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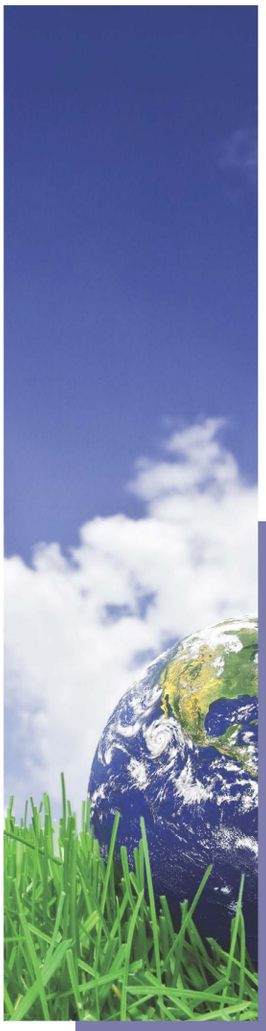

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The Development of Climate Negotiations in View of Lima (COP 20)

Study for the ENVI Committee

EN

2014

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STUDY

Abstract

This report provides an overview of the development of the negotiations within the UNFCCC since COP 19 in Warsaw. It summarises the key developments in 2014 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.

This study was provided by Policy Department A for the Committee on Environment, Public Health and Food Safety (ENVI).

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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 S
	mall Island States
ARD	Afforestation, reforestation, deforestation
AR5	5th Assessment Report of the IPCC
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
BUR	Biennial update 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 (to the Kyoto Protocol
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
DRR	Disaster risk reduction
EB	Executive Board of the CDM
EIG	Environmental Integrity Group
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
GTP	Global Temperature Potential
GWP	Global Warming Potential
HFC	Hydrofluorocarbons
IAR	International assessment and review
ICA	International consultation and analysis
ICAO	International Civil Aviation Organization
ICI	International Cooperative Initiative
IEA	International Energy Agency
IMO	International Maritime Organization
INDC	Intended nationally determined contribution
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
LDCF	Least Developed Country Fund
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
MoI	Means of Implementation
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
SB	Subsidiary Body
SBI	Subsidiary Body for Implementation
SBSTA	Subsidiary Body for Scientific and Technological Advice
SED	Structured expert dialogue
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 the COP in Lima is to make progress in the negotiations under the Durban Platform for Enhanced Action to develop a new global agreement for the period after 2020 for all Parties to be adopted at COP 21 in 2015 in Paris and to ensure that mitigation action before 2020 is enhanced.

As a key step towards the 2015 agreement, countries committed to submit so-called Intended Nationally Determined Contributions (INDCs) in the first quarter of 2015 that include their post-2020 mitigation targets. The joint US-China announcement on climate change of 12th November 2014 in which US President Barack Obama and China's President Xi Jinping announced their intended mitigation actions post-2020, as well as the EU's Council conclusions of October 2014 presented some of the early announcements of such INDCs. At the COP in Lima, a decision is expected on the scope of the INDCs that will include Parties' post 2020 targets and on the up-front information that should be submitted together with these contributions. It is also important to advance the elements of the negotiation text for the new agreement to ensure that a final negotiation text can be agreed in Paris in 2015. Furthermore, it will be crucial to raise the ambition level of mitigation action pre-2020 in order to close the gap between currently pledged mitigation targets and the emission reductions necessary to achieve the 2°C objective, and to identify concrete steps to do so.

Beyond the negotiations under the ADP, outcomes in Lima are expected for the following elements:

- the finalisation of reporting and accounting rules for the second commitment period of the Kyoto Protocol to ensure the ratification and implementation of the Doha Amendment to the Kyoto Protocol;
- the development of a roadmap for mobilising USD 100 billion annually by 2020 as promised by developed countries;
- the further implementation of the Green Climate Fund;
- the further implementation of the Warsaw International Mechanism on Loss and Damage resulting from the adverse impacts of climate change.

In addition, the agenda of the COP and subsidiary bodies will include other items such as :

- the design of new market mechanisms and the work related to the implementation of a mechanism for activities to reduce emissions from deforestation and forest degradation (REDD+);
- 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, which are explained in more detail in this briefing.

Brief history of the UNFCCC negotiations up to Lima

The UNFCCC was adopted in 1992, setting the framework for action to stabilise atmospheric concentrations of greenhouse gases (GHGs) to avoid "dangerous anthropogenic interference with the climate system". The Convention entered into force in 1994 and has currently 194 Parties. A major agreement made under the UNFCCC was the adoption of the Kyoto Protocol in 1997 which lays down binding emission reduction targets for the majority of industrialised countries and economies in transition which are included in Annex I to the Convention. These countries agreed to reduce their overall emissions of six

GHGs by an average of 5% below 1990 levels during the first commitment period running from 2008 until 2012.

Considerations of targets beyond that commitment period started already in 2005 under the Ad Hoc Working Group on Annex I Parties' Further Commitments under the Kyoto Protocol (AWG-KP). In 2007, Parties agreed on the Bali Roadmap on long-term issues, adopted the Bali Action Plan and established the Ad Hoc Working Group on Long-term Cooperative Action under the Convention (AWG-LCA). The AWG-LCA and the AWG-KP were supposed to conclude negotiations in Copenhagen in 2009 where the building blocks for a successor agreement to the Kyoto Protocol were expected. However, COP 15 in Copenhagen was dominated by conflicts over transparency and procedural issues, and countries failed to negotiate any substantive agreement. The "Copenhagen Accord" was not formally adopted by the COP but Parties only "took note" of the outcome document.

At COP 16 in 2010 in Cancún, trust in the process could be largely restored, and a series of decisions was adopted. The Cancún Agreements include non-binding mitigation targets by developed countries and nationally appropriate mitigation actions (NAMAs) communicated by developing countries for the period until 2020. Furthermore, countries recognised the need for extensive reductions in global emissions in order to limit global average temperature rise to 2°C above pre-industrial levels, and agreed to review the global long-term goal by 2015. Also, several new institutions and processes on adaptation, technology and finance were established through the Agreements. Developed countries' pledge to mobilise USD 100 billion per year by 2020 was recognised by the COP.

In Durban in 2011, Parties agreed on establishing a second commitment period under the Kyoto Protocol from 2013 to 2020. Most notably, countries agreed to launch the Ad Hoc Working Group on the Durban Platform for Enhanced Action (ADP) "to develop a protocol, another legal instrument or an agreed outcome with legal force under the Convention applicable to all Parties". The ADP is supposed to complete these negotiations by 2015 and the new instrument should enter into force in 2020. As a second task, the ADP is mandated to enhance mitigation action pre-2020 to close the ambition gap related to the 2°C target.

In Doha in 2012, an amendment to the Kyoto Protocol was decided to implement the second commitment period which is yet to enter into force as ratification by a sufficient number of Parties is pending. Thus, the AWG-KP's work could be concluded in Doha and Parties also agreed to terminate the AWG-LCA and negotiations under the Bali Action Plan. Another important outcome of the negotiations in Doha was the agreement to establish an institutional mechanism to address loss and damage resulting from the adverse impacts of climate change.

The subsequent sessions of the subsidiary bodies (SBs) taking place each year in June in Bonn and COP 19 in Warsaw were largely dominated by negotiations under the ADP towards a new global agreement for the period after 2020. Additionally, sessions that focused only on the ADP took place in 2013 and 2014. At COP 19, Parties agreed to an ADP decision that invites Parties to initiate or intensify domestic preparations for their intended nationally determined contributions (INDCs) to the agreement which should be presented until the first quarter of 2015. These contributions will turn into individual commitments of Parties under the new agreement after inscription in the agreement and ratification. Also, Parties identified a list of elements that should be included in the new agreement. Yet, positions diverge on many issues, including the differentiation of responsibilities between developed and developing countries, the provision of support through finance, technology transfer and capacity building and with regard to the scope of INDCs.

1. GENERAL ISSUES IN CLIMATE NEGOTIATIONS BEFORE LIMA

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 20) in Lima, Peru, from 1st to 12th December 2014. 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). The study is an update of briefings published in previous years on the development of the climate negotiations under the UNFCCC commissioned by the European Parliament.

