e.g. Norway, USA). In Doha, governments agreed to submit information, views and proposals on actions, initiatives and options to enhance ambition to the UNFCCC by 1 March 2013. Observers were invited to do the same and the Secretariat was tasked with analysing the resulting mitigation benefits of planned actions.

The EU welcomed the decision as laying the basis for more ambitious international action against climate change in the short term, setting up a work plan for the ADP to pave the way for a new global climate change agreement to be finalised in 2015, streamlining negotiations under the ADP and enabling a second period of the Kyoto Protocol to start on 1 January 2013.

1.3.2. Negotiation process in 2013

The first meeting of the ADP in 2013 took place from 29 April to 3 May 2013 in Bonn and was resumed during the Bonn Climate Change Conference on 3-14 June (ADP 2). It was structured around workshops and roundtables on workstreams 1 and 2. At the meetings, Parties were expected to move towards gathering concrete proposals on substantive elements of the future agreement and adopt a practical approach to enhancing pre-2020 mitigation ambition. This conceptual work should contribute to an ADP draft negotiating text to be considered by COP 20 in 2014. No agreement was reached on establishing one or more contact groups to move part of the work to a more formal setting.
Generally, however, the meeting was seen as achieving concrete progress in designing and implementing solutions for a post-2015 agreement (Secretariat, 2013).

WORKSTREAM 1: Work towards the new legal instrument

In terms of workstream 1 (WS1), countries and observers provided submissions on the scope, structure and design of the new agreement and ways to define and reflect enhanced action in 2013. Moreover, a workshop was held on the scope and design of the 2015 agreement as well as several roundtable discussions.

Discussing elements for a post-2015 agreement, developed countries proposed a spectrum of commitments for countries to choose from and a mechanism to ensure that the overall ambition is in line with climate science. In turn, some developing countries voiced support for the Brazilian proposal, originally made in 1997, which addresses historical responsibility not just in terms of emissions, but also in terms of relative historical contributions to the temperature increase. Views converged on the issue of finding a balance between a top-down system to set national mitigation according to a global emissions reduction target to avoid surpassing the 2°C temperature increase, and a bottom-up approach enabling countries to submit nationally determined commitments. Most Parties favour a hybrid approach implying that countries set national commitments first which are then internationally reviewed. Different proposals were made for how to specify commitments under such a hybrid approach and on which principles for differentiation between Parties the agreement should be based. The need to use different commitment types depending on national circumstances was emphasised.

On mitigation, the major point of discussion was whether all Parties should take on commitments and how these should be determined. Developing countries stressed developed countries' obligation to take the lead, while many developed countries argued that all countries should take on commitments. Views diverged on the question of the extent to which these commitments should be overseen at the international level, with the USA arguing for nationally determined commitments, Switzerland favouring international MRV rules and the EU promoting a step-wise approach that couples nationally-driven approaches with international coordination.

On transparency of action and support, developing countries demanded more transparency of commitments and provision of financial support by developed countries. Developed countries argued for a MRV system to be developed for all countries, which developing countries warned should not translate into a burden for them.

On adaptation, many Parties, including the Alliance of Small Island States (AOSIS), Australia, Norway, Japan, the Association of Independent Latin American and Caribbean States (AILAC), the EU, Singapore and Mexico, identified the need to build on existing institutions. Also, there was a convergence of views around the need to mainstream adaptation on the national level and to strengthen developing countries' means of implementation.

Wrapping up the first part of ADP2 in Bonn in early May 2013, the Co-Chair highlighted common ground on the 2015 agreement on a number of issues, including:

- application of the Convention's principles;
- adaptation as an integral part;
- enabling enhanced action on adaption and mitigation by finance, technology and capacity building;
- that all Parties need to contribute, taking into account national circumstances.

The Co-Chair also indicated that Parties agree on the need for enhanced national action and international cooperation, combined with a process for assessing action, transparency and accountability, provision of incentives and support; and regular review of overall results based on science.

The Co-Chairs suggested that setting a common timeframe for post-2020 commitments would be important in assisting Parties to formulate their proposed commitments and that this timeframe should be addressed in Warsaw.
The discussions in 2013 showed that the relationship between mitigation and adaptation will require particular attention in future discussions. Also links between elements of the 2015 agreement to the existing infrastructure under the Convention as well as between the two workstreams emerged as major points of debate. The relationship with the 2013-2015 review, the latest science from the new IPCC assessment report, the role of market and non-market mechanisms and the role of forests and land use will also need to be explored in further detail. Furthermore, even though the general feeling was that discussions were positive and constructive, many developing countries complained about the inadequate implementation of developed countries' commitments on finance and technology transfer under the Convention and that the GCF remains an empty shell. Developed countries in turn confined themselves to emphasising that the institutional machinery created in Cancún should be built upon and that appropriate regulatory and policy frameworks are needed in developing countries.

In a speech before the UN General Assembly in New York on 24 September 2013 UN Secretary-General Ban-Ki Moon repeated the summoning of a Climate Summit meeting in September 2014 to which he invited all heads of state. He challenged them to bring bold pledges to the summit and to deliver concrete actions and undertake further initiatives to close the emissions gap to meet the 2015 deadline for a new climate agreement.

Subsequent to COP 19 in Warsaw the roadmap to negotiate a new global agreement by 2015 includes 3-4 UNFCCC meetings in 2014, a UN meeting of heads of state in September 2014, the 5th Assessment Report of the IPCC in October 2014, the drafting of text elements for the new agreement until COP 20 in Lima, drafting the new agreement by mid-2015 and adopting it at COP 21 in Paris.

WORKSTREAM 2: Pre-2020 mitigation ambition

With regard to workstream 2 (WS2), countries and observers provided submissions on enhanced action, initiatives and options to increase ambition in 2013.

At the ADP session in April and June 2013, workshops took place on low-emission development opportunities, energy transformation and land-based mitigation opportunities. Roundtables were held on catalysing action, and building a practical and results-oriented approach to increasing pre-2020 ambition.

On land-based mitigation opportunities, Parties discussed national initiatives, obstacles and needs in order to reap benefits of the forest sector to mitigation. This was the first time that the ADP addressed land use-based mitigation opportunities. On low-emission development opportunities, Parties discussed best practices, success stories, barriers and solutions. On catalysing action, countries discussed strategies to enhance mitigation and adaptation activities and how to endow all countries with the means to do so. Developing countries emphasised the need to increase access to energy. During the roundtable discussions UNEP presented its Emissions Gap Report 2012. Views converged around the need to encourage new pledges, increase the ambition of existing pledges and scale up efforts in areas with high mitigation potentials. Specifically, it was debated how efforts under the Convention to the Montreal Protocol on Substances that Deplete the Ozone Layer could be linked to phase down HFC use.

Several countries emphasised opportunities from renewable energy and energy efficiency as the low-hanging mitigation potentials that Parties should focus on.

It was also discussed how climate finance can shift investment patterns faster towards low carbon. Governments examined key elements for such a shift, including: reducing investment risk for investors, public-private partnerships, a long-term legally binding agreement and strong domestic institutions in recipient countries. The role of finance, technology development and transfer and capacity building was emphasised as a key factor in facilitating enhanced action by developing countries before 2020.

Some Non-Annex I Parties including Brazil said that progress in the negotiations would depend on ambitious mitigation actions by developing countries.
However, in the discussions Parties did not hint at significant new or strengthened country-wide pledges for the pre-2020 period. For Warsaw, the ADP invited the incoming Co-Chairs to propose a more focused and formal mode of work on the basis of countries' submissions.
The key task in Warsaw will be to establish concrete inputs on how to enhance pre-2020 mitigation ambition to close the ambition gap. According to the ADP work programme, COP 19 is expected to provide a clear roadmap for 2014 with the aim of producing a draft negotiating text for COP 20 in 2014.

International Cooperative Initiatives

International Cooperative Initiatives (ICI) were proposed by the EU in 2012 in the context of WS2 to describe and encourage voluntary partnerships to enhance ambition. ICIs are seen as a flexible concept rather than one requiring an agreed definition, meaning that governance arrangements and types of activity need not be prescribed. As such ICIs represent more of a bottom-up approach of contributions by diverse actors.

Parties still need to identify areas where additional actions and initiatives may be required and to accelerate and scale up international cooperative initiatives to help Parties taking the actions necessary to bridge the gap. In Bonn, Parties identified activities that could be strengthened or established outside the UNFCCC to promote ambition, particularly: phasing down fluorinated gases, promoting renewables, energy efficiency, fossil fuel subsidy reform, improved land use management, capitalising on actions at city-level, and addressing the upfront costs of investments in the energy sector. However, Parties have not yet presented elaborated ideas on the ways for the UNFCCC process to catalyse, encourage, showcase and record progress of these activities.
For Warsaw it is expected that prototype ICIs are taken forward, and that the UNFCCC process will get a role in catalysing and monitoring these initiatives. However, to encourage a broad range of action, the EU sees the role of the UNFCCC as relatively slight, neither requiring nor preventing them. Instead, a mechanism by which ICIs can be encouraged and guided, and voluntarily accounted for, would enhance and formalise their role in the UNFCCC process.

Phase-down for HFCs

One example of a potential ICI proposed by the EU would be a Partnership to phase down and leap frog HFCs that could be led by the EU. These fluorinated gases, that have replaced ozone depleting substances in refrigeration, air conditioning or insulating foams, are already being replaced in some categories with cost-effective substitutes. Through such an initiative partners would agree to take significant domestic measures to phase down current consumption and avoid future growth of HFCs in the coming decade. Partners would agree, through a joint declaration, to set national targets that reflect a contribution to global efforts; to share best practices through multiple forums, including under the Montreal Protocol or the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants (CCAC) under UNEP; to jointly promote the amendment of the Montreal Protocol to phase down HFCs; and to fund HFC 'leapfrogging' under the Multilateral Fund, bilaterally, and, eventually, under the GCF.

Similar to the EU, the USA supports a gradual phase-down in the consumption and production of HFCs through an amendment to the Montreal Protocol. Progress related to HFCs was made at the G20 summit in September 2013 where leaders of the G20 agreed to phase down HFCs. Particularly, China and the USA announced their agreement on establishing a contact group under the Montreal Protocol on HFCs to consider issues related to cost-effectiveness, financial and technology support, environmental benefits and an amendment to the Montreal Protocol. The recently agreed partnership to combat climate change by USA and India includes the reduction of HFCs as well (Goswami, 2013).

The proposal to include HFCs within the Montreal Protocol has the support of over 100 countries, including the EU, the USA and Mexico. Also the G20 countries have agreed to phase down HFC production and consumption under the Montreal Protocol, while continuing to account for HFC emissions under the UNFCCC. China's support will strengthen the proposal, which will be considered at the 25th meeting of the Parties to the Montreal Protocol, to be held in Bangkok in October 2013.

1.3.3. Position of Parties

The overarching divide between Annex I and Non-Annex I Parties under the ADP work is whether and how the clear separation between these groups of Parties should be modified and replaced by a more differentiated spectrum of commitments for all Parties.

Also, the role of the Convention principles, particularly the common but differentiated responsibilities (CBDR) and the equity principle in the new legal agreement to be developed by the ADP constitutes a major point of debate. The Umbrella Group, the EU and Colombia hold the view that Convention principles should be seen in an "evolving context", highlighting the need to discuss further the principle of equity in terms of fairness and reflecting changing realities. Also the Association of Independent Latin American and Caribbean States (AILAC) considers the Convention to be a living instrument that should be interpreted in a dynamic way so that the CBDR principle is understood as a tool for action, not an excuse for inaction. However, many developing countries oppose any "rewriting or renegotiation of Convention's principles" and suggest together with China that the CBDR principle should guide the ADP's work, which is opposed by the USA and others.

The AILAC countries stated at the meeting that they want a new Protocol and argued in favour of mitigation commitments for all Parties, calling for a dynamic interpretation of the Convention and a reconsideration of how common but differentiated responsibilities should apply to commitments by all Parties for the 2015 agreement. On WS2, AILAC wants Parties to present information on the size of gap and analysis of potential global emissions reductions by sector and a discussion on barriers to enhanced ambition.

At the meetings in 2013 AOSIS stressed the principle of common but differentiated responsibilities and respective capabilities (CBDRRC), highlighted means of implementation and called for further work on linkages between existing institutions. They oppose any changes to the Annexes of the Convention and favour a new protocol under which all Parties shall act. On WS2 AOSIS argued in favour of involving a number of stakeholders into the process. AOSIS calls for a ministerial roundtable at COP 19.

Australia stressed that mitigation must be a core part of a post-2015 Agreement which should not replicate existing infrastructure such as the Cancún institutions. It should be fair, flexible, robust and dynamic to accommodate for different national capacities and allow for differentiated commitments. Yet, it calls for every country to submit a pledge. For WS2 it focuses on five areas of action: building mitigation toolboxes, transparency, markets, REDD+ and political engagement.

Canada advocates a dynamic application of the Convention principles and mitigation commitments for all major emitters.
China argues for maintaining the Convention and its principles and provisions as they are. China called for revisiting Annex I quantified emission limitation or reduction objectives (QELROs) and inviting Annex I Parties not participating in the second commitment period under the Kyoto Protocol to undertake comparable targets. No new commitments should be introduced for developing countries. It suggested using developed countries' public finance as a catalyst to provide incentives for the private sector in capital and technology markets.

The EU proposed a step-wise approach to formulating mitigation commitments consisting of: (1) defining the information to be presented upfront with mitigation commitments to ensure that commitments are transparent, quantifiable, comparable, verifiable and ambitious; (2) Parties decide in Warsaw to formulate and put forward their mitigation commitments in 2014; (3) a review of proposed commitments assessing whether they are sufficient to meet the 2ºC targets in 2014 and 2015; and (4) inscribing commitments into the 2015 agreement, which should be a Protocol. The EU outlined encouraging new pledges and increasing ambition of existing pledges with developed countries in the lead; a decision on phasing out HFCs; elaborating the role of the UNFCCC in catalysing international cooperation initiatives; and linking the UNFCCC to other processes, including the 2014 UN Leaders' Summit.

For COP 19 the EU particularly envisages a decision on the timelines for the process of establishing commitments and a decision on HFCs and scaling up actions in areas of high mitigation potential. It calls for agreement on the process for Parties coming forward with proposed mitigation commitments already in 2014 and inscribing them in the 2015 agreement, an agreed common format for information that must accompany proposed mitigation commitments, progress on accounting rules associated with different commitment types and a clearer understanding of how an 'assessment phase' of such commitments might work. Individual Parties would be free to choose which indicators they use in the development of their proposed commitments to assess whether these are sufficiently ambitious and fair, and should put these indicators forward in a transparent manner. The EU also proposes that indicators which a majority of Parties see as the most relevant for use in the assessment phase could form a 'basket' of indicators against which proposed mitigation commitments would be assessed.

However, the majority of Parties hold the view that putting forward mitigation commitments in 2014 is far too early.

India strongly opposes any reinterpretation of the Convention, its principles or Annexes. It advocates a punitive compliance mechanism for developed countries and calls for the provision of concessional technology to allow developing countries to take early and effective action as developed countries need means of implementation to act.

The Least Developed Countries (LDCs) emphasise developed country leadership but call for action from all Parties. They support the use of metric and non-metric criteria, such as historical responsibility, future sustainable needs and vulnerabilities. They are sceptical towards voluntary schemes and actions outside the Convention as these are likely to undermine its effectiveness and are not under international oversight. They stress transparency and the balance between mitigation and adaptation.

The Like-Minded Developing Countries (LMDC) want to uphold the principles of the Convention and call for greater action by Annex I Parties as well as commitments on climate finance. A review of developed country commitments is key for an ADP work plan for this group of countries. They favour the continuation of a top-down approach for developed countries. No new commitments for developing countries shall be introduced.

South Africa calls for broad participation and ambitious commitments from all Parties for a legally binding post-2015 Protocol. It stresses the equal importance of mitigation and adaptation and that a future agreement shall be dynamic, cost-effective and fair. It proposes tools as a basis for countries to implement the action most appropriate to their national circumstances. South Africa cautioned against using global economic instability as an excuse for delaying the delivery of means of implementation, and stressed the need to focus on capitalizing the Green Climate Fund (GCF). On WS2, South Africa called for further discussion on: phasing out fossil fuel subsidies, supporting technology transfer, encouraging local innovation, and involving women and youth.

The USA expressed the view that the 2015 agreement should focus on the approach to mitigation. According to the USA, mitigation action is the main issue that needs updating, as the Cancún mitigation commitments (and Kyoto commitments for those that undertook them) generally do not extend beyond 2020. It calls on all Parties to contribute to mitigation by defining their own mitigation commitments to allow for differentiation. A common system of reporting and review should provide flexibility. Furthermore, the USA stresses that the same rules shall apply for major emitters from developing countries and developed countries. It believes advanced developing countries should be treated like developed countries once they have surmounted a certain level of development. Under WS2 of the ADP the USA expressed the following ways to increase pre-2020 ambition: clarification of existing pledges, encouragement of Parties to include additional sectors or actions in their pledges, encourage Parties that have not yet pledges to do so, and public recognition of countries' mitigation pledges. The USA also stresses that it is important for the UNFCCC to encourage and recognize subnational and private sector action regarding progress on WS2.

1.4. Amendment of the Kyoto Protocol

1.4.1. Agreement achieved in Doha

In Doha, an amendment of the Kyoto Protocol was agreed so that it could seamlessly continue (Decision 1/CMP.8). Specifically, governments decided:

- quantitative limitation and reduction commitments for Annex I Parties for the second commitment period from 2013 to 2020. However, the number of Parties with commitments has been reduced further compared to the first commitment period and includes only EU, Iceland (included in EU's joint fulfilment agreement), Norway, Switzerland, Ukraine, Australia, Belarus, Kazakhstan, Liechtenstein, Monaco and Ukraine. Canada, Japan, New Zealand and the Russian Federation do no longer have a quantitative target for the second commitment period.
- that the second commitment period will be from 1st January 2013, running until the end of 2020;
- the preservation of the legal requirements and the accounting rules of the Protocol;
- that countries which are taking on further commitments under the Kyoto Protocol will review their emission reduction commitments at the latest by 2014 with a view to increasing their respective levels of ambition in line with an aggregate reduction of GHG emissions of at least 25-40% below 1990 levels by 2020;
- the continuation of the market mechanisms under the Kyoto Protocol (Clean Development Mechanism, Joint Implementation, International Emissions Trading);
- that all developed countries that have accepted targets for the second commitment period will continue to have uninterrupted access to the mechanisms;
- that surplus assigned amount units (AAUs) carried over from the first to the second commitment period (CP2) of the Kyoto Protocol by Annex I countries are transferred

to a special account and can only be used if a Party is in non-compliance with its target for the second commitment period and can be traded to a limited amount of 2.5 % of a Party's assigned amount.

- to introduce a new provision to prevent so-called 'hot air' and strengthen targets for the second commitment period. Under Article 3.7ter, a Party has to cancel AAUs for the second commitment period, if the assigned amount of the second commitment period is higher than the average annual emissions for the first three years of the preceding commitment period multiplied by eight. This provision would prevent quantitative commitments that are higher than the average emissions in the first commitment period. In Doha there had been disagreement about this provision between the Russian Federation, Belarus and Ukraine and AOSIS and developing countries who proposed this provision. The EU argued in Doha that this provision will only be applied for the EU as a whole under the joint fulfilment agreement.
- to introduce a new type of 'fee' for the transfer of AAUs and the issuance of Emission Reduction Units (ERUs) from Joint Implementation (JI) projects. This so called 'share of proceeds' is a 2 % share of the first international transfers of AAUs and is transferred to the Adaptation Fund under the UNFCCC.

1.4.2. Negotiation process in 2013

Before the Doha Climate Gateway package was agreed, the Russian Federation wanted to make a statement in the CMP closing plenary and reject the adoption of the AWG-KP outcome. However, it was not given the floor and adoption was gavelled by the COP/CMP President. Consequently, the Russian Federation, Belarus and Ukraine submitted a proposal on legal and procedural issues related to decision-making under the COP and CMP to SBI 38 in June 2013 which other Parties did not want to consider as a new SBI agenda item. As a result, the SBI was unable to start its work in Bonn in June 2013.

The amendment of the Kyoto Protocol was completed in Doha. Outstanding work in 2013 only concerns further technical issues necessary to fully implement the second commitment period. This work is described in section 2.2.2 under 'Implications of Durban decisions 2-4/CMP.7 and Doha decision 1/CMP.8 under the Kyoto Protocol on the previous decisions on methodological issues related to the Protocol, including Protocol Articles 5 (national systems), 7 (GHG inventories) and 8 (expert review).'

The key step now is the ratification of the amendment for the second commitment period. The EU will present its proposal for ratification during the negotiations in Warsaw. This proposal will address how the EU will internally implement the joint fulfilment agreement under Article 4 of the Kyoto Protocol. The joint ratification will cover a significantly larger number of countries, an increase from 15 to the 28 Member States. In addition, Iceland will be part of the EU bubble in the second commitment period. Currently, negotiations are underway for this implementation. It is likely that the EU ratification proposal will look different from the one relating to the first commitment period and will reflect the climate and energy package which constitutes an EU-wide target under the ETS in the period 2013-2020 and Member States' specific targets for the non-ETS sectors under the Effort Sharing Decision (Decision No 406/2009/EC). Details will only become available during the COP in Warsaw. No Party has ratified the amendment so far.

After the change of governing Party in Australia, it is also unclear whether the new government will continue with the ratification process for the second commitment period. However, in recent meetings Australian government officials expressed continued support for ratification.

1.5. The impact of other relevant international developments on the negotiation process

In 2013 the public debate continues to be dominated by the financial crisis. An increase in the ambition of mitigation targets, an enhanced mitigation burden for developed countries and additional commitments to long-term financial support are clearly not top priorities for many governments of developed countries. Public budgets of Annex I Parties are extremely stretched and Annex I Parties can no longer make very generous offers of financial support. With the fast recovery from the economic crisis of emerging and developing countries and the continued economic problems in Annex I Parties like the USA and many EU Member States, ambitious mitigation commitments without some type of mitigation action from emerging countries are difficult to sell to voters in industrialised countries.

In the future the discussions under the ADP will again strongly depend on the willingness of the USA as well as China and other emerging countries to commit to mitigation action in a legally binding international form. Recent high-level meetings with China and the US indicated some willingness of both key players to present mitigation commitments for the period after 2020 and to be ready with such proposals at the end of 2014 or early 2015.

While in the USA there is no increase in public support for climate policy compared to previous sessions, the strong shift from coal to gas from fracking technologies leads to decreasing emissions in the energy sector and is lowering the influence of the coal industry. This creates more favourable conditions for an international mitigation commitment under the UNFCCC. The Chinese attempt to create a domestic emission trading system also indicates domestic preparations towards an international agreement.

However, with regard to some other emerging countries with high contributions to global emissions, no signals are available that they are willing to accept legally binding commitments for the period after 2020 in a new agreement.

High-level statements from India show that they are not willing to accept any responsibilities related to mitigation commitments and want to keep the current situation with only binding commitments for Annex I Parties. Brazil is also strongly emphasising the historic responsibility of Annex I Parties for anthropogenic GHG emissions.

Specific issues deserving attention in the context of COP 19 are Poland's initiatives to strongly involve the private sector in the international negotiations and its agreement with 12 companies as 'partners' of this year's COP. Among these companies are big energy and oil companies involved in the construction of new coal power plants as well as the steel firm Arcelor Mittal, BMW and International Paper, which will provide logistics and funding for the conference. Also, a Business Day will be organised during the pre-COP, roundtable discussions for business representatives and Party delegates are planned for the COP and an 'International Coal and Climate Summit' will be held parallel with COP 19. This strong business involvement in the COP raises strong criticism from NGOs, but will also raise concerns of participating countries that the Polish COP presidency might be pursuing a separate agenda. In addition, the Polish presidency has established separate objectives for COP 19 outcomes which are not directly related to the agenda of the UNFCCC negotiations. These preparations might not create favourable conditions for a strong outcome of the conference.

In June, the Russian Federation, Ukraine and Kazakhstan blocked the negotiations under SBI, because they insisted on an agenda item related to decision-making under the COP and CMP after they had not been provided with the possibility to intervene when the Doha Climate Gateway package was agreed. Other Parties, in particular G77 and AOSIS rejected this agenda item and therefore the SBI session did not start. In Warsaw, this item is on the agenda again and a similar dispute may be triggered. In addition, a new additional agenda item related to Article 3.7ter of the Kyoto amendment was proposed by Kazakhstan (agenda item 11 of the provisional COP/MOP agenda) which may be seen by other Parties as supporting Russia, Ukraine and Belarus and additional disputes on the agenda may arise from this proposal.

2. INDIVIDUAL TOPICS IN CLIMATE NEGOTIATIONS

2.1. Mitigation of greenhouse gas emissions

2.1.1. Agreement achieved in Doha

Regarding the mitigation ambition of developed countries, the COP in Doha:

- urged developed country Parties to increase the ambition of their quantified economy-wide emission reduction targets, with a view to reducing their aggregate anthropogenic GHG emissions to a level consistent with the IPCC Fourth Assessment Report; and
- decided to establish a work programme under the SBSTA to commence in 2013 and end in 2014, to continue clarifying the targets, with a view to: identifying common elements for measuring the progress made towards the achievement of the targets; and ensuring the comparability of efforts among developed countries, taking into account differences in their national circumstances.

Furthermore, a process was launched in Doha to review the long-term temperature goal between 2013 and 2015 in order to verify the magnitude of climate change and the possible need to mobilise further action. While the EU only aimed for assessing the appropriateness of the long-term goal, the BASIC countries called for a general review of the implementation of commitments. The final agreement allows for considering countries' commitments when assessing progress towards the long-term goal.

In Doha, Parties also adopted amendments to the Kyoto Protocol Article 3.1, including the objective of reducing overall emissions by Annex I Parties of the covered GHG by at least 18% below 1990 levels from 2013 to 2020. A new provision was added to Article 3.1 stipulating that a Party included in Annex B "may propose an adjustment to decrease" its quantified economy-wide limitation or reduction commitment (QELRC) stated in Annex B and that this proposal shall be considered adopted by the CMP unless more than ¾ of the countries present and voting object to its adoption.

The Doha agreement recalls the goal to hold the increase in global average temperature below 2°C above pre-industrial levels. To ensure a likely (>66%) chance of achieving the common goal of limiting global warming to less than 2°C above pre-industrial temperatures, a peak in global GHG emissions is required before 2020, with emissions levels in 2020 being approx. 44 $GtCO_2eq$ (current emissions are estimated at 50.1 $GtCO_2eq$) and steeply declining thereafter (at a median of 2.5% per year). The later the peak occurs, the steeper the decline in emissions would need to be in the subsequent decades (UNEP, 2012). However, neither in previous COPs nor in Doha could a time frame for a peak in global emissions be agreed upon.

Shortly after the COP 15 in Copenhagen, developed countries submitted pledges for quantified economy-wide emission reduction targets for 2020. These pledges were included in an information document in accordance with the Cancún decision, but not converted into legally-binding commitments in an international agreement. Some of these pledges were slightly updated and modified in 2012 and the Kyoto Parties submitted quantified targets in 2012. In 2013, the general situation did not change significantly.
Accordingly, developing countries, including all major emitters, committed to implementing nationally appropriate mitigation actions (NAMAs), which they also had submitted at the beginning of 2010. These pledges were included in an UNFCCC information document which is not a legally binding commitment.

The Cancún decision invites developing countries to submit further pledges for NAMAs and some additional pledges or clarifications of existing pledges were submitted in 2013. The implementation of NAMAs is conditional on the provision of support from developed countries.

It was agreed that further work to increase the mitigation ambition will be carried out under the ADP. As described in section 1.3.2.2, a number of workshops were held in 2013 to discuss the increase in ambition of mitigation commitments.

2.1.2. Necessary emission reductions

The IPCC Fifth Assessment Report (AR5) as well as recent literature reinforce evidence that limiting warming to less than 2°C above pre-industrial temperatures considerably reduces the risk of triggering accelerated or irreversible changes in the climate system as well as large-scale adverse impacts. Nevertheless, significant risks do still remain. The assessments that are currently available give preliminary evidence that such a goal might only be possible by allowing temperatures to initially exceed 1.5°C, followed by temperature reductions towards the end of the century or later (overshooting) (UNEP 2012). In May 2013, CO_2 levels exceeded 400 ppm for the first time in recent history (IEA, 2013).

The AR5 deviates from the approach taken so far to develop emission scenarios which indicate consequences for temperature increases from the point in time when global emissions peak and the rate at which they decrease thereafter (Special Report on Emission Scenarios). Instead, it presents four Representative Concentration Pathways (RCPs). Each RCP expresses a different total radiative forcing by 2100, or shows how much extra energy the Earth will retain as a result of human activities. From this information the concentration of greenhouse gases needed to trap that amount of energy can then be derived, and it can be assessed what those levels of radiative forcing would mean for the climate.

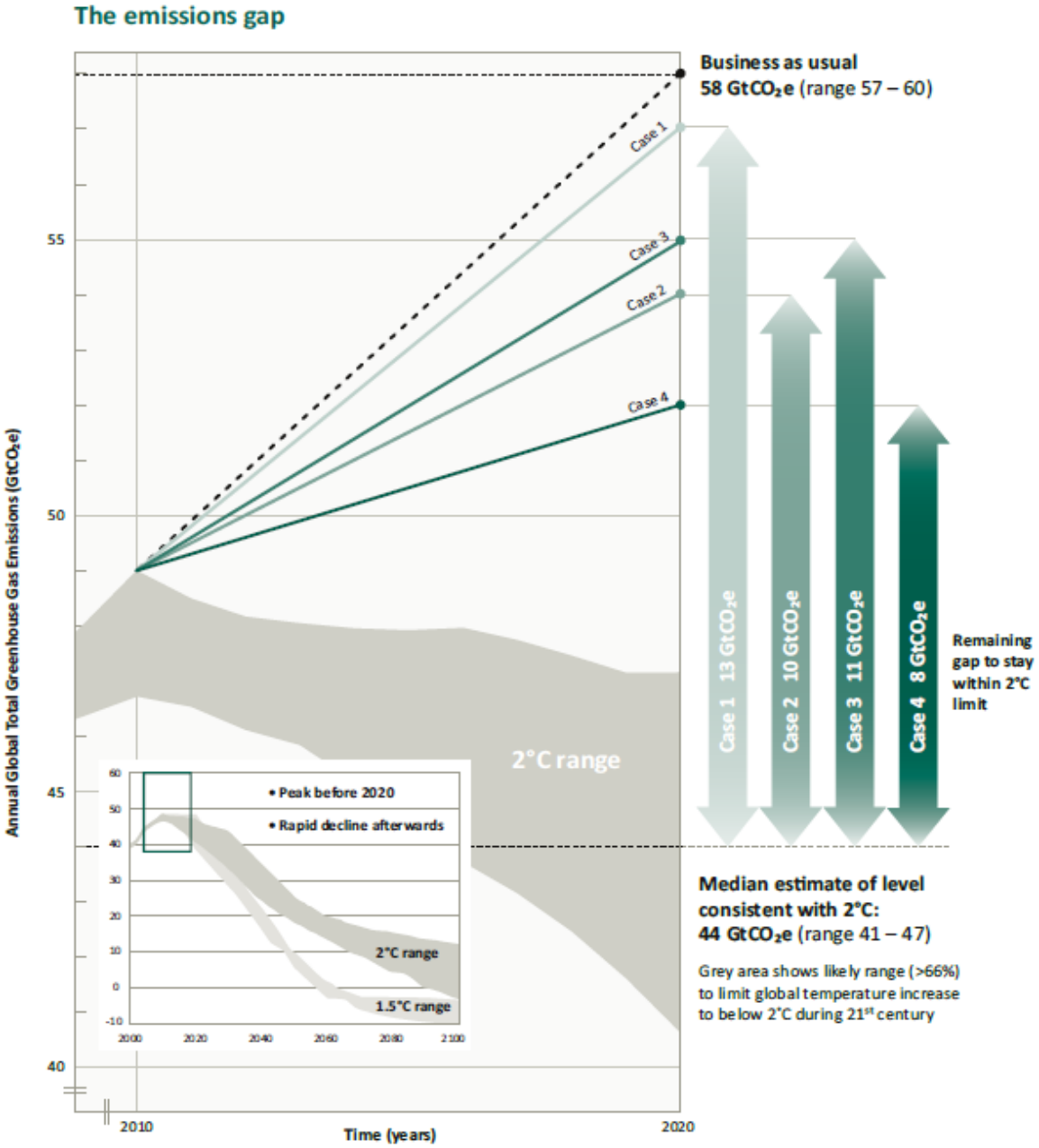
Under the newly developed emissions scenarios, the IPCC scenario RCP2.6 is the only scenario that will lead to global temperatures which will probably not exceed 2°C by the end of the 21st century (22% probability to exceed 2°C). The RCP2.6 is a stringent mitigation scenario assuming peaking CO_2 emissions in the decade 2015-2024, therefore peaking atmospheric CO_2 concentration below 450 ppm around 2050 and declining concentration thereafter due to net CO_2 removals from atmosphere. This stabilises and then slowly reduces the radiative forcing after mid-21st century.