Chapter 1 of the study gives an overview of the negotiation situation in 2014, starting with the results from the previous COP in Warsaw and looking at the progress made during 2014 prior to the conference in Lima. It focuses in particular on progress made on implementing the Durban Platform for Enhanced Action and the implementation of the second commitment period under the Kyoto Protocol, highlighting which issues are at stake for the negotiations in Lima. Chapter 2 addresses the main issues in the negotiations, which relate to the work on mitigation commitments, adaptation, loss and damage, finance, technology transfer, monitoring, reporting and verification, deforestation, LULUCF, flexible mechanisms, emissions of international aviation and maritime emissions and capacity building. 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).

1.2. Main outcomes of COP 19 in Warsaw

The decisions taken by governments at COP 19 in Warsaw (Decisions 1/CMP.9 to 10/CMP.9 and 1 to 28.CP19) include the following agreements:

- Negotiations under the Ad Hoc Working Group on the Durban Platform for Enhanced Action (ADP) on a new global agreement in 2015 intensified in Warsaw. Governments agreed to elaborate elements for a draft negotiating text for such agreement in 2014. The agreement should cover mitigation, adaptation, finance, technology development and transfer, capacity-building and transparency of action and support. Countries' should present their intended nationally determined contributions (INDCs) to a global agreement by the first quarter in 2015 in a transparent and clear way.
- With regard to mitigation action before 2020, countries agreed to strengthen measures to close the ambition gap and a series of technical expert meetings for 2014 was planned.
- Regarding climate finance, it was decided that developed countries should publish their efforts to mobilise USD 100 billion annually by 2020 and to convene ministerial meetings on long-term finance every two years from 2014 to 2020. In addition, Parties agreed that the Green Climate Fund (GCF) should be ready for capitalisation in the second half of 2014.
- Moreover, governments agreed on the Warsaw International Mechanism for Loss and Damage to address losses caused by the impacts of climate change in developing countries.

- In terms of emissions from the forest sector in developing countries, countries were able to agree the Warsaw Framework for REDD+ (Reducing Emissions from Deforestation and Forest Degradation), including monitoring and verification rules, measures to enhance the protection of forests and a results-based payment system to promote such protection.
- The framework for measuring, reporting and verifying (MRV) of mitigation efforts could be further completed.
- The rules for the Climate Technology Centre and Network (CTCN) were agreed and the network is now open for business (UNFCCC 2014l).

1.3. Implementation of the Durban Platform for Enhanced Action

Background: Key issues for the negotiations in Lima

The main objective for Lima under the ADP is to make progress in developing a new global agreement applicable to all Parties for the period after 2020 which is foreseen to be adopted at COP 21 in Paris.

Progress towards this new agreement would include a decision that advances a negotiation text on elements of such new global agreement. In July 2014 the ADP co-chairs published a non-paper on the elements for a draft negotiating text which has been discussed at the ADP session in October and revised version was published on 11th November. A major achievement in Lima would be a decision that includes elements for a negotiation text for the 2015 agreement that would turn the non-paper or parts of it into a text adopted by Parties. It is unlikely that such decision on a negotiation text would already be very detailed, but it could capture at least a potential structure of a new agreement as well as outline some key elements (see section 1.3.2).

In 2013 Parties agreed that they will prepare and submit so called 'Intended Nationally Determined Contributions' (INDCs) which will reflect their domestic mitigation contributions for the period 2020-2030. In Lima a decision is expected related to the scope of these INDCs and on the up-front information that should be submitted together with these contributions to ensure that they are clear, transparent and understandable. This decision should also cover the way and process how the INDCs will be assessed in 2015 to determine the aggregate contribution of all Parties to the global emission reductions and to compare the level of efforts that Parties will propose. Views currently diverge on whether the INDCs should focus on mitigation contributions, or whether such contributions should be also determined for adaptation and financial support. Strong differences also prevail related to the question whether the INDCs should be assessed in 2015 at international level (see section 1.3.2).

A third area in which a decision is expected in Lima is on the acceleration of the implementation of climate action before 2020. A draft decision proposed by the ADP co-chairs in November includes a Forum on Accelerated Implementation of pre-2020 Climate Action in June 2015, urges Parties to revisit their quantified targets for 2020 and to increase them. It also proposes continued work on the examination of policy actions with high mitigation potentials, the identification of barriers for the implementation of mitigation actions and of opportunities for voluntary multilateral cooperation on concrete actions.

The latest co-chair's proposals from mid-November elaborated two draft decision texts, one on elements for the 2015 agreement and a second decision covering the INDCs, upfront information, but also the acceleration of action prior to 2020.

Agreement achieved in Warsaw

In Warsaw, governments intensified work under the Ad hoc Working Group on the Durban Platform for Enhanced Action (ADP). This group was established in Durban in 2011 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 work under the ADP is conducted in two workstreams. Workstream 1 is the process that aims at developing a new Protocol or legal instrument (see section 1.3.1 below). Under workstream 2, countries work together on a work programme on enhancing mitigation ambition to close the current ambition gap between the proposed mitigation targets for 2020 and the required aggregate global mitigation efforts to achieve the 2°C objective through the highest possible mitigation efforts by all Parties prior to 2020. This workstream also aims to take into account potential contributions of other international initiatives to the global climate effort (see section 1.3.2 below).

In Warsaw, countries disagreed on the term "commitments" which was replaced by the term "contributions" and agreed to refer to "intended nationally determined contributions" (INDCs) when speaking about countries' targets under the 2015 agreement. A major point of contention was the application of the principles of the Convention, mainly addressing common but differentiated responsibility (CBDR): Many developing countries wish to continue the differentiation based on the existing Annexes of the Convention into Annex I (developing countries) and non-Annex I Parties (developed countries) while Annex I countries and some non-Annex I countries (e.g. the Alliance of Independent Latin American Countries (AILAC)) are in favour of applying the principle of CBDR in a way that reflects evolving circumstances and development of countries which means that they also see the need for mitigation contributions from emerging countries with high emissions.

Overall, progress under **workstream 1** was made to define a timeline for the development of the 2015 agreement. According to that timeline, an initial draft negotiation text shall be prepared by December 2014 and a formal draft text shall be ready by May 2015. Also, it was decided that Parties shall intensify the preparation of their INDCs to have them finalised by the first quarter of 2015. To ensure that INDCs are put forward in a clear and transparent manner, countries agreed to determine the information to be submitted together with their INDCs in Lima at COP 20.

Yet, disagreement on major issues persists between negotiating countries. Developing countries would like to keep up the so-called "firewall" – the split into Annex I and Non-Annex I Parties as determined by the Convention related to the differentiated obligations of the two groups of countries. Developed countries stress that the new agreement shall be 'applicable to all Parties' which also requires major emitters in emerging countries to provide mitigation contributions. This major dispute is one of the core areas of disagreement to reach an ambitious climate treaty in 2015 with obligations for all Parties.

Discussions under **workstream 2** in Warsaw included workshops on lessons learned from relevant experiences of other multilateral environmental agreements, and consultations on pre-2020 ambition, urbanisation and climate action in cities facilitated by governments (Earth Negotiations Bulletin 2013). Yet, Parties showed little political will to increase ambition as developed countries did not submit higher emission reduction goals for 2020.

1.3.1. Negotiation process in 2014 related to Workstream 1: Work towards the new legal instrument

In 2014, three meetings on the ADP took place from 10-14 March, during the Bonn Climate Change Conference from 4-15 June and from 20-24 October (ADP 2). The discussions were conducted in plenary sessions with no meetings on sub-items in smaller negotiation groups.

Decision on Intended Nationally Determined Contributions (INDCs) / upfront information

As explained above Parties agreed at the COP in Warsaw that "intended nationally determined contributions" (INDCs) shall be submitted until the first quarter of 2015 which will represent the countries' targets under the 2015 agreement and therefore will be the core of the 2015 agreement. There are major areas of discussions related to these INDCs: the character and scope of the contributions, which up-front information Parties should submit together with the contributions and how the assessment of the proposed contributions should be organised.

Regarding the **character and scope of INDCs** countries disagree on whether INDCs shall comprise mitigation contributions only or also include contributions on adaptation and finance, technology and capacity building support. The EU and other Annex I Parties hold the view that it should be obligatory for all Parties to put forward a mitigation contribution. They want to adopt some general characteristics of mitigation contributions, including that contributions should not be backsliding in terms of ambition and scope over subsequent cycles. Most non-Annex I Parties see a broader scope of INDCs covering quantified contributions for mitigation, adaptation and finance. The group of Like-Minded Developing Countries (LMDCs) also wants to include technology transfer and capacity building in the scope of INDCs. The LMDCs claim that only developed Parties should provide mitigation contributions. In their view any contributions from non-Annex I Parties depend on the support provided by Annex I Parties. Similar to the EU, the Alliance of Small Islands States (AOSIS) countries also stress the importance of the mitigation contributions that should be mandatory for all major emitters. In the discussions on INDCs, Brazil mentioned a new approach for differentiation at the October session of the ADP and explained that they are not arguing in favour of a binary approach between Annex I and Non-Annex I Parties, but support a 'concentric differentiation approach'. They explained this approach in the way that Annex I Parties' commitments with absolute targets related to a base year would be in the centre of the new agreement and non-Annex I Parties could choose from a broader menu of target types while all countries should be incentivised to move to the centre with absolute targets against a base year over time.

Similarly, Least Developed Countries (LDCs) and Association of Independent Latin American and Caribbean States (AILAC) also support the view that INDCs should primarily focus on mitigation, but they also request that adaptation and finance should be properly represented in the agreement. Many non-Annex I Parties, including some of the OPEC countries like Saudi-Arabia announced that they will prepare adaptation contributions. Thus, one of the key areas of discussion is whether adaptation contributions can replace mitigation contributions, or whether mitigation is mandatory and can be complemented with voluntary adaptation contributions. Developing countries also stressed that the time frame to develop INDCs until March 2015 is not appropriate for adaptation contributions.

Developing countries require an appropriate representation of adaptation and financial support in the new agreement. It will be important for a convergence of views on INDCs in Lima, whether some common ground can be developed on how adaptation and finance will be reflected in the agreement. If an alternative structure for how to include adaptation and finance contributions becomes clearer, a focus of INDCs as mitigation contributions may be

more acceptable. The difficulty for the COP in Lima is whether such alternative approaches can be developed to the extent necessary to be able to agree on the scope of INDCs.

The different views on whether the scope of INDCs includes adaptation and finance are also reflected in different proposals related to **up-front information** to be provided together with the INDCs, which should also be specified in a decision in Lima. For each area, several options are given in the draft decision text of the ADP co-chairs. One option provides a list of information applicable to all countries and alternative options define information requirements differentiated for Annex I and non-Annex I Parties - proposed by developing countries that push to keep the current separation between Annex I and Non-Annex I Parties. Furthermore, the EU and other developed countries disagree with the specific information requirements for adaptation and finance, in particular regarding the definition of concrete amounts of financial support for specific time frames as suggested in the document. The group of Like-Minded Developing Countries (LMDCs) emphasized at the ADP session in October, that a decision on the 'upfront information' to be part of INDCs is not essential and that a paper from the co-chairs would represent sufficient guidance for Parties.

Also, there is disagreement on how to organise the **assessment phase** in which bottom-up, nationally defined contributions should be internationally considered. The group of LMDCs rejects any assessment process of INDCs. Most other countries however see the need for a facilitative assessment process in 2015. Annex I countries suggest a short and general assessment phase in 2015 which is not expected to significantly change the proposed contributions. Subsequently to an assessment process, the assessed contributions would turn into commitments by inscribing them in the annex to the new agreement in Paris at the end of 2015 without changing them later on. Also AILAC, AOSIS and the LDCs proposed an ex-ante assessment with the purposes of assessing if individual INDCs are equitable and fair and whether they collectively suffice to keep emissions at a level sufficient to reach the 2°C target. The African Group has proposed an assessment based on a principle-based reference framework to consider the adequacy of the proposed contributions in terms of ambition, equity and fairness. This represents the most structured and detailed process proposed. However, such more thorough assessment would continue until 2016 while the structure and rules of the agreement will be adopted in December 2015 in Paris. If agreed, Parties would need to be given some time to develop their final quantified commitments until the end of 2016.

The most recent draft decision text from the co-chairs that was released in November outlines a process that starts with a compilation and publication of the contributions presented by Parties, the submission of questions to Parties and their answers on a UNFCCC website as well as workshops in conjunction with the ADP sessions in 2015.

With the conclusions adopted by the European Council in October 2014, the EU is the first Party that endorsed a binding target for the period from 2020 to 2030. The Council adopted an EU target of at least 40% domestic reduction in greenhouse gas emissions by 2030 compared to 1990 which is split to 43% reduction in the ETS sector and 30% in the non-ETS sector compared to 2005.

On 12th November 2014, also the US and China jointly announced their respective post-2020 mitigation targets. The United States intends to achieve an economy-wide emission reduction target of 26-28 % below its 2005 level in 2015 and to "make best efforts to reduce its emissions by 28%". China intends to achieve the peaking of its CO_2 emissions around 2030 and to increase the share of non-fossil fuels in primary energy consumption to around 20% by 2030.

Elements for a 2015 Agreement

In addition to the draft text on INDCs, the Co-Chairs published a paper summarising Parties' views and proposals on the elements for a draft negotiating text in July 2014 (UNFCCC 2014g) which was further discussed at the ADP session in October and updated in November 2014 (UNFCCC 2014g). The individual elements covered by the text are considered in the following sections.

Legal character

In 2014 no specific negotiation session has been dedicated to the legal character of the new agreement itself, i.e. whether it will be a Protocol under the Convention or another legal instrument of which both are options provided for in the ADP mandate. In October, the secretariat released a paper with questions and answers related to legal and institutional aspects of the 2015 agreement. This paper explains that a Protocol would need a separate decision-making body next to the COP. The US stressed that they assume that only Parties with contributions would be entitled to participate in the decision-making progress under a new agreement. This would be a substantial difference to the current principle under the Kyoto Protocol where all decisions are taken by all Parties to the Protocol irrespective of their commitments under the Protocol. The paper also deals with the question of whether and how existing institutions under the Convention can be used for the new agreement. There was no time for a very intensive discussion of these legal and institutional aspects during the October session in Bonn.

Furthermore, several proposals exist for how to inscribe the commitments into the agreement: they could be written in an annex to the agreement, form an integral part of the agreement or be inscribed in national schedules that could be part of the agreement or not.

Different views also exist related to a future compliance system under the new agreement. Some countries do not see the need for a compliance system (e.g. the US, Canada), some see this only applicable to Annex I Parties (LMDCs) while others stress the importance of a compliance system in which the progress with targets is monitored and in which certain actions are defined in case that Parties would not meet their targets.

Mitigation

On mitigation, discussions under the ADP evolve around the question how mitigation commitments under the new agreement are to be defined (see above) and how they should be aligned with a long-term global mitigation goal. In this regard, points of disagreement relate to how this goal should be defined (as global average temperature rise, maximum concentration of GHGs in the atmosphere, global goal for emission reductions or as a carbon budget) and to the principles for how to break down a common global goal into individual goals on the country level.

Countries disagree on the way the new agreement would apply to all Parties. Annex I Parties emphasize that INDCs should be applicable to all Parties while the majority of non-Annex Parties considers them to be mandatory/binding for Annex I Parties but voluntary and depending on financial support for non-Annex I Parties. Regarding ambition and the type of commitments which countries will submit, many Annex I Parties stress that all major emitters should submit ambitious quantified economy-wide reduction targets and that all Parties should strive to move to such targets over time, while contributions should be selected by each Party based on national circumstances and capacities. Yet, a number of non-Annex I Parties ask Annex I Parties to take the lead in setting ambitious reduction targets and envisage mitigation actions for developing countries.

Also, the length of the first commitment period under the new agreement needs to be defined (five years or ten years with mid-term review).

The EU favours the insertion of a mechanism to increase the ambition of mitigation commitments once they are inscribed into the agreement.

The Africa Group, the LMDCs and China are strongly in favour of a differentiated approach between developed and developing countries' mitigation pledges. According to the Africa Group, the commitments that countries propose shall be assessed thoroughly, especially with regard to equity and fairness indicators oriented at a global carbon budget.

AILAC propose a mechanism to determine nationally determined contributions to ensure that the new agreement is applicable to all and will enhance ambition at the national level and at the global level. Furthermore, the agreement should contain a review mechanism to allow for ambition to be updated on the basis of science.