As the principal driver of long-term warming is the total cumulative emissions of CO_2 over time, it is necessary to limit the cumulative emissions over the entire industrial era to about 1000 Gigatons carbon to keep the temperature rise likely (i.e. with a probability greater than 66%) below 2°C, 460 to 630 Pg of which had already been emitted by 2011. Accounting non-CO_2 radiative forcing results in a lower remaining budget for CO_2 emissions. Thus, aggressive mitigation is necessary in order to keep the temperature rise below 2°C (IPCC, 2013).

The 2012 "Emissions Gap Report" by UNEP provided new evidence pointing to the fact that current global emissions considerably exceed the level of emissions consistent with the 2°C target in 2020 and are still growing. Current emissions are estimated at 50.1 $GtCO_2e$ (with a 95% uncertainty range of 45.6 – 54.6) (UNEP 2012).[2]

[2] At the time of publication no 2013 update of the UNEP emission gap report was available.

Figure 1: The emission gap in the period 2010 to 2020



Case 1 – "Unconditional pledges, lenient rules"

If countries implement their lower ambition pledges and are subject to "lenient" accounting rules, then the median estimate of annual greenhouse gas emissions in 2020 is 57 $GtCO_2e$, within a range of 56-57[3] $GtCO_2e$.

Case 2 – "Unconditional pledges, strict rules"

This case occurs if countries keep to their lower ambition pledges, but are subject to "strict" accounting rules. In this case, the median estimate of emissions in 2020 is 54 $GtCO_2e$, within a range of 54-55 $GtCO_2e$.

Case 3 – "Conditional pledges, lenient rules"

Some countries offered to be more ambitious with their pledges, but linked that to various conditions described previously. If the more ambitious conditional pledges are taken into account, but accounting rules are "lenient", median estimates of emissions in 2020 are 55 $GtCO_2e$ within a range of 54-56 $GtCO_2e$.

Case 4 – "Conditional pledges, strict rules"

If countries adopt higher ambition pledges and are also subject to "strict" accounting rules, the median estimate of emissions in 2020 is 52 $GtCO_2e$, within a range of 51-52 $GtCO_2e$.

Source: UNEP (2012)

[3] Ranges refer to the 20th – 80th percentile.

Converted to absolute figures studies show that emission levels of approximately 44 Gigatonnes of CO2 equivalent (GtCO2eq) (range: 41-46 GtCO2eq) in 2020 would be consistent with a "likely" chance of limiting global warming to 2°C. For a "likely" chance of meeting the 2°C target, the estimated emissions gap in 2020 is 8 to 13 GtCO2eq (depending on how reduction pledges are implemented) according to the latest UNEP Emissions Gap Report (as compared to 6 to 11 GtCO2eq in the last Report).
Under business-as-usual projections, global emissions could reach 58 GtCO2eq (range: 57 to 60 GtCO2e) in 2020, leaving a gap of 14 GtCO2eq (UNEP 2012) as shown in Figure 1.

Consequently, the average 18% emission reduction by Annex I Parties from 1990 levels in 2013-2020 agreed for the second commitment period under the Kyoto Protocol is not nearly enough to embark on a way to avoid exceeding the 2°C temperature increase limit.

As the effects of global warming will not be evenly distributed around the world, warming to global mean temperatures much higher than 2°C must be avoided. The consequences of 4°C warming would not simply be an extension of those at 2°C warming. The risk of crossing thresholds of non-linear tipping elements in the Earth system, with abrupt climate change impacts and unprecedented high-temperature climate regimes, increases. Projections for a 4°C world show a dramatic increase in the intensity and frequency of high-temperature extremes. In this new high-temperature climate regime, the coolest months are likely to be substantially warmer than the warmest months at the end of the 20th century. The projected impacts on water availability, ecosystems, agriculture, and human health could lead to large-scale displacement of populations and have adverse consequences for human security and economic and trade systems. A 4°C world is likely to be one in which communities, cities and countries would experience severe disruptions, damage, and dislocation, with many of these risks spread unequally. The full scope of damages in a 4°C world has not been assessed to date (The World Bank, 2012).

Achievement of targets for the first commitment period by the EU

On 9 October 2013 the EEA released a report 'Trends and projections in Europe 2013'. This report concludes that the 15 EU Member States with a common target for the first commitment period under the KP (2008-2012) are on track to achieve their 8% reduction target compared to base-year levels under the KP. In total, the average emissions of this group of countries have declined by 12.2% compared to base-year levels during the first commitment period – well beyond the 8% target.

Also other European countries with individual GHG limitation or reduction targets under the KP (26 EU Member States, Iceland, Liechtenstein, Norway and Switzerland) are on track towards achieving their respective targets. 17 EU Member States as well as Iceland and Norway are achieving their targets through domestic reductions only.

Austria, Belgium, Denmark, Liechtenstein, Italy, Luxembourg, the Netherlands, Spain and Switzerland have exceeded their respective emission budgets in sectors not covered by the EU ETS and will need to close the gap by making use of flexible mechanisms under the KP.

The first commitment period under the KP also coincides with the second trading period under the EU ETS. Due to changes in the fuel mix which observed a shift to gas, increased use of renewable energy sources and a decrease in production due to the economic crisis a large surplus of around 1.8 billion allowances has been accumulated through the EU ETS from 2008-2012.

Regarding the EU's 20/20/20 objective (20% reduction of GHG emissions compared to 1990; 20% share of renewable energy in the EU's final energy consumption and a 20% increase of the EU's energy efficiency by 2020), the EU reduced its emissions between 1990 and 2012 by approximately 18 % - so it is very close to reaching its 20% emission reduction target already 8 years ahead of 2020. The EU is also on track to meet its target for renewable energy consumption by 2020 - renewables contributed with 13 % to final energy consumption in 2011, a share expected to further increase to 20% by 2020. Progress on increasing energy efficiency is insufficient to meet the 20% target by 2020 though, and only four Member States (Bulgaria, Denmark, France and Germany) are making good progress in reducing energy consumption and primary energy intensity (EEA, 2013). While the assessment of Member State progress shows overall relatively good progress towards climate and energy targets, no single Member State is on track towards meeting all three targets. Equally, no Member State is underperforming in all three areas.

2.1.3. Bridging the ambition gap

Technically speaking, the emissions gap can be bridged. The technical potential for reducing emissions by 2020 is estimated to be about 17 +/-3 $GtCO_2eq$, at marginal costs below USD 50-100/t CO_2e reduction. This potential includes the power sector, industry, transport, buildings, forestry, agriculture and waste. Yet, time is running out to do so and faster action is required which will be more costly. Meanwhile, current investments in infrastructure are consolidating patterns of high energy use and subsequent emissions for many years (UNEP 2012).

Suggested building blocks to enhance climate change mitigation and bridge the emissions gap are (1) international negotiations, including in non-UNFCCC fora such as the G20, G8, the Montreal Protocol, IMO and ICAO, that should contribute to mitigation and finance pledges, abolishing loopholes in the Kyoto Protocol, phase out HFCs and achieve progress in many other areas with mitigation potential such as fossil fuel subsidies, black carbon, emissions from international aviation and shipping; (2) ambitious unilateral action and (3) the building of pioneer alliances between states as well as non-state actors such as civil society, the private sector and sub-states (Cuntz, Bals, & Harmeling, 2013).

2.1.4. Mitigation commitments of developed countries

During the course of 2013, the mitigation pledges of Annex I Parties did not change much compared to the pledges submitted until 2012. The submissions of Parties on the work programme on clarification of quantified economy-wide emission reduction targets of developed country Parties agreed in Doha include their views on how to identify such common elements for measuring progress towards the achievement of emission reduction targets and views on how efforts can be made comparable; but they do not amend or add any further clarification to the pledges made by developed countries in 2012 under the Convention (new pledges are supposed to be made under the ADP). For comparability, the countries' reduction pledges are given in Table 1. Current reduction targets by Annex I countries aggregated together only achieve a 12-18 % emission reduction in 2020 and are still about 10 percentage points short of reaching even the lower end of the necessary range of -25 to 40 %. According to Rogelj et al. (2010), the current pledges correspond to a 50% chance that the increase in temperatures will exceed 3°C by 2100. Climate Analytics, PIK and Ecofys project that the global mean temperature will increase by 2.6 – 4.1 degrees Celsius by 2100 if no further action beyond current pledges is taken (Vieweg et al., 2012).

In addition to the shortfall between scientific needs and Parties' pledges, two more aspects decrease the environmental effectiveness:

- **Assigned Amount Unit (AAU) surplus**:

  Under the Kyoto Protocol, Parties can bank any unused emission allowances from one commitment period to the next. Emissions in most central and eastern European countries fell far below their respective Kyoto targets during the restructuring of their centrally planned economies. Despite emission increases in recent years overall, these countries are still significantly below their commitments in the first commitment period. Estimates for the carry-over of these unused Assigned Amount Units (AAUs) amount to 6% of the aggregate Annex I emissions in 1990 for all years between 2013 and 2020. They are also called 'hot air' units that do not represent real mitigation efforts but are due to economic decline experienced by a number of countries after 1989, especially Central and Eastern European countries in transition such as the Russian Federation, Ukraine and Poland.

  In Doha it was decided that Parties with commitments for the second commitment period are required to establish 'previous period surplus reserves". AAUs in a Party's national registry that are carried over shall then be transferred to its previous period surplus reserve account. The units in this reserve account can only be used for a country's own compliance and only a limited amount of up to 2% of the initial assigned amount a country received for the first commitment period (CP1) can be transferred to other Parties. Potential sales are likely to be below the 5-7 billion AAUs that are available from countries with a surplus from CP1 that have a commitment for CP2 as the demand is low (Kollmuss, 2013). In addition many countries with commitments for the second commitment period, have declared that they will not purchase banked AAUs from other countries to achieve their targets in the second commitment period (Australia, EU-27, Japan, Liechtenstein, Monaco, Norway and Switzerland). Countries which are not participating in CP2 are not allowed to sell their surplus AAUs to a country with a commitment for CP2. This means that in practice the AAU surplus may have limited impact in the second commitment period and the full potential to lower the ambition will likely not be used.

Table 1: Annex I reduction targets for 2020 (in %) including related assumptions and conditions

	Quantitative economy-wide emission reduction targets (%)	Reference year	Assumptions and conditions
Australia	-5 to -15 or -25	2000	- 5% target represents a minimum unconditional commitment (and in line with its QELRC under the second commitment period of the Kyoto Protocol); - 15% target is conditional on a global agreement falling short of securing atmospheric stabilisation at 450 ppm CO_2eq, including emission reduction targets for all major developing economies substantially, a strong international financing and technology cooperation framework, commitments by advanced economies comparable to Australia's, and access to deeper and broader functional carbon markets; - 25% target is conditional on an ambitious global deal capable of stabilizing levels of GHGs in the atmosphere at 450 ppm CO_2eq or lower, including a clear pathway to achieving an early global peak in emissions, advanced economy reductions in aggregate of at least 25% below 1990 levels by 2020, major developing economies with a collective reduction of at least 20% below business as usual (BAU) by 2020, and the nomination of a peaking year for major developing economies. Additionally, the 25% target is conditional on the inclusion of forests and the land sector in the global agreement.
Belarus	-5 to -10	1990	- Conditional on the Party's access to the flexibility mechanisms under the KP, the increase of technology transfer, capacity-building and taking into consideration Belarus's special conditions as a country in transition. - Conditional on clarity on the use of new rules and modalities for LULUCF; if LULUCF is included, the target could increase by a further 5%.
Canada	-17	2005	- Canada's target is to be aligned with the final economy-wide emission reduction target of the USA; - LULUCF emissions and removals would be in the range of -2% to +2% of total 2006 emissions; - Use of Kyoto Protocol mechanisms is assumed to amount to less than 5% of total reductions.
Croatia	-5	1990	- Croatia's target will be replaced by an arrangement in line with and as part of the EU mitigation effort subsequent to its accession to the EU.
EU-27	-20/-30	1990	- 20% reduction target is unconditional; - The EU would move to a 30% target as part of a global comprehensive agreement for the period beyond 2012 under the conditions that all Parties contribute their fair share to a cost-effective global emission reduction pathway, other developed countries commit themselves to comparable emission reductions and developing countries contribute adequately according to their responsibilities and respective capabilities; - Greater ambition regarding use of market mechanisms compared to Kyoto Protocol: wants the inclusion of international aviation, higher CDM quality standards, supplementarity defined, recognition of early action, no carry-over of AAUs, single base year of 1990, annual compliance cycle, higher penalties for non-compliance in emissions trading sectors, taking into account direct and indirect effects of biofuels on land-use change.

	Quantitative economy-wide emission reduction targets (%)	Reference year	Assumptions and conditions
Iceland	-15/-30	1990	- 15% target assumes that the rules governing the Kyoto Protocol will continue to apply after 2012; - 30% target is to be achieved in a joint effort with the EU, as part of a global and comprehensive agreement for the period beyond 2012, provided that other developed countries commit themselves to comparable emission reductions and that developing countries contribute adequately; - Substantial share of mitigation efforts will have to be achieved through the LULUCF sector; actions in the LULUCF sector will allow Iceland to take on targets comparable with other developed countries, but large changes in LULUCF rules might call for recalculation of targets; - Role of market-based mechanisms in achieving targets is expected to be small.
Japan	-25	1990	- Japan's target is conditional on the establishment of a fair and effective international framework in which all major economies participate and on agreement by those economies on ambitious targets; - Contribution of forest management may vary from -2.9% to +1.5% relative to 1990 levels, depending on accounting rules for LULUCF under negotiation.
Kazakhzakhstan	-15	1990	
Liechtenstein	-20/-30	1990	- 20% target is unconditional; - Higher reduction target of up to 30% levels would be considered if other developed countries commit themselves to comparable reductions and that economically more advanced developing countries contribute adequately according to their responsibilities and respective capabilities; - Liechtenstein intends to refrain from using LULUCF in meeting its target; - Kyoto Protocol mechanisms are planned as an additional tool for complying with Kyoto provisions (10-40%).
Monaco	-30	1990	- Target is unconditional; - Ambition to become carbon neutral by 2050 at the latest; - Possibility of exceeding emission reduction target for 2020 through the use of mechanisms, particularly CDM.
New Zealand	-10 to -20	1990	- Target is conditional on a comprehensive global agreement which sets the world on a pathway to limit temperature rise to no more than 2°C, in which developed countries make comparable efforts, advanced and major emitting developing countries take action in line with their capabilities, there is an effective set of rules for LULUCF and there is full recourse to a broad and efficient international carbon market.
Norway	-30 to -40	1990	- 30% target is unconditional; - Move to a 40% target (and become carbon neutral by 2030) as part of a global and comprehensive agreement for the period beyond 2012 whereby major emitting Parties agree on emission reductions in line with the objective of a max-

	Quantitative economy-wide emission reduction targets (%)	Reference year	Assumptions and conditions
			imum 2°C global temperature rise; - LULUCF expected to contribute 6% of 1990 emissions to achievement of target; - 2/3 of emission reductions in 2020 will be achieved domestically; continuation of flexible mechanisms plays an important role.
Russian Federation	-15 to -25	1990	- Range of the target of the Russian Federation depends on appropriate accounting of the potential of the Russian Federation's forestry sector in the context of its contribution to meeting the obligations of anthropogenic emission reduction and the undertaking by all major emitters of legally-binding obligations to reduce anthropogenic GHG emissions.
Switzerland	-20 to -30	1990	- 20% target is unconditional; - Conditional offer to move to a 30% reduction as part of a global and comprehensive agreement for the period beyond 2012, provided that other developed countries commit themselves to comparable emission reductions and that developing countries contribute adequately according to their responsibilities and respective capabilities.
Ukraine	-20	1990	- The target of Ukraine is based on the following conditions: ○ (a) Developed countries have an agreed position on the quantified emission reduction targets of Annex I Parties; ○ (b) Ukraine maintains its status as a country with an economy in transition; ○ (c) The existing flexibility mechanisms under the Kyoto Protocol are kept; ○ (d) 1990 is kept as the single base year for calculating Parties' commitments; ○ (e) The provisions of Article 3, paragraph 13, of the Kyoto Protocol are used for the calculation of the quantified emission reductions of Annex I Parties under the Kyoto Protocol for the relevant commitment period.
USA	-17	2005	- Target is in conformity with anticipated US energy and climate legislation; - According to pending legislation target could be set to achieve 30% emission reduction by 2025 and 42% emission reduction by 2030, in line with the goal to reduce emissions by 83% by 2050; - Submission of the target by the United States was made on the assumption that other Annex I Parties, as well as more advanced Non-Annex I Parties, would associate with the Copenhagen Accord and submit mitigation actions; - LULUCF sector is included in target; - Currently no federal law exists that provides for emissions trading or international offsets.
Annex I	-12/-13 to -18	1990	- The aggregate emission reductions of developed country Parties over the 1990-2020 period are estimated for the low target to be about 12% and 13%, excluding and including LULUCF respectively, and for the high target to be about 18%, excluding and including LULUCF.

Source: http://unfccc.int/resource/docs/2012/tp/02.pdf and http://unfccc.int/resource/docs/2012/tp/05.pdf

- **Land use, land-use change and forestry:**

  If LULUCF is taken into account, emission reductions decrease further. Insufficient data and clarity regarding rules on carbon credits and LULUCF does not allow for a comparison of mitigation efforts relating to targets taking into account the contribution of carbon credits and LULUCF across Parties. However, the available data suggests that including LULUCF in the calculations would considerably reduce emission reductions for developed countries. Some preliminary estimates assume that the overall emission reduction decreases by another 5 % of 1990 emissions for all years between 2013 and 2020 if the accounting of LULUCF activities is included in 2012, new and less uncertain assessments are still missing, because the IPCC has not yet completed the methodological work for the second commitment period.

If the emission reductions are converted to absolute amounts in gigatonnes of CO_2eq, the situation looks as follows:

- The low targets could lead to absolute aggregate emission reductions by developed country Parties of around 2.34 $GtCO_2$eq in 2020, relative to the level of emissions in 1990 (which was approximately 37 $GtCO_2$eq), excluding LULUCF. Similarly, the high targets could lead to absolute aggregate emission reductions of around 3.36 $GtCO_2$eq in 2020, relative to the level of emissions in 1990, excluding LULUCF. Taking into consideration LULUCF, the situation only changes marginally, mainly owing to the emission trend of the Russian Federation (http://unfccc.int/resource/docs/2012/tp/05.pdf).

If the pledges of all countries are taken into account, the gap between ambition and emission reductions that would be necessary to meet the 2°C goal can be examined:

- If the lowest ambition pledges were implemented with the use of AAU surplus and LULUCF, emissions could be lowered slightly to 57 $GtCO_2$eq (range: 56-57 $GtCO_2$eq), leaving a significant **gap of 13 $GtCO_2$eq** (compared to 11 $GtCO_2$eq as estimated by UNEP in 2011).
- If countries were to move to the higher end of the emission reduction pledges and if a net increase of emissions was avoided by strict rules for LULUCF and surplus AAUs[4] the gap could be reduced substantially, the emissions in 2020 could be lowered to 52 $GtCO_2$eq (range: 41-52 $GtCO_2$eq), reducing the size of the **gap to 8 $GtCO_2$eq** (compared to 5 $GtCO_2$eq according to UNEP's most recent Emissions Gap Report). The median estimate of the emissions level with a "likely" chance of meeting the 2°C target is 44 $GtCO_2$eq for 2020 (UNEP, 2012).

Table 2 shows the targets proposed by the Commission, the high end of the pledges under the Copenhagen Accord and the range of outcomes of the different effort sharing proposals. To achieve the overall 30 % target, the USA, Russia, the Ukraine and Canada would particularly need to enhance their commitments. The compliance costs for achieving the high end of the pledges are below 0.5 % of GDP in 2020 in all Annex I countries if international emissions trading is allowed but no carry-over of unused units occurs (Duscha et al. 2010).

[4] Strict rules are defined to exclude allowances from LULUCF accounting and surplus emission credits to be counted towards the emission reduction pledges (UNEP, 2012, p. 12).

Table 2: Absolute emission targets and reductions of Annex I Parties (high end of range, excluding LULUCF)

	Emissions [Mt CO_2eq]			Target [Mt CO_2eq]		
	1990	2005	2020 BAU	2020 Target	Reduction to 1990	Reduction to BAU
Australia[(a)]	418.0	527.8	648.0	370.7	-47,3	-277,3
Belarus	139.2	84.2	136.2	125.3	-13,9	-10,9
Canada	589.3	739.8	720.0	614.0	24,7	-106
Croatia	31.5	30.2	41.7	33.2	1,7	-8,5
EU-27	5583.1	5148.7	5486.0	3908.2	-1674,9	-1577,8
Iceland	3.5	3.8	3.3	2.5	-1	-0,8
Japan	1266.7	1351.5	1334.0	950.0	-316,7	-384
Kazakhstan	360.1	234.3	290.0	306.1	-54	16,1
Liechtenstein	0.2	0.3	0.30	0.2	0	-0,1
Monaco	0.1	0.1	0.10	0.1	0	0
New Zealand	59.8	76.5	83.5	47.8	-12	-35,7
Norway	49.8	53.8	59.0	29.9	-19,9	-29,1
Russian Federation	3348.7	2120.3	2651.0	2511.5	-837,2	-139,5
Switzerland	53.1	54.4	55.1	37.1	-16	-18
Ukraine	929.6	417.4	468.0	743.7	-185,9	275,7
USA	6161.5	7178.7	7291.0	5958.3	-203,2	-1332,7
Annex I pledges	18994.1	18021.7	19267.1	15638.5	-3355,6	-3628,6
Annex I -25%	18994.1	18021.7	19267.1	14 286	-4 762	-1 530
Annex I -30%	18994.1	18021.7	19267.1	13 333	-5 714	-2 483
Annex I -40%	18994.1	18021.7	19267.1	11 428	-7 619	-4 387

Notes:
[(a)] For Australia an additional 83 $MtCO_2e$ came from the LULUCF sector in 2005.

Source: http://unfccc.int/resource/docs/2012/tp/05.pdf and Fenhann, 2012

The EU is close to achieving its unilateral target of cutting emissions by 20% by 2020 already 8 years ahead of 2020. Additionally, aggregated projections from Member States indicate, that the EU's emissions will further decrease in the coming years. If planned additional measures are implemented, the EU is expected to achieve a reduction of 24% below 1990 levels in 2020. Furthermore, emission reduction targets for the first commitment period of the KP have been overachieved in most Member States in sectors covered by the EU ETS as well as non-ETS emissions (EEA, 2013). There is therefore an unused potential to increase ambition to reduce emissions in the EU.

2.1.5. Pledges for mitigation action from developing countries

In Doha the COP decided to establish a work programme to further understanding of the diversity of nationally appropriate mitigation actions (NAMAs) from developing countries, including on: the underlying assumptions and methodologies; the need for financial, technological and capacity-building support for the preparation and implementation of NAMAs; and the matching of NAMAs with support.

NAMAs submitted by Non-Annex I countries vary greatly among countries. While some countries (Brazil, Indonesia, Israel, Marshall Islands, Mexico, Republic of Korea, Republic of Moldova, Singapore and South Africa) pledged non-binding, absolute emission reductions below a certain baseline or a business-as-usual (BAU) emission development, others (e.g. China and India) gave non-binding relative targets based on economic development and still others provided a list of intended actions in a number of sectors (Table 3).

Under the open invitation to communicate NAMAs under the SBI (previously AWG-LCA, included in decision 1/CP.16) 57 countries (or 35 % of developing countries with almost half of them being African countries) as well as the African Group have submitted mitigation actions in total.

As decided at COP 16 and COP 17, NAMAs can be submitted through a web-based registry[5] to record mitigation actions and information and support. Developing countries are also obliged to prepare biennial update reports containing an update of their national GHG inventory, information on mitigation actions and support needs and received support.

Table 3: Quantified NAMAs by Non-Annex I countries under the Copenhagen Accord and the Cancún Agreements

	NAMAs
Antigua and Barbuda	25% below 1990 by 2020
Bhutan	Stay carbon neutral by 2020
Brazil	36.1-38.9% below BAU by 2020
Chile	20% below BAU by 2020 as projected from the year 2007
China	40-45% reduction of CO_2 emissions/GDP below 2005 levels by 2020; increase share of non-fossil fuels in primary energy consumption to around 15% by 2020; increase forest coverage by 40 million hectares and forest stock volume by 1.3 billion cubic meters by 2020 from 2005 levels
Costa Rica	Conditional pledge: carbon neutrality by 2021
Kyrgyzstan	20% below BAU provided it receives adequate support
India	20-25% reduction of CO_2 emissions/GDP below 2005 levels by 2020
Indonesia	26% below BAU by 2020; conditional (government announcement but no official pledge) : 41% on BAU by 2020
Israel	20% below BAU by 2020
Maldives	Conditional: carbon neutral by 2020
Marshall Islands	40% below 2009 levels by 2020
Mexico	Emissions reductions through Special Climate Change Programme; estimated to deliver 51MtCO2eq reduction on BAU in 2020; Conditional: 30% below BAU by 2020
Montenegro	20% below 1990 by 2020
Papua New Guinea	At least 50% below BAU by 2030

[5] See http://www4.unfccc.int/sites/nama/SitePages/Home.aspx.

	NAMAs
Republic of Korea	30% below BAU by 2020
Republic of Moldova	25% below 1990 by 2020
Singapore	Conditional: 16% below BAU by 2020
South Africa	Conditional: 34% below BAU by 2020, 42% below BAU by 2025

Source: UNEP, 2012; http://unfccc.int/resource/docs/2013/sbi/eng/inf12r02.pdf

An overview of the submissions, which do not quantify the amount of emissions that will be reduced, is provided in Table 4. Table 5 shows the emission reductions implied by the submitted NAMAs for those developing countries that submitted quantified NAMAs related to their total emissions. By mid-2013, 57 Parties and a group of Parties had submitted lists of specific mitigation activities in different sectors.

Table 4: Overview of developing countries proposing specific non-quantified NAMAs in different sectors

	Submission of individual NAMAs without quantified contribution to total national emission reductions
Afghanistan	Preparation of initial national communication, including GHG inventory and specific mitigation strategies and activities appropriate to national context
African Group	List of NAMAs related to investments in the agricultural sector and risk management, policies related to climate change with a focus on agriculture, early action readiness to enhance adaptation capacities and secure availability of resources and MRV systems
Algeria	Renewable energy management and development programmes that will reduce emissions relative to BAU; reduction in flaring of gas associated with oil production, promotion of use of low-carbon fossil fuels, CCS
Argentina	Developing programmes and list of 5 NAMAs in the energy, forestry, waste sectors
Armenia	List of 8 NAMAs in the energy, transport, waste and forestry sectors
Benin	List of 3 NAMAs in the transport, waste and forestry sectors (No. of
Botswana	List of 6 NAMAs in the energy, transport, building and forestry sectors
Burkina Faso	Developing of NAMAs in the rural development and energy sector
Cambodia	Will undertake NAMAs through REDD
Cameroon	Will undertake NAMAs through REDD, CDM, reforestation, sector-specific mitigation actions
Central African Republic	List of 20 NAMAs in the energy, transport, building, agriculture, waste, forestry and LULUCF sectors
Chad	List of 20 NAMAs in the energy, forestry, agriculture, LULUCF and transport sectors

	Submission of individual NAMAs without quantified contribution to total national emission reductions
Colombia	Undertaking studies on its mitigation potential and abatement cost curves for the transport, agriculture, energy, waste and industrial sectors. Preliminary actions in the following sectors : energy, forestry, LULUCF and transport
Congo	List of 22 NAMAs in the energy, transport, waste, forestry sectors
Cook Islands	100% renewable electricity by 2020 with phased implementation
Ivory Coast	List of10 NAMAs in the energy, agriculture, industrial, transport and forestry sectors
Dominica	Low-Carbon Climate-Resilient Development Strategy and NAMAs in the energy, forestry, technology and waste sectors
Egypt	List of 12 NAMAs in the forestry, industrial, energy sectors
Eritrea	List of14 NAMAs in the energy, agriculture, LULUCF and forestry sectors
Ethiopia	List of 10 NAMAs in the energy, agriculture, waste, transport and forestry sectors
Gabon	List of 22 NAMAs in the energy, waste, transport, LULUCF and forestry sectors
Gambia	List of NAMAs; 8 priority NAMAs and 2 mitigation/adaptation projects in the energy, agriculture, LULUCF, forestry and waste sectors
Georgia	NAMAs in the context of sustainable development, to establish a baseline to measure action against, to develop a low-carbon strategy and to support the CDM
Ghana	List of 34 NAMAs in all sectors
Guinea	2 NAMAs in the energy and agriculture sector
Jordan	List of 23 NAMAs in the energy, transport, waste, agriculture, LULUCF and forestry sectors
Madagascar	List of19 NAMAs in the energy, transport, waste, agriculture and forestry sectors
Malawi	Developing NAMAs in the energy, agriculture, forestry and waste sectors; REDD strategy under development
Mauritius	Embarked on a comprehensive Sustainable Development Programme which prioritizes renewable energy and energy efficiency
Mauritania	List of 13 NAMAs in the energy, transport, LULUCF and forestry sectors
Mongolia	List of 22 NAMAs in the energy, transport, industry, agriculture, LULUCF and forestry sectors
Morocco	List of 43 NAMAs in all sectors

	Submission of individual NAMAs without quantified contribution to total national emission reductions
Peru	List of 3 NAMAs in the energy, waste and forestry sectors
San Marino	List of5 NAMAs in the energy and transport sectors
Sierra Leone	List of 12 NAMAs in the energy, agriculture, waste, transport and forestry sectors
Swaziland	NAMA in agriculture sector
Tajikistan	List of 5 NAMAs in the energy sector
Macedonia	List of 66 NAMAs in the energy, transport, industry, agriculture and forestry sectors
Togo	List of 8 NAMAs in the energy sector
Tunisia	List of 34 NAMAs in the energy, transport, waste, industry, LULUCF and forestry sectors

Source (see for further details): http://unfccc.int/resource/docs/2013/sbi/eng/inf12r02.pdf

Overall reductions in Non-Annex I countries including reductions in the LULUCF sector are calculated to add up to 4.39 CO_2eq in 2020.