Adaptation

Adaptation is emphasised as a central element for the 2015 agreement. Also, the links between mitigation and adaptation should be stressed in the agreement according to the position of many countries. A number of developing countries call for the inclusion of a global adaptation goal. Several proposals exist for how to define such a goal. One option would be to establish a global goal based on the pledged mitigation level which would determine the level of support required to meet the costs of impacts under different temperature scenarios (South Africa). Costs and respective support needs to be identified through National Adaptation Plans (NAPs) and other needs assessment processes. A second option would be to establish a process to develop a goal valid for adaptation and mitigation in terms of temperature limit (AILAC, Africa Group). The US and other developed countries are sceptical towards an approach of defining a global goal for adaptation, stressing the technical difficulty of aggregating adaptation to a quantified global goal. A third option is to define a global goal as the common commitment for all Parties to ensure resilience to the adverse effects of climate change by integrating adaptation into policies and programmes and to build/increase capacity to adapt to climate-induced hazards (supported by the USA, Canada, Japan, Switzerland). At the October session of ADP some convergence around the idea of an adaptation goal emerged in developing countries, but differences around the implementation of such goal and the linking to developing countries' adaptation needs and costs persist.

Commitments on adaptation by developed countries are envisaged as detailed commitments on the financial support for adaptation actions by non-Annex I countries. Many developing countries claim that the support available for adaptation needs to increase significantly (LDCs, LMDCs, South Africa). Developing countries on the other hand should bring forward their efforts and needs to adapt to the impacts of climate change. National Adaptation Plans (NAPs) are to play a central role in that regard (AILAC, LMDCs). In the October session of the ADP there was some convergence towards adaptation commitments for all Parties in the new agreement, framed as collective commitments and individual commitments, although retaining flexibility for country driven priorities. Divergence remained around the differentiation between Annex I/non-Annex I Parties and the question whether individual commitments would go beyond the commitment to prepare National Adaptation Plans and to report on national strategies and plans.

Furthermore, several proposals exist with regard to the role of existing institutional arrangements (Cancun Adaptation Framework and the Nairobi work programme on impacts, vulnerability and adaptation to climate change (NWP)) in the future climate regime. They could either be explicitly anchored in the new agreement or be effectively implemented instead of anchoring them as institutional arrangements in the agreement

(Environmental Integrity Group (EIG), Mexico). New institutional arrangements like a subsidiary body for adaptation or a registry to record and showcase national adaptation actions (LMDCs) could be developed or the mandate of the Adaptation Committee could be enhanced and linkages with existing funds could be strengthened. At the ADP session in October there was convergence that adaptation in the new agreement should build on existing adaptation institutions, but disagreement about the placement of such provisions in the agreement (i.e. within core agreement (LDCs) or in supporting decisions (USA)) and whether there is a need for new institutions and processes.

The relation of Loss and Damage and the process established in Warsaw (see section 2.3.1) to the new agreement remains to be clarified as well. AOSIS, LDCs and South Africa want to treat loss and damage as an issue separate from adaptation while most developing countries see this as part of adaptation action.

Moreover, approaches for monitoring and evaluation of as well as reporting on adaptation actions should be developed under the new agreement, too (supported by AILAC, the EU, and Switzerland). The EU stresses in this regard that the total funding delivered for adaptation is not an indicator for successful adaptation actions in Parties and that monitoring needs to entail the effectiveness of adaptation actions to create more resilient economies.

Means of implementation / Support to developing countries

Support of developed to developing countries is currently often addressed in terms of "means of implementation" (MoI) in the negotiations which includes financial support, technology transfer and support for capacity building. Developing countries continue to emphasise the linkage between their level of action and the level of support provided by developed countries (Africa Group, Mexico). Essentially, non-Annex I Parties demand that available support shall be quantifiable, transparent and predictable for developing countries. It is subject to debate which countries are to provide support through; whether only Annex II countries (a reduced list of developed countries in the Convention which excludes economies in transition to a market economy) have such commitments or whether all Parties in a position to do so (while it is to be clarified how this is defined) should be obliged to provide support (supported by AILAC, Japan, Switzerland). Also, the role of existing institutional arrangements for the support under the new agreement as well as the role of market mechanisms remains to be clarified.

Regarding **finance**, non-Annex I Parties advocate for adequate, quantified, transparent and predictable commitments on finance and have made different proposals on how to implement the USD 100 billion goal post-2020. They combine this demand with the call for increased MRV (monitoring, reporting and verification) of financial support and a compliance mechanism that assesses such financial commitments. Developed countries strongly argue against quantified financial commitments, in particular for long-term time horizons. Such an approach would earmark budgets of future governments which finance ministries generally oppose. There has been no convergence of positions related to quantitative finance targets Furthermore, the role of the private sector in the provision of funds is subject to debate (EIG, Japan, Mexico, Switzerland, USA advocating for a strong role). At the ADP October session there was a more open debate related to the role of private finance, on South-South cooperation and on domestic investment by some developing countries.

There is convergence of views among Parties that the Green Climate Fund (GCF) which recently started to function as the financial mechanisms of the Convention should play a key role under the new agreement as well as the standing committee on finance (see section 2.4).

In terms of **technology transfer**, developing countries likewise call for differentiated commitments in the agreement. The role of the technology mechanism under the new agreement and how to provide adequate financing to this mechanism are yet to be specified. Furthermore, Parties are debating how to create enabling environments in developing countries and remove barriers to technology development and transfer. A specific issue in this regard is the question how to address intellectual property rights (IPR). The LMDCs, China, and other developing countries call for specific arrangements and funding to facilitate access to IPR. They demand a dedicated window for technology transfer in the GCF. AOSIS emphasises the need to link technology transfer and development under the new agreement to existing institutions under the financial mechanism.

Equally, claims are brought forward in the negotiations to increase support for **capacity building** in a more coordinated approach and to set clear and predictable targets. A major question of debate is whether to establish an international capacity-building mechanism funded by the GCF, a capacity-building committee with clearly defined relationships to other bodies under the Convention or to deliver capacity-building through existing arrangements such as the Durban Forum on capacity-building. A number of developing countries, including AOSIS, China and the Republic of Korea, emphasise the importance of the GCF as the channel for capacity-building support and call for a dedicated funding window under the GCF for capacity-building.

Transparency of action and support

All developed countries stress the importance of accounting rules and a common framework for monitoring, reporting and verification with built-in flexibility and continuous improvement over time. At the October ADP session, they provided more detailed ideas on the details of the future accounting rules and MRV requirements in the 2015 agreement and COP decisions in Paris. Generally, the importance of a rules-based system is widely recognized in the negotiations (AOSIS, EU, Norway, Canada, Japan, South Africa, USA), including Parties that were strongly opposing the need of accounting rules for the 2020 targets.

A major question for the 2015 agreement will be whether and to what extent Parties will be able to agree on common **accounting rules** to track progress with commitments for all countries and to what extent the Annex I/non-Annex I divide will prevent such common accounting rules for all countries. Proposals diverge to a large extent with Annex I Parties (Australia, Canada, EIG, EU, but also South Africa) advocating a common accounting system for all countries that provides flexibility to accommodate national circumstances and capabilities and a number of developing countries supporting differentiation between Annex I and non-Annex I Parties (LMDCs, Africa Group, China). A further proposal (put forward by Brazil) is to develop a single set of guidelines for all Parties with flexibilities through 'different tiers of accounting rules' depending on the contributions countries will bring forward (supported by AILAC). In this approach there should be stricter accounting rules for absolute economy-wide targets.

There is a convergence of views among Parties that until the COP in Paris it is crucial to make progress on those rules that have a substantial impact on the definition and level of efforts of the contributions which countries will put on the table in 2015. Other accounting and MRV rules that impact only the implementation of commitments (e.g. a reporting system, rules on how to account for natural disturbances in the land sector) can be agreed at a later stage between 2015 and 2020.

The areas for accounting rules mentioned by most Parties at the ADP session were :

- the accounting related to the definition of the commitments and the assessment of progress with targets (such as inventory methodologies, inventory adjustments, metrics (use of Global Warming Potentials (GWPs) or Global Temperature Potentials (GTPs), coverage of gases);
- the monitoring, reporting and verification (MRV) system as part of the international rules;
- rules related to carbon markets (rules and frameworks to keep track on market mechanisms, to avoid double-counting and double-claiming of emission reductions),
- rules for the accounting of emissions and removals from forests and land use.

AOSIS and South Africa, but also the EU mentioned that the accounting system should enable an assessment of the aggregate progress towards the global objective to limit the temperature increase to 2°C and to enable the COP to assess at any point in time where we stand related to this global objective. Several Parties also stressed that it is important to learn from accounting rules under the Kyoto Protocol (AOSIS, LDCs).