The main reductions in terms of percentage below BAU come from Brazil, Mexico, South Korea and South Africa. The main reductions in terms of absolute tons of CO_2eq occur in China, Brazil and India, which are also the countries with the highest projected GHG emissions in 2020.

In total, emission reductions in Non-Annex I countries are about 12 % below the business-as-usual emissions path. This is about 3 percentage points short of the lower end of the 15-30% reduction range below business-as-usual recommended by the IPCC (Fenhann 2012).

Emission reductions pledges by developing countries show a similar level of ambition as the pledges by Annex I countries compared to the necessary reductions.

Hope that Gulf region countries would come up with pledges to reduce emissions remained elusive.

Table 5: Emission reductions from NAMAs in developing countries (including LU-LUCF)

	Current Emissions (Mt CO_2eq 2010)	BAU 2020 [$MtCO_2eq$]	Target 2020 [$MtCO_2eq$]*	Reduc-tion to BAU [$MtCO_2e$]	Reduc-tion to BAU [%]
Antigua and Barbuda	1		0.3		
Brazil	2478	3236.0	1977	-1259	-39%
Chile	107				
China	10101	14280.0	13561	-719	-5%
Costa Rica	10	14.0	0.0	-14	-100%
India	2400	4600.0	4232	-368	-8%
Indonesia	2500	2950.0	1741	-1209	-41%
Israel	75	107.0	86	-21	-20%
Maldives	0.2	0.0	0.0		
Marshall Islands					
Mexico	691	881.7	617	-264.7	-30%
Moldova	12.5	20.0	32	12	60%
Montenegro					
Papua New Guinea	43		3		
Republic of Korea	564.7	813.0	569	-244	-30%
Singapore	40	74.0	62	-12	-16%
South Africa	560	721.5	476	-245.5	-34%
Major developing coun-tries with NAMAs	19688.6	27987.2	23604	-4383.2	-16%
Other Non-Annex I countries	12127.8	10029.0	10020	-9	0%
Total Non-Annex I countries	31816.41	38016.2	33627	-4389.2	-12%

Notes: Figures include LULUCF emissions.
* Calculations carried out on the basis of high targets.

Source: UNEP 2012; Fenhann, 2012; http://edgar.jrc.ec.europa.eu/overview.php

2.1.6. Negotiation process in 2013

The 'ambition gap' between Parties' current pledges and the level of reductions necessary to remain below the 2°C objective continued to be a major issue in the negotiations in 2013 mainly under the ADP process and there was broad recognition of the existence of this 'ambition gap'. Parties outlined a number of options to help bridge the gap, including increased ambition of national targets, using untapped mitigation potentials, development of the carbon market, or stronger action on international aviation and maritime transport.

The role of finance, technology development and transfer and capacity-building has been recognised as a critical factor in the facilitation of enhanced action by developing countries prior to 2020. However, developing countries, with the exception of AILAC, consider that any process to increase the level of ambition should only apply to developed countries.

The EU's proposal to start 'international cooperative initiatives' (ICIs, see section 1.3.2.2.1) to ensure the necessary mitigation efforts and early action prior to 2015 could be valuable to bridge the ambition gap and provide a basis for countries that want to demonstrate greater ambition to do so in an accountable way. Yet, areas where additional actions and initiatives may be required and the role of the UNFCCC in this process still need to be further defined.

The process launched in Doha to review the long-term temperature goal between 2013 and 2015 in a structured expert dialogue in order to verify the magnitude of climate change continued in 2013. In a SBSTA workshop in Bonn, Parties discussed the first step of information gathering and compilation in order to be able to review the long-term global goal. The World Meteorological Organisation explained how climate change is accelerating and how currently observed impacts correspond to the worst-case scenarios developed by the IPCC in the 1990s. Because negotiations under the SBI could not take place in Bonn due to the opposition by the Russian Federation, Belarus and Ukraine, the SBSTA and SBI were unable to take forward the establishment of a joint contact group on the 2013-15 review and a structured expert dialogue.

For the same reason, no progress was made on the work programme on developing country pledges.

However, three regional capacity building workshops on NAMAs with the aim of promoting international collaboration to facilitate preparation, submission and implementation of NAMAs took place in 2013. From 16-19 April a workshop took place in Lesotho, from 13-15 August a workshop took place in Singapore and from 10-13 September a workshop took place in Mexico.

2.1.7. Position of Parties

Between March and May 2013 several Parties submitted their views on the work programme under the SBSTA established in Doha to continue the process of clarifying the quantified economy-wide emission reduction targets of developed country Parties. A major point of disagreement is the nature of the accounting system for progress towards achieving reduction targets: The EU, Norway and developing countries are pushing to adopt a common international accounting system for mitigation action, but the USA as well as the EIG, Australia and New Zealand are seeking a flexible system.

In their submissions, China and Saudi Arabia called upon developed countries to increase the ambition of their targets to reduce their GHG emissions to a level consistent with their historical responsibility and the ranges informed by the Fourth Assessment Report of the IPCC. According to China's view, the following elements need further clarification: the implementation of COP decisions to limit GHG emissions to achieve the 2°C target if developed countries' pledges are far from the required ambition; the trajectory to developed countries to achieve their reduction targets; the balance between reductions achieved at home and abroad and the use of offsetting credits; whether there will be sector-specific regulations; how to ensure comparability against the background of different accounting methodologies; how to make the domestic compliance system work in case of failure to achieve mitigation obligation and whether there will be any remedy. South Africa also called for clarification on approaches to measure progress to achieve reduction targets and for a more thorough analysis of the assumptions and conditions related to the ambition of developed country pledges.

Furthermore, China and AOSIS demanded that developed countries should present unconditional targets. Developing countries also call for robust accounting rules and the use of 1990 as the base year for accounting for all targets by developed countries. AOSIS favours a budget approach to specify developed countries' emission reduction targets.

The EU stressed that in the discussions on the work programme, mitigation actions by both developed and developing countries need to be considered. The transitional period between 2013 and 2020 should be used to draw conclusions from the diverse set of pledges and rules for the post-2020-period. It calls on all Parties to submit pledges and provide all information necessary to clarify them and highlights the need for a robust accounting framework. To identify common elements for measuring progress in achieving targets, gaps should firstly be identified in the information provided by Parties, followed by focused technical discussions on how different accounting rules impact measurement of progress. The USA and Australia addressed the work programmes for clarification of targets for both developed and developing Parties in their submissions. The USA proposed thematic in-session discussions for both groups of countries under the work programmes to further clarify pledges and mitigation actions.
New Zealand repeated the commitments it has made and suggested that the SBSTA should particularly focus on identifying common elements that may be "applicable to all" Parties post-2020, the role of LULUCF and the use of carbon markets in the further course of the work programme.

The USA is in favour of a pledge and review system for emission reduction targets without a legally-binding framework. They strongly oppose any system that includes an international compliance system with consequences. They consider that the agreement should provide for Parties to define their own mitigation contributions, taking into account national circumstances, capacity, and other factors that they consider relevant. A template might be drawn up to reflect a variety of contributions. The USA believes that an approach that imposes contributions from Parties is neither realistic nor likely to result in wide participation/implementation. In terms of encouraging Parties to strive for greater ambition when determining their contributions, the USA proposes that the agreement should encourage ambition by including a consultative period after 'draft' contributions were put forward. This would allow each Party to analyse other Parties' measures in light of both comparative effort (allowing consideration of national circumstances and capabilities and other relevant factors) and the overall level of ambition in light of the global temperature goal.

With regard to the current pledges for up to 2020, the USA now seems closer to the EU position because they proposed in their submission in 2013 thematic discussions on the coverage of targets and metrics (base year, global warming potentials, coverage of gases and sectors), the role of LULUCF and the LULUCF accounting approach and the contribution of units from market-based mechanisms.

Differences remain in terms of timing: while the EU advocates that Parties provide their mitigation pledges by the end of 2014 in order to allow for a thorough analysis, the USA suggest that Parties should submit their pledges by mid-2015, since a non-binding review would last only a few months (Doyle, 2013).

In terms of the work programme to further understanding of the diversity of NAMAs under the SBI, only Australia, the EU, Norway and the EIG have made submissions until June 2013.

Australia suggests that discussions about NAMAs should be structured around four broad categories of NAMAs: deviations from a BAU trajectory, reductions in emissions intensity, absolute emission reductions or the aim to become carbon-neutral and policies and measures that countries will undertake. For each of these categories, the metrics and methodological questions should then be identified and discussed in detail. The EU suggests that external input should be sought to clarify the assumptions and methodologies and fully understand NAMAs and on barriers to international financing of NAMAs by practitioners in-country and from international financial institutions and banks. It also underlines its support for common accounting rules for all countries.

Norway calls for a better structuring of information, clarification of assumptions and methodologies and it would welcome further consideration of results-based approaches to finance mitigation actions. All of the developed countries that have made submissions stress the relationship between the clarification of NAMAs and support provided by developed countries.
Developing countries hold the view that NAMAs should be voluntary in nature and included in national communications and call for support by developed countries and fair representation of developing countries in the international governance system for managing the funds.

2.2. Monitoring, reporting and verification (MRV) and accounting arrangements for developed countries

2.2.1. Agreement achieved in Doha

At COP 16 and COP 17, Parties had decided to enhance reporting by developed countries in national communications (NCs) and submit biennial reports (BRs) outlining progress in achieving emission reductions and the provision of financial, technological and capacity-building support to Non-Annex I countries. In the following years, more detailed reporting rules were negotiated. In Doha some outstanding elements related to the monitoring, reporting and verification of mitigation actions and support of developed countries were agreed with the adoption of a common tabular format for the UNFCCC biennial reporting guidelines. These tables complete all elements necessary for the reporting on the progress with the mitigation pledges.

With regard to verification of reported information, a work programme on the revision of review guidelines for biennial reports, national communications and GHG inventories was agreed for the period 2013 to 2014.

In Doha revised reporting requirements for KP LULUCF activities under the Kyoto Protocol were agreed as well as the details on the report to calculate the assigned amounts of Parties for the second commitment period: however, work is outstanding at technical level related to reporting, review and accounting requirements to implement the second commitment period.

2.2.2. Negotiation process in 2013

Work programme on the revision of the guidelines for the review of biennial reports and national communications, including national inventory reviews for developed country Parties

The need for this work process arises for a number of reasons:

- Guidelines for GHG inventories under the Convention were revised in Durban, which requires a subsequent revision of guidelines for the review process;
- The review step of the new modalities for international assessment and review (IAR) for biennial reports agreed in Durban are rather general and may not yet provide sufficient guidance to the Secretariat to start this process;
- Guidance for the review of national communications of Annex I Parties under the Convention is scattered in several decisions and a more streamlined set of guidance would be more transparent;
- The fact that more Annex I Parties are withdrawing from the Kyoto Protocol's thorough review procedures should lead to similarly rigorous review procedures under

the Convention in order to achieve a comparable outcome for Kyoto and Non-Kyoto developed countries;

- The numerous review procedures are time-consuming and costly. In recent years there have been problems with the timing of the review procedures and funding which will get more difficult when biennial reports have to be reviewed. Other review processes – such as the inventory review – have taken place for almost ten years and experience over this period should be evaluated. Therefore some general streamlining of the review procedures and modalities that increase the efficiency of the implemented procedures are important to ensure quality and implementation in the future.

During two workshops in 2013 different views between developed and developing countries became obvious with regard to the need for streamlining of the review procedures under the Convention. G-77 countries are sceptical with regard to any approaches to streamlining existing review procedures for Annex I Parties and are not concerned about the cost implications. Annex I Parties want to achieve an efficient review process in which each report is only submitted once and using less costly approaches such as centralized desk reviews instead of in-country reviews. Different proposals from Parties on this issue will also have considerable cost implications in the future, e.g. whether a standing group of experts for the review is introduced as proposed by developing countries, or when service fees for review experts would be introduced which is also a proposal from developing countries.

While the revision of the review guidelines for national communications and biennial reports will be completed by COP 19, the revision of the review guidelines for GHG inventories is planned to be completed by COP 20.

Revision of the UNFCCC reporting guidelines on annual inventories for Parties included in Annex I to the Convention (SBSTA)

Revised guidelines for the reporting of Annex I national GHG inventories were agreed at COP 17 for a trial period. These guidelines implement IPCC 2006 Guidelines for the reporting. Also revised global warming potentials (GWPs) were agreed for the reporting which are used to convert greenhouse gases into a comparable unit of CO_2equivalents. These decisions have impacts on the establishment of QELROS and assigned amount for the second commitment period because it was decided that base year emissions will be recalculated with revised GWPs and 2006 IPCC methodologies. These revised emission estimates will only be submitted in 2015. In 2013 Parties reported on their experiences in using these revised guidelines and suggested a number of additional technical changes to improve the implementation and a clear understanding of the reporting guidelines for GHG inventories and the related reporting tables. Issues that are to be further debated at SBSTA 39 are the reporting of CO_2 emissions related to ammonia production and urea application and the supplementary guidance to the IPCC guidelines for national GHG inventories on wetlands. A final decision is expected from COP 19 which will then guide reporting of GHG inventories from 2015 onwards. With regard to the reporting of CO_2 emissions related to ammonia production, there are different views between the EU and USA which mainly arise from the way this reporting requirement is currently implemented at installation levels. However, a large part of this work was agreed already in June and most conflicts could have been resolved.

Implications of Durban decisions 2-4/CMP.7 and Doha decision 1/CMP.8 under the Kyoto Protocol on the previous decisions on methodological issues related to the Protocol, including Protocol Articles 5 (national systems), 7 (GHG inventories) and 8 (expert review)

The adoption of the amendment of the Kyoto Protocol for the second commitment period in Doha as well as some other recent decisions under the Kyoto Protocol, such as different ac-

counting rules for LULUCF activities require further implementation at technical level in the rules on reporting, accounting and review which are summarised under Articles 5, 7 and 8 of the Kyoto Protocol. For example, the agreement on new rules for the carry-over of surplus AAUs agreed in Doha make additional changes at technical level necessary as well as the option under the Kyoto Protocol to increase the ambition level. Under this agenda item, further implementation work takes place related to Article 3.7ter that requires the cancellation of assigned amount units for the second commitment period to the extent that the assigned amount exceeds the average emissions of the first three years of the first commitment period multiplied by 8. This provision had been introduced by AOSIS to prevent so-called 'hot air' and weak targets for the second commitment period. Economies in transition EIT countries to which this provision would apply (Russian Federation, Ukraine and Belarus) did not agree to this provision in Doha where the amendment was nevertheless adopted. The discussions on the technical implementation of this article have so far been less contentious.

In 2013 the discussion between AOSIS/G-77 and the EU continued to be difficult as regards the outstanding technical work to implement the second commitment period of the Kyoto Protocol with AOSIS refusing any improvements to the rules apart from changes which are absolutely necessary, whereas the EU also intended to improve the rules in areas where the first commitment period has shown implementation problems. Also the large amount of technical changes makes this agenda item challenging.

Another area generating different views under this item concerns the question as to which reporting requirements Kyoto Parties without a new quantitative commitment for the second commitment period will have. Japan, which belongs to this group of countries, sees many of the Kyoto reporting requirements as voluntary for the second commitment period, whereas the EU and developing countries believe that Kyoto decisions require also those Parties without quantitative commitments to report annual GHG inventories or establish national systems for GHG inventories.

A third area of discussion under this agenda item are revised reporting tables for LULUCF activities under the Kyoto Protocol which are required to reflect revisions of the LULUCF accounting rules. These discussions have not yet started, and the elaboration of these tables into a decision at COP/MOP 9 is a challenge due to a considerable amount of changes that need to be reflected, the short time available between the adoption of the underlying methodological report by the IPCC in October 2013 and the need to finalise the negotiations on these tables at the end of 2013.

2.2.3. Position of Parties

Parties' positions related to the different discussion streams have been incorporated in the previous section on the negotiation process in 2013.

2.3. Monitoring, reporting and verification (MRV) for developing countries

2.3.1. Agreement achieved in Doha

Similar to MRV for Annex I Parties, this heading summarises several work streams under the UNFCCC:

- In Doha the operationalisation of a registry to **record nationally appropriate mitigation actions** (NAMAs) seeking international support and to facilitate matching of finance, technology and capacity-building support for these actions was decided with a deadline of two months prior to COP 19 in Warsaw.
- In Doha, the SBSTA agreed that the **guidelines for domestic MRV of domestically supported NAMAs by developing Parties** should be general, voluntary, pragmatic, non-prescriptive, non-intrusive and country-driven, and should take into account national circumstances, respect the diversity of NAMAs, build on existing domestic systems and capacities, recognise existing systems, and promote a cost-effective approach. The SBSTA was tasked with developing these general guidelines.
- The **modalities and guidance for the procedure to conduct an international consultation and analysis (ICA)** of biennial update reports (BUR) of developing countries require some further decisions before implementation can start, in particular with regard to the composition, modalities and procedures of the team of technical experts that conduct this analysis. The G-77 preferred to mandate the existing 'Consultative Group of experts on Non-Annex I National communications' (CGE) with this task. However, 80% of the CGE are experts from Non-Annex I countries and 20% experts from Annex I countries. Annex I Parties want to have 50% participation of Annex I experts in the analysis of BURs. Overall the CGE is composed of 24 members. With 24 members the group is also rather small to be able to conduct an analysis of all biennial reports of all developing countries. The EU and other Annex I Parties have proposed that Parties should nominate experts and that the UNFCCC Secretariat should then select teams of experts for the analysis of biennial reports with some specified expertise in the different areas covered by the biennial reports. No agreement could be achieved in Doha and discussions continued in 2013.

2.3.2. Negotiation process in 2013

NAMA registry

A prototype of the NAMA registry was implemented in 2012 and Parties could provide more detailed views on the implementation of this prototype. The key debate is between some developing countries that oppose standardised information and standardised input fields for the key parameters. They emphasize the voluntary character of the registry and want to have the lowest level of standardised information possible. However, Annex I Parties and some other developing countries propose more specific fields for information to make the registry a useful tool for developing countries looking for support and for donors. The registry is accessible to the public since October 2013 under the following link: http://www4.unfccc.int/sites/nama/SitePages/Home.aspx. The debate in Warsaw will be influenced by whether Parties provided further information to the registry.

Guidelines for domestic MRV of domestically supported NAMAs by developing Parties

The SBSTA initiated the process of the development of the guidelines for domestic MRV of domestically supported NAMAs by developing Parties; however, there continued to be disagreement from some developing countries, in particular Saudi Arabia with regard to the need for such guidelines.

Views differ on the scope and the ambition of the guidelines. The Umbrella Group considers the guidelines to be a useful knowledge base which should be both general and concise to contribute to the establishment of robust and reliable domestic MRV systems. New Zealand proposed that domestic MRV systems should ensure the quality of national GHG inventory data as well as information on mitigation actions and their effects. The EU stresses that the guidelines should promote a consistent approach towards domestic MRV systems and enhance the clarity of mitigation efforts and actions and their recognition. The African Group stated that guidelines for MRV of NAMAs should focus on domestic verification, as guidelines for measurement, reporting and international verification already exist. It also stresses that the guidelines should be of a general nature.

In Bonn in June 2013, Brazil, South Africa and Saudi Arabia voiced opposition to the guidelines. A number of developing countries supported the idea that the guidelines should be developed as guidelines on the "design" of MRV systems, not guidelines on how to report about their domestic activities.

At SBSTA 39 the process will be continued with the aim of developing guidelines that can be forwarded to the COP.

Composition, modalities and procedures of the team of technical experts under international consultation and analysis

In Bonn a new text on the modalities and guidance for the procedure to conduct an international consultation and analysis (ICA) of biennial update reports (BUR) of developing countries was developed which includes still many areas of disagreement. The main areas continued to be which experts will conduct the technical analysis, whether this task is mandated to the CGE or performed by experts nominated by Parties. Some developing Parties also objected that the reports of the analysis of biennial update reports should include recommendations and proposed a very superficial analysis whereas Annex I Parties argued for a more thorough analysis.

2.3.3. Position of Parties

Parties' positions related to the different discussion streams have been incorporated in the previous section on the negotiation process in 2013.

2.4. Financial support

2.4.1. Agreement achieved in Doha

Green Climate Fund (GCF)

The GCF was established as an operating entity of the financial mechanism of the Convention under Article 11 at COP 16 in Cancún. It is governed by the GCF Board. The World Bank serves as the interim trustee of the GCF and is administering its assets, which will be reviewed three years after operationalisation of the Fund.

In Doha, Songdo in the Republic of Korea was endorsed as the host of the Green Climate Fund (GCF).

The COP also decided to provide initial guidance to the GCF at COP 19 and reaffirmed that the interim arrangements for the GCF – e.g. relating to the Secretariat – should only be in place until COP 19. The COP also requests the GCF Board to report to COP 19 on the implementation of Decision 3/CP.17, which mandates the launch of the GCF.

The arrangements between the COP and the GCF were supposed to be concluded at COP 18 but remain a contentious issue. The Durban agreement states that the GCF will be "accountable to" and work under the "guidance of the COP". This language is controversial though: while developing countries would like to see a strong role for COP in supervising the work of the GCF, developed countries envisage the GCF as a more independent institution. In Doha, Parties also disagreed on which body should be responsible for drafting the arrangements between the GCF and the COP.

Ultimately, it was decided by the COP that the Standing Committee and the GCF Board should develop arrangements between the COP and the GCF in accordance with Convention Article 11.3, decision 3/CP.17 and the GCF governing instrument, which form the basis for these arrangements (Decision 7/CP.18). The result (see section 2.4.2.1) was discussed by the GCF Board at its 5th Board meeting from 8-10 October 2013 and will be put forward for agreement at COP 19.

The COP in its conclusions reiterated that a significant share of new multilateral funding for adaptation should flow through the GCF and requests the GCF Board to balance the allocation of the resources of the GCF between adaptation and mitigation activities, and called upon developed country Parties to channel a substantial share of public funds to adaptation activities. It also requested that the GCF Board implements its 2013 work plan expeditiously, with a view to making the GCF operational as soon as possible to enable an early and adequate replenishment process. Concrete details on its replenishment remained absent though. At the fifth GCF Board meeting in October 2013 no date for raising new funds was set, after the USA and Australia blocked any specific timeline. It was decided that an initial resource mobilisation will start within three months of the adoption of a set of key policies and procedures that enable the Fund to receive, manage and disburse funds.

Tensions exist regarding USA and Australia's strong support for a private sector facility of the GCF which developing countries see sceptically as well as with regard to social and environmental safeguards.

Long-term finance

In 2012 the work programme which had been agreed at COP17 in Durban on long-term finance was implemented. It aimed at contributing to ongoing efforts to scale up the mobilisation of climate change finance after 2012.

As the mobilisation of climate finance continues to be a contentious issue, Parties decided to extend the work programme on long-term finance for one year in Doha (4/CP.18). The aim for 2013 was to support developed countries in their efforts to identify pathways for mobilising scaled-up climate finance to USD 100 billion by 2020 and Parties in enhancing their enabling environments and policy frameworks to facilitate the mobilisation and effective deployment of climate finance in developing countries. The COP also agreed to continue the existing process within the Convention for assessing and reviewing developing country Parties' needs for financial resources and for identifying options for mobilising these resources and their adequacy, predictability, sustainability and accessibility.

In Doha, the COP urged developed country Parties to announce climate finance pledges and to scale up climate finance from a wide variety of sources in order to achieve the joint goal of mobilising USD 100 billion per year by 2020. Parties were encouraged to increase efforts to provide finance between 2013 and 2015 to at least the same levels as during the period of fast-start financing. The COP also agreed to consider the progress made in the mobilisation of long-term finance at COP 19, through an in-session high-level ministerial dialogue under the COP on efforts by developed country Parties to scale up the mobilisation of climate finance after 2012 (Decision 1/CP.18).

However, it still remains largely unclear what financial support will be available during the second commitment period and no trajectory to achieve the long-term goal for 2020 has been agreed up date. Some developed countries have announced financial contributions. The EU has promised "voluntary" climate finance contributions totalling EUR 5.5 billion, while a Commission document elaborates strategies for how the EU's share could be about one third of the envisaged USD 100 billion per year by 2020.[6] Some countries have also announced piecemeal pledges to specific funds such as the Adaptation Fund, the Congo Basin Forest Fund, the UN-REDD Programme or the Clean Technology Fund. For the USA, for example, the public contribution to climate finance will very likely be insufficient. The biggest share of their financing commitment was expected to come from private capital, including payments for international offsets. Yet, such offsets played no role in the Clean Air Act (regulating air emissions from stationary and mobile sources) (Burtraw & Woerman, 2012).

Developing countries keep pushing for concrete numbers and reassurance about the level of climate finance from 2013 onwards. However, specific finance commitments are very difficult for many Annex I Parties during the current finance crisis and it will be difficult to provide reassurance to developing countries that the long-term objectives will be met. The absence of concrete financial commitments is a major point of conflict between Annex I and Non-Annex I countries. Furthermore, there is pressure by countries like Saudi Arabia on China not to set a precedent for developing countries by contributing to the GCF (Ed King, 2013).

[6] See http://ec.europa.eu/economy_finance/articles/financial_operations/pdf/sec_2011_487_final_en.pdf.

Standing Committee on Finance

The Standing Committee had been established by the Cancún Agreement to assist the COP in exercising its functions with respect to the financial mechanism of the Convention in terms of improving coherence and coordination in the delivery of climate change financing, rationalisation of the financial mechanism, mobilisation of financial resources and measurement, reporting and verification of support provided to developing country Parties.

In Durban, the roles and functions, as well as the composition and working modalities, of the Standing Committee were further defined. In Doha, the Standing Committee introduced a report of its work in 2012 which was welcomed by the COP, particularly the work on the forum of the Standing Committee. The work programme of the Standing Committee (see: http://unfccc.int/resource/docs/2012/cop18/eng/04.pdf#page=8) was endorsed and the revised composition and working modalities of the Committee was adopted by the COP. It was decided that the Committee would be renamed the Standing Committee on Finance. Also the COP requested that the Committee, in preparing the first biennial assessment and overview of financial flows, considers ways of strengthening methodologies for reporting climate finance.

Furthermore, the COP requested the Standing Committee, in initiating the first biennial assessment and overview of climate finance flows, to take into account relevant work by other bodies and entities on MRV of support and tracking of climate finance.

Its mandate also includes organising a forum for communication and continued exchange of information among bodies and entities dealing with climate finance, maintaining linkages with the SBI and thematic bodies of the Convention, providing the COP with draft guidance for the operating entities of the financial mechanism of the Convention and making recommendations on how to improve their coherence, effectiveness and efficiency, providing expert input into the preparation and conduct of the periodic reviews of the financial mechanism by the COP and preparing a biennial assessment of climate finance flows.

2.4.2. Negotiation process in 2013

In 2013 climate finance was discussed in several work streams under the COP (work programme on long-term finance, SBSTA work on MRV of finance, the Standing Committee's work on several finance issues) and under the Board of the GCF.

Green Climate Fund

The third meeting of the CGF Board took place in Berlin on 13-15 March 2013. At this meeting, criteria for selecting an Executive Director of the Fund's Independent Secretariat were defined. Also, administrative policies and procedures of the Independent Secretariat on issues such as salaries, immunities and privileges were discussed and the Secretariat was tasked with developing them further to report back to the Board at the meeting in October of the same year.

The Board held its fourth meeting on 25-28 June 2013 in Songdo, South Korea with the aim of taking decisions on how the GCF will conduct its business in order to fulfil its mandate and promote low-carbon development in developing countries. The meeting was dominated by discussions about elements of the Business Model Framework (BMF) for the Fund, which comprises constituent policies, guidelines and organisational structure of facilities, windows and units to make the Fund operational. Particularly, the role of the private sector was a contentious issue in the debates with developed countries envisaging a much stronger role for the Private Sector Facility than developing countries.

Furthermore, desired results and performance indicators, how to ensure country-ownership of the Fund, access modalities, the range of financial instruments and access to existing multilateral instruments were discussed. While it is urgent for the Fund to show results, there are still considerable differences on the vision for the Fund and issues that remain to be clarified.

A major achievement of the meeting of Songdo was the selection of Ms. Heda Cheikhrouhou from Tunisia, who previously worked for the African Development Bank, as the new Executive Director of the Fund's Independent Secretariat.

On the issue of transparency of the Fund, the Board decided in Songdo not to allow web-casting of its proceedings (which a number of civil society organisations had demanded in a letter to the Board among other measures to strengthen civil society participation). Other issues that were discussed relate to the Fund's information disclosure, further work on a communication strategy, a competition to design a logo for the Fund and voting rules for the Board.

The decision on the relationship of the GCF to the COP to whom it is accountable was deferred to the next meeting of the Board. It continues to be a contentious issue with developing countries favouring a strong role of the COP in supervising the work of the GCF, while developed countries see the GCF as a more independent institution. The Board is tasked to finalise arrangements on the relationship between the GCF and the COP by COP 19 together with the Standing Committee on Finance (SCF), which developed draft arrangements at its meeting in August 2013 (Schalatek, 2013).

According to these draft arrangements[7], the GCF shall receive **guidance** from the COP, including on matters related to policies, programme priorities and eligibility criteria; the COP shall communicate guidance to the GCF after each of its sessions and based inter alia upon a thorough consideration of the annual reports of the CGF; and the GCF shall take appropriate actions according to the guidance and report on actions taken. Regarding **funding decisions**, the arrangements reaffirm that the GCF Board has full responsibility for funding decisions. In its **annual reports** to the COP, the GCF shall include the recommendations of its independent redress mechanism (mechanism to deal with complaints) and any action taken in response to those recommendations. The COP may then provide additional guidance to clarify policies, programme priorities and eligibility criteria with respect to how they affect funding decisions. In terms of the **determination and review of necessary funding**, the COP shall make assessments of the amount of funds necessary to assist developing countries in implementing the Convention to help inform resource mobilisation by the GCF and the GCF shall provide information on resource mobilisation and the available financial resources, including any replenishment processes in its annual report. The draft arrangements also include provisions related to the **review and evaluation of the financial mechanism**, stating that the COP may commission an independent assessment of the overall performance of the GCF, including of the performance of the Board.

At the fifth Board meeting that took place in October 2013 in Paris other elements of the BMF such as country ownership, financial inputs, allocation procedures including results-based approaches and elements of a results management framework, modalities for monitoring and evaluation, access modalities, and the Private Sector Facility were discussed. The priority decisions to be taken at COP 19 will be on the rules guiding the GCF-COP relationship, the annual report of the GCF Board activities to the COP and the decisions necessary to accomplish the move of the Secretariat to Songdo before the end of 2013.

[7] See: http://gcfund.net/fileadmin/00_customer/documents/pdf/GCF_B05_17_COP_Arrangements_fin_20130919.pdf.

Pledges to fill the GCF are yet to be made; Germany and South Korea have committed EUR 40 million and USD 40 million respectively to help developing countries with capacity building and the development of a pipeline of credible projects to be funded by the GCF (Schalatek, 2013).
Until the end of the year, the permanent Independent Secretariat will be set up in Songdo, terminating the current GCF Interim Secretariat in Bonn. The initiation of resource mobilization for the Fund is expected to take place via a pledge meeting or conference in autumn 2014 (Schalatek, 2013).

Long-term finance

A work programme on long-term finance to identify pathways for mobilising scaled-up finance to reach the 100 billion target by 2020 is continuing throughout 2013.

Between April and June 2013, several consultations and meetings in relation to the extended work programme took place in addition to submissions by Parties and other bodies under the Convention.
The discussions recognised that more work remains to be done on defining climate finance, improving the tracking and reporting of climate finance flows and overcoming the barriers to the pathways for mobilising scaled-up climate finance.

The meeting which took place on 10-12 September 2013 in Incheon, Korea (future location of the GCF Secretariat) concluded the 2013 work programme on long-term climate finance, planned to look into pathways and policy environments to mobilise and deploy scaled-up climate finance to USD 100 billion per year from 2020. Ownership of and coordination of funds by developing countries as well as transparency of implementation were stressed as conditions for effective deployment of climate finance. The role of the private sector was highlighted as an important factor in creating enabling environments for mobilising climate finance in developed countries. Participants discussed barriers to projecting public financial expenditures, such as annual budgeting processes that require parliamentary approval, and exchanged views on pathways for mobilising climate finance related to sources, channels and timing of finance. A number of issues are considered to require further work such as climate finance definitions, the predictability of financing and the role of the private sector. A report on the work programme will be forwarded by the Co-Chairs to the COP.

A high-level roundtable on finance is planned for COP19/CMP9 in Warsaw so that ministers can provide general guidance on long-term finance commitments.

Standing Committee on Finance

The SCF met three times, in March, June and August 2013, to discuss the fifth review of the financial mechanism, for which Parties are invited to submit views and recommendations, MRV of support and assessments and overview of financial flows and draft guidance to the operating entities of the financial mechanism. On this issue, Annex I Parties generally stress the independence of operating entities of the financial mechanisms in their decisions whereas developing countries want to influence these decisions more directly via the COP.
Furthermore, the Standing Committee on Finance (SCF) is tasked together with the GCF Board with developing arrangements between the GCF and the COP by COP 19 in Warsaw. At its June meeting, the SCF was unable to agree on a draft text with the main point of contention being a potential role for the COP in reconsidering a complaint of a Party against a GCF funding decision as an arbiter of last resort, after having progressed through the GCF independent redress mechanism. Such involvement by the COP is favoured by most developing countries while the USA and Australia in particular reject such a role (Schalatek, 2013).

Fast-start financing

For the 2010-2012 period developed countries committed themselves to providing new and additional resources approaching USD 30 billion with balanced allocation between adaptation and mitigation (**fast-start financing**). Fast-start finance supports immediate action by developing countries to strengthen their resilience to climate change and mitigate their greenhouse gas emissions, including those from deforestation.

Table 6 below provides an overview of the fast-start contributions as reported in Parties' submissions to the UNFCCC Secretariat by 11 September 2013. The total amounts reported amount to more than USD 33 billion for 2010-2012 (Fransen & Nakhooda, 2013).

Table 6: Fast-start finance provided in 2010-2012

	Disbursement 2010-2012	Commitment 2010-2012
EU	EUR 7.34 billion	EUR 7.2 billion (USD 9.6 million)
USA	USD 4.7 billion (Congressionally Approved Assistance) USD 1.99 billion (Development finance) USD 0.75 (export credits) Total: USD 7.44 billion	USD 7.5 billion
Australia	USD 0.551 billion (AUD $0.559 billion)	USD 0.551 billion (AUD $0.559 billion)
Canada	USD 1.2 billion (CAD$ 1.2 billion)	USD1.2 billion (CAD 1.2 billion)
Iceland	USD 0.001 billion	USD 0.001 billion
Japan	USD 17.6 billion (including public and private financing) USD 13.5 billion newly implemented finance between 2010 and 2012	USD 15 billion, of which USD 11 billion public
Liechtenstein	USD 0.001 billion	USD 0.001 billion (CHF 0.001 billion)
New Zealand	USD 0.72 billion (NZD 0.09 billion)	USD 0.72 billion (NZD 0.09 billion)
Norway	US $ 3.4 billion bilateral and multilateral ODA, including climate finance (USD 1.2 billion went into REDD+ activities)	USD 1 billion
Switzerland	New and additional: USD 0.15 billion/CHF 0.14 billion Total fast-start finance from public sources: USD0.44 billion/CHF 0.4 billion (USD 0.16 billion/ CHF 0.15 billion allocated, USD 0.12 billion/ CHF 0.11 billion disbursed)	New and additional: USD 0.15 billion (CHF 0.14 billion)

Source: Figures as reported by the Parties in their submissions to the UNFCCC Secretariat by 24 September 2013, see http://unfccc.int/resource/docs/2013/cop19/eng/inf01.pdf, http://unfccc.int/documentation/submissions_from_Parties/items/5916.php and http://pdf.wri.org/climate_finance_pledges_2012-11-26.pdf. It becomes obvious that countries use different approaches to calculate climate and fast-start finances, demonstrating that the definition of climate finance still remains unclear.

During the fast-start finance period, developed countries delivered considerably greater amounts of climate finance to developing countries than before (the UK quadrupled its climate finance, Germany's spending doubled and Norway's contributions increased by about 30%). However, there are major divergences with regard to how countries calculate their climate finance: While Germany counts only grants towards its fast-start finance, with the exception of a USD 615 million loan to the Climate Investment Funds, Japan and the USA also include a big portion of export credit and development finance for low-carbon infrastructure. Japan, for example, is the only country which counts private finance in its contributions to fast-start finance. Furthermore, adaptation activities only received between 7 and 35% of fast-start finance while the larger share of money went into mitigation activities. Also the original intention to channel fast-start finance to the least developed and most vulnerable developing countries has not been fulfilled (e.g. only 20% of the USA's and about 6% of Japan's fast-start finance is directed to Least Developed Countries (LDCs) and Small Island Developing States (SIDS)). The extent to which fast-start finance has been "new and additional" is unclear as countries were using different criteria to determine whether climate finance is additional. The EU's 2013 Monterrey Aid Accountability report revealed that parts of EU climate finance in 2012 were taken from aid funds and are thus likely to be double counted (Neslen, 2013). Reporting on fast-start finance contributions also varied considerably; a common tabular format for biennial reporting on climate action, including climate finance, was only agreed in Doha in 2012 (see also section 2.3) (Fransen & Nakhooda, 2013).

Thus, whereas the overall figures reported by countries indicate that fast-start finance commitments were met, transparency about fast-start climate finance has been relatively weak, and funding for adaptation remains insufficient. About half of fast-start climate finance was delivered as loans, money was mostly not channelled through multilateral funds, additionality remains questionable and the vulnerability of countries was not addressed (Ciplet, Fields, Madden, Khan, & Timmons Roberts, 2012).

Despite the difficult economic situation and tight budgetary constraints, the EU mobilised EUR 2.27 billion in fast-start finance in 2010, EUR 2.32 billion in 2011 and another EUR 2.67 billion in 2012. 66% of the EU's climate finance has been provided through bilateral and 34% through multilateral channels, such as the Climate Investment Funds, the Global Environmental Facility, the Adaptation Fund, the Least Developed Countries Fund, the Forest Carbon Partnership Facility and the Multilateral Development Banks. Beyond the contributions to fast-start finance, the EU has supported climate actions in developing countries through other channels such as the European Investment Bank (submission of the EU to the UNFCCC: see: http://unfccc.int/files/cooperation_support/financial_mechanism/fast_start_finance/application/pdf/ie-05-29_-_fsf_report.pdf).

2.4.3. Position of Parties

With regard to long-term finance, developing countries continue to call for the mobilisation of public resources of climate finance to secure equitable distribution of financial resources and balancing between money provided for mitigation and adaptation activities respectivly.

The EU:

- Stresses that both public and private flows are indispensable elements of climate finance and is aiming to develop public interventions that mobilise private sector finance;
- Highlights the need for climate change to be mainstreamed in public financing flows to ensure coherence and consistency of Official Development Aid (ODA) and other official flows with the below 2°C goal;
- Emphasises the need for financial support for adaptation activities in developing countries;
- Stresses the role of international financial institutions in delivering and scaling up climate finance and creating new channels of leveraging and mobilising climate finance;
- Welcomes the focus of the report on the work programme on long-term finance on enabling environments in developing countries, and encourages domestic efforts by developing countries, including the phasing-out of fossil fuel subsidies and other distortions as well as in providing good framework conditions for investments;
- Favours the introduction of market-based instruments via the International Maritime Organisation (IMO) and the International Civil Aviation Organisation (ICAO) to establish carbon pricing of global aviation and maritime transport, which could generate a price signal to efficiently achieve more emission reductions from these sectors and generate financial flows that could partly be used for climate finance, while still taking into account national budgetary rules and fiscal sovereignty;
- Welcomes positive developments in carbon markets around the world, which contribute to mitigation efforts and could help increase flows of climate finance to developing countries, and currently examines ways of linking the EU ETS to the Australian and Swiss ETS;
- Welcomes the long-term finance work programme's recognition of the potential for the removal of fossil fuel subsidies in creating accurate price signals, which should be carried out in accordance with national budgetary rules and fiscal sovereignty;
- Underlines the need to continue working actively towards common internationally agreed standards for MRV of climate finance flows as well as better MRV on the recipient side, and supports the proposal to link better tracking of climate finance to work outside the UNFCCC, e.g. by the OECD or the joint Multilateral Development Bank (MDB) Climate Finance Tracking Approaches;
- Announced voluntary climate finance contributions in Doha totalling EUR 5.5 billion from their respective financial provisions.

Australia, Canada, Japan, New Zealand and the USA:

- Strongly emphasise the role of the private sector in contributing to climate finance;
- Do not make any concrete commitments regarding climate finance after the fast-start financing period;
- Want the work programme in 2013 to focus on:
    - enabling environments and policy frameworks that attract flows of investment and technology for low-carbon, climate-resilient development;
    - understanding lessons from the past on how successful climate-friendly private investments are being made and what role public finance and policy is playing in helping overcome specific barriers; and
    - looking at the role of various actors in the climate finance architecture and the specific role they are playing in helping unlock greater flows of finance.

The USA considers private sources of financial flows more important than public sources for financial support; with regard to management, the USA prefers involvement of the World Bank and their Climate Investment Funds as financial institutions to providing finance support related to climate.

Korea also stresses the role of the private sector in achieving the long-term finance goal. It furthermore suggests using the NAMA registry to improve the process of matching climate finance and need.

China:

- Urges Annex I Parties to fulfil their commitments under the Convention related to financing, including the transfer of technologies and meeting the increasing costs and the urgent need for developing countries' mitigation and adaptation actions;
- Asks for more efforts to assess and review the needs of developing country Parties for financial resources;
- Calls for funding that is no less than the average annual level of the fast-start finance period for 2013-2015;
- Demands that the major sources of long-term finance shall be public sources, mainly from direct budget contribution of developed country Parties. All financial resources shall be subject to MRV procedures, and any potential source shall be excluded if they constitute obstacles against developing country Parties' aspirations for economic and social development as well as poverty eradication and employment creation; and
- Requests new, additional, predictable and adequate funding.

Other members of the G-77 similarly call for the provision of scaled-up financial resources that are new and additional and come from public sources. Some developing Parties oppose the inclusion of private funding. AOSIS additionally suggests creating a Joint Task Group on Long-term Finance for Climate Resilience to explore options for dramatically scaling-up long-term finance for climate resilience, particularly for LDCs, SIDS and other countries highly vulnerable to the impacts of climate change within the work programme on long-term finance. The work programme should also be informed by ongoing work under the SBI on Loss and Damage.

2.5. Reducing emissions from deforestation and degradation (REDD+)

2.5.1. Background: key issues in negotiations

Up to 20% of global CO_2 emissions are due to tropical deforestation and forest degradation. Yet this major emission source is not directly addressed by the UNFCCC or the Kyoto Protocol. There is international consensus that this situation must be rectified in an international agreement through a programme for reducing emissions from deforestation and forest degradation in developing countries (REDD) and for promoting conservation, sustainable management of forests and enhancement of forest carbon stocks (REDD+).

Issues related to REDD+ are negotiated under various UNFCCC bodies. The SBSTA has continued its consideration of the methodological guidance for activities related to REDD+ since 2006. SBI together with SBSTA are jointly considering issues related to improving coordination of support for REDD+ and possible institutional arrangements under the UNFCCC, e.g. a REDD Board or Committee as mandated by COP 18. The COP is undertaking a work programme on results-based finance in 2013. Also REDD+ plays a role in the ADP negotiations because many Parties see it as an important factor in reducing emissions prior to 2020. Additionally, there is a REDD Web Platform and a REDD Discussion Forum[8] where experts and stakeholders can exchange information and experiences.

The European Commission estimated that REDD+ will cost developing countries an additional EUR 18 billion per year by 2020. International public funding needs for REDD+ and agriculture in developing countries are estimated at EUR 7-14 billion per year up to 2020.

2.5.2. Agreement achieved in Doha

Decisions prior to Doha included an incentive scheme on forest emissions to cover the following REDD+ activities:

a) Reducing emissions from deforestation;
b) Reducing emissions from forest degradation;
c) Conservation of forest carbon stocks;
d) Sustainable management of forest;
e) Enhancement of forest carbon stocks.

Phases for the implementation of REDD+ were agreed which countries should follow on the path to reducing deforestation beginning with the development of national strategies or action plans, followed by the implementation of national policies and measures and national strategies and evolving into results-based actions that should be fully measured, reported and verified.

In Doha it was agreed that work would be continued on the following aspects related to methodological guidance for REDD+:

- Guidance related to modalities for national forest monitoring systems and MRV;
- Drivers of deforestation and degradation and approaches to address the drivers of deforestation and forest degradation in developing countries;
- Guidance on systems for providing information on how safeguards are addressed and respected. The term safeguards refers to arrangements and principles that en-

[8] See: http://unfccc.int/methods/redd/redd_web_platform/items/4531.php.

sure a number of objectives established for REDD+ activities, e.g. the promotion of sustainable forest management or taking into account multiple functions of forests. Such safeguards include, for example, transparent and effective national forest governance structures, and respecting the rights of indigenous people and local communities.

On MRV, no agreement was reached in Doha because developing countries rejected donor countries' call for international third-party verification of emission reductions before being willing to commit to results-based finance for REDD+. For COP 19 adoption of a decision with recommendations on modalities for national forest monitoring systems and for MRV is foreseen. Also further discussions on information systems on addressing and respecting safeguards are expected to be concluded in Warsaw.

Discussions on the future financing of a REDD+ mechanism had been ongoing in 2012, yet no conclusion has been reached by Doha. In Doha, the COP decided to undertake a work programme on results-based finance for REDD+ in 2013 to end by COP 19, including two in-session workshops, to progress the full implementation of the REDD+ activities as listed above. The aim of the work programme should be to contribute to the ongoing efforts to scale up and improve the effectiveness of finance for REDD+ activities, taking into account a wide variety of sources. The COP requested SBSTA 38 to consider how non-market-based approaches, such as joint mitigation and adaptation approaches, could be developed; and to initiate work on methodological issues related to non-carbon benefits resulting from REDD+ activities, for reporting to COP 19. The aspect of permanence cuts across technical and accounting aspects in the debate and will require further discussions in the context of adaptation, finance, various approaches and market-based mechanisms.

Also, the need to provide adequate and predictable support and to improve the coordination of that support for REDD+ activities was highlighted. SBI, together with SBSTA, was requested to initiate a process addressing the need to improve the coordination of support for REDD+ activities, and to consider existing institutional arrangements or potential governance alternatives and to make recommendations for COP 19.

2.5.3. Negotiation process in 2013

Discussions on methodological guidance for REDD+ progressed substantially in discussions at SBSTA 38 in Bonn. On MRV, developing countries supported the view that information on forest-related emissions should be subject to international consultation and analysis (ICA) while developed countries advocated for some other type of assessment because the decision on ICA is still pending and the assessment included may be rather limited. Developing countries also underlined the need to foster capacity building and provide support for MRV. On guidelines for the technical assessment of submissions on forest reference emission levels and/or forest reference levels, Parties' views diverged on the type of feedback that the technical assessment could provide to developing country Parties.

It was also discussed how information on addressing and respecting safeguards should be presented. On addressing the drivers of deforestation and forest degradation, a number of developing countries underscored that the drivers should be addressed through implementation of national strategies and action plans. Parties agreed to reflect in a preambular paragraph that livelihoods may be dependent on activities related to drivers of deforestation and forest degradation, and that addressing these drivers may have an economic cost and implications for domestic resources.

Parties also discussed non-carbon benefits, as mandated by COP 18. While some Parties highlighted the potential of considering compensation for the provision of non-carbon benefits, others highlighted difficulties with measuring non-carbon benefits. It was agreed that activities would be organized to explore the issue further.
On non-market-based approaches, Parties agreed that further clarity is needed on the issue and agreed to invite submissions and hold a workshop.

Related to the work programme on REDD+ finance, two workshops on issues relating to ways and means to transfer payments for results-based actions and ways to improve the coordination of results-based finance were held in June and August 2013.[9] At the first workshop, barriers to accessing results-based payments were identified, sources of finance were discussed and views were exchanged as to whether a central architecture on an international level would be the best way to increase synergies between difference sources of finance and to ensure coordination. The need to incorporate good governance at all levels and in all sectors, the creation of enabling environments, the need to finalise work on MRV of REDD+ activities and the need to address safeguards, drivers of deforestation and ensure that the benefits are felt by local people were highlighted. At the second workshop, Parties were able to agree on several guiding principles for results-based financing, how to track results and corresponding payments, national coordination entities and the role that the GCF could play in a REDD+ financing architecture. Concerns were voiced regarding the present state of financing for REDD+, which is fragmented and lacks common standards and predictability. The question of whether the NAMA registry could be upgraded to meet the needs of tracking REDD+ results and payments was raised. There was agreement that further clarification is needed regarding the role of the private sector in REDD+ financing.

The discussions resulted in draft COP 19 decisions on: modalities for national forest monitoring systems; timing and frequency of presentations of the summary of information on how all the safeguards in Decision 1/CP.16 are addressed and respected; and addressing the drivers of deforestation and forest degradation.

In addition, a text on modalities for MRV with elements that could be used in possible draft decisions was developed; and guidelines and procedures for the technical assessment of Party submissions on forest reference emission levels and/or forest reference levels.

2.5.4. REDD+ partnership in 2013

At the Oslo Forest Climate Conference on 27 May 2010, representatives of 50 governments agreed to establish a partnership for reducing emissions from REDD+. Partner governments agreed to provide a voluntary framework, including a secretariat to be provided jointly by the UN and the World Bank. This would serve as an interim platform for immediate action aimed at scaling up REDD+ actions and finance while negotiations on REDD+ continue under the UNFCCC. The main objectives of the partnership are to facilitate readiness activities, demonstration activities, results-based action, the scaling-up of finance and actions and to promote transparency. 75 countries have joined the partnership so far. It is considered as an interim solution and will be replaced by an UNFCCC REDD+ mechanism once this has been agreed and established.

[9] See: http://unfccc.int/resource/docs/2013/cop19/eng/05.pdf.

The work programme for 2013-14 is divided into the following five components:

1. Facilitating readiness activities,
2. Facilitating demonstration activities,
3. Facilitating results based actions,
4. Facilitating the scaling up of finance and actions,
5. Promoting transparency and communication.

Two meetings of the REDD+ partnership were held in 2013. At the first meeting the 2013-2014 work programme and budget was discussed and approved. The second meeting provided the opportunity to discuss existing Country Needs Assessments approaches and frameworks, and explore what process should be put in place to complete an assessment of needs and address the gaps in REDD+ preparation at country level. Participants also used this face-to-face meeting to discuss grant disbursement processes and also to visit a demonstration activity at ground level.

By June 2013, donors had pledged USD 6.54 million to the REDD+ Partnership, of which USD 5.84 million has been transferred or is in the process of being transferred to developing countries. The 2013-2014 work programme budget amounts to USD 3.1 million.

2.5.5. Position of Parties and stakeholders

The EU:

- Supports a phased approach for REDD+. In the medium to long term REDD+ could be phased into the international carbon market in a long-term perspective under the condition that market integrity is preserved, and robust measurement, reporting and verification requirements are met. The EU supports the role of private sector investments in funding REDD+ activities and also highlights the importance of domestic funding for REDD+ implementation.
- Agrees with other Parties on the need to scale up international support, to support the full implementation of results-based REDD+ actions that at a later stage should be assessed against an independently reviewed and verified national reference level. The EU stresses, that results-based finance will be provided only in the context of a qualified, independent and international verification of results though.
- Considers that any outstanding issues related to scaling up support for the implementation of REDD+ activities, including financial resources and technical and technological support should be considered in relation to the discussions on long term finance under the UNFCCC.
- Argues for clear conditions and rules with regard to robust MRV systems, stable markets and standards for environmental integrity that need to be fulfilled for any market-based approaches. MRV requirements shall also include safeguards.
- Argues that coordination of support for REDD+ initiatives should be done through improving existing arrangements rather than through creating new structures.

Most developing countries with substantial natural forests want to see fast progress on decisions related to REDD. Developing countries also want to get substantial finance commitments from Annex I Parties for the implementation of REDD+ activities.

REDD+ is an area for which individual Non-Annex I Parties have many specific views; the wider range of views on the individual issues is difficult to present within the scope of this paper. The differences are mostly related to specific implementation issues at a level of detail which is currently no longer reflected in the negotiation text.

- The BASIC countries (Brazil, South Africa, India, China) highlight the critical issue of provision of adequate and predictable support by developed countries for the implementation of REDD+ including enhanced coordination of financial support. However, results-based payments shall not be used to offset mitigation commitments by Annex I countries.
- A number of developing countries support the creation of a REDD+ Committee which should function as the overall advisory body to oversee, address and facilitate the implementation of REDD+ activities in developing countries, including the provision of financial and technological support and capacity development, under the authority of the COP. Developed countries propose drawing on existing governance structures under the UNFCCC, other international bodies or on the national level.
- Bolivia strongly opposes a market-based approach to REDD+ and the creation of new offsetting mechanisms and supports a "Joint Mitigation and Adaptation Mechanism for the Integral and Sustainable Management of Forests" to be developed under the Convention.
- The COMIFAC (Commission des Forêts d'Afrique Central) demands that finance for REDD+ should be additional, predictable and adequate and should primarily come from public sources. Private finance should only be supplementary and benefit developing countries.
- The LDCs emphasise the importance of adaptation co-benefits and other non-carbon benefits of REDD+, which should be addressed with provisions of technical and financial support.
- The Coalition for Rainforest nations, Guyana, Norway, the Philippines, Switzerland and the USA have voiced support for REDD+ financing through bilateral and multilateral offset programmes. Also Australia and Japan argue in favour of using REDD+ activities to mitigation commitments by Annex I countries.

Annex I Parties are usually in favour of a REDD+ mechanism due to the importance of emissions from deforestation.

The USA argues strongly against the creation of any new institutional arrangements or governance bodies to improve the coordination of REDD+ activities. Instead it is arguing for reliance on REDD+ Strategies and Action Plans, the voluntary REDD+ Database managed by the REDD+ Partnership and a system for tracking units.

Numerous Parties have expressed their views on the importance of channelling resources through the financial mechanism under the Convention and identify a prominent role for the GCF. The Coalition for Rainforest Nations, Guyana, Indonesia and Norway advocate a dedicated REDD+ window under the GCF.

2.6. Accounting for GHG emission changes from land use, land use change and forestry (LULUCF)

2.6.1. Agreement achieved in Doha

The rules on how developed countries are to account for GHG emissions or removals from land use, land use change and forestry (LULUCF) are an important element of the Kyoto Protocol's architecture. Depending on how they are designed, future LULUCF accounting rules could significantly affect the ambition level of the post-2012 emission reduction targets of developed countries. In quantitative terms forest management is the most relevant part of the accounting of the LULUCF sector.

Already at COP 17 a decision on the accounting of LULUCF activities in the second commitment period under the Kyoto Protocol was agreed. It included the following elements:

- Forest management became a mandatory activity in the second commitment period.
- The accounting approach for forest management will use reference emission levels. This means that the difference between the total net GHG emissions/removals from LULUCF in a given year minus a reference emission level defined by each Party are accounted for in its GHG balance. The reference emission level can be the emissions/removals in a particular past year or a projected level of business as usual emissions/removals in the commitment period. On harvested wood products (a new activity), text with fewer brackets could be achieved. According to the approved text, the accounting of harvested wood products will be mandatory.
- A new LULUCF activity of 'wetland drainage and restoration' was agreed.
- Specific accounting rules for natural disturbances were agreed.
- A proposal from New Zealand on flexible land use was agreed.
- The accounting will take into account the time lag of emissions from harvest in Harvested Wood Products.
- In the first commitment period, net emissions for deforestation and reforestation could increase the permitted cap of net removals from forest management. This provision will no longer exist in the second commitment period.

With the decisions in Durban, the work stream of accounting of LULUCF activities under the Kyoto Protocol was generally completed. Some technical work remained before the agreed decisions in the accounting, reporting and review modalities under the Kyoto Protocol can be implemented by Parties. In Doha a decision was taken that implemented the new accounting provisions for KP LULUCF activities in additional reporting requirements for Parties under the Kyoto Protocol.

2.6.2. Negotiation process in 2013

In 2013 the technical work on the implementation of accounting provisions for LULUCF activities under the Kyoto Protocol continued. In mid-October 2013, the IPCC the adoption of a methodological supplement for the estimation of emissions and removals from LULUCF activities under the Kyoto Protocol by the IPCC is planned. This supplement implements the accounting rules agreed in Durban into the methodologies for GHG inventories. Based on this supplement, the negotiations on reporting instructions for the Kyoto LULUCF activities will continue in Warsaw to finally implement the new accounting rules in the reporting requirements.

In 2013, Parties under the Kyoto Protocol also started to discuss on a more comprehensive accounting of anthropogenic emissions by sources and removals by sinks from LULUCF, including through a more inclusive activity-based approach or a land-based approach; a decision is expected for Warsaw.

In 2013, Parties also considered the inclusion of possible additional LULUCF activities under the clean development mechanism (CDM) (at the moment limited to afforestation/ reforestation) and modalities and procedures for alternative approaches to addressing the risk of non-permanence under the CDM. Parties agreed to a workshop during the COP in Warsaw to identify and discuss additional LULUCF activities under the CDM.

The decisions from Durban invited Parties to consider a work programme on agriculture and climate under SBSTA. So far Parties could not agree on the focus of such work programme and three sessions already passed without agreement. Argentina and India reject any work programme on agriculture that also includes GHG mitigation aspects. Annex I Parties do not support a work programme only focussed on adaptation. Parties agreed in June to hold a workshop on agriculture, adaptation and co-benefits.

2.7. Flexible mechanisms

New market-based mechanisms

Putting a price on carbon through the use of market mechanisms is imperative to drive low carbon investment and reduce global emissions cost-effectively. The EU proposes enhancing the global carbon market by implementing the new market-based mechanism (NMM) defined in Doha. This mechanism addresses broad segments of the economy to promote greater emissions mitigation taking into account own contributions of developing countries to global mitigation efforts. It also functions as a prerequisite for agreeing to ambitious targets by developed countries. Moreover, the international carbon market could generate up to USD 308 billion a year in additional financial flows to developing countries by 2020 (AGF 2010); it could be one of the main sources of mitigation finance for developing countries.

CDM/JI

The two project-based market mechanisms established by the Kyoto Protocol – the Clean Development Mechanism (CDM) and Joint Implementation (JI) – generate approved emission-reducing or sink-enhancing projects generating credits that governments or companies in developed countries can use to offset some of their emissions. CDM projects are carried out in developing countries and JI projects in developed countries. In 2012, together the two mechanisms accounted for around 28% of the global carbon market (Point Carbon, 2013).

In Doha it was decided that the market mechanisms under the Kyoto Protocol (CDM, JI and International Emissions Trading) would be continued. The Conference of the Parties serving as the meeting of the Parties (CMP) clarified, however, that only Parties with reduction commitments for the second commitment period can transfer and acquire Certified Emissions Reductions (CERs) in the second commitment period of the Kyoto Protocol. Also for participation in emissions trading, only Parties with commitments for the second commitment period can transfer and acquire CERs, AAUs, emissions reduction units (ERUs) and removal units (RMUs) that are valid for emissions trading in the second commitment period (see section 2.1.4).

The 2% share of proceeds levy to CDM, which is used to assist vulnerable developing countries to meet the costs of adaptation, was extended to international emissions trading and JI in Doha.

2.7.1. Agreement achieved in Doha

New market-based mechanisms

In Doha the Parties agreed to mandate SBSTA to conduct three separate work programmes with the aim of elaborating a Framework for Various Approaches (FVA) and Non-Market-based Approaches (NMA) as well as modalities and procedures for the new market-based mechanism (NMM). The work programme for the FVA should address the following elements (1/CP.18, paragraph 46):

- The purpose of the FVA;
- The scope of approaches included under the FVA;
- A set of criteria and procedures to ensure environmental integrity;
- Technical specifications to avoid double counting;
- Institutional arrangements for the FVA.

The work programme for elaborating modalities and procedures for the NMM should consider among others the following issues (1/CP.18, paragraph 51):

- The operation under guidance and authority of the COP;
- The voluntary participation of Parties;
- Standards that deliver real, permanent, additional, and verified mitigation outcomes, and avoid double counting of efforts;
- Criteria for the establishment, approval and periodic adjustment of ambitious reference levels (crediting thresholds and/or trading caps);
- Criteria for the accurate and consistent recording and tracking of units.

CDM/JI

In 2010, the EU had achieved the establishment of standardised methods and tools to calculate emission baselines and reductions with a view to further ensuring that CDM and JI projects genuinely lead to additional emission savings. This standardisation will improve the mechanisms' environmental integrity, streamline the project registration process and reduce transaction costs. In Doha, Parties commended the Executive Board (EB) of the CDM for further developing the regulatory framework relating to standardised baselines and activities undertaken by the EB and the Secretariat to promote the equitable distribution of project activities. They requested that the EB continues its work on programmes of activities and its work on the simplification and streamlining of methodologies. Moreover, Parties requested that the EB provides recommendations on possible changes to the modalities and procedures for the CDM as input to the review of the modalities and procedures at CMP 9.