With regard to a future system of **monitoring, reporting and verification (MRV)** under the new agreement, the same divergence of views exists related to the differentiation between Annex I and non-Annex I Parties. Developing countries are rather unanimous in their views that the MRV system for Non-Annex I Parties should be maintained in the new agreement (Brazil, South Africa, China) and that the MRV system should keep the differentiation between Annex I and Non-Annex I Parties. Annex I Parties on the other hand support one single MRV system from 2020 (EU, Norway, Switzerland, USA; AILAC advocates the integration of the current system into a single system over time) with a single set of guidelines for all Parties with flexibilities through different tiers, timelines and frequency depending on capabilities. They argue that in an agreement which is based on nationally determined contributions, all countries should be able to monitor the assessment of these nationally determined targets and that future differentiation in monitoring and reporting is therefore based on the types of commitments, but not on types of Parties.

AILAC is the only developing country group that clearly supports a single, dynamic MRV system with support for developing countries. This system should lead to improvements over time and include common accounting rules and assessment of compliance for each country with committed contributions. AILAC also stresses the need for rules on land-use sector and markets and requested a compliance system that assesses both mitigation and support commitments.

A number of developing countries (China, Turkey, AILAC, LDCs, Brazil) demand that accounting rules should also be established for finance commitments; China with the strongest position among the G77 requested accounting rules for adaptation, technology, capacity building and even response measures to be established. Developing countries stress the huge 'gap' in MRV of support and methodologies to track support for Non-Annex I Parties and lack of agreed definition of climate finance. Developed countries are willing to engage in such improvements. However they argue that on the one hand considerable improvements have already been implemented and that existing institutions such as the Standing Committee on Finance are already working on these tasks, so that the new agreement can build on this ongoing work under the Convention.

Cycle of commitments

As the commitments countries will pledge are applicable to a specific period, they will need to be renewed in a cycle under the new agreement. This cycle is supposed to lead to

formalisation and effective implementation of the commitments and enable an upward spiral of ambition of time. It could consist of 5 steps:

1. Communication of the intended contribution, in accordance with the necessary information agreed upon by the COP.
2. Ex-ante process or consultations: prior to inscribing the contributions in the agreement, they should be considered in order to enhance transparency and understanding of the contributions in terms of ambition and fairness (strongly advocated by South Africa). Various proposals exist on how to organise such an assessment phase and to what extent a country will be obliged to adjust its contribution according to the results of the process.
3. Formalising/inscription of the commitment, in an annex to the agreement or in national schedules.
4. Review of overall adequacy of the commitments, during or after a commitment cycle (AILAC, EU, LDCs, Norway; the Africa Group and South Africa argue for a review of countries' individual commitments with regard to fairness and adequacy as well).
5. Assessment of compliance: Parties disagree on whether a compliance mechanism similar to the one under the Kyoto Protocol should be established, whether the results of a compliance procedure should imply compulsory measures for the Party concerned, or whether other ways should be found to incentivise participation and implementation.

Proposals for the length of the cycle of commitments suggest 5 year (Africa Group, LDCs, USA) or 10 year periods (Russia, South Africa); while some Parties leave it up to countries to define the timeframe of contributions.

Also, a mechanism to raise the ambition of commitments over time has been proposed (EU, Mexico, New Zealand, Switzerland).

There is convergence in Parties' views that the first contributions in 2015 are the initial step and that it is important to build a robust long-term framework for future commitment cycles in which contributions should be more ambitious and comprehensive, even when the initial round may not yet achieve the global emission reductions that are necessary from a scientific point of view.

Way forward

Subsequent to COP 20 in Lima the roadmap to negotiate a new global agreement by 2015 includes ADP sessions during the sessions of the subsidiary bodies in June 2015, COP21 in Paris and additional ADP session in February 2015 and potentially one additional ADP sessions in the autumn. The current plan foresees the submission of INDCs in the first half of 2015, drafting of a negotiating text of the new agreement until May 2015 and adopting it at COP 21 in Paris.

1.3.2. Negotiation process in 2014 related to Workstream 2: Pre-2020 mitigation ambition

Workstream 2 under the ADP aims to formulate a work programme on enhancing mitigation ambition prior to 2020 to close the current ambition gap between the aggregated proposed mitigation targets by Parties for 2020 and the emission reductions necessary to achieve the 2°C target. Under this workstream, a series of Technical Expert Meetings (TEMs) in 2014 focussed on opportunities for mitigation actions. At the ADP session in March and June 2014, two technical expert meetings focused on renewable energy and energy efficiency as well as on urban environment and on land use. Also, a forum on cities and sub-national

authorities has been organised at SB 40 in June. An informal follow-up meeting took place at the ADP session in October.

At the high-level ministerial dialogue in June 2014, focus was put on hydro-fluorocarbon gases (HFCs) and Short lived Climate Pollutants (SLCP) as an area of opportunity for enhancing pre-2020 mitigation ambition. Particularly, HFC emission reductions were considered as a cost-effective low hanging fruit. Even though a decision on a global phase down of the production and consumption of HFCs should be taken under the Montreal Protocol, the Technical Expert Meetings (TEMs) on F-gases as part of workstream 2 could support global action to reduce HFC emissions. Further TEMs took place in October on non-CO_2 greenhouse gases and on carbon capture, use and storage (CCS).

The co-chairs summarised specific follow up actions in the technical summaries from the meetings which included providing further information on platforms for Parties to engage with other Parties and stakeholders on how to scale-up their efforts. Additionally, the secretariat is regularly updating its technical paper on mitigation benefits of actions, policies and options to enhance mitigation ambition. The intention is to elaborate a policy menu and options for overcoming barriers and the lack of means of implementation in order to support countries in enhancing their pre-2020 efforts (UNFCCC 2014j). Countries are invited to showcase their efforts in a virtual exposition at the next meetings under the UNFCCC.

The draft negotiating text on workstream 2 urges Parties to strengthen their domestic mitigation actions, decides to convene a Forum on Accelerated Implementation of pre-2020 Climate Action in June 2015 and a high-level ministerial event and envisages further technical expert meetings to be held in 2015. It is foreseen that the workstream continues until 2020 (UNFCCC 2014a, 2014b).

However, Parties have not submitted significantly new or strengthened pledges for the pre-2020 period in 2014. Thus, besides measures to promote exchange and dialogue, no clear roadmap exists on how to close the pre-2020 ambition gap.

Progress on global sectorial agreements

Under workstream 2, mitigation efforts of other international venues than the UNFCCC shall be considered. Among the most prominent examples of such venues, regimes, initiatives or global sectorial agreements are the International Civil Aviation Organization (ICAO), the International Maritime Organisation (IMO), the Montreal Protocol, the World Trade Organisation (WTO), the Convention on Long-Range Transboundary Air Pollution (LRTAP), the Group of 7 (G7, which used to be G8 until March 2014), the Group of 20 (G20) and the Major Economies Forum (MEF), the Climate and Clean Air Coalition (CCAC), the International Renewable Energy Agency and the UN-REDD Programme (van Asselt 2014). Under the UNFCCC, such venues are mostly referred to as International Cooperative Initiatives (ICIs) that involve non-governmental stakeholders, citizens or governmental actors at sub-national level.

The EU proposed the idea of ICIs in 2012 in the context of workstream 2 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 do not need to be prescribed.

Phase down of Hydrofluorocarbons (HFCs)

A prominent example of a potential ICI is the proposal by the EU of a partnership to phase down hydrofluorocarbons (HFCs). These gases, originating from mainly refrigeration, air-conditioning and other industrial processes, have a high mitigation potential of

approximately 1 billion tons CO_2eq by 2020 due to their high global warming potential even though they only represent around 1% of global GHG emissions (EU 2014). Together with Canada and Mexico, the USA have submitted an amendment to the Montreal Protocol in May 2014. The proposal to include HFCs within the Montreal Protocol has the support of over 100 countries, including the EU. It will formally be discussed by the Parties to the Montreal Protocol in November 2014 (US Environmental Protection Agency 2014).

Several arguments are brought forward for addressing HFCs through the Montreal Protocol: It is more cost-effective to prevent HFC emissions by reducing production and consumption than through emissions-based regulations as done by the Kyoto Protocol. Secondly, the Montreal Protocol is considered the right arena to address HFCs because it is already undertaking the phase-outs of CFCs and HCFCs which have cross-links to the use of HFCs. Thirdly, the HFC phase-down requires the destruction of HFC-23 as well so that it needs to be ensured that no new projects under the CDM to destroy HFC-23 are being undertaken. Such projects to destroy HFC-23 which is a by-product of HCFC-22 production have been undermining the environmental integrity of the CDM as they provided incentives to produce more HCFC-22 in order to earn CDM credits. Lastly, it is argued that a phase-down under the Montreal Protocol could demonstrate cooperation in combating climate change and provide momentum to discussions under the UNFCCC (ISGD 2014). Moreover, a phase-down under the Montreal Protocol could potentially be implemented faster than including the issue in the 2015 agreement which will only enter into force in 2020.

India, China and Brazil oppose the inclusion of HFC-controls under the Montreal Protocol, though and prefer to address the issue under the UNFCCC (EFCTC 2014). They have been arguing that HFC is not an ozone-depleting gas but contributes to global warming and should thus be considered under the Kyoto Protocol. Additionally, their scepticism relates to the fact that regulation on HFCs under the Montreal Protocol would imply binding obligations for emerging economies to phase out their HFC emissions, and it is yet unclear how safe and economically-viable alternatives will be made available to developing countries (Mohan 2013). It is therefore considered important for the UNFCCC to support the phase-out of HFCs through its well-established mechanisms for technology transfer and for financial support.

Anticipating a global phase-down of the consumption and production of HFCs under the Montreal Protocol, the EU has passed legislation in April 2014 to control emissions from fluorinated GHGs (F-gases) including HFCs in Regulation (EU) No 517/2014 (see http://ec.europa.eu/clima/policies/f-gas/legislation/documentation_en.htm).

Other International Cooperative Initiatives and their mitigation potential to close the pre-2020 gap

As a complement to actions to enhance mitigation ambition compiled under workstream 2, a list of ICIs and a database on ICIs has been set up on the UNFCCC website (http://unfccc.int/focus/mitigation/items/7907.php). This database includes a large number of existing activities to share information on approaches to mitigate climate change and to reduce emissions. Yet, the large majority of these initiatives is not new. Thus, the UNFCCC to some extent has been able to provide fora and platforms to share experiences and information on climate initiatives outside the UNFCCC. Yet, it has not significantly catalyzed additional action or new sectorial agreements so far.

In a study, the Nordic Council has identified a list of potential ICIs in the energy sector, on fluorinated GHGs and short-lived climate pollutants, which donor countries and institutions could promote and support as a priority. The study concludes that there are a wide range of ICIs already making an important contribution to emission reductions globally. Many could potentially scale-up their activities and could offer promising new opportunities for public

climate finance with the potential to deliver substantial additional emission reductions and enhance ambition in national pledges (Harrison et al. 2014).

The UNEP gap report groups ongoing ICIs into three categories: 1) global dialogues providing a forum for national governments to exchange information and understand national priorities; 2) formal multilateral processes under international organisations or treaties; 3) implementation initiatives that focus on enabling countries to meet their pledges through sharing good practices and technical knowledge, also including non-governmental actors. The extent to which these initiatives contribute directly to narrowing the emissions gap varies, as global dialogues and many of the implementation initiatives rather focus on building consensus and sharing best practices.

Most ICIs overlap with countries' national pledges so that it is difficult to assess emission reductions achieved by specific initiatives alone. There are only few ICIs that are outside the scope of national pledges, including those on international aviation and shipping and those on short-lived climate pollutants or initiatives on non-CO_2 gases for those countries whose pledges only relate to CO_2 emissions. To what extent an ICI is effective in achieving emission reductions depends on various factors including its focus and set goals, participation, funding and institutions, incentives and benefits for participants to join, and transparency and accountability. Promising areas with high mitigation potential for ICIs that may lead to direct and additional emission reductions include energy efficiency (potential of up to 2 $GtCO_2eq$ by 2020), fossil-fuel subsidy reform (potential of 0.4-2 $GtCO_2eq$ by 2020), renewable energy (1-3 $GtCO_2eq$ by 2020) and methane and other short-lived climate pollutants (UNEP 2013).

Currently, existing ICIs are not formally linked to the UNFCCC negotiations. A central question is whether and how reductions achieved by ICIs can be accounted for under the Convention. If a methodology was found for Parties to report and account for such reductions in a transparent manner, the UNFCCC could potentially provide a forum for recognising efforts by ICIs (UNEP 2013). It remains to be seen however, to what extent the UNCCC will be able to play a role in catalysing action through ICIs to enhance pre-2020 ambition.

Position of Parties related to workstream 2

In their submissions on workstream 2, Parties mainly highlight their own initiatives to enhance or which they would like to examine further under the UNFCCC to strengthen pre-2020 ambition. The EU, Norway and New Zealand emphasise their support for the technical expert meetings organised under the UNFCCC.

The EU and Norway also call on those Parties that have not submitted a pre-2020 pledge to the UNFCCC to do so as soon as possible. Furthermore, they highlight the need for further work to understand the underlying assumptions of 2020 pledges and what they imply in terms of absolute emission reductions.

With regard to workstream 2, the EU puts a strong focus on HFC emission reductions. Domestically, this is underlined by the adoption of a new F-gas regulation which will apply from 1 January 2015 onwards and strongly discourages the use of high GWP HFCs. Furthermore, the EU supports the continuation of workstream 2 beyond 2015. On the way forward on workstream 2, the EU in its submissions suggests to think about how to make best use of existing Convention mechanisms such as the Technology Executive Committee, the Climate and Technology Centre and the Green Climate Fund to promote further mitigation action. The EU and Norway also propose that the most promising policy options and initiatives in terms of their potential for reducing emissions should be summarised by the Secretariat.

AOSIS calls for moving from the technical examination of opportunities to promoting cooperation on concrete actions to help closing the pre-2020 emissions gap. China puts the blame on developed country Parties, saying that if they had committed to adequate emission reductions until 2020 at an earlier point in time, the pre-2020 mitigation gap would not have existed. It calls on Parties to ratify the Kyoto Protocol (KP) until the end of 2014 and revisit and increase their targets under the KP. Additionally, developed country Parties should increase their finance commitments. International cooperative actions or initiatives should not replace commitments under the UNFCCC. No new commitments shall be introduced for developing countries which have already submitted their nationally appropriate mitigation actions for the pre-2020 period.

1.3.3. Outcome of UN-Secretary-General Ban Ki Moon's Climate Summit

On 23 September 2014, a climate summit bringing together Heads of State and Government along with business, finance, civil society and local leaders was held by UN-Secretary-General Ban Ki Moon. Many governments presented their current actions and future plans to take action against climate change. Ethiopia, Germany, Iceland, Sweden and Trinidad and Tobago even pledged to become carbon neutral by 2050. Many other countries pledged to speed up the energy transition and to promote renewable energy. The summit was a clear signal for the political willingness and support by many governments to take action against climate change.

Yet, most developed countries did not put concrete pledges for the 2015 agreement on the table. The following presidents or government representatives announced specific mitigation targets:

- José Manuel Barroso, President of the European Commission restated the Commission's proposal for an **EU** reduction target of 40 % of domestic emissions by 2030 compared to 1990 levels.
- Barack Obama announced that the **US** will put forward a new emission reduction target early in 2015. He did not announce any major new efforts at home, instead outlining steps the US has already taken to boost renewable energy deployment and energy efficiency and to cut emissions.
- Vice-Premier Zhang Gaoli, **China**, said China has legislation in place to ensure a 40-45% reduction in carbon intensity by 2020 from 2005 levels. He noted China will announce its post-2020 ambition on climate change as soon as possible to markedly reduce carbon intensity and aim to bring about peaking of emissions as early as possible. Yet he stopped short of confirming when such peak might be.
- **Norway** and **Switzerland** announced to present INDCs in early 2015.
- Prime Minister Fredrik Reinfeldt, **Sweden**, said Sweden aims to reduce its GHG emissions by 40% below 1990 levels by 2020 and have zero net emissions by 2050.
- Prime Minister Elio Di Rupo, **Belgium**, stressed that Belgium plans to reduce emissions by 40% by 2030 and by 80% by 2050.
- President Sauli Niinistö, **Finland**, outlined the country's long-term goal of becoming carbon neutral, with 80% emission reductions by 2050.
- Prime Minister David Cameron, **United Kingdom**, emphasized the historical commitment of the UK to tackle climate change and reported, inter alia, that his country is on track to cut 80% of emissions by 2050.

- Julie Bishop, Minister of Foreign Affairs, **Australia**, said Australia will reduce emissions by 5% by 2020, which will be a 22% reduction from business-as-usual levels.