Similarly, Parties also requested that the Joint Implementation Supervisory Committee (JISC) prepares recommendations for possible changes of the JI guidelines. Parties also agreed that the new guidelines should be based on one single track for JI projects and that the accreditation procedures of JI and CDM should be closely aligned or, if possible, unified.

2.7.2. Negotiation process in 2013

New market-based mechanisms

At the SBSTA session in June 2013 Parties have intensively discussed their views of how the FVA, the NMA and the NMM should be operationalised. They agreed to conduct workshops for each of the issues prior to COP 19, which took place in October 2013 in Bonn. Parties further agreed on a set of questions for each of the issues. Some of these questions are stated below:

- FVA:
  - The role of the FVA;
  - The technical design of the FVA;
  - Further steps in the work programme.
- NMA:
  - What is understood by the term 'non-market-based approach';
  - What is the scope of the activities to be considered;
  - What is a non-market-based approach under the UNFCCC;
  - Is there any other process to address the non-market-based approach within the UNFCCC or elsewhere;
- NMM:
  - The role of the NMM with a number of detailed sub-questions;
  - The technical design of the NMM with a number of detailed sub-questions;
  - Further steps in the work programme.

Parties also requested that the Secretariat prepares a technical synthesis of relevant materials, including the discussions of Parties at SBSTA 38 and the submissions and to make it available for the October workshops and for consideration at SBSTA 39.

CDM/JI

In 2012, towards the end of the first commitment period, many projects were submitted for registration under the CDM, because the EU has limited the eligibility of credits accepted under the EU Emissions Trading Scheme (EU ETS) to those which register in the first commitment period or which are from LDCs. Project participants were thus keen to get their projects registered before this cut-off date. 2013 saw the backlog created by this run-up and a strong decline of CER prices to values below EUR 1. New projects are nevertheless submitted for registration, though in much smaller numbers.

Throughout 2013, both the JISC and the EB worked on a review of the accreditation standard and the accreditation procedures. As a result they are much closer aligned, though not unified.

2.7.3. Position of Parties

New market-based mechanisms

The EU wants to see the creation of an OECD-wide carbon market through linking the EU ETS with other cap-and-trade systems that are comparable in ambition and compatible in design similar to the link with the Australian emissions trading system (see section 3.9.1). Currently, the EU ETS accounts for 80% of the demand on the international carbon market.

The new market-based mechanism could serve as a stepping stone to the introduction by developing countries of domestic cap-and-trade systems. More advanced developing countries should set ambitious crediting thresholds or trading caps for specific sectors as part of their low-carbon growth plans. The thresholds and caps should reflect the countries' respective capabilities. The EU is willing to work with these countries to identify appropriate sectors and to facilitate the sectoral mechanisms by allowing the credits and tradable units which they will generate to be used in the EU ETS at the appropriate time.

In the new agreement with legal force the NMM should facilitate the transition towards a global carbon market and thus provide clarity to investors and ensure the continuing stability of the international carbon market. The CDM should be phased out for those sectors of countries that participate in the sectoral mechanisms but existing CDM investments would be honoured.

The EU's proposal on the NMM is actively supported by Switzerland, South Korea and a number of developing countries in Latin America such as Chile, Colombia, Mexico or Peru. Other developing countries such as Brazil, China or India are less supportive and highlight the current lack of demand on the global carbon market and put into question whether additional market mechanisms are required at this point in time. Umbrella group countries such as USA, Japan, New Zealand, Australia and Norway prefer the FVA under which they strive for recognition of domestically developed market-based policies under the UNFCCC. The EU is open to exploring opportunities for implementing such a FVA, particularly if it facilitates the establishment of consistent and stringent accounting rules and procedures.

CDM/JI

Generally, many countries acknowledge the progress that has been achieved in the governance of the CDM by decisions of the Executive Board in recent years. The negotiations on guidance of the CMP to the Executive Board may thus be less contentious than in the past.

The first review of the modalities and procedures for the CDM shall, according to 1/CMP.3, be concluded by CMP 9 in Warsaw. In 2013, a two-day workshop was held in Bonn in conjunction with the SB sessions. The report of the workshop as well as submissions by Parties and NGOs/IGOs and the recommendations by the CDM EB, were to serve as input for consideration by SBI 38. Since SBI 38 did not start, no negotiations on this item have been held yet. It is thus unclear whether the review can be concluded in Warsaw or whether discussions need to be continued in 2014. Issues which will be addressed in the negotiations on the review include the length of the crediting periods, strengthening additionality determination, improving validation of sustainable development, the withdrawal of letters of approval, and the mitigation contribution of host countries (beyond offsetting).

As part of the usual guidance to the EB, Parties will address additional issues such as combined validation and verification for some projects and excluding certain project types such as HFC-23, N_2O from adipic acid and super critical coal.

2.8. International aviation and maritime emissions

Emissions from international civil aviation and maritime transport (so called 'bunker fuels') are two of the fastest-growing GHG emission sources. In 2005, they account together for some 5.3% of global CO_2 emissions (UNEP 2011, pp. 40-42). In absolute terms, international aviation emitted approx. 460 Mt CO_2 (2.1 %) and international maritime transport 800 Mt CO_2 (3.2 %); these quantities are comparable to total GHG emissions of Poland (399 Mt CO_2eq) and Germany (916 Mt CO_2eq) in 2011. Despite efficiency gains due to technological and operational improvements, emissions from international aviation and maritime transport have grown at an annual average of 2.5 % and 2.9 % respectively in recent years. Projections for 2050 indicate that under BAU conditions, aviation and maritime transport will be responsible for 10.0 % to 32.5 % of global CO_2 emissions (UNEP 2011).

2.8.1. Agreement achieved in Doha

These sectors were addressed under cooperative sectoral approaches in the mitigation track of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention (AWG-LCA). The main issues discussed between Parties were:

- the role of the UNFCCC in relation to IMO/ICAO,
- the treatment of developing countries, and
- necessary emission reductions.

There was a growing consensus amongst Parties that the International Maritime Organisation (IMO) and the International Civil Aviation Organisation (ICAO) should develop and implement policies to reduce emissions from their respective sectors with some guidance from the UNFCCC. Despite this, the agenda item was highly controversial and Parties' positions have hardly converged in recent years. The most contentious question was whether the principle of 'common but differentiated responsibilities' (CBDR) should apply in these sectors when addressing greenhouse gas emissions or whether IMO/ICAO should act according to their own principles of equal treatment of all vessels and planes. Lastly, some countries including the EU would have liked to set global sectoral reduction targets under the UNFCCC whereas others saw no need to do so.

In Doha, parties could not agree on how to align the CBDR principle with the non-preferential treatment in a manner which does not distort international competition in the respective markets. As a result, this agenda item of the Bali Action Plan (BAP) was the only item that was closed with neither a decision text nor a follow-up process.

2.8.2. Negotiation process in 2013

Due to the result of Doha, no formal negotiations took place on this agenda item in 2013. At SBSTA 38 in Bonn, ICAO and IMO reported as usual on their efforts to address GHG emissions.[10] In this context a few Parties reiterated their position on this issue. However, there were no contact groups or any other negotiations on how to address emissions from bunker fuels under the UNFCCC. Nevertheless, bunker fuel emissions were at least mentioned by the EU and a few other Parties in the context of workstream 2 under the ADP as an option to increase the pre-2020 ambition.

[10] A description of the state of play in ICAO and IMO is given in sections 5.2 and 5.3.

2.8.3. Position of Parties

The **EU** has been one of the strongest advocates for progress under this agenda item. Emissions should be addressed globally through IMO/ICAO because differentiating according to nationality of ships or planes would provide strong incentives for flagging out ships or planes from developed to developing countries. As a result the smaller share of covered bunker fuel emissions would be reduced even further and the contribution of these sectors to global mitigation efforts may turn out to be negligible.

Absolute emission caps for such global sectoral approaches should be recommended by the UNFCCC in the EU's view. Emissions would not be allocated to Parties but addressed directly at the level of vessels and planes, e.g. through an emissions trading scheme. The EU has proposed global targets of 20% and 10% below 2005 levels in 2020 for international maritime transport and international aviation, respectively.

To take into account the different economic situations amongst Parties, the EU suggests using a share of potential revenues from any market-based mechanisms (GHG fund, emissions trading schemes, levy, etc.) in these sectors for climate finance in developing countries. All other Annex I Parties and some developing countries including Singapore, Mexico, many AOSIS members and African countries agree with the need for a global approach and, with the exception of the USA, actively support the idea of using revenues to reflect the principle of CBDR. China, India, Brazil, Egypt, Saudi Arabia, Venezuela and Argentina are the countries most opposed to any action in these sectors. Their main concern is that a deviation from the principle of common but differentiated responsibilities could be used as a precedent for other sectors.

Almost all developing countries are worried about the impacts that any measures could have on trade and/or tourism and therefore their development. Most studies estimate that negative impacts will be negligible in the vast majority of cases but could be in the order of a few per cent for a small number of countries or products. Adding the full price of carbon to the fuel costs would increase the marine bunker fuel price by about 20%; in comparison, the fuel price fluctuations are much higher (at most, doubling in a year) and therefore impact trade much stronger than carbon costs.

2.9. Technology and technology transfer

Limiting the global average temperature increase to 2°C requires further development and deployment of low-carbon and climate resilient technologies in key sectors such as energy, industry, agriculture and transport. However, private and public spending on research, development and deployment (RD&D) related to energy has been declining globally since the 1980s. This trend must be reversed in order to build a low carbon global economy. At the same time, the focus of RD&D needs to shift towards safe and sustainable, low GHG-emitting technologies, especially renewable energy and energy efficiency.

2.9.1. Agreement achieved in Doha

Already in Cancún, Parties decided to establish a **Technology Mechanism (TM)** which includes a **Technology Executive Committee (TEC)** and a **Climate Technology Centre and Network (CTCN)**. In Durban, Parties adopted the modalities and procedures for the TEC and further details of the approach for establishing the CTCN. It was reiterated that the TM should support action on mitigation and adaptation and that technology needs must be determined nationally, taking into account national circumstances and priorities.

The TEC is supposed to fulfil six functions: analysis and synthesis of issues arising from technology needs assessments and existing technology development and transfer initiatives; policy recommendations on how to promote technology development and transfer as well as guidance on policies; facilitation and catalysing by collaborating with relevant organisations; linkage with other institutional arrangements in- and outside the UNFCCC; engagement of stakeholders and information and knowledge sharing.
In Doha, a UNEP-led consortium was confirmed for an initial term of five years as the host of the Climate Technology Centre (CTC), which is the implementing institution of the UNFCCC Technology Mechanism (decision 14/CP.18).

By the same decision, the Advisory Board of the CTCN was established through which the CTCN is accountable to the COP. The COP recommended the Advisory Board of the CTCN to consider the following activities: providing advice and support to developing country Parties in relation to conducting assessments of new and emerging technologies; and elaborating the role of the CTCN in identifying currently available climate-friendly technologies for mitigation and adaptation that meet the key low-carbon and climate-resilient development needs of Parties. The TEC was requested to initiate the exploration of issues relating to enabling environments and barriers. Parties were invited to nominate their national designated entities for the development and transfer of technologies.

The COP agreed to further elaborate, at COP 20, the linkages between the Technology Mechanism and the financial mechanism of the Convention.

2.9.2. Negotiation process in 2013

In 2013, the TEC has held three meetings so far. The main issues discussed include progress made on producing new technology briefs and guidelines for such briefs, enabling further engagement with arrangements under and outside of the Convention, modalities for increasing engagement with stakeholders, especially through the information platform of the TEC (TT:CLEAR), technology roadmaps and transfer, activities related to technology needs assessments and preparation of technical papers. Furthermore, enabling environments for and barriers to technology development were discussed, including the role of intellectual property rights.

Also, the CTCN Advisory Board held two meetings in May and September in 2013, arranged by UNEP as the new host of the CTC. At the first meeting, the Chair and Vice-Chair were agreed, the rules of procedure were discussed and main elements of the work programme for 2013 were discussed. At the second meeting, the CTCN five-year work programme, CTCN modalities and procedures, the criteria for prioritising requests from developing country Parties and the guiding principles and criteria for establishing the CTN were approved.

In June 2013 in Bonn, the SBSTA encouraged the CTCN Advisory Board to submit its report on modalities and procedures of the CTCN and its Advisory Board with a view to making a decision at COP 19. In doing so, they should take into account coherence and synergy within the Technology Mechanism and consult with stakeholders on how technical support may be provided to national designated entities on requests from developing countries and how interaction is enabled between the CTC, national designated entities and the CTC. Institutional arrangements between the CTCN and the TEC still remain to be finalised.

Furthermore, a number of Parties have followed the invitation of the COP in Doha to nominate their national designated entities for the development and transfer of technologies in order to facilitate the operationalization of the CTCN. A list of these entities submitted so far is available here: http://unfccc.int/ttclear/templates/render_cms_page?TEM_nda.

2.9.3. Position of Parties

Many developing countries, including the Philippines, China, Nigeria, Uganda, Iran, Kazakhstan and Argentina, still want to enhance the functions of the TM by establishing a direct link to the Financial Mechanism and by explicitly mentioning that intellectual property rights need to be addressed under the TM.

Annex I Parties do not see a direct link between the TM and the Financial Mechanism and do not want to extend the UNFCCC discussions to the topic of intellectual property rights.

2.10. Adaptation

Keeping global warming below 2°C could prevent serious climate change impacts. However, even below this level adverse effects will be felt in all countries. Many vulnerable nations, in particular LDCs and SIDS, are already experiencing adverse climate impacts today. Their ability to cope varies considerably. The poorest nations and the most vulnerable sectors of society (the poor, women, children and the elderly) will be hit the hardest. Climate change is already seriously undermining efforts to reduce poverty and hunger in developing countries and posing a major threat to the achievement of the Millennium Development Goals. Adapting to present and future climate change is thus an essential complement to mitigating GHG emissions and should be undertaken by all nations. The more mitigation action is taken, the less need there will be for adaptation.

Implementing adaptation actions that are consistent with and integrated into national policy planning – e.g. sectoral plans or poverty reduction strategies wherever relevant – is key to effective adaptation. The UNFCCC should play a catalytic role in mobilizing adaptation activities in all Parties and by relevant international, regional and national organizations and institutions. Existing institutions at national and regional level should be built upon and strengthened where necessary.

The Adaptation Committee (AC) which has been established at COP 16 is the main body dealing with adaptation issues under the Convention. Additionally, the SBSTA is responsible for carrying out the Nairobi Work Programme (NWP), which has the objective of assisting all Parties, in particular developing countries, to improve their understanding and assessment of impacts, vulnerability and adaptation to climate change and of making informed decisions on practical adaptation actions and measures.

There are several links between the work under the NWP and the AC. For example, both are mandated to work on indigenous and traditional practice for adaptation, which might raise issues of coherence. Additionally, the NWP might support the work of the AC from 2014 onwards (Kreft, Junghans, & Harmeling, 2013).

Furthermore, the work programme on loss and damage (see section 2.12.3) is one of the UNFCCC's workstreams on adaptation. Additionally, the formulation of National Adaptation Plans and National Adaptation Programmes of Action are two processes enabling LDCs to formulate and implement adaptation strategies and identify priority activities in the area of adaptation.

2.10.1. Agreement achieved in Doha

In Doha, governments identified ways to further strengthen the adaptive capacities of the most vulnerable through better planning. A pathway was established towards concrete institutional arrangements to provide the most vulnerable populations with better protection against loss and damage caused by slow onset events such as rising sea levels. Also, ways to implement National Adaptation Plans for least developed countries were agreed, including linking funding and other support efforts.

The COP also requested that the Adaptation Committee considers the establishment of an annual adaptation forum to raise awareness and ambition with regard to adaptation.

In Doha, the COP also approved the three-year work plan of the Adaptation Committee and endorsed its draft rules of procedure. Particularly, the Adaptation Committee planned to establish working linkages with all adaptation-relevant bodies and work programmes under the Convention. It will also engage with relevant organizations, centres and networks working on adaptation at intergovernmental, regional, national or sub-national level outside the UNFCCC with a view to drawing on their expertise. Moreover, the Adaptation Committee is mandated to provide expertise on adaptation to the SCF, the CTCN and the TEC. It also collaborates with the Least Developed Countries Expert Group (LEG) in their efforts to support LDCs in their national adaptation planning.

As part of the initial review of the Adaptation Fund, the report of the Adaptation Fund Board presented in Doha highlights a significant increase in the number of adaptation projects financed and national implementing entities accredited. Yet, the price of CERs has dropped, which could harm the Adaptation Fund. In the CMP decision in Doha, issues related to the sustainability, adequacy and predictability of funding from the Adaptation Fund are noted with concern based on the current uncertainty on the CER prices and the continuation of the Fund during and beyond the second commitment period. It was decided that CMP should consider ways to enhance the sustainability, adequacy and predictability of these resources, including the potential to diversify revenue streams of the Fund.

The World Bank's role of acting as a trustee for the Adaptation Fund was extended to June 2015 (Decision 4/CMP.8).

2.10.2. Negotiation process in 2013

At SBSTA 38 in Bonn, it was agreed that the discussion would be continued on the Nairobi work programme on impacts, adaptation and vulnerability (NWP) (renamed from the 'Five-year programme of work on impacts, vulnerability and adaptation to climate change' to its current name at SBSTA 25 in Nairobi at COP 12). SBSTA also requested that the Secretariat prepares a technical paper before SBSTA 39 and organize a technical expert meeting before SBSTA 40 on best practices and available tools for the use of indigenous knowledge and practices for adaptation, the application of gender-sensitive approaches and tools for understanding impacts, vulnerability and adaptation.

The Adaptation Committee (AC), established as part of the Cancún Adaptation Framework to promote the implementation of enhanced action on adaptation in a coherent manner under the Convention, held its 2nd, 3rd and 4th meetings in March, June and September 2013. At these meetings, views were exchanged on how to promote greater coherence on adaptation under the Convention. Also, a template for UN and regional agencies to respond to the AC were discussed, and the mandate to undertake an overview report on adaptation during the three-year period of the AC work plan, was addressed. Communication, information and outreach strategies were discussed.

Parties agreed that there is no need for the AC to develop a database for national adaptation planning as the LDC expert group is developing one. It was then discussed how collaboration with this expert group could be organized. Also, coherence and collaboration and activities relating to means of implementation and the establishment of an annual adaptation forum were addressed. Additionally, a workshop on the monitoring and evaluation of adaptation took place on 9-11 September 2013 in Nadi, Fiji.

Under the NWP a technical workshop on ecosystem-based approaches for adaptation to climate change was held in Tanzania in March 2013. To enhance dissemination of information and use of knowledge from practical adaptation, a more use-friendly and dynamic online database of partner organizations and action pledges was launched in December 2012.
Because discussions on the individual agenda items under the SBI did not take place in Bonn in June 2013 (see section 1.3.2), LDC matters, national adaptation plans, loss and damage, the Buenos Aires Programme of Work on Adaptation and Response Measures and administrative, financial and institutional matters, which make up other agenda items related to the Adaptation Committee, were not further dealt with.

2.10.3. Position of Parties

Regarding future work under the NWP, Parties suggest different topics that the programme should focus on: Australia recommends further considering health and climate change, Chile, Costa Rica, Nepal, Sri Lanka and Kyrgyzstan propose establishing an area of work on mountains and climate change. The EU proposes a focus on slow onset events such as sea level rise, melting of glaciers or degradation of ecosystems to better complement the extreme events already addressed. The EU also proposes a gender-sensitive approach. The group of LDCs calls for a more efficient dissemination of information and knowledge products to the most vulnerable, specialised training on modelling and scenarios to achieve capacity building and for enhancing the use of indigenous knowledge and understand of cost-effectiveness of adaptation. They also suggest that the next phase of the NWP should be a further 5 years.
LDCs and other developing countries also put a strong emphasis on the importance of adaptation in the post-2015 agreement. Many Parties also call for financial support to implement medium- and long-term adaptation under the National Adaptation Plan process as well as National Adaptation Programmes of Action, and to be able to make use of the guidelines for the national adaptation plan process. Developed countries emphasize the need to make knowledge about the need for taking adaptation action accessible to decision-makers.

2.11. Loss and damage

Loss and damage under the Convention refers to the residual costs, which are not avoided through adaptation and mitigation. They can be split into economic loss and non-economic loss. Non-economic losses can be understood as losses of inter alia life, health, displacement, and human mobility, territory, cultural heritage, indigenous/local knowledge, biodiversity and ecosystem services. They may be related to slow onset impacts (e.g. the loss of territory to sea level rise) and extreme events (e.g. loss of life in a cyclone) associated with climate change. The loss may be directly linked to adverse climate change impacts (e.g. loss of ecosystems) or occur indirectly (e.g. malnutrition as a consequence of impacts in the agriculture sector). Increasing the mitigation effort would reduce loss and damage and make adaptation cheaper (cf. http://unfccc.int/files/adaptation/workstreams/loss_and_damage/application/pdf/background_information.pdf).

2.11.1. Agreement achieved in Doha

Prior to Doha a work programme under the Cancún Adaptation Framework was established to consider approaches to address loss and damage associated with climate change impacts in developing countries that are particularly vulnerable to the adverse effects of climate change.

In Doha, Parties then agreed to establish institutional arrangements "such as an international mechanism" at COP 19 to address this issue. The functions and modalities of such an international mechanism will be elaborated in accordance with the role of the Convention and include: enhancing knowledge of comprehensive risk management approaches, strengthening dialogue with relevant stakeholders and enhancing actions and support to address loss and damage.

2.11.2. Negotiation process in 2013

In 2013, a technical paper on non-economic losses and on gaps in existing institutional arrangements delivered input to the process of establishing a mechanism to address loss and damage. Progress under the SBI in areas where further work is needed to advance the understanding of loss and damage was not made due to the blocked SBI discussions.

An expert meeting took place on 12-14 September 2013 to consider future needs, including capacity needs associated with possible approaches to address slow onset events (comprising sea level rise, increasing temperatures, ocean acidification, glacial retreat and related impacts, salinization, land and forest degradation, loss of biodiversity and desertification).

2.11.3. Position of Parties

The main disagreement between developed and developing Parties relate to whether to establish an institutional mechanism which developing countries favoured or continue to address the topic through a work programme.

The Alliance of Small Island States wants loss and damage to be addressed in an international mechanism with three components, namely an insurance component to manage financial risk from extreme weather events, a rehabilitation/compensatory component to address negative impacts of climate change and a risk management component. Other developing countries also call for enhanced action on loss and damage at the international level and the provision of scaled-up financial assistance to developing countries. They identify gaps related to loss and damage that must be addressed in the negotiations, including slow-onset impacts and events, migration, identification of tipping points, non-economic losses and increased certainty for longer-term planning and managing variability with insurance-like tools.

Developed countries put more emphasis on mitigation as a strategy to reduce the risk of loss and damage and advance less concrete proposals as to how loss and damage should be tackled institutionally. Additionally, they call for strengthening the knowledge base on losses and damages from the impacts of climate change. In terms of the institutional set-up of action on loss and damage, the USA strongly opposes the creation of any international mechanism, Norway suggests including loss and damage as a pillar of the NWP and the EU does not clearly define which institutional format a mechanism should take.

2.12. Capacity building

Capacity building is a cross-cutting issue which is quite relevant for an effective implementation of many climate change activities including mitigation, adaptation, MRV, etc.

2.12.1. Agreement achieved in Doha

In Doha, a new work programme to build climate action capacity through education and training, public awareness and public participation in climate change decision-making was agreed. This is important in order to create a groundswell of support for embarking on a new climate change regime after 2020.

In Durban, Parties had reviewed the framework for capacity building and eventually agreed to organize an annual in-session **Durban Forum** for in-depth discussion on capacity building under the SBI. This forum should aim at enhancing ideas through sharing experiences, best practices and lessons learned regarding the implementation of capacity building. In Doha, the CMP decided that the Durban Forum is an appropriate arrangement for sharing and exchanging experiences regarding the implementation of capacity-building activities related to the Kyoto Protocol and encouraged Parties to further improve the implementation of capacity-building activities.

2.12.2. Negotiation process in 2013

The second meeting of the Durban Forum took place in Bonn on the 4th and 6th June 2013. At the meeting, representatives of Parties, intergovernmental and non-governmental organizations and the private sector gave presentations on their experiences, good practices and lessons learned from the delivery of capacity-building to enable adaptation and mitigation action and to integrate gender perspectives in climate change policies at national level. During the second part of the meeting, presentations were given on capacity-building for the implementation of the Kyoto Protocol as well as an overview of capacity-building elements provided in work plans of the bodies established under the Convention and its Protocol. Discussions focused on potential ways to further enhance the implementation of capacity-building at national level and the importance of catalysing actions to build capacity for mitigation and adaptation at national level.

2.12.3. Position of Parties

China reiterates a demand from G-77 in 2012 in suggesting a two-year work programme under the SBI with a view to further strengthening the monitoring and review of the effectiveness of capacity building, to develop a set of evaluation indicators and to assess the activities by developed countries in support of developing countries' capacity. It proposes to focus discussions on the needs and priority areas of developing countries in capacity builing and gaps between those needs and the available support, besides discussing the evaluation of indicators measuring capacity building support.

The EU highlights that monitoring in the field of capacity building is a real challenge which cannot be addressed through global or standard approaches but builds on each country's individual situation and also requires efforts from the developing countries to provid information on their experiences, lessons learned and opportunities to enhance capacity to address climate change. They also underscored the cross-cutting nature of capacity building and the importance of a gender-sensitive approach in capacity building activities.

Australia, Canada, Japan and the USA encourage a wider range of stakeholders to participate in the Durban Forum's discussions on capacity building.

They also call on the Forum to focus on the relationship between long-term planning and capacity-building as this relates to climate change. They suggested that the Durban Forum could invite Parties and stakeholders to provide information on their practices to monitor and review the effectiveness of capacity-building at the national level.

AOSIS calls for enhanced action on capacity building through a clear mechanism for implementation under the Convention and proposes the establishment of a Work Programme to be included on the agenda of the Durban Forum on action on the results of the review of progress on implementing the capacity-building frameworks by the SBI.

3. COUNTRY POSITIONS

3.1. China

3.1.1. Facts

Cancún agreement pledge: "China will endeavour to lower its carbon dioxide emissions per unit of GDP by 40-45% by 2020 compared to the 2005 level, increase the share of non-fossil fuels in primary energy consumption to around 15% by 2020 and increase forest coverage by 40 million hectares and forest stock volume by 1.3 billion cubic meters by 2020 from the 2005 levels." (28 January 2010 and repeated at ADP2 in April/May 2013).

China's new Five–Year Plan (12th FYP, 2011-2015) includes the following targets:

- Emissions intensity: Decrease its carbon dioxide emissions per unit of GDP -17% from 2011 to 2015;
- Non-fossil fuel target: Increase the share of non-fossil fuels in primary energy consumption from 8.3% in 2010 to 11.4% in 2015;
- Energy intensity: Decrease energy consumption per GDP by -16% from 2011 to 2015.

Recent energy and emissions data and China's new 12th FYP indicate that China is set to not only meet its Cancún Agreement emissions intensity pledge, but is likely to go beyond it. However, at the same time, largely due to faster than expected economic growth, emissions in 2020 are likely to be higher than previous estimates (Höhne et al., 2011). China's international emissions intensity target and its non-fossil energy consumption target translates into emissions of about 13 $GtCO_2e$ by 2020 (Climate Action Tracker, 2012a).

China has been successful in introducing renewable energy and other non-fossil energy sources. The domestic target to increase the share of non-fossil fuels in primary energy consumption to 11.4% in 2015 is consistent with the international pledge to increase it to 15% in 2020. China updated its plan for renewable electricity production capacity to 700 GW by 2020 (of which 420 GW hydropower, 200 GW wind, 50 GW solar and 20 GW biomass). These new targets would lead to a more ambitious level of renewable energy than the internationally pledged 15% non-fossil target, and in consequence to a lower emission level. Therefore, the planned renewable capacity targets are likely to result in overachieving the pledge (Höhne, Braun, & Fekete, 2012).

Challenges to climate change mitigation in China include intensive urbanisation and industrialisation in the coming decades, and the challenge of changing China's 70% reliance on coal in primary energy use.

In November 2012, China submitted its 2nd National communication (see section 6.5 for further information on National communications).

Table 7: Emissions profile for China

	China	EU 27
CO_2 emissions (2010)		
• Absolute (Gt)	8.9	3.9
• Rank	1	3
• Of global total	27.5%	12.1%
• Per capita (t/capita)	6.6	7.8
• Per GDP (t/mil USD)	1.5	0.24
GHG emissions (2010)		
• Absolute (Gt)	11.2	5.0
• Rank	1	3
• Of global total	22.3%	10.0%
• Per capita (t/capita)	8.3	10.0
• Per GDP (t/mil USD)	1.9	0.31

Source: http://edgar.jrc.ec.europa.eu, http://data.worldbank.org/indicator/NY.GDP.MKTP.CD

3.1.2. Positions

China is a major player in the CDM; it is by far the largest supplier in terms of reduction credits (CERs), which, however, predominantly stem from the HFC23 destruction. Interest in implementing emissions trading as a domestic policy tool is also growing in China. In July 2010, the National Development and Reform Commission (NDRC) announced that China will establish domestic carbon trading programmes in selected provinces and/or sectors during the 12th Five Year Plan from 2011 to 2015 to help to meet its 2020 carbon intensity target. Such efforts are, however, self-imposed and are strictly separated from ongoing international negotiations.

China repeatedly emphasizes that the CBDR principle should guide the ADP's work and insists on the dichotomy of developed and developing countries as the foundation of the Convention. China also underscores the need for public financial support for low-carbon development and calls upon developed countries to deliver climate finance.

In September 2013, China and the USA agreed to bilaterally cooperate on eliminating HFCs. China also supports the proposal to include HFCs within the Montreal Protocol, which will be considered at the 25th meeting of the Parties to the Montreal Protocol, to be held in Bangkok at the end of October 2013.

China argues for maintaining the Convention and its principles and provisions as they are. China called for revisiting Annex I quantified emission limitation or reduction objectives (QELROs) and inviting Annex I Parties not participating in the second commitment period under the Kyoto Protocol to undertake comparable targets. No new commitments should be introduced for developing countries. It suggested using developed countries' public finance as a catalyst to provide incentives for the private sector in capital and technology markets.

According to China, the pre-2020 ambition gap under workstream 2 of the ADP shall primarily be tackled through the implementation of the second commitment period of the Kyoto Protocol and the outcome of the Bali Action Plan.

Market-based measures at the ICAO should be fully compatible with the principles enshrined in the UNFCCC and the Kyoto Protocol and should be based on mutual agreement and voluntary participation. China opposes to any unilateral measures on civil aviation or similar intentions in other sectors.

3.2. India

3.2.1. Facts

Cancún agreement pledge: "India will endeavour to reduce the emissions[11] intensity of its GDP by 20-25% by 2020 in comparison to the 2005 level" (30 January 2010).

Table 8: Emissions profile for India

	India	EU 27
CO_2 emissions (2010)		
• Absolute (Gt)	1.9	3.9
• Rank	4	3
• Of global total	5.8%	12.1%
• Per capita (t)	1.5	7.8
• Per GDP (t/mil USD)	1.1	0.24
GHG emissions (2010)		
• Absolute (Gt)	2.7	5.0
• Rank	4	3
• Of global total	5.4%	10.0%
• Per capita (t/capita)	2.2	10.0
• Per GDP (t/mil USD)	1.6	0.31

Source: http://edgar.jrc.ec.europa.eu, http://data.worldbank.org/indicator/NY.GDP.MKTP.CD

India's 2nd National communication was submitted in May 2012.