A number of developing countries made announcements related to post-2020 targets:

- President Park Geun-hye, **Republic of Korea**, announced that Korea will submit a plan to support the post-2020 climate regime.
- President Luis Guillermo Solís, **Costa Rica**, reaffirmed his country's commitment to become carbon neutral by 2021, noting that 90% of their power production is renewable energy-based and that with a hydropower project coming online in 2016, this will increase to 100%.
- President Susilo Bambang Yudhoyono, **Indonesia**, outlined a voluntary domestic pledge to reduce GHG emissions by 26% up to 2020 compared to business-as-usual, with an offer to increase reductions to 41% with international support.
- Carlos Raúl Morales, Minister of Foreign Affairs, **Guatemala**, committed to the Bonn Challenge of restoring forests in highly-vulnerable lands, with a goal of restoring 3.9 million hectares, as well as investments in solar energy, reducing carbon emissions, and collective management of land resources with indigenous peoples.
- Robert Pickersgill, Minister of Water, Land, Environment and Climate Change, **Jamaica**, said his country will continue to reduce GHG emissions as far as practicable, and committed to expanding renewables to 20% of the energy mix by 2030 and doubling RE by 2060.
- Prime Minister Tuilaepa Aiono Sailele Malielegaoi, **Samoa**, said Samoa would reduce fossil fuel use by 10% by 2016, matched by a 10% increase in renewables, and aspire to 100% renewable power by 2070.
- President Michelle Bachelet, **Chile**, said the country will reduce emissions by 20% by 2020, conditional on international support, and highlighted its goal of producing 45% of electricity by renewables by 2025. She noted the introduction of a tax on carbon emissions.
- President Alassane Ouattara, **Ivory Coast**, said the country is working to restore forest cover and promote renewables to reduce GHG emissions, noting the goal to increase renewables to 20% of the energy mix by 2030 and efforts to increase energy efficiency by 20%.

Beyond targets on mitigation, the summit focused on mobilising climate finance, particularly for filling the Green Climate Fund (GCF). Prior to the meeting, civil society and developing countries have asked for funds of USD 15 billion to mobilise the GCF, while the fund itself called for USD 10 billion. At the summit in New York, the European Commission and a number of EU member states announced pledges on climate finance for the GCF and through national initiatives:

- **Denmark** pledged USD 70 million to the GCF in addition to the USD 350 million that it has provided since 2010. Moreover Denmark is planning to provide USD 1.5 billion for the new Danish Climate Investment Fund.
- The **EU** announced that more than EUR 3 billion in grants over the next seven years to support sustainable energy in developing countries, to leverage between EUR 15-EUR 30 billion in loans and equity investment in sustainable energy infrastructure. José Manuel Barroso further announced the provision of a total of EUR 14 billion in public climate finance to partners outside the EU. Andris Piebalgs, European Commissioner for Development, European Commission, announced it would increase

its support of vulnerable regions, including Africa, the Caribbean and the Pacific, to EUR 180 million and increase its current contribution to the Global Climate Change Alliance by EUR 70 million.

- **France** committed to provide USD 1 billion to the Green Climate Fund over the next four years.
- **UK**'s committed to provide nearly GBP 4 billion in climate finance over five years as part of its commitment to keep investing 0.7% of its GDP as part of its international aid goal.
- **Norway** pledged about USD 33 million to the GCF in 2015, with the official amount to be announced at the first formal GCF pledging meeting in November 2014.
- The **Czech Republic**, pledged its support for the World Bank's "Putting a Price on Carbon" Initiative, and announced the provision of USD 12 million to developing countries for fast start financing, and USD 5.5 million to the GCF over the next two years.
- **Japan**, pledged funding to train 14,000 experts in disaster risk reduction (DRR) and climate change in developing countries.
- **China** announced to double its current financial contributions to establish a South-South fund for climate change and will provide USD 6 million to facilitate South-South cooperation on climate change.
- **Mexico** announced a USD 10 million contribution to the GCF.

Moreover, a central announcement made at the summit was a voluntary commitment to end deforestation by 2030, supported by 28 governments, 35 companies and 45 NGOs. Yet, criticism was voiced that this announcement wrongly suggests that forests can offset emissions from fossil fuels which can undermine mitigation ambition. Moreover, a statement on carbon pricing by the World Bank got strong support at the summit.

While, according to UN secretary general Ban Ki-Moon, the summit "delivered" on its goals, many observers have criticised the event as hot air without concrete commitments and pathways for achieving long-term climate goals. Many governments did not bring forward any new pledges but simply restated targets that had already been made earlier on. Against this lack of increased ambition, the activities and commitments presented by a number of private sector and voluntary initiatives figured prominently at the summit. Their activities will remain purely voluntary though, making them a weak substitute for commitment to take action by governments.

Nevertheless, observers noted that overall, the summit has generated new momentum and might provide the ground for a substantial deal on a new climate agreement in Paris next year. In that sense, it revealed that the approach to climate politics has changed over the last years to making stepwise progress towards an ambitious global agreement instead of pursuing an "all or nothing" strategy that failed in Copenhagen (Burrows 2014).

1.4. Implementation of the Doha Amendment of the Kyoto Protocol

1.4.1. Background: Key issues for the negotiations in Lima

It is crucial that Parties ratify the Doha Amendment of the Kyoto Protocol in order to reach the level necessary for the Amendment to enter into force (3/4 or 144 Parties of all Parties to the Protocol). Additionally, the open methodological and political questions for the implementation of the Doha Amendment should be resolved in Lima. This will be essential

to generate trust that developed countries are delivering on their existing commitments pre 2020 in order to set the basis for constructive negotiations of a new agreement for the post 2020 period.

1.4.2. Agreement achieved in Warsaw

The amendment of the Kyoto Protocol was agreed by governments in 2012 in Doha (Decision 1/CMP.8). With this amendment, quantitative limitation and reduction commitments have been set for Annex I Parties for the second commitment period from 2013 to 2020. Yet, only the EU, Iceland (included in EU's joint fulfilment agreement), Norway, Switzerland, Ukraine, Australia, Belarus, Kazakhstan, Liechtenstein, Monaco and Ukraine submitted pledges for the second commitment period. Canada, Japan, New Zealand and the Russian Federation which participated in the first commitment period do no longer have a quantitative target for the second commitment period.

While the Doha amendment was completed, some issues related to further technical guidelines are still outstanding in order to fully implement the second commitment period. They concern the changes arising from the Doha amendment on existing decisions on methodologies and adjustments (Article 5), reporting and accounting (Article 7), and review of information (Article 8).

Moreover, at COP 19 in Warsaw, guidance for the reporting on information on LULUCF activities under the Kyoto Protocol was agreed including related reporting tables. Accounting rules for forest management, afforestation, deforestation and other land use activities were changed which required modifications of the reporting requirements.

Discussions on accounting rules for the second commitment period were intense in Warsaw, however at the end, no agreement was achieved.

1.4.3. Negotiation process in 2014

Several key areas for the implementation of the 2nd commitment period of the Kyoto Protocol have been advanced considerably, but could not be resolved in Warsaw. Therefore, in 2014 discussions continued on the following issues:

- Implementation of Article 3.7ter of the Doha amendment: This provision has been introduced to prevent so-called 'hot air' and strengthen targets for the second commitment period. Under Article 3.7ter, a Party has to cancel Assigned Amount Units (AAUs) for the second commitment period, if the assigned amount of the second commitment period is higher than the Party's average annual emissions for the first three years of the preceding commitment period multiplied by eight (as the duration of the second commitment period is eight years). That way, the provision retrospectively adjusts mitigation commitments and does not allow that quantitative reduction commitments are higher in the second commitment period than the average emissions in 2008-2010. In Doha there had been disagreement about this provision between the Russian Federation, Belarus and Ukraine on the one side and AOSIS and developing countries who proposed this provision on the other side. The EU argued in Doha that this provision will only be applied for the EU as a whole under the joint fulfilment agreement. Ukraine, Kazakhstan and Belarus proposed provisions for the implementation of Article 3.7ter that would imply that this Article is not applicable to them. This was not accepted by AOSIS.
- Implementation of accounting rules and the reporting format (Standard Electronic Format, SEF) for the reporting of assigned amounts and tradable units for the second commitment period: These rules were finalized in Warsaw, but not adopted due to the disagreement related to the implementation of Article 3.7ter.

- Guidelines for the review of information and adjustments of GHG inventories under the Kyoto Protocol.
- Rules on reporting for Kyoto Parties that do not longer have quantified commitments for the second commitment period: 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. Apart from Japan, other Kyoto Parties without quantified commitments for the second commitment period (Russian Federation, New Zealand) have not outlined very clearly how they see the Kyoto reporting requirements applying to them.