India earlier provided a climate plan, which includes eight national missions in key areas. It specifies several measures but only a few of them are quantified in terms of resulting emission reductions. However, detailed targets on the electricity sector are contained in the 11th Five-Year Plan. Most measures in the climate plan are rather general, e.g. promoting public transport or a fuel switch in industry. The plan does not provide an overall baseline and mitigation scenario (Höhne et al., 2011).

In March 2012, the Indian government agreed upon an energy efficiency cap-and-trade scheme covering the largest industry and power generation facilities. The target is to achieve a 4 to 5% reduction of final energy consumption in 2015 with plant-specific targets for the participating facilities in the power sector and industry, which cover in total more than 50% of the fossil fuel used in India (Höhne et al., 2012).[12]

[11] The emissions of agriculture sector will not form part of the assessment of emissions intensity.

[12] The aim is to reduce the "specific energy consumption" of the industries concerned, defined asenergy consumed per unit of production or more specifically as the net energy input into the designated consumers' boundary divided by the total quantity of output exported from the designated consumers' boundary. This is because the energy efficiency improvement targets are "unit specific"; they are based on the trend of energy consumption and energy-savings potential of the plants (Government of India, 2012).

3.2.2. Positions

India's participation in the international climate negotiations has thus far been mostly defensive. It has argued against commitments and puts the onus on developed countries to live up to their responsibilities before expecting action from developing countries. India underlines the principle of common but differentiated responsibilities. India reiterates that the scope of ADP for the new legal instrument must include the following elements: mitigation, adaptation, finance, technology development and transfer, transparency of action, and support and capacity-building.

Thus, in the context of the ADP, India highlights that increased financial, technological and capacity-building support from developed countries is essential for mitigation and adaptation actions by Non-Annex I parties. Furthermore, the pre-2020 ambition gap as part of workstream 2 of the ADP shall be primarily addressed through the implementation of the 2nd commitment period of the Kyoto Protocol and the outcome of the Bali Action Plan. . India stresses the importance of a science and rules-based mitigation model for enabling ambitious emission reductions in developed countries. Annex I Parties must continue to take quantified emission limitation and reduction objectives, while non-Annex I Parties will take nationally appropriate mitigation actions enabled by finance and technology transfer, based on historical responsibility and capability.

India strongly opposes any reinterpretation of the Convention, its principles or Annexes. It advocates a punitive compliance mechanism for developed countries and calls for the provision of concessional technology to allow developing countries to take early and effective action as developing countries need means of implementation to act. India stressed the need to establish linkages between workstreams 1 and 2, and to take the work of the SBs, the IPCC and the 2013-15 Review into account for work under WS2.

Concerning technology development and transfer, India has – besides financing – a strong focus on intellectual property rights of technologies.

India emphasizes the importance of a science- and rules-based mitigation model for enabling ambitious emission reductions in developed countries.

3.3. Brazil

3.3.1. Facts

Cancún agreement pledge: Brazil communicated that it anticipates its mitigation actions, listed below, to lead to an expected emissions reduction of between 36.1 per cent and 38.9 per cent below its projected emissions in 2020.

a) A reduction in deforestation in the Amazon (range of estimated reduction: 564 Mt carbon dioxide equivalent (CO_2eq) in 2020);

b) A reduction in deforestation in the Cerrado region (range of estimated reduction: 104 Mt CO_2eq in 2020);

c) A restoration of grazing land (range of estimated reduction: 83 to 104 Mt CO_2eq in 2020);

d) An integrated crop–livestock system (range of estimated reduction: 18 to 22 Mt CO_2eq in 2020);

e) No-till farming (range of estimated reduction: 16 to 20 Mt CO_2eq in 2020);

f) Biological nitrogen fixation (range of estimated reduction: 16 to 20 Mt CO_2eq in 2020)

g) Energy efficiency (range of estimated reduction: 12 to 15 Mt CO_2eq in 2020);

h) An increase in the use of biofuels (range of estimated reduction: 48 to 60 Mt CO_2eq in 2020);

i) An increase in energy supply from hydroelectric power plants (range of estimated reduction: 79 to 99 Mt CO_2eq in 2020);

j) Alternative energy sources (range of estimated reduction: 26 to 33 Mt CO_2eq in 2020);

k) Iron and steel – replacing coal from deforestation with coal from planted forests (range of estimated reduction: 8 to 10 Mt CO_2eq in 2020).

Table 9: Emissions profile for Brazil

	Brazil	EU 27
CO_2 emissions (2010)		
• Absolute (Gt)	0.44	3.9
• Rank	10	3
• Of global total	1.4	12.1%
• Per capita (t)	2.2	7.8
• Per GDP (t/mil USD)	0.21	0.24
GHG emissions (2010)		
• Absolute (Gt)	1.6	5.0
• Rank	7	3
• Of global total	3.2	10.0%
• Per capita (t/capita)	8.3	10.0
• Per GDP (t/mil USD)	0.76	0.31

Source: http://edgar.jrc.ec.europa.eu, http://data.worldbank.org/indicator/NY.GDP.MKTP.CD

Among the BASIC countries, Brazil is the one with the strongest pledge for emission reductions. In its pledge under the Cancún agreement, Brazil announced the reduction of GHG emissions by 36-39% beyond the BAU scenario. This is equivalent to a stabilization of emissions at the 2005 level. About half of the emission reduction is to be achieved through the reduction of deforestation, the other half in sectors such as agriculture or the steel industry. Brazil uses a large amount of hydropower and biomass and has therefore a rather limited potential for emission reduction in the energy sector. The national target to reduce deforestation is ambitious.

The BAU and the targets were specified in national legislation. Accordingly, the target emission level from the pledges is between 1,980 and 2,070 MtCO_2e in 2020. Most reductions are expected from the agriculture and forestry sector (Höhne et al., 2012)

The Clean Development Mechanism (CDM) contributed significantly to GHG emission reduction in Brazil.

In 2010, Brazil published its 2nd national communication with detailed information on its emission development and mitigation action.

3.3.2. Positions

Brazil believes that the extent to which each Party should contribute to global overall emission reductions should be defined domestically, taking into account historical responsibilities, national circumstances and capacities. While domestically self-defining its own mitigation contribution to the 2015 agreement, each Party should have its historical responsibility as the primary point of reference.

The original Brazilian proposal outlining this understanding of burden-sharing was made in 1997. According to this proposal, a direct link is established between emissions and temperature increase, resulting in the burden of reducing emissions (by 30% by 2020 with reference to 1990 for Annex I Parties in the original proposal). This burden should be shared among Annex I Parties in accordance with their respective contributions to the temperature increase. Parties falling short of reaching their targets should contribute to a Clean Development Fund. Yet, there are many uncertainties related to the contribution to absolute temperature and the contribution of LULUCF. Moreover, choices regarding the inclusion of certain gases and LULUCF, the time frame etc. considerable impact the relative contribution results. The methodology should be developed by the IPCC and based on Parties' individual cumulative greenhouse gas emissions since 1850. This methodology should cover all Kyoto gases and all sectors, and should take into account the double accumulation process, both with respect to emissions and concentration of greenhouse gases in the atmosphere. . An expert group should be established to undertake the calculation of countries contributions to the increase of temperature.

Similar to the EU's stepwise approach, Brazil also proposes that COP 19 shall launch domestic processes for the definition of commitments, that parties shall come up with pledges in the course of 2014 and that a process for multilateral considerations of commitments shall be established.

The pre-2020 ambition gap as part of workstream 2 of the ADP shall be primarily addressed through the implementation of the 2nd commitment period of the Kyoto Protocol and the outcome of the Bali Action Plan.

Brazil proposes that voluntary nationally appropriate mitigation actions communicated to the UNFCCC by Non-Annex I Parties, as well as actions that are supplementary to communicated quantified economy-wide emission reduction targets by Annex I Parties, should be accounted for the achievement of commitments under the 2015 agreement, provided that they have delivered concrete additional emissions reduction results before 2020. Brazil proposes that COP-19 adopts a decision recognizing that early action during the pre-2020 period will be accounted for under the 2015 agreement.

Brazil highlights that increased financial, technological and capacity-building support from developed countries is essential for mitigation and adaptation actions by Non-Annex I parties. It stresses the voluntary nature of the mitigation activities of developing countries.

Reporting of GHG emissions and national communications and implementing methodologies in very advanced in Brazil. However, it objects to enhancing MRV requirements for Non-Annex I Parties in general and improved methodological guidance that would make the emissions reporting more transparent. Brazil also rejects any review or consultation of the information reported by Non-Annex I Parties.

REDD+ is a central part of the national mitigation strategy in Brazil. Brazil strongly supports fund solutions before direct market-based mechanisms for REDD+. It has a rather careful approach towards market-based approaches in the forest sector which in many areas supports the EU view to ensure that carbon markets are stable and that strong MRV underpins the emission reductions. The model of the Amazon fund in Brazil is unique in the context of REDD+ because it links payments to verified emission reductions.

In the view of the Brazilian government, the promotion of voluntary cancellation of certified emission reduction credits (CERs) arising from projects under the Clean Development Mechanism of the Kyoto Protocol (CDM) offers a great potential for increasing short-term ambition, in particular through enhanced engagement of the civil society and the private

Brazil generally takes a sceptical stance towards market-based mechanisms. Regarding market-based measures at the ICAO, it states that those measures should be fully compatible with the principles enshrined in the UNFCCC and the Kyoto Protocol and should be based on mutual agreement and voluntary participation. Brazil opposes any unilateral measures on civil aviation or similar intentions in other sectors.

3.4. Mexico

3.4.1. Facts

Cancún Agreement pledge: By 2020, Mexico aims at reducing its GHG emissions up to 30% with respect to the business-as-usual scenario if developed countries provide adequate financial and technological support.

Table 10: **Emissions profile for Mexico**

	Mexico	EU 27
CO_2 emissions (2010)		
• Absolute (Gt)	0.44	3.9
• Rank	11	3
• Of global total	1.4%	12.1%
• Per capita (t)	3.9	7.8
• Per GDP (t/mil USD)	0.43	0.24
GHG emissions (2010)		
• Absolute (Gt)	0.66	5.0
• Rank	11	3
• Of global total	1.3%	10.0%
• Per capita (t/capita)	5.8	10.0
• Per GDP (t/mil USD)	0.64	0.31

Source: http://edgar.jrc.ec.europa.eu, http://data.worldbank.org/indicator/NY.GDP.MKTP.CD

Mexico presented a highly detailed climate plan with significant actions up to 2020 and ambitious long-term goals. It recently increased the 2020 target from a 20% to a 30% reduction below the baseline. However, Mexico has made reductions after 2012 conditional on external financing without further specification. Mexico makes great efforts to thoroughly MRV its mitigation activities.

Mexico adopted a General Climate Change Law implementing economic instruments, planning framework and mandatory emissions reporting. However, more action is needed to meet the current emission reduction targets for 2020 and Mexico needs to put more effort into implementing policies that secure long-term action. Current policies would reduce emissions by 21% or reductions of about 130 $MtCO_2e$ below BAU by 2030 - with the reductions coming from industry, land use and forest control and energy supply (Climate Analytics et al. 2012; Höhne et al., 2012).

3.4.2. Positions

Mexico plays an important role as a progressive advanced developing country and as a mediator between Annex I countries and developing countries. It is a member of the OECD, a member of the Environmental Integrity Group, one of the largest emitters in the world and is treated as a Non-Annex I country under the UNFCCC.

The national climate change programme includes the short-term target to reduce emissions by 51 Mt CO_2eq with respect to the business-as-usual scenario in 2012.

In addition to the Copenhagen target of -30 % with respect to business-as-usual, Mexico also adopted a long-term target of -50 % below 2002 levels in 2050. Consequently, Mexico is one of the few developing countries that has adopted concrete short-, mid- and long-term targets which are also in the range needed for global warming to stay below 2°C.

Mexico aims for expanding the coverage of gases and emitting sectors. Concerning the coverage of gases, key short-lived climate pollutants (SLCPs), including methane, black carbon, tropospheric ozone, and many hydrofluorocarbons (HFCs), are responsible for a substantial share of global warming with significant detrimental health and environmental impacts.

3.5. South Africa

3.5.1. Facts

Cancún Agreement pledge: South Africa has committed itself to reducing emissions by 34% by 2020 and by 42% by 2025 compared to BAU, conditional on an international deal with an enabling framework and provision of finance, technology and capacity building. These figures were calculated on the basis of Long Term Mitigation Scenarios (LTMS), Integrated Resource Plan for Electricity Sector (IRP) of December 2009 and activities in the Clean Technology Fund Investment Portfolio. Yet, according to current trends, South Africa is unlikely to meet its pledge as current emissions are already higher than earlier BAU projections (Climate Action Tracker, 2012b).

South Africa has 51 million inhabitants and an average annual population growth of 1.2%. In 2012, South Africa's GDP was USD 384.3 billion, and the GDP per capita was USD 7,508. The annual growth rate is about 3%. A significant portion of its population (about 23% of the population) is still in poverty, lacking access to quality healthcare services, water supply and education (The World Bank, 2013). South Africa has very energy-intensive industry; the fuel mix is based to 90% on fossil fuels.

Table 11: **Emissions profile for South Africa**

	South Africa	EU 27
CO_2 emissions (2010)		
• Absolute (Gt)	0.36	3.9
• Rank	15	3
• Of global total	1.1%	12.1%
• Per capita (t)	7.1	7.8
• Per GDP (t/mil USD)	1.0	0.24
GHG emissions (2010)		
• Absolute (Gt)	0.42	5.0
• Rank	17	3
• Of global total	0.8	10.0%
• Per capita (t/capita)	8.4	10.0
• Per GDP (t/mil USD)	1.2	0.31

Source: http://edgar.jrc.ec.europa.eu, http://data.worldbank.org/indicator/NY.GDP.MKTP.CD

South Africa was the first emerging country that agreed to the 2°C objective. It has developed a long-term low carbon emission strategy in which national emissions peak between 2020 and 2025, then stabilize for a decade, and will be subsequently reduced.

By 12 November 2010 a draft green paper for a national Climate Change policy was adopted by the Cabinet in South Africa and will be open to comments from the public. The final policy paper in the form of a white paper was approved by the Cabinet as 'National Climate Change Response Policy' in October 2011.

South Africa has published the 2nd National communication including suggestions for carbon taxing, emissions trading and diversification of energy sources in 2011. In 2009 a renewable electricity feed-in tariff system was established.

3.5.2. Positions

South Africa is one of the important strategic partners for discussing the avenues leading to a post-2012 climate regime. Since Bali, South Africa has made many useful contributions on possible different elements of a post-2012 climate regime. South Africa is in the vanguard of the G-77 & China who are calling for further action under the UNFCCC.

- Mitigation: South Africa calls for broad participation and ambitious commitments from all Parties for a post-2015 agreement. Targets should be set domestically in accordance with multilaterally agreed criteria. A rigorous multilateral process would precede COP21 to review the initial offers, based on science and equity. Mitigation commitments should be set for implementation periods of 5, 10 or 15 years, in each period the commitments should become stronger/ more ambitious. The domestic targets should be set based on multilaterally agreed criteria pertaining to three major elements: form, stringency and rules. Differentiation between Parties is proposed to take the form of absolute targets and zero emission pathways for developed countries and relative emission reduction commitments and actions for developing countries – at least initially 2020/30. Domestically determined targets/commitments/actions should undergo an ex ante multi-lateral assessment process. All Parties have the same legally binding obligations, i.e. of following agreed criteria to formulate their targets/commitments/actions, and there will be no need to amend (and therefore ratify the amendments to) the protocol for further periods of implementation beyond e.g. 2025, 2030 or 2035. An 'Equity reference framework' would be part of this process. NAMAs should be implemented in the context of sustainable development. In terms of workstream 2 of the ADP, South Africa calls for further discussion on: phasing out fossil fuel subsidies, supporting technology transfer, encouraging local innovation, and involving women and youth.
- Adaptation: Adaptation should be given the same priority as mitigation in a 2015 agreement. All Parties must commit to a common global goal for adaptation. Parties should agree on a process to arrive at a common adaptation goal which will encompass the needs and costs of adaptation in a quantified way. Parties should also agree to develop a Strategic Framework for a coherent and consolidated international response and work programme on adaptation for the period 2020 to 2030.
- South Africa has put forward the idea of a registry for NAMAs and developed proposals for a life-cycle of NAMAs and for international MRV of NAMAs. It also supports the development of new sectoral mechanisms linking NAMAs with carbon markets.
- Germany has established an MRV partnership with South Africa to organize an international dialogue on MRV and South Africa is proactive in advancing approaches for MRV in relation to developing countries.
- Adaptation: This is a high priority for South Africa; an adaptation fund has been requested.

- Finance: South Africa calls for rapidly capitalising the GCF. It stresses that NAMAs in developing countries depend on finance provided by Annex I Parties. Adaptation is seen as the main focus of finance needs. It criticizes Annex I Parties for a lack of ambition with regard to finance pledges and highlights the need for MRV of financial support of Annex I Parties.
- South Africa has proposed a carbon tax to be implemented in 2015, which companies can pay by meeting up to 10% of their carbon tax liability through carbon offsets (Gonzalez, 2013).

3.6. USA

3.6.1. Facts

Shortly after he took office in 2001, former President George W. Bush withdrew the USA's support for the Kyoto Protocol and refused to submit it to Congress for ratification. Since this time the USA continue to refuse to commit to a legally-binding international instrument with a quantitative emission reduction target. This position of the second largest global emitter has strongly affected the UNFCCC negotiations. Key emerging countries such as China, India and Brazil are not willing to adopt legally-binding mitigation targets unless the USA is going ahead and also commits to such targets. For many years this situation has made progress in the UNFCCC negotiations very difficult.

Cancún Agreement pledge: The United States communicated a target in the range of a 17% emission reduction by 2020 compared with 2005 level in conformity with anticipated US energy and climate legislation (28 January 2010). In addition, the USA communicated that the pathway set forth in pending legislation would entail a 30% emission reduction by 2025 and a 42% emission reduction by 2030, in line with the goal to reduce emissions by 83% by 2050. The reported GHG emissions for 2011 were 7.0% below 2005 levels for total emissions excluding LULUCF and 6.5% below 2005 levels for total GHG emissions including LULUCF.

Table 12 presents some key figures related to the US emissions compared to EU-27.

Table 12: Emissions profile for USA and EU-27

	USA	EU-27
CO_2 emissions (2011)		
• Absolute (Gt) without LULUCF	5.8	3.7
• Absolute (Gt) with LULUCF	4.7	3.4
• Rank	2	3
• Change from 1990 to 2011 (without LU-LUCF)	+ 9.9%	-15.2%
• Of global total	16.8%	11.2%
• Per capita (t/capita)	18.0	7.5
• Per GDP (t/Mio. USD)	0.37	0.21
GHG emissions (2011)		
• Absolute (Gt) without LULUCF	6.7	4.6
• Absolute (Gt) with	5.8	4.2

	USA	EU-27
LULUCF		
• Rank	2	3
• Change from 1990 to 2011 (without LU-LUCF)	+ 8.04%	-18.5
• Of global total	13.3%	9.1%
• Per capita (t/capita)	21.4	9.1
• Per GDP (t/Mio. USD)	0.44	0.26

Sources: http://edgar.jrc.ec.europa.eu, http://data.worldbank.org/indicator/NY.GDP.MKTP.CD, Annual GHG inventories submission

Recently, there are reports that the use of fracking technologies and the increased production of shale gas in the USA leads to lower coal prices for US coal and higher coal imports and related emissions in the EU. It is correct that coal imports from the USA in the EU increased considerably between 2011 and 2012 (increase by 38%[13]). However, coal imports from the USA mainly replaced coal imports from other non-EU countries and total consumption of solid fuels increased only by 2.4% in EU-27 between 2011 and 2012.[14]

At the end of June 2013 president Obama announced a new climate action plan. This plan reiterates the emission reduction target of -17% below 2005 levels by 2020 pledged in 2009. The specific measures announced in the plan include

- The development of CO_2 standards for new and existing power plants until 2015
- Acceleration of the development of renewable energy
- Expansion and modernization of the electric grid
- Finance for advanced fossil energy projects
- Conducting an energy review
- Increasing fuel economy standards
- Developing and deploying advanced transport technologies including next-generation biofuels and electric cars
- Establishing new minimum energy efficiency standards for appliances
- Reducing barriers to investments in energy efficiency
- Expansion of the programme 'better buildings challenge'
- Curbing emissions of HFCs
- Reducing methane emissions
- Preserving the role of forests

Besides mitigation actions, the plan also includes a large amount of adaptation measures such as:

- Directing agencies to support climate-resilient investment
- Establishing a leaders task force on climate preparedness
- Supporting Communities as they prepare for climate impacts
- Improving the resilience of buildings and infrastructure
- Rebuilding and learning from hurricane Sandy
- Identifying vulnerabilities of key sectors
- Promoting resilience in the health sector

[13] Based on Eurostat monthly data for coal imports, 2012 corrected with national data for UK.
[14] Öko-Institut own calculations based on Eurostat monthly data.

- Promoting insurance leadership for climate safety
- Conserving land
- Maintaining agricultural sustainability
- Managing draught
- Reducing wildfire risks
- Preparing for future floods

The actions proposed can all be implemented via the US EPA; the plan is therefore a way to bypass Congress.

Obama also announced that the USA want to get back to a global leadership role at international level.

3.6.2. Positions

2015 agreement

The USA expressed the view that the 2015 agreement should focus on the approach to mitigation noting that it will include pieces devoted to all the well-known elements of the climate regime (e.g., mitigation, reporting/review, adaptation, finance, and technology). According to the USA, mitigation action is the main issue that needs updating, as the Cancún mitigation commitments (and Kyoto commitments for those that undertook them) generally do not extend beyond 2020.[15]

In the US view, the 2015 agreement should promote real-world ambition, with reference to the agreed goal of keeping global temperature below a two-degree increase. If the agreement reflects ambition on paper but countries do not join it, or they join it but do not implement it, then it will not be effective in the real world and will not advance the UNFCCC's objective. If, on the other hand, the agreement attracts countries to join and implement but the level of action is substantially inadequate, then the agreement will also not meet real-world ambition.

The USA is in favour of a pledge and review system for emission reduction targets without a legally-binding framework. They strongly oppose any system that includes an international compliance system with consequences. They consider that the agreement should provide for Parties to define their own mitigation contributions, taking into account national circumstances, capacity, and other factors that they consider relevant. A template might be drawn up to reflect a variety of contributions. The USA believes that an approach that imposes contributions from Parties is neither realistic nor likely to result in wide participation/implementation. In terms of encouraging Parties to strive for greater ambition when determining their contributions, the US propose the inclusion of a consultative period after 'draft' contributions were put forward. This would allow each Party to analyse other Parties' measures in light of both comparative effort (allowing consideration of national circumstances and capabilities and other relevant factors) and the overall level of ambition in light of the global temperature goal.

The USA stress that major emitters from developing countries should be bound by the same rules. It believes advanced developing countries should be treated like developed countries once they have surmounted a certain level of development.

[15] Submission of the United States under ADP Workstream 1: 2015 Agreement, March 11, 2013

Accounting framework

With regard to an international accounting framework for mitigation targets, the USA recently seems to have changed their position. In Durban and Doha, the USA was strongly opposing a common accounting framework and stressed that Parties should determine their own accounting rules. With regard to the 2015 agreement the USA now stress that they need a 'clarity component'. While Parties would have flexibility in designing their mitigation contributions, there will need to be ex ante clarity with respect to the various aspects of such contributions, e.g., scope/timing/stringency/assumptions, etc. Such clarity would both promote understanding of individual contributions and facilitate an analysis of aggregate efforts. As such, mitigation contributions should be put forward in combination with certain types of necessary information. At sessions of subsidiary bodies in Bonn in June 2013, the USA supported the EU in highlighting the importance of ex ante and ex post transparency and accountability emphasizing the need for: providing clarity to predict and quantify the impacts of parties' commitments; understanding the methods used by parties to track their efforts; and tracking impacts and learning lessons to enhance actions. The USA said accounting guidance should apply to all parties, be flexible, promote ambition, and avoid double counting.

With regard to the current pledges until 2020, the USA now seems closer to the EU position because they proposed in their submission in 2013[16] thematic discussions around

- Coverage of targets and metrics (base year, global warming potentials, coverage of gases and sectors)
- The role of LULUCF and the LULUCF accounting approach
- The contribution of units from market-based mechanisms

Differences remain in terms of timing: while the EU advocates that parties provide their mitigation pledges by the end of 2014 in order to allow for a thorough analysis, the USA suggest that parties should submit their pledges by mid-2015, since a non-binding review would last only a few month.[17]

Enhancement of mitigation ambition

Under workstream 2 of the ADP the USA expressed the following ways to increase pre 2020 ambition:[18]

- Clarification of existing pledges
- Encouragement of Parties to include additional sectors or actions in their pledges
- Encourage Parties that have not yet pledges to do so
- Public recognition of countries' mitigation pledges

[16] US Submission to the Subsidiary Bodies on the work programs for clarification and further understanding of Party mitigation pledges, April 26, 2013.
[17] http://uk.reuters.com/article/2013/05/28/us-climate-goals-idUKBRE94R0LN20130528
[18] Submission of the United States: ADP Workstream 2: Mitigation ambition, March 11, 2013

Market Mechanisms

In line with the recent change of their position towards a common accounting framework the USA also seemed to have changed their position towards flexible mechanisms. Until Doha, the USA was strongly promoting domestic accounting rules for the use of flexible mechanisms. In their submission under the framework for various approaches (FVA)[19] the USA now explain in detail how international transfers of mitigation outcomes of market-based approaches implemented by Parties, sub-national jurisdictions or under the UNFCCC should be accounted for.

The common rules should be based on information provided under international consultation and analysis (ICA) for developing countries and international assessment and review (IAR) for developed countries. However, since this information are not sufficient to accurately track international transfers and to avoid double counting or claiming of emission reductions, Parties which wish to acquire or to transfer such units for the purpose of using them towards UNFCCC mitigation pledges, would need to comply with more elaborate opt-in accounting rules.

These rules would include an UNFCCC expert and independent third-party review of the approaches based on common criteria and a reconciliation of national GHG inventories with international transfers of emission units towards UNFCCC mitigation pledges. With this change, the USA is now much closer to the EU's perspective of a robust common accounting framework.

Finance

Private sources of financial flows are considered more important than public sources for financial support; with regard to management, the USA prefer involvement of the World Bank and their Climate Investment Funds as financial institutions to provide finance support related to climate.

Phase-down of HFCs

Similar to the EU, the USA support a gradual phase down in the consumption and production of HFCs through an amendment to the Montreal Protocol. On June 8, 2013, United States President Barack Obama and Chinese President Xi Jinping pledged to cut production of hydrochlorofluorocarbons (HFCs). This chemical, used in refrigeration and insulating foams, is already being replaced in some categories with cost-effective substitutes.

The proposal to include HFCs within the Montreal Protocol has the support of over 100 countries, including the EU, the USA and Mexico. China's support will strengthen the proposal, which will be considered at the 25th meeting of the parties to the Montreal Protocol, held in Bangkok in October 2013.

[19] U.S. Submission on the Framework for Various Approaches to UNFCCC, May 10, 2013, http://unfccc.int/files/documentation/submissions_from_parties/application/pdf/fva_usa.pdf

International aviation

At the 194th ICAO council meeting in November 2011 26 countries of the 36 Council states including the USA, Russia and China adopted a Council resolution urging the EU not to include non-EU carriers into the EU ETS because this policy would infringe the basic principle of national sovereignty. However, the Council resolution does not have any legally binding consequences. The USA has been one of the major opponents against the EU ETS and in the past also did not allow ICAO to make progress. At the 38th Assembly of ICAO in October 2013 it agreed to develop a global market-based scheme to tackle aviation emissions that should finally be adopted in 2016 though (see section 2.8.2 for details).

3.7. The Russian Federation

3.7.1. Facts

Cancún Agreement pledge (confirmed in 2012): The Russian Federation communicated a target within the range of a 15–25% emission reduction by 2020 compared with 1990 levels. The range of its GHG emission reductions will depend on the following conditions:

(a) Appropriate accounting of the potential of Russia's forestry sector in the context of its contribution to meeting the obligations of anthropogenic emission reductions;

(b) The undertaking by all major emitters of the legally-binding obligations to reduce anthropogenic GHG emissions (4 February 2010).

Without any LULUCF credits, the new -25% target leaves Russia's emissions still above the business-as-usual range and would also be rated as inadequate (Höhne et al., 2011). If LULUCF is included in the target, the amount of fossil fuels burned by the country would have to be increased by more than a third in order to reach the 2020 goal (Dobrovidova, 2013)

Table 13: Emissions profile for the Russian Federation

	Russian Federation	EU 27
CO_2 emissions (2010)		
• Absolute (Gt)	1.8	3.9
• Rank	5	3
• Of global total	5.5%	12.1%
• Per capita (t)	12.4	7.8
• Per GDP (t/mil USD)	1.2	0.24
GHG emissions (2010)		
• Absolute (Gt)	2.5	5.0
• Rank	5	3
• Of global total	5.0%	10.0%
• Per capita (t/capita)	17.6	10.0
• Per GDP (t/mil USD)	1.7	0.31

Source: http://edgar.jrc.ec.europa.eu, http://data.worldbank.org/indicator/NY.GDP.MKTP.CD

Russia's energy mix relies to more than 50% on gas, and another 40% of energy comes from coal and oil. Emissions have been falling steadily since the collapse of the Soviet Union. In 2009 the government first officially recognised the anthropogenic nature of climate change and announced long-term emission reduction targets. Russia is an active applicant for Joint Implementation projects under the Convention (Yale Center for Environmental Law & Policy, 2011).

3.7.2. Positions

Since Doha, Russia has been obstructing progress in the negotiations. As a consequence of not being given the floor by the Chair in Doha in the CMP closing plenary, the Russian Federation together with Belarus and Ukraine submitted a proposal on legal and procedural issues related to decision-making under the COP and CMP to SBI 38 in June 2013 which other Parties did not want to consider as a new SBI agenda item. As a result, the SBI's work was blocked during 2013.

The Russian Federation clearly announced that it will not participate in a second commitment period under the Kyoto Protocol. Russia has set clear formal preferences for economic development and aims at doubling its GDP by 2020. In addition, Russia highlights specific national circumstances (large size, cold climate and relying on energy trade and heavy industry) which should be taken into account with regard to mitigation targets. Current GHG emissions are some 33% below 1990 levels and estimates for 2020 amount to 30% of 1990. Therefore, the Cancún pledge would actually not contribute to emission reductions but result in increasing GHG emissions.

At the end of the first commitment period Russia holds the biggest part of excess AAUs ('hot air') granted by the Kyoto Protocol (5.8 billion/about 18%). In addition, Russia calls for full accounting of its forest sinks which, depending on the accounting rules for LULUCF, could amount to an additional 365 Mt per year (about 12% of its 1990 emissions).

In terms of mitigation of developing countries, Russia follows an all-or-nothing approach, i.e. all major economies should agree to contribute to global emission reductions efforts. Therefore, Russia also supports the establishment of sectoral approaches, not least because such approaches might improve the competitiveness of Russia's energy-intensive export industries such as steel and aluminium. Russia also requested that special rules for EIT (economies in transition) countries should continue in the future.

So far, Russia has not adopted a clear position on financial support. Officials communicated that Russia would not commit to additional support beyond that which is already provided to the Commonwealth of Independent States. Financial contributions at a later stage, for example beyond 2020, might be possible.

For the 2015 agreement, the Russian Federation demands that mitigation should be central and calls for 'legally-locked' commitments by all, even if different in format.

The Russian Federation has voiced support for geoengineering to be included in the fifth IPCC report as a solution to dealing with climate change (Lukacs & Vaughan, 2013).

3.8. Japan

3.8.1. Facts

Cancún Agreement pledge: "Emission reduction in 2020: 25% reduction, which is premised on the establishment of a fair and effective international framework in which all major economies participate and on the agreement by those economies on ambitious targets; Base year: 1990" (26 January 2010).

Table 14: Emissions profile for Japan

	Japan	EU 27
CO_2 emissions 2010)	1.3	3.9
• Absolute (Gt)		
• Rank	6	3
• Of global total	3.9%	12.1%
• Per capita (t)	10.0	7.8
• Per GDP (t/mil USD)	0.23	0.24
GHG emissions (2010)		
• Absolute (Gt)	1.4	5.0
• Rank	8	3
• Of global total	2.8%	10.0%
• Per capita (t/capita)	10.9	10.0
• Per GDP (t/mil USD)	0.25	0.31

Source: http://edgar.jrc.ec.europa.eu, http://data.worldbank.org/indicator/NY.GDP.MKTP.CD

The new government of Japan has been holding to Japan's conditional 25% reduction below 1990 by 2020 emission reduction pledge, despite the tragic and extremely damaging tsunami caused by the 2011 earthquake and the meltdowns at three reactors in the Fukushima nuclear power plant complex. However, in January of this year, the government announced a review of the target before COP 19, and it is yet unclear whether this pledge will be amended. Japan has made clear that achievement of its emissions target is contingent on an international agreement including China and India.

Japan is making progress on domestic implementation of the renewable energy bill, which has the potential to improve performance on meeting its targets. It envisages implementation of a feed-in-tariff scheme for renewable energy sources (Solar photovoltaic, wind power, hydraulic power, geothermal and biomass). Nuclear energy has been reduced to less than 5% of the country's energy mix. Under the so-called 'Top Runner Programme' Japan is introducing energy conservation standards which are implemented for automobiles and household electrical appliances.

The country is involved in promoting Japanese technologies in climate change mitigation worldwide through a Bilateral Offset Crediting Mechanism. The majority of initiatives under this mechanism are undertaken in Asia.

The government of Japan has developed the joint credit mechanism (JCM) to mitigate climate change and help developing countries achieve low-carbon growth by mobilising technology, markets and finance. For example, a JCM project in Mongolia plans to replace conventional coal-based boilers with new energy-efficient ones. As Japan has no quantitative commitment under the Kyoto Protocol for the second commitment period, it is no longer able to use JI and CDM credits. Other Parties fear double counting of emission reductions when countries create domestically new flexible mechanisms that are not approved under the UNFCCC.

3.8.2. Positions

Japan's highest priority is a multilateral agreement which includes all major emitters and is applicable to all countries. Japan is emphasizing the importance of a review system of mitigation commitments to decide whether Parties' contributions are fair and transparent MRV but says that commitments should be determined nationally.

Japan clearly announced that it will not participate in a second commitment period under the Kyoto Protocol.

The pledge under the Copenhagen Accord should be achieved through domestic policies and measures and through offsets, although the shares of both approaches have not yet been determined. Therefore, Japan has a strong interest in a well-functioning global carbon market. It supports enhancing the global carbon market through sectoral approaches and a focus on streamlined procedures but, in contrast to the EU, less on environmental integrity. The recently started Joint Crediting Mechanism/Bilateral Offset Crediting Mechanism with several developing countries in Asia serves to explore opportunities for sectoral approaches. One aim of this effort is to bypass some of the provisions for existing mechanisms and to include technologies which are currently excluded, such as nuclear power or CCS. The country also supports an agreement on International Cooperation Initiatives.

Japan has not made any concrete pledges regarding its contributions to long-term climate finance, but stresses the important role of the private sector in mobilizing sufficient financial resources.

With regard to the 2015 agreement Japan proposed that all Parties should have the same international obligation to submit their commitments in a way that allows comparing, evaluating and reviewing the performance and effects of each Party's efforts. Each Party is subject to an effective transparency mechanism common to all Parties composed of ex-ante consultation as well as ex-post international evaluation and review of each Party's performance based on internationally agreed rules.

3.9. Australia

3.9.1. Facts

Cancún Agreement pledge: Australia will reduce its greenhouse gas (GHG) emissions by 25 per cent compared with 2000 levels by 2020 if the world agrees to an ambitious global deal capable of stabilising levels of GHGs in the atmosphere at 450 ppm carbon dioxide equivalent (CO_2eq) or lower. Australia will unconditionally reduce its emissions by 5 per cent compared with 2000 levels by 2020 and by up to 15% by 2020 if there is a global agreement which falls short of securing atmospheric stabilization at 450 ppm CO_2eq under which major developing economies commit to substantially restraining their emissions and advanced economies take on commitments comparable to Australia's.

Under the second commitment period of the Kyoto Protocol (2013-2020), Australia pledged to limit emissions to no more than 99.5% of 2000 levels. This limit is consistent with its unconditional 5% target set in the Cancún Agreement and inscribed in Annex B of the Kyoto Protocol, but it is not legally-binding. These targets include LULUCF emissions.

The liberal-national coalition under Tony Abbott which won the elections in September 2013 initially maintained their support for 2020 emission reductions of 5 to 25% (The Climate Institute, 2013). However, a change in Australia's role in the negotiations is likely because in the new Australian Cabinet the ministerial role for climate change issues has been abolished and the government has made it clear that they do not consider climate change to be a priority topic.

It is planned to abolish the carbon tax and the emissions trading scheme, disband Australia's Climate Commission, an independent climate advisory body, and to achieve emission reductions through buying emission cuts from those companies that pledge to achieve them at the lowest cost. The prime minister has announced a "serious review" of the renewable energy target (Reklev, 2013; Slezak, 2013).

Australian GHG emissions excluding land use, land-use change, and forestry (LULUCF) increased by nearly 30% between 1990 and 2010. If LULUCF is included in the calculations, annual figures vary to a much greater extent due to climatic variability, major natural disturbances and changes in the agricultural sector (Kember, Jackson, & Merry, 2013).

Table 15: Emissions profile for Australia

	Australia	EU 27
CO_2 emissions (2010)		
• Absolute (Gt)	0.40	3.9
• Rank	14	3
• Of global total	1.2%	12.1%
• Per capita (t)	17.9	7.8
• Per GDP (t/mil USD)	0.35	0.24
GHG emissions (2010)		
• Absolute (Gt)	0.63	5.0
• Rank	13	3
• Of global total	1.3%	10.0%
• Per capita (t/capita)	28.2	10.0
• Per GDP (t/mil USD)	0.55	0.31

Source: http://edgar.jrc.ec.europa.eu, http://data.worldbank.org/indicator/NY.GDP.MKTP.CD

In 2011, Australia endorsed the Clean Energy Act to put a price on carbon which came into force in July 2012. Up to 2014, the bill introduces a fixed carbon price to be replaced by a cap and trade system in 2015. In summer 2012, Australia and the EU agreed to link their emissions trading schemes. From 2015 onwards Australian emitters will have access to allowances from the EU ETS while bidirectional trading is envisaged to start in 2018. Yet, the government's plans to abolish the carbon tax and the emissions trading scheme might jeopardise this agreement.

Beyond the carbon-pricing mechanism, Australia has put in place the Large-Scale Renewable Energy Target (LRET) or 41,000 GWh renewable energy generation by 2020 and the Clean Energy Finance Corporation, which has $A10 billion to assist deployment of low-emission technologies. Furthermore, the government implemented policies such as feed-in tariffs for solar photovoltaic, energy efficiency obligations, and laws regulating land clearing. Additionally, the Carbon Farming Initiative lets Australia's agricultural sector reduce emissions and create carbon credit units.

If the Clean Energy Act and associated legislation, known together as the Clean Energy Future package, remains in place, Australia will be able to meet all of its targets; yet it is unclear to what extent it will be able to reduce emissions domestically and whether the legislation is supported by the new government. Currently, it is projected that domestic emissions will increase and that international abatement will be necessary for Australia to achieve its targets (Kember et al., 2013).

3.9.2. Positions

Australia stressed that mitigation must be core of a post-2015 Agreement which should not replicate existing infrastructure such as the Cancún institutions. It should be fair, flexible, robust and dynamic to accommodate for different national capacities and allow for differentiated commitments. Yet, it calls for every country to submit a pledge. For WS2 it focuses on five areas of action: building mitigation toolboxes, transparency, markets, REDD+ and political engagement.

For meeting its commitment under the Kyoto Protocol, Australia submitted political declarations to Annex II of the CMP decision stating that it will not purchase or use surplus AAUs carried over from the first commitment period for meeting their targets in the second commitment period.

In terms of the accounting system for progress towards achieving reduction targets Australia supports a flexible system.

Australia's International Forest Carbon Initiative supports global efforts to establish a REDD+ mechanism under the UNFCCC and MRV systems in the forest/land-based sectors.

Australia is frequently acting as part of the Umbrella Group and supporting the Umbrella Group positions.

3.10. Peru

3.10.1. Facts

Cancún Agreement pledge: In 2010, Peru communicated the following NAMAs:

(a) The reduction to zero of the net deforestation of primary or natural forests until 2021;

(a) The modification of the current energy grid, so that renewable energy (non-conventional energy, hydropower and biofuels) represent at least 33 per cent of the total energy use by 2020;

(b) The design and implementation of measures which allow the reduction of emissions caused by the inappropriate management of solid waste.

Peru communicated three additional NAMAs: one in the housing sector in 2011 and two in the energy generation and end-use sectors and in the agricultural sector for scaling up waste-to-energy in 2012.

In its submission to the UNFCCC, Peru stated that its mitigation measures do not exclude the use of the CDM or other market-based mechanisms which could be created under the Convention and asked for financial support from developed countries.

Table 16: Emissions profile for Peru

	Peru	EU 27
CO_2 emissions (2010)		
• Absolute (Gt)	0.04	3.9
• Rank	67	3
• Of global total	0.12%	12.1%
• Per capita (t)	1.4	7.8
• Per GDP (t/mil USD)	0.26	0.24
GHG emissions (2010)		
• Absolute (Gt)	0.08	5.0
• Rank	69	3
• Of global total	0.15%	10.0%
• Per capita (t/capita)	2.6	10.0
• Per GDP (t/mil USD)	0.50	0.31

Source: http://edgar.jrc.ec.europa.eu, http://data.worldbank.org/indicator/NY.GDP.MKTP.CD

In 2011, the government approved a national plan of environmental action for 2010–2021, which established goals and actions incorporating the following commitments to achieve a national low-carbon economy and adding further details to the envisaged NAMAs:

- Reducing net emissions from the LULUCF sector through the conservation of 208,500 square miles of primary forests as part of its National Programme of Forest Conservation. This programme, combined with additional actions, will allow Peru to achieve an emission reduction of 45% compared with the emission level in 2000, with potential avoided emissions of up to 50 Mt CO_2eq;
- Using non-conventional renewable energies and hydropower to provide at least 40% of the total energy mix. Together with energy efficiency, this initiative will result in a total emission reduction of 28% compared with the emission level in 2000, with potential avoided emissions of up to 7 Mt CO_2eq;
- Capturing and using CH_4 from urban solid waste: a national programme to build landfills in 31 large and medium-sized cities, with the potential to achieve an emission reduction of 7 Mt CO_2eq.

Peru has relatively low emission levels but is one of the most vulnerable countries to the impacts of climate change. Its glaciers represent 70% of the ice surface in the tropics but they recede between 20 and 30 meters per year and destroy valuable water resources for consumption, electricity generation and agriculture.

Over 50% of the country's emissions originate from the burning and deforestation of forests and other land use changes (WWF Peru, 2013). In May 2013, President Ollanta Humala declared an environmental state of emergency in part of Peru's Amazon jungle region and intended to hold the oil company operating in the region accountable for the pollution caused.
Of its total primary energy supply, about 27% come from renewable sources, including mainly solid biofuels and hydropower (IRENA, 2009).

The country is governed by a left-wing government, yet President Ollanta Humala has taken a more moderate stance which caused dissatisfaction among his allies and support base. Social unrest over how to pursue development and over the exploitation of natural resources that affect indigenous communities in the highlands and have disastrous environmental impacts threaten political stability.

Despite high economic growth rates over the last 10 years (over 8% until 2008 and about 6% since 2011), about 25% of the population in total and over 60% of the population in remote areas of the country continue to live in poverty (Taft-Morales, 2013).

3.10.2. Positions

Peru participates in the Cartagena Dialogue for Progressive Action (see section 4.6). Additionally, it is a member of the AILAC countries, aiming to take proactive action under the UNFCCC and to overcome the strict division between Annex I and Non-Annex I Parties. As such it is strongly oriented towards achieving progress in developing a new global climate change agreement and supports positions on other topics which the AILAC takes (see section 4.7).

Peru supports the EU's proposal on the NMM. Moreover, it advocates for action in the agricultural sector as a key sector for food security, livelihoods, raw materials and national incomes. Production systems shall be adapted to changing environmental conditions also with regard to associated co-benefits as mentioned above.

Peru has not made any individual submission to the ADP in 2013.

4. POSITION OF NEGOTIATION GROUPS

4.1. G-77 & China

G-77 & China are coordinating common negotiating positions among 130 developing countries. The G-77 positions are presented by the country serving as the chair for each specific negotiation issue. However, as there are a wide range of interests on climate change within the G-77, from AOSIS to OPEC, sub-groups of developing countries (e.g. African Group, AOSIS, LDC, etc.) will also state their positions alongside the G-77 position, or independently if there is no consensus among G-77 members.

Despite difficulties in coordinating common positions on many details, G-77 members share basic views:

- G-77 demands the operationalization of an ambitious second commitment period under the Kyoto Protocol and commitment by Annex I Parties to ambitious QELROs. It also called for a restriction of access to the flexibility mechanisms for those Annex I Parties with commitments under the second commitment period.
- Regardless of considerable differences in the level of development among the group which often results in conflicting positions, G-77 regularly reiterates the UNFCCC principle of common but differentiated responsibility and warns that re-classification of countries or differentiation amongst developing countries will impede the process of negotiations.
- G-77 & China are requesting additional financial support for developing countries for mitigation action, adaptation to climate change impacts, capacity building and technology transfer.

The recent formation of the AILAC group (see section 4.7) as another group with strong common positions that deviate from the views held by G-77 indicates a split up of the G-77 though.

4.2. Like-minded developing countries

The group of the Like-Minded Developing Countries (LMDC) on Climate Change is a relatively new group under the UNFCCC. They did not hold their first meeting until 18-19 October 2012 in Beijing, China. This recent meeting was attended by representatives from Bolivia, China, Ecuador, Egypt, India, Malaysia, Nicaragua, Pakistan, Philippines, Saudi Arabia, Thailand and Venezuela. The group is a platform which includes up to 20 other developing countries in varying configurations depending on the issues at stake. In 2011, the grouping occasionally had coordinated joint statements and positions against further action under the UNFCCC related to emissions from bunker fuels (international aviation and shipping). They made a number of joint statements and proposals in 2012 and 2013 and actively participate in the debate about the post-2015 agreement under the ADP. At the meeting in Beijing in 2012 they stressed that LMDC is part of and firmly anchored in the G-77 & China before the UNFCCC, a like-minded group already organized themselves as block voters in the UN Human Rights Council and the World Trade Organization using its influence to hold up progress in the fields of human rights. The formation under the UNFCCC also seems to be a reaction to the Cartagena group of countries as well as to the cooperation between the EU AOSIS and small and least developed countries in Durban.

One of the primary goals for LMDC is to uphold the Convention's principles of CBDR and equity, as well as developed countries' historical responsibility for climate change. Thus, they oppose any re-interpretation of the Convention or a re-negotiation of the Annexes. The LMDC call for greater action by Annex I Parties as well as commitments on climate finance. A review of developed country commitments is key for an ADP work plan for this group of countries. They favour the continuation of a top-down approach for developed countries. No new commitments for developing countries shall be introduced and mitigation and adaptation actions must be balanced. They hold the view that non-market approaches should be given more priority.

Furthermore, they stress that sustainable development and poverty eradication are the primary goals of developing countries. Action must be taken so that these goals are not obstructed by the impacts of climate change. Adaptation may not be conditional upon mitigation action and must be given greater priority. Pre-2020 ambition shall be achieved primarily through the implementation of the 2nd commitment period of the Kyoto Protocol and the outcome of the Bali Action Plan. Kyoto Parties shall immediately ratify the amendment to the Kyoto Protocol for the 2nd commitment period during 2013 and thereafter significantly scale-up their mitigation ambition by April 2014. Non-KP Annex I Parties must also commit to comparable enhanced mitigation ambition in the same time frame. Annex II Parties must also show increased ambition pre-2020 by fully financing mitigation actions in developing countries without seeking to get emission reduction credits from these actions and fully implementing their commitments to provide finance and technology transfer to developing countries under the Convention. The group also requests enhanced support for adaptation and a loss and damage mechanism.

4.3. AOSIS

The Alliance of Small Island States (AOSIS) is a coalition of small islands and low-lying countries. It was established in 1990, mainly to advocate the interests of Small Island Developing States (SIDS), which are the most affected by sea-level rise resulting from global warming. The group has 44 members, some of which are least developed countries (LDCs). It has always been very active under the UNFCCC.

Based on the scientific fundamentals of climate policy, AOSIS is urgently calling for limiting the global temperature increase to below 1.5°C in order to enable survival of the particularly vulnerable states. AOSIS is requesting that developed countries take ambitious mitigation targets but also supports quantifiable contributions of developing countries. Therefore, AOSIS is a strategic partner, both with regard to the EU's position that advanced developing countries should accept mitigation commitments and with regard to the adoption of a strong legally binding agreement.

Many small island developing states are already faced with the impacts of climate change. To adapt to climate change they seek support in three areas: (1) risk management, such as the 'climate proofing' of infrastructure; (2) insurance support for dealing with immediate losses from catastrophic events; and (3) a compensation mechanism to deal with 'slow onset' losses. In addition, funding for implementing adaptation measures is urgently needed, also pre-2013. Many AOSIS countries are therefore calling for financial contributions of developed countries up to 2% of their GDP.
In the meetings in 2013 AOSIS stressed the principle of common but differentiated responsibilities and respective capabilities, highlighted means of implementation and called for further work on linkages between existing institutions. They oppose any changes to the Annexes of the Convention and favour a new protocol under which all Parties shall act. In terms of WS2 AOSIS argued in favour of involving a number of stakeholders into the process. AOSIS calls for a ministerial roundtable at COP 19.

To enhance mitigation action prior to 2020, AOSIS proposes a technical process to identify specific policies and technologies with the potential to rapidly reduce GHG emissions in the near-term and involve a number of different stakeholders in this process. In this process, AOSIS suggests focusing on renewable energy and energy efficiency first and to devote three days during the first week of COP 19 on expert workshops dealing with this topic. AOSIS calls on developed countries to take the lead and stresses that the development of NAMAs should not lead to binding sectoral targets for developing country Parties. Mitigation targets should be unconditional and action plans by developed countries should be ready in 2014.

In 2012 AOSIS was one of the key opponents to the EU in the discussions on the detailed elements for the second commitment period under the Kyoto Protocol. AOSIS is also not supportive of methodological and accounting modalities for the second commitment period that needed to be revised for the implementation of the new amendment. AOSIS is currently chaired by Nauru which presents much stronger positions than other AOSIS countries such as Grenada.

4.4. Umbrella Group

The Umbrella Group is a loose coalition of non-EU developed countries which formed following the adoption of the Kyoto Protocol. Although there is no formal list, the Group is usually made up of Australia, Canada, Japan, New Zealand, Norway, the Russian Federation, Ukraine and the USA.

The Umbrella Group countries stress that major emitters from developing countries should have similar responsibilities to Annex I Parties and that the division in the two groups of Parties Annex I and Non-Annex I is no longer adequate given the global economic developments. It believes advanced developing countries should be treated like developed countries once they have reached a certain level of development. Developing countries should establish low emission development strategies, taking into account their respective capabilities.

The Umbrella Group, the EU and Colombia hold the view that Convention principles should be seen in an "evolving context", highlighting the need to discuss further the principle of equity in terms of fairness and reflecting changing realities.

4.5. ALBA countries

Since 2009, the members of the ALBA (the Bolivarian Alliance for the Peoples of our Americas) group (Bolivia, Cuba, Ecuador, Nicaragua and Venezuela) have voiced strong opposition to the Copenhagen Accord and the Cancún Agreement and played a role of resistance. Some of their key positions are:

- Limitation of the global mean temperature increase to well below 1.5° C, ideally stabilizing it at 1° C;
- Annex I Parties should commit to an emission reduction of 50% relative to 1990 for a second commitment period of the Kyoto Protocol;
- Developed countries should provide additional financial support at the level of war and defence budgets;
- Strong rejection of any flexible mechanisms and carbon markets;
- Establishment of an Adaptation Fund with a facility to remedy the damages caused by any impacts;

- Polluting countries must directly transfer financial and technological resources to pay for restoration and conservation of forests and jungles, in favour of indigenous peoples and ancestral original social structures; and
- Developed countries should assume responsibility towards climate migrants, admitting them to their territories.

Regarding the post-2015 agreement, the ALBA countries emphasize the importance of the Convention's principles. However, the ALBA countries seem to be becoming a less important group in the negotiations. They have not handed in any common submission on the ADP process in 2013. Instead, the individual countries have often supported and joined the positions of the LMDC.

4.6. Cartagena Dialogue

The Cartagena Dialogue for Progressive Action is a group of around 40 countries seeking ambitious outcomes from the UNFCCC negotiations. Participating countries include Antigua and Barbuda, Australia, Bangladesh, Belgium, Burundi, Chile, Colombia, Costa Rica, Denmark, Democratic Republic of Congo, Dominican Republic, Ethiopia, France, Gambia, Germany, Ghana, Guatemala, Indonesia, Kenya, Lebanon, Malawi, Maldives, Marshall Islands, Mexico, the Netherlands, New Zealand, Norway, Panama, Peru, Rwanda, Samoa, Spain, Switzerland, Sweden, South Africa, Tanzania, Thailand, Timor-Leste, Uruguay, the UK and the European Commission.

The Dialogue emerged as a spontaneous and informal effort to elaborate the negotiation texts in Copenhagen. It was open to countries with ideas about creating an ambitious regime, both comprehensive and legally-binding across constructive positions and that, within the domestic sphere, strive to continue with or promote low carbon economies in the medium- and long-term. These participating countries share a main goal that the negotiations advance, and that countries work together positively and proactively both within and with other regional groups.

However, the Dialogue is neither a negotiation block, nor does it have the intention to challenge the blocks in the negotiations. The Dialogue serves as a discussion forum to exchange opinions and to explore options and texts that can generate support and consensus from other parts.

Outside of the formal negotiation rooms, a space is created where frank discussions can take place to explore areas of common interest — which is very different from the polarizing environment that prevails in the negotiations.

In 2013, the meeting of the Cartagena Dialogue continued and the platform will hopefully again contribute to achieving improved understanding and compromises in Warsaw. A meeting in April 2013 highlighted the following issues for Warsaw:

- The importance of operationalizing the newly created frameworks, mechanisms, institutions and processes in an expeditious manner;
- Maintaining effective linkages between discussions under the Subsidiary Bodies and the ADP;
- An effective, robust, multilateral rules-based regime created through the 2015 agreement;
- The need to focus on low-hanging mitigation potential as well as supplementary initiatives

4.7. AILAC

The Independent Alliance of Latin American and Caribbean states (AILAC), comprising Colombia, Peru, Costa Rica, Chile, Guatemala, Panama, officially formed and spoke as a group in Doha in 2012. The formation of this group indicates a split of the G-77 and a greater diversity of views within the group of developing countries. It aims to take proactive action by bringing new ideas and commitments to the UNFCCC process. The participating countries are middle income countries that have taken ambitious domestic commitments to reduce their emissions and are pushing for all countries to step up their mitigation commitments. They are seeking to bridge the North-South divide by showing action taken as developing countries and thus setting an example.

The AILAC considers the Convention to be a living instrument that should be interpreted in a dynamic way so that the CBDR principle is understood as a tool for action, not an excuse for inaction. It calls for a mechanism allowing countries to become more ambitious when their circumstances evolve. AILAC supports mitigation commitments for all Parties and a common-rules framework that can be implemented with differentiation over time and include incentives. In terms of WS2, AILAC wants Parties to exchange views and information on the size of gap and analysis of potential global emissions reductions by sector and a discussion on barriers to enhanced ambition to develop a common understanding of the global mitigation potential.

For the 2015 agreement, AILAC proposes putting more emphasis on adaptation and establish an adaptation assessment framework under the Convention to assess and quantify questions related to adaptation and raising the available funding for adaptation measures. Enhanced action to strengthen capacity to cope with non-economic losses shall be evaluated via an inter-governmental expert group established within the structures of the new legally binding agreement. The 2015 Agreement must include specific commitments on the provision of means of implementation. $100 billion represents a minimum portion of the necessary resources for the major transformation of the world's economy towards a low-carbon and resilient path and this must be acknowledged and addressed by the 2015 Agreement. Commitments on the provision of means of implementation need also to be defined as soon as possible; their timeline must be the same as the one that will be agreed for the definition of commitments on mitigation, allowing for enough time in order to review them and raise ambition.

While going ahead with ambitious mitigation actions regardless of the financial support of wealthy countries, AILAC nevertheless ask for financial support from developed countries to catalyse the transition to a greener path (Roberts & Edwards, 2013)

The AILAC countries have also participated in discussions under the Cartagena Dialogue.

5. POSITIONS OF STAKEHOLDER GROUPS

5.1. Environmental NGOs

Civil society is playing an important role in the UNFCCC process. Overall, there are nine different constituencies:

1. Business and industry non-governmental organisations (BINGO)
2. Environmental non-governmental organizations (ENGO)
3. Farmers
4. Indigenous peoples organizations (IPO)
5. Local government and municipal authorities (LGMA)
6. Research and independent non-governmental organizations (RINGO)
7. Trade Unions non-governmental organizations (TUNGO)
8. Women and Gender
9. Youth (YOUNGO)

Environmental organizations have been the most active, coordinated and visible constituencies in the process and are organized into two networks with different focuses.

5.1.1. Climate Action Network (CAN)

The Climate Action Network is a worldwide network of roughly 500 non-governmental societies working to promote government and individual action to limit human-induced climate change to ecologically sustainable levels.

CAN highlights the need to secure a binding deal by 2015 in line with the 1.5°C goal and said that Parties' attitudes must change to this effect. It criticizes Parties' lack of political will which impedes progress in the negotiations and demands leadership. CAN supports the EU's proposal for a stepwise approach and the formulation of mitigation commitments in 2014.

CAN stresses the principle of common but differentiated responsibility but calls upon all Parties to act, according to their capabilities. To assess the remaining emissions budget for 2015-2020, CAN calls for an equity review of the mitigation pledges that Parties submit. It should be assessed for all Parties whether proposed ambition is sufficient. For developing countries with low capability, COP 19 should develop a "NAMA Readiness process". The EU should move to a 40% emission reduction target for 2020.

A mitigation potential necessary to close the gap exists in various areas that could be agreed outside the UNFCCC for Parties to focus more on the 2015 Agreement. This would require enhanced coordination between the UNFCCC and other bodes. Particularly, CAN supports the idea of ICIs, e.g. for bunkers, HFCs, fossil fuel subsidies, short-lived climate pollutants, energy efficiency, renewables, REDD+ to enhance mitigation. It also calls upon developed countries to announce concrete finance pledges. For Warsaw, CAN suggests a ministerial meeting on finance.

The CAN position paper includes the following main elements (Climate Action Network, 2013):

- Developing countries must take leadership in taking action against climate change;
- Countries need to strive towards global emission peaking by 2015. This should be complemented by actions to close the growing emissions gap;
- Developed countries need to immediately increase their pre-2020 mitigation commitments to the upper limits of their pledges and ensure that developed countries' pledges cumulatively amount to a 40% reduction by 2020 based on 1990 levels;
- Urgent complimentary and ambitious mitigation action in areas such as HFCs, fossil fuel subsidy, international aviation and maritime emissions, black carbon and global initiatives around renewable energy and energy efficiency should be initiated;
- Developed countries should make clear commitments in terms of climate finance, allocate at least 50% of public finance to adaptation, make pledges to the CGF, Adaptation Fund and Least Developed Country Fund and provide USD 60 billion in public finance for the period 2013-2015; additionally, a review mechanism to reassess finance commitments and a permanent high-level negotiating space for climate finance under the COP shall be established;
- Finance for REDD+ should be mobilized as REDD+ is key to achieve emissions reductions;
- In Warsaw, a decision is required to begin negotiations on LULUCF rules;
- Access to international carbon markets under an ADP agreement should be limited to countries that have a sufficiently ambitious reduction target that is in line with the 2 degree target and equity principles.

5.1.2. Climate Justice Now! / Third World Network

The focus of these two networks with a broad constituency of civil society organizations lies on equity and development in the context of climate change.

Their demands include the unconditional continuation of the Kyoto Protocol and the integration of the Cochabamba World People's Conference on Climate Change and the Rights of Mother Earth in the negotiation text. These include the demand to limit global warming to 1°C, a decrease of Annex I GHG emissions by 50% in 2017, the rights of Mother Earth, the formation of an International Climate Justice Tribunal, a commitment by developed countries to provide 6% of their GDP for climate finance in developing countries, a removal of intellectual property rights and the opposition to any new market mechanisms.

5.2. ICAO

The International Civil Aviation Organization (ICAO) was founded in 1944 and set global standards for the aviation sector in areas such as safety, security, efficiency or environmental protection. Current efforts under the ICAO on addressing greenhouse gas emissions from international aviation are based on Resolution A37-19, which was adopted by the 37th session of the ICAO Assembly in October 2010. This resolution was amended by Resolution A38-17, which was adopted by 38th Session of the ICAO Assembly in October 2013. ICAO resolutions do not have a legally binding character and are mainly an expression of intent.

In A37-19 states committed themselves to:

- a global annual average fuel efficiency improvement of 2% up to 2050;
- striving to achieve a medium-term goal to stabilize emissions at 2020 emission levels;
- taking the special circumstances and respective capabilities of developing countries into account; to this extent, the resolution requested that the ICAO council develops processes and mechanisms to facilitate the provision of technical and financial assistance to developing countries;
- submitting action plans on activities to reduce GHG emissions (states whose airlines are responsible for less than 1% of the global revenue ton kilometres (RTK) from international aviation are exempt from this obligation); and
- engaging in constructive bilateral and/or multilateral consultations and negotiations on the design and implementation of market-based mechanisms.

From the EU's perspective, the resolution is a weak but improved outcome compared to the assembly in 2007. The resolution recognises the need to limit emissions from international aviation even if the targets are much below the EU's ambition. A non-binding fuel efficiency improvement of 2% is only slightly better than historic autonomous efficiency improvements in this sector and therefore close to the business-as-usual scenario. Effectively, the resolution implies that aviation emissions will increase by 70% compared to 2005 levels before the aspirational stabilization takes effect in 2020.

The A37-19 recognizes that some countries might take more ambitious action. Since 1st January 2012 all flights to and from the EU were included in the EU ETS, irrespectively of the flag or carrier. Despite or rather due to strong opposition to the EU's move both in developed and developing countries, the ICAO council intensified its work on a market-based mechanism. In autumn 2011, an expert working group was established to analyse options for market-based mechanisms. Initially six options for market-based mechanisms were in less than one year narrowed down to three remaining options:

1) Global mandatory offsetting: Emissions above a baseline have to be offset through the purchase of eligible allowances or credits; the baseline could be based on historic emissions (grandfathering) or by multiplying activity data with an emission rate (benchmarking).
2) Global mandatory offsetting with revenue generation: In addition to option 1) a fee per surrendered offset would be levied; as an alternative, a fee could be levied by a central entity that is high enough to cover the costs for both the aggregated offsets and other mitigation purposes.
3) Global emission cap and trade system: This approach is similar to the EU ETS; based on a cap for aviation emissions allowances would be allocated to the sector; the ways in which allowances could be allocated and how revenues should be used still have to be refined.

In December 2012 the EU put on hold the implementation of the inclusion of aviation into the EU ETS, providing ICAO room to manoeuvre in agreeing upon a global market-based mechanism by October 2013 (so-called 'stop the clock initiative'). If, in the EU's view, the ICAO decisions towards this goal are insufficient, implementation would continue from 1st January 2014.

In A38-17 ICAO Member States took note of the collective commitments expressed by industry organizations to continuously improve CO_2 efficiency by an average of 1.5 % per annum from 2009 until 2020, to achieve carbon neutral growth from 2020 and to reduce its carbon emissions by 50% by 2050 compared to 2005 levels. They also agreed to develop a market-based mechanism which should finally be adopted at the 39th session of the ICAO assembly in October 2016 and which should be implemented from 2020 onwards. Implicitly ICAO also acknowledges for the first time in A38-17 that differentiation among countries can be conducted in a route-based manner.

In terms of existing market-based mechanisms such as inclusion of aviation into the EU ETs the EU did not get the support for a regional system limited to the EU airspace. Flights on routes to and from developing states whose carriers account for less than 1% of the global air traffic should be exempted entirely. These conditions would reduce the coverage in terms of CO_2 emissions to just 22% of its initial coverage. However, a vast majority of ICAO member states voted for a resolution that requires mutual consent even for market-based mechanisms within the regional or national airspace if third country carriers would be included. The EU and several of its Member States announced a reservation to this decision. It is not yet decided within the EU to which extent and how the implementation of the inclusion of aviation into the EU ETS needs to be changed.

5.3. IMO

The International Maritime Organization (IMO) is a specialized UN agency which addresses safety, security and environmental pollution of international shipping. As an important first step towards combating climate change in international shipping, the IMO's Marine Environment Protection Committee (MEPC) adopted in 2011 mandatory technical and operational measures to reduce emissions of greenhouse gases. In parallel, Parties have been discussing design options of a market-based mechanism for limiting and reducing emissions from international shipping since 2008, though with little progress so far.

At MEPC 65 in May 2013 Parties agreed on the assumption and methodology for the update of the GHG emission estimate for international shipping. Moreover they started considerations on approaches and methodologies for monitoring GHG emissions from international shipping and agreed to take that issue up by working group at the MEPC 66 in April 2014.

Technical and operational measures

The amendments to the MARPOL Protocol Annex VI established a mandatory Energy Efficiency Design Index (EEDI) for all new ships, and a Ship Energy Efficiency Management Plan (SEEMP) for all existing and new ships. The EEDI required ship architects and builders to comply with minimum efficiency standards while providing flexibility to identify the most cost-efficient technological solution to achieve these standards. The SEEMP requires ship operators to monitor and to improve the energy efficiency of their ships. The regulations apply to all ships with 400 gross tonnage or more.

Both measures have been welcomed by many stakeholders as the first mandatory GHG reduction measures for the shipping sector. Since they do not differentiate between flag states but treat all ships equally irrespective of their origin, they also illustrate that policies to address GHG emissions can be implemented at the global level.

Market-based mechanisms

Since 2008, MEPC has been discussing the options for establishing market-based mechanisms to address GHG emissions of international maritime transport. In addition, three inter-sessional meetings have been devoted to that issue. Furthermore, a smaller expert working group had been established to analyse the differences and impacts of the various proposals submitted by Parties. The analysis included criteria such as environmental effectiveness, cost-efficiency, impact on trade, incentives to technological change and innovation, practical feasibility and potential contribution to climate financing.

All together 10 different proposals were identified including a GHG contribution fund, a port state levy, an efficiency trading approach, an emissions trading scheme and a rebate mechanism to deal with revenues of market-based mechanisms. The expert working group concluded that all proposals could be implemented in a practical and feasible manner despite the fact that all proposals will incur some additional administrative burden, though their administrative requirements vary. However, the expert working group could not identify a clear preference for one specific market-based mechanism but drafted terms of reference for conducting a more comprehensive impact assessment.

This draft has been on the agenda of all MEPC meetings since the summer of 2011 but Parties have not yet been able to agree on adopting the draft and postponed this decision again in the last meeting in May 2013 to the next meeting in April 2014 (MEPC 66). Despite focusing negotiation time on other issues, this delay is mainly due to the fact that Parties are still divided in their views as to whether the compelling need for establishing a market-based mechanism under the IMO had been clearly demonstrated or not.

5.4. GEF

The Global Environment Facility (GEF) is a global partnership among 183 countries, international institutions, non-governmental organizations, and the private sector to address global environmental issues while supporting national sustainable development initiatives. It provides grants for projects related to six focal areas: biodiversity, climate change, international waters, land degradation, the ozone layer, and persistent organic pollutants. As the financial mechanism of the UNFCCC, the GEF allocates and disburses hundreds of millions of dollars per year in projects on energy efficiency, renewable energy, sustainable urban transport and sustainable management of land use, land-use change, and forestry. The GEF also manages two separate, adaptation-focused funds under the UNFCCC — the Least Developed Countries Fund (LDCF) and the Special Climate Change Fund (SCCF), which mobilize funding specifically earmarked for activities related to adaptation, and the latter also to technology transfer.

The atmosphere amongst many developing countries towards the GEF was very negative during the Copenhagen Conference but has become more positive afterwards. The reforms to the GEF-5 in 2010 which have been agreed together with the replenishment fell short of the expectations of many countries. Instead, the GEF Council is looking for input from the UNFCCC on the necessary reforms.

The GEF produced a detailed report to COP 19 (GEF, 2013). The main points include:

The GEF supported activities based on the Cancún agreement. For biennial update reports and NCs the GEF Council approved a global programme that supports Non-Annex I Parties in strengthening their technical and institutional capacities. The GEF Secretariat has held several consultations with the UNFCCC Secretariat about how it can provide information on support available and/or provided for the preparation and implementation of NAMAs in line with development of the NAMA registry.

The GEF, through the LDCF, approved operational guidelines in support of the National Adaptation Plan (NAP) process in least developed countries, while it is providing additional support for the implementation of the least developed countries work programme.
For technology transfer, the GEF continues to support projects for technology transfer and financing. In addition, the GEF's support for the Technology Needs Assessment within the Long-Term Implementation of the Poznan Strategic Program on Technology Transfer includes the approvals of two national projects in China and South Africa in the financial year 2013. The GEF is ready to continue support for the operationalization and activities of the Climate Technology Centre and Network (CTCN). During the reporting period, for climate mitigation, 71 projects with technology transfer objectives were approved with USD 427.7 million of GEF funding.

The GEF supports the preparation of NCs by Non-Annex I Parties as well as capacity building in numerous countries, including economies in transition. All requests to support NCs have been met by the GEF.

On climate change mitigation, to date the GEF has supported 639 projects with USD 4.0 billion in funding to 156 developing countries and economies in transition, attracting co-financing of USD 27.2 billion. Most of the projects were funded from the GEF Trust Fund. During the reporting period (the fiscal year 2013), the GEF allocated USD 408.7 million to 68 projects in the climate change mitigation focal area. This GEF investment leveraged an additional USD 3.0 billion in outside funding, resulting in a co-financing ratio of 1 (GEF) to 7.3 (co-financing). The 68 mitigation projects are expected to mitigate over 510 Mt CO_2eq directly and indirectly over their lifetime, satisfying the GEF-5 cumulative greenhouse gas (GHG) mitigation target of 500 Mt CO_2eq.

For adaptation, the GEF, through the LDCF and the SCCF Adaptation Program, had mobilized USD 271.4 million and USD 39.1 million respectively for 41 and 9 projects (including one programmatic approach) as of June 30, 2013. Through the LDCF, the GEF has also financed the preparation of 50 National Adaptation Programmes of Action (NAPAs). During the reporting period, LDCF resources amounting to USD 200.2 million were approved for 50 projects, mobilizing USD 1.5 billion in co-financing.

The GEF strategy for the coming years proposes a series of signature pilot programmes to deliver integrated approaches that address significant but discrete challenges facing the global environmental commons.

Under its private sector engagement strategy, the GEF has worked with multilateral development banks to develop public-private partnership programmes for activities that will produce general global environmental benefits. Overall, 4 regional public-private partnership programmes have been approved so far.

5.5. Intergovernmental Panel on Climate Change (IPCC)

The IPCC is the leading international body for the assessment of climate change. It is a scientific body under the auspices of the UN, tasked to provide the world with a clear scientific view on the current state of knowledge in climate change and its potential environmental and socio-economic impacts.

The Fifth Assessment Report (AR5) of the IPCC is being released in four parts between September 2013 and October 2014. It consists of three Working Group (WG) Reports and a Synthesis Report, to be completed in 2013/2014:

- WG I: The Physical Science Basis – approval by mid-September 2013
- WG II: Impacts, Adaptation and Vulnerability - mid March 2014
- WG III: Mitigation of Climate Change - early April 2014
- AR5 Synthesis Report (SYR) - October 2014

The full Report of WG I was released on 30 September 2013. It confirms with 95-100% certainty that human activity is responsible for the majority of global warming since 1951. Also, it shows that sea level rise has accelerated, that the rate of arctic sea ice retreat has doubled, that the melting of glaciers and ice sheets is faster than before and that oceans are acidifying. The frequency and intensity of heavy precipitation events will increase over many land areas. Flooding and droughts will likely increase on a regional to global scale. It also increases the range of climate sensitivity (how much would the planet warm if the amount of atmospheric CO_2 doubled) slightly on the lower end of the range; the upper end of the uncertainty range is unchanged. The report makes clear that a rapid reduction of greenhouse pollution will help the world avert the worst of climate change, but without aggressive mitigation strategies, the increase in global temperature will likely exceed 2°C by 2100.

The whole AR5 will provide an update of knowledge on the scientific, technical and socio-economic aspects of climate change. More than 800 authors, selected from around 3000 nominations, are involved in writing the reports.

During the writing and the review of the IPCC reports authors and reviewers are not allowed to quote from the draft reports.

Also, the IPCC will produce the *2013 Revised Supplementary Methods and Good Practice Guidance Arising from the Kyoto Protocol (KP Supplement)*, which includes updated methodologies for estimating anthropogenic GHG emissions by sources and removals by sinks resulting from LULUCF activities. The final draft was distributed to governments for submission of written comments from 2-29 September 2013. The entire report was presented and adopted at the 37th Session of the IPCC in Georgia in October 2013.

6. GLOSSARY

6.1. Understanding the agenda and the daily programme

- The **Conference of the Parties (COP):** the supreme body of the Convention, that is, its highest decision-making authority. It is an association of all the countries that are Parties to the Convention.
- The **meeting of the Parties (CMP):** the Conference of the Parties serves as the meeting of the Parties to the Kyoto Protocol (CMP). The CMP meets during the same period as the COP. Parties to the Convention that are not Parties to the Protocol are able to participate in the CMP as observers, but without the right to take decisions. The functions of the CMP relating to the Protocol are similar to those carried out by the COP for the Convention.
- The **Subsidiary Body for Scientific and Technological Advice (SBSTA)** is one of the two permanent subsidiary bodies established under the Convention. The SBSTA's task is to provide the COP with advice on scientific, technological and methodological matters.
- The **Subsidiary Body for Implementation (SBI)** is one of the two permanent subsidiary bodies established under the Convention. SBI gives advice to the COP on all matters concerning the implementation of the Convention.
- **Ad-hoc Working Group on further commitments for Annex I Parties under the Kyoto Protocol (AWG-KP):** at the United Nations Climate Change Conference in 2005, Parties to the Kyoto Protocol initiated a process to consider further commitments by Annex I Parties for the period beyond 2012. The resulting decision established an open-ended ad hoc working group of Parties to the Kyoto Protocol to conduct that process and report to each session of the CMP on the status of this process.
- **Ad-hoc Working Group on Long-term Cooperative Action under the Convention (AWG-LCA):** the United Nations Climate Change Conference in 2007 culminated in the adoption of the Bali Road Map which consists of a number of forward-looking decisions that represent the various tracks that are essential to strengthening international action on climate change. Central to the Bali Road Map was the establishment of a two-year process to enable full and effective implementation of the Convention. This took place in a negotiating group called the AWG-LCA, which concluded its work in Doha.
- **Annex I Parties:** The industrialized countries listed in this annex to the Convention which were committed to return their greenhouse-gas emissions to 1990 levels by the year 2000 as per Article 4.2 (a) and (b). They have also accepted emissions targets for the period 2008-12 as per Article 3 and Annex B of the Kyoto Protocol. They include the 24 original OECD members, the European Union, and 14 countries with economies in transition. (Croatia, Liechtenstein, Monaco, and Slovenia joined Annex 1 at COP-3, and the Czech Republic and Slovakia replaced Czechoslovakia.)
- **Non-Annex I Parties:** Refers to countries that have ratified or acceded to the United Nations Framework Convention on Climate Change that are not included in Annex I of the Convention. Includes developing countries and emerging countries.

- **Global Environment facility (GEF):** The GEF is an operational entity of the financial mechanism of the Convention that provides financial support to the activities and projects of Non-Annex I Parties. The COP regularly provides guidance **to the GEF.**
- **IPCC Intergovernmental Panel on Climate Change:** The IPCC is a scientific body. It reviews and assesses the most recent scientific, technical and socio-economic information produced worldwide relevant to the understanding of climate change. It does not conduct any research nor does it monitor climate related data or parameters. The COP receives the outputs of the IPCC and uses IPCC data and information as a baseline in.
- **Technology Executive Committee (TEC):** The Technology Executive Committee (TEC) is the policy arm of the Technology Mechanism. The Technology Mechanism's overarching goal is to sharpen the focus, step up the pace, and expand the scope of environmentally-sound technology development and transfer in a highly qualitative way. The key functions of the TEC are to consider and recommend actions to promote technology development and transfer in order to accelerate action on mitigation and adaptation, to provide an overview of technological needs and to catalyse the development and use of technology road maps or action plans at international, regional and national levels through collaboration with relevant stakeholders including governments, relevant international and regional organizations, the private sector, non-profit organizations, academic and research communities to support action on mitigation and adaptation on the ground.

6.2. Negotiation formats

- **Contact group:** An open-ended meeting that may be established by the COP, a subsidiary body or a Committee of the Whole wherein Parties may negotiate before forwarding agreed text to a plenary for formal adoption. Observers generally may attend contact group sessions.
- **Drafting group:** A smaller group established by the President or a Chair of a Convention body to meet separately and in private to prepare draft text -- text which must still be formally approved later in a plenary session. Observers generally may not attend drafting group meetings.
- **Friends of the chair:** Delegates called upon by the Chair (who takes into account the need for political balance among various interests) to assist in carrying out specific tasks.
- **Informal contact group:** A group of delegates instructed by the President or a Chair to meet in private to discuss a specific matter in an effort to consolidate different views, reach a compromise, and produce an agreed proposal, often in the form of a written text.

6.3. Types of documents

- **L. docs:** In-session documents that contain draft reports and texts for adoption by the COP or its subsidiary bodies.
- **Miscellaneous documents (misc. docs):** Documents issued on plain paper with no UN masthead. They generally contain views or comments published as received from a delegation without formal editing.
- **Non-paper:** An in-session document issued informally to facilitate negotiations. A non-paper does not have an official document symbol. It may have an identifying number or carry the name of its author.

6.4. Negotiating groups

- **The Independent Alliance of Latin American and Caribbean states (AILAC),** comprising Colombia, Peru, Costa Rica, Chile, Guatemala, Panama, officially formed and spoke as a group in Doha in 2012. The participating countries are middle income countries that have taken ambitious domestic commitments to reduce their emissions and they are pushing for all countries to step up their mitigation commitments.
- **ALBA Bolivarian Alliance for the Peoples of Our America** (Spanish: Alianza Bolivariana para los Pueblos de Nuestra América, or ALBA): is an international cooperation organization based on the idea of social, political, and economic integration between the countries of Latin America and the Caribbean. It is associated with socialist and social democratic governments and is an attempt at regional economic integration based on a vision of social welfare opposing to markets and trade liberalization as with free trade agreements. The agreement was initially proposed by the government of Venezuela, led by Hugo Chávez, as an alternative to the Free Trade Area of the Americas as proposed by the USA. When it was launched, ALBA had two member states, Venezuela and Cuba. Subsequently 6 other countries Bolivia, Ecuador, Nicaragua, the Caribbean island nation of Dominica, Saint Vincent and the Grenadines, Antigua and Barbuda joined the group.
- **Alliance of Small Island States (AOSIS):** An ad hoc coalition of low-lying and island countries. These nations are particularly vulnerable to rising sea levels and share common positions on climate change. The 43 members and observers are American Samoa, Antigua and Barbuda, Bahamas, Barbados, Belize, Cape Verde, Comoros, Cook Islands, Cuba, Cyprus, Dominica, Dominican Republic, Federated States of Micronesia, Fiji, Grenada, Guam, Guinea-Bissau, Guyana, Haiti, Jamaica, Kiribati, Maldives, Marshall Islands, Mauritius, Nauru, Netherlands Antilles, Niue, Palau, Papua New Guinea, Samoa, Sao Tome and Principe, Seychelles, Singapore, Solomon Islands, St. Kitts & Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Tonga, Trinidad and Tobago, Tuvalu, US Virgin Islands, and Vanuatu.
- **BASIC countries:** Brazil, South Africa, India & China
- **Environmental Integrity Group:** A coalition or negotiating alliance consisting of Mexico, the Republic of Korea, and Switzerland.
- **Group of 77 (G-77) and China:** A large negotiating alliance of developing countries that focuses on numerous international topics, including climate change. The G-77 was founded in 1967 under the auspices of the United Nations Conference on Trade and Development (UNCTAD). It seeks to harmonize the negotiating positions of its 131 member states.

- **Group of like-minded developing countries:** new group under the UNFCCC which held their first meeting only on 18-19 October 2012 in Beijing, China and currently comprises representatives from Bolivia, China, Ecuador, Egypt, India, Malaysia, Nicaragua, Pakistan, Philippines, Saudi Arabia, Thailand and Venezuela. The group is rather a platform which includes up to 20 other developing countries in varying configurations depending on the issues at stake.
- **Umbrella Group:** A loose coalition of non-European Union developed countries formed following the adoption of the Kyoto Protocol. Although there is no formal membership list, the group usually includes Australia, Canada, Iceland, Japan, New Zealand, Norway, the Russian Federation, Ukraine, and the United States.

6.5. Other key terms

- **Bunker fuels:** A term used to refer to fuels consumed for international marine and air transport.
- **Clean Development Mechanism (CDM):** A mechanism under the Kyoto Protocol through which developed countries may finance greenhouse-gas emission reduction or removal projects in developing countries, and receive credits for doing so which they may apply towards meeting mandatory limits on their own emissions.
- **International Cooperative Initiatives (ICIs):** Voluntary partnerships involving governments, civil society and the private sector aiming to help countries to accelerate immediate climate action and go beyond their current mitigation commitments for 2020 and thereafter. Envisaged as a flexible concept, governance arrangements and types of activity are not prescribed, but could be in areas where there is significant potential to mitigate emissions that is insufficiently addressed, such as international shipping and aviation, the production and use of fluorinated gases and reform of fossil fuel subsidies.
- **Joint Implementation (JI):** Jointly implemented projects that limit or reduce emissions or enhance sinks are permitted among developed countries under Article 6 of the Kyoto Protocol. JI allows developed countries, or companies from those countries, to cooperate on projects to reduce greenhouse gas emissions and share the emissions reduction units (ERUs). As JI occurs between Annex B countries (who have emissions caps), no new emissions units are generated (unlike the case with projects under the CDM).
- **Least Developed Countries (LDCs):** The World's poorest countries. The criteria currently used by the Economic and Social Council (ECOSOC) for designation as an LDC include low income, human resource weakness and economic vulnerability. Currently 50 countries have been designated by the UN General Assembly as LDCs.
- **Least Developed Countries Expert Group (LEG):** A panel of 12 experts which provides advice to LDCs on the preparation and implementation of national adaptation programmes of action (NAPAs) -- plans for addressing the urgent and immediate needs of those countries to adapt to climate change.
- **Least Developed Country Fund (LDCF):** The LDCF is a fund established to support a work programme to assist Least Developed Country Parties to carry out, inter alia, the preparation and implementation of national adaptation programmes of action (NAPAs). The Global Environment Facility, as the entity that operates the financial mechanism of the Convention, has been entrusted to operate this fund.

- **Nationally appropriate mitigation actions (NAMAs):** Initiatives by developing country Parties aimed at achieving a deviation in emissions relative to 'business as usual' emissions in 2020 in the context of sustainable development, supported and enabled by technology, financing and capacity-building. So far 57 and the African submitted a great diversity of NAMAs that range from project based mitigation actions to economy-wide emission reduction objectives.
- **National adaptation programmes of action (NAPAs):** Documents prepared by least developed countries (LDCs) identifying urgent and immediate needs for adapting to climate change. The NAPAs are then presented to the international donor community for support.
- **National communication:** A document submitted in accordance with the Convention (and the Protocol) by which a Party informs other Parties of activities undertaken to address climate change. National communications by developed country Parties are more comprehensive than those by developing country Parties as they additionally contain information on policies and measures. The 6th national communication by developed countries is due to be submitted by January 2014. Most developing countries have completed their first national communication and are in the process of preparing their second. Only 6 Non-Annex I countries have submitted more than 2 communications so far.
- **Quantified Emissions Limitation and Reduction Objectives (QELROs):** Legally binding targets and timetables under the Kyoto Protocol for the limitation or reduction of greenhouse-gas emissions by developed countries.

6.6. Institutions under the UNFCCC

- **Adaptation Committee:** As part of the Cancún Adaptation Framework, Parties established the Adaptation Committee to promote the implementation of enhanced action on adaptation in a coherent manner under the Convention
- **Adaptation Fund:** The Adaptation Fund was established to finance concrete adaptation projects and programmes in developing countries that are Parties to the Kyoto Protocol. The Fund is to be financed with a share of proceeds from clean development mechanism (CDM) project activities and receive funds from other sources.
- **Executive Board of the Clean Development Mechanism (EB)**: A 10-member panel established at COP-7 which, under the authority of the COP, governs and supervises the CDM.
- **Compliance Committee:** A committee that helps facilitating, promoting and enforcing on compliance with the provisions of the Kyoto Protocol. It has 20 members with representation spread among various regions, small-island developing states, Annex I and Non-Annex I Parties, and functions through a plenary, a bureau, a facilitative branch and an enforcement branch.
- **Consultative Group of Experts on National communications from Non-Annex I Parties:** A panel established to improve the preparation of national communications from developing countries. National communications are an obligation of Parties to the Climate Change Convention.
- **Expert Group on Technology Transfer (EGTT):** An expert group established at COP7 with the objective of enhancing the implementation of Article 4.5 of the Convention, by analysing and identifying ways to facilitate and advance technology transfer activities under the Convention , by analysing and identifying ways to facilitate and advance technology transfer activities under the Convention.

- **Green Climate Fund (GCF):** The GCF, established at COP 16, will support projects, programmes, policies and other activities in developing country Parties. The Fund is governed by the GCF Board.
- **Joint Implementation Supervisory Committee (JISC)**: The JISC is, under the authority and guidance of the CMP, responsible for the governance of the JI and has 10 members from Parties to the Kyoto Protocol.
- **Special Climate Change Fund (SCCF):** The SCCF was established to finance projects relating to adaptation; technology transfer and capacity building; energy, transport, industry, agriculture, forestry and waste management; and economic diversification. This fund should complement other funding mechanisms for the implementation of the Convention. The Global Environment Facility (GEF), as the entity that operates the financial mechanism of the Convention, has been entrusted to operate this fund.
- **Standing Committee on Finance (SC):** The Standing Committee had been established by the Cancún agreement to assist the COP in exercising its functions with respect to the financial mechanism of the Convention in terms of improving coherence and coordination in the delivery of climate change financing, rationalisation of the financial mechanism, mobilization of financial resources and measurement, reporting and verification of support provided to developing country Parties.
- **Technology Executive Committee (TEC):** The Technology Executive Committee is established under the Technology Mechanism to facilitate the effective implementation of the Technology Mechanism, under the guidance of the COP.

6.7. Shift of issues under AWG-LCA to other negotiating bodies

After the termination of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention (AWG-LCA) in Doha, several elements previously discussed under this negotiating group were shifted to other negotiating bodies to be further debated. The following table gives an overview of the decision and continuation of issues considered under LCA.

Table 17: Continuation of elements previously discussed under LCA

Issue	Outstanding tasks identified prior to COP 18	Decisions at COP 18	Continuation
Shared vision	Agreement on global long term mitigation goal	Decision to continue negotiations	ADP
	Agreement on global emissions peak (preferably 2015)		
	Other global long term goals (e.g. finance, goals related to technology)	Not further defined	ADP
		Equitable access to sustainable development	ADP
Climate finance	Continuity of climate finance post 2012, including scale-up until 2020, climate finance goals for 2015	Acknowledgement of pledges made by several developed countries on climate finance post 2012; other developed countries are urged to announce pledges; developed countries are invited to submit by COP 19 information on their strategies for mobilizing scaled-up climate finance by 2020; developed countries are requested to deliver resources of at least the average annual level of the 2010-2012 period	Continuation of the work programme on long term finance for one year until the end of 2013 under the COP

Issue	Outstanding tasks identified prior to COP 18	Decisions at COP 18	Continuation
	Assessing and reviewing the regional balance of distribution, assessment of needs	Decision to continue ongoing processes on finance needs of developing countries	Various
	Assessment of lessons learnt from the fast-start finance period 2010-2012	No explicit decisions on open questions such as additionality	Implicit in various processes
	MRV of climate finance (including developing guidelines and assessing finance flows)	Decisions taken on specific elements (e.g. on common reporting format, registry, tasks for the SC)	Continuation of the work programme under cop; tasks for the SC
	Agreement between the COP and the GCF	Governing instrument of the GCF as a basis for developing further elements in 2013	SC and GCF Board
Adaptation	Further development of the Cancún Adaptation Framework (CAF)	Acknowledgement of progress under Cancún Adaptation Framework (CAF)	Adaptation Committee and other sub-bodies
	Recommendations for support of adaptation (financing etc.) for 2013-2020	Not explicitly addressed, general call on other bodies	AC and other sub-bodies
	Recommendations on National Adaptation Plans for non-LDCs	Not explicitly addressed	AC
	Further input for the negotiating streams/institutions under CAF	Request to AC to review the creation of an annual "Adaptation Forum" to increase ambition on adaptation	AC
	Role of regional centres	Addressed in the context of general requests to other bodies	AC
Mitigation in developed countries	Synthesis related to progress on clarifying emission reduction targets (until 2020)	Notices outcomes of clarifying the emission reduction targets during 2011 and 2012; Requests the Secretariat to annually update the technical paper	
	Continuation of clarifying emission reduction targets, submission of further information, confirmation of necessity of common accounting rules	Creation of a work programme (until 2014) to continue necessary clarification processes Invitation of countries to hand in submissions until 25.03.2013 (also see section 2.3)	SBSTA-Work programme
	Methodological aspects of reviewing progress on achieving targets to ensure comparability of efforts		
	Request to increase ambition, including removal of conditionalities for high end targets	Developed countries are requested to increase their targets to a level in line with the ranges identified by the IPCC	Not explicitly mentioned, ADP likely for short-term ambition
		Reiteration of invitation of developed countries to publish information on progress on low carbon development strategies	
Mitigation in developing countries	Request of developing countries to submit NAMAs	Reiteration of request; Secretariat is requested to prepare an information note compiling information provided by countries for subsidiary bodies	UNFCCC Secretariat
	Request to submit further information on NAMAs, discussion of measures	Reiteration of request	
	Continuation of clarifying NAMAs and support needed	Creation of SBI work programme (until 2014) to deal with these issues	SBI
	Development of guidelines for MRV of NAMAs	Request to organize technical workshops and technical guidelines related to NAMAs	

Issue	Outstanding tasks identified prior to COP 18	Decisions at COP 18	Continuation
	Development of supporting material to build capacity in preparation, submission and implementation of NAMAs		Secretariat in cooperation with intergovernmental organizations
		Reiteration of invitation of developing countries to develop low emission and climate resilient development strategies	
REDD+	Financing options for REDD+ and enabling framework conditions	Creation of a work programme on results-based financing in 2013 (including 2 workshops)	COP in coordination with SBSTA
	Discussion of possible institutional arrangements under the Convention (including reference to the GCF) to accompany results-oriented finance	Initiation of a process to address the need to improve coordination of support for the implementation of REDD+ activities; submissions were invited until the 25.03.2013	SBSTA/SBI
	Definition of functions of necessary institutional arrangements		
	Guidance and methods for captur	SB38 will take on work	SBSTA
	ing co-benefits and non-carbon benefits, including their inclusion into results-based finance		
		Discussion of the role of non-market-based approaches, including a common mechanism for mitigation and adaptation	SBSTA
Sectoral approaches	Mitigation related to international aviation and shipping (optionally as climate finance instrument)	Not addressed in final outcome	
Various approaches to mitigation	Continuation of negotiations on the new market mechanism decided in Durban	Work programme to elaborate on various aspects	SBSTA
		Work programme to develop a framework for such approaches, including purpose, scope, criteria and processes; countries were invited to hand in submissions by 25.03.2013	SBSTA
Review 2013-2015	Decisions on scope and implementation of the review which is supposed to start in 2013	Scope: Adequacy of the long term goal (2°C/1.5°C); overall progress of measures to achieve this goal	SBI/SBSTA, supported through structured expert dialogue

Source: Adapted from Harmeling et al., 2012 and http://unfccc.int/resource/docs/2012/cop18/eng/08a01.pdf

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