It is important that these remaining issues are resolved at COP 20 in Lima, because otherwise the implementation of the 2nd commitment period under the Kyoto Protocol could technically not start. Such situation may send a bad signal to the ADP negotiations and developing countries may not be encouraged to present INDCs early in 2015, if the remaining Kyoto Parties do not go ahead with the implementation of the Doha amendment.

Beyond the finalization of the implementation rules, the key step ahead is the ratification of the amendment for the second commitment period. The EU presented its proposal for ratification which addresses how the EU will implement the joint fulfilment agreement under Article 4 of the Kyoto Protocol internally. The joint ratification will cover a significantly larger number of countries, due to the increase from 15 to currently 28 Member States. In addition, Iceland will participate in the EU's target for the second commitment period. Currently, negotiations are underway for the final decision. The EU ratification proposal is different from the one relating to the first commitment period and reflects 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).

The entry into force of the Doha amendment is subject to acceptance by at least three fourths of the Parties (144 Parties) to the Kyoto Protocol. Until October 2014, the only Annex I Parties that accepted the Doha amendment are Norway and Monaco. In addition 16 developing countries have currently provided an instrument of acceptance. Under the current membership to the Kyoto Protocol entry into force requires 144 States to accept the Doha amendment. Thus, a considerable number of Parties still need to accept the Doha amendment before it can enter into force in 2015.

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

In the future the discussions about a post 2020 climate agreement under the ADP will again strongly depend on the willingness of the USA as well as China to commit to ambitious targets as these two countries account for more than one third of global GHG emissions. The recent joint announcement of their respective intended mitigation targets by US' President Barack Obama and China's President Xi Jinping at the APEC summit has injected momentum to the current negotiations under ADP. The United States intends to achieve an economy-wide emission reduction target of 26-28 % below its 2005 level in 2015 and to "make best efforts to reduce its emissions by 28 %". China intends to achieve the peaking of its CO_2 emissions around 2030 and to increase the share of non-fossil fuels in primary energy consumption to around 20% by 2030. This important announcement of the key global emitters creates more favourable conditions for an international mitigation commitment under the UNFCCC. China is currently also establishing a domestic emission

trading system, has strongly invested in renewable energies and improved energy efficiency.

However, there are also developments that show that an increase in the ambition of mitigation targets and additional commitments to long-term financial support are clearly not top political priorities for all governments of developed countries. The recent revisions by Australia and Japan of their mitigation targets which decreased their ambition proved this point:

After a change in government in Australia in September 2013, the new government under Abbot dismantled the three key climate mitigation programmes (carbon tax, clean energy legislation, emissions trading) and ended the work of the Climate Commission as well as the Climate Change Authority (see also section 3.9).

Japan revised its target for 2020 and presented a new 2020 target of a 3.8 % cut in emissions at 2005 levels. The new target will mean that by 2020, Japan's emissions will have increased by 3.1 % above 1990 levels (see also section 3.8).

Due to the appearance of a large number of different situations of crisis around the world – Islamic State (IS) attacks in Iraq and Syria, the conflict between Ukraine and Russia, the spread of the Ebola virus in Sierra Leone, Liberia and Guinea, the war in Sy, the increasingly fierce conflicts in Israel, the protests in Arab countries, the continued impact of the financial crisis in several countries - climate change has become a problem among many other very urgent global problems which lowers the attention that political leaders give to the topic.

Moreover, the persisting impacts of the financial crisis continue to play a role for the international climate negotiations. Even though the crisis is not directly discussed under the UNFCCC, it still has strong indirect implications for the action on climate change and on the commitments which countries are able to make under the UNFCCC: 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 in some 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 particular long-term quantified financial commitments to developing countries – which is a key ask in the ADP negotiations from developing countries, are a very difficult demand for countries that still have not recovered fully form the financial crisis and which are faced by strong domestic cuts in public budgets.

The new global conflicts make it also uncertain which role the Russian Federation – also one of the key global emitters – will play in the future agreement after 2020. The Russian Federation was very upset about the way decisions were adopted at COP 18 in Doha where Russian objections were ignored. Since then, the Russian Federation is carefully supervising whether the UNFCCC process sticks to its rules and procedures, but Russia has not provided detailed views on its own contributions to a new global agreement (see also section 3.7).

In 2014 Brazil has developed several proposals that have tried to overcome some of the key divides among Parties in the negotiations, e.g. at the recent ADP session as proposal for concentric differentiation of Parties' was proposed. In this proposal developed countries should adopt INDCs that represent quantified, economy-wide emission limitation or reduction targets in relation to a base year while developing countries can choose from several options for mitigation targets, such as economy-wide targets against a business-as-usual projection, specific targets of GHG emissions relative to GDP or population or actions in specific sectors. After the recent re-election of the Brazilian government, it is likely that Brazil continues with this approach (see also section 3.3).

2. INDIVIDUAL TOPICS IN CLIMATE NEGOTIATIONS

The following sections mainly describe the status of negotiations under the subsidiary bodies and the related positions of Parties. However there are linkages and overlaps to the status of negotiations described in the sections related to ADP.

2.1. Mitigation of greenhouse gas emissions

2.1.1. Background: Key issues for the negotiations in Lima

The currently pledged mitigation targets until 2020 are highly insufficient to reach the global goal of keeping emissions at a level compatible with a temperature increase of less than 2°C compared to pre-industrial levels. Therefore, it is crucial to make progress in Lima to increase the ambition pre-2020 in order to reduce the emissions gap. Ambitious pre-2020 targets are also necessary to pave the way for a meaningful post-2020 agreement. Discussions on countries' targets until 2020 mostly take place under the ADP (workstream 2) where Parties could present more ambitious pledges, but several agenda items of the SBs as well are relevant in terms of pre-2020 action as well. Discussions on mitigation targets post-2020 take place under the ADP's workstream 1 (see section 1.3.1 for further details).

Furthermore, it is crucial to strengthen pre-2020 mitigation targets in order to build trust between developing and developed countries. Developing countries continuously have been asking developed countries to bring their targets for 2020 in line with the ambition needed to achieve the 2°C goal by increasing their targets inscribed in the Cancún agreement and the Kyoto Protocol and taking additional action under workstream 2 of the ADP. Increasing action by developed countries will therefore be essential to show commitment to meaningful mitigation policies. Developing countries on the other hand have committed themselves to undertake Nationally Appropriate Mitigation Actions (NAMAs) in the pre-2020 period, which are voluntary in nature and not subject to rigorous MRV processes. Developed countries have particularly called upon emerging countries to undertake ambitious mitigation policies and to increase the transparency of their actions in terms of implied emission reductions and underlying assumptions.

2.1.2. Agreement achieved in Warsaw

In terms of mitigation ambition, focus under the UNFCCC negotiations has shifted largely towards the ADP where countries are discussing how to bring forward mitigation targets for the post-2020 period (see section 1.3). On pre-2020 targets, the COP re-emphasised its call on developed country Parties to implement their quantified economy-wide emission reduction targets under the Convention and under the Kyoto Protocol and to revisit these targets in order to increase ambition in its conclusions on the ADP in Warsaw.

Until 2020, the pledges submitted by developed country Parties under the Convention (see section 2.1.5) since 2010 remain valid. Additionally, some Annex I Parties took on economy-wide limitation or reduction commitments (QELRC) for the second commitment period under the Kyoto Protocol (see section 1.4). The Doha Amendment to the Kyoto Protocol, which established the second commitment period, introduced the possibility for Parties to increase the ambition of their commitments unless more than ¾ of the countries that are present and voting object to its adoption (Article 3.1 of the Doha Amendment). However, the importance of the Kyoto Protocol as an international policy instrument has decreased due to the reduced number of participating countries in the second commitment period and no Parties have put forward additional proposals to increase their ambition so far.

The decisions taken in Warsaw also call upon developing countries which have not yet submitted their nationally appropriate mitigation actions (NAMAs) to do so and to increase their ambition. In 2014, few new NAMAs have been submitted though (see section 2.1.7).

In Doha, 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. Parties disagreed on whether this process should also imply revisiting individual pledges of developed country Parties. In Warsaw, Parties agreed to take IPCC's Fifth Assessment Report (AR5) into account for this review process. Meetings of the structured expert dialogue (SED) will take place in Lima and Parties will discuss the implications of the IPCC's Fifth Assessment Report on the review of the long-term goal.

2.1.3. 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).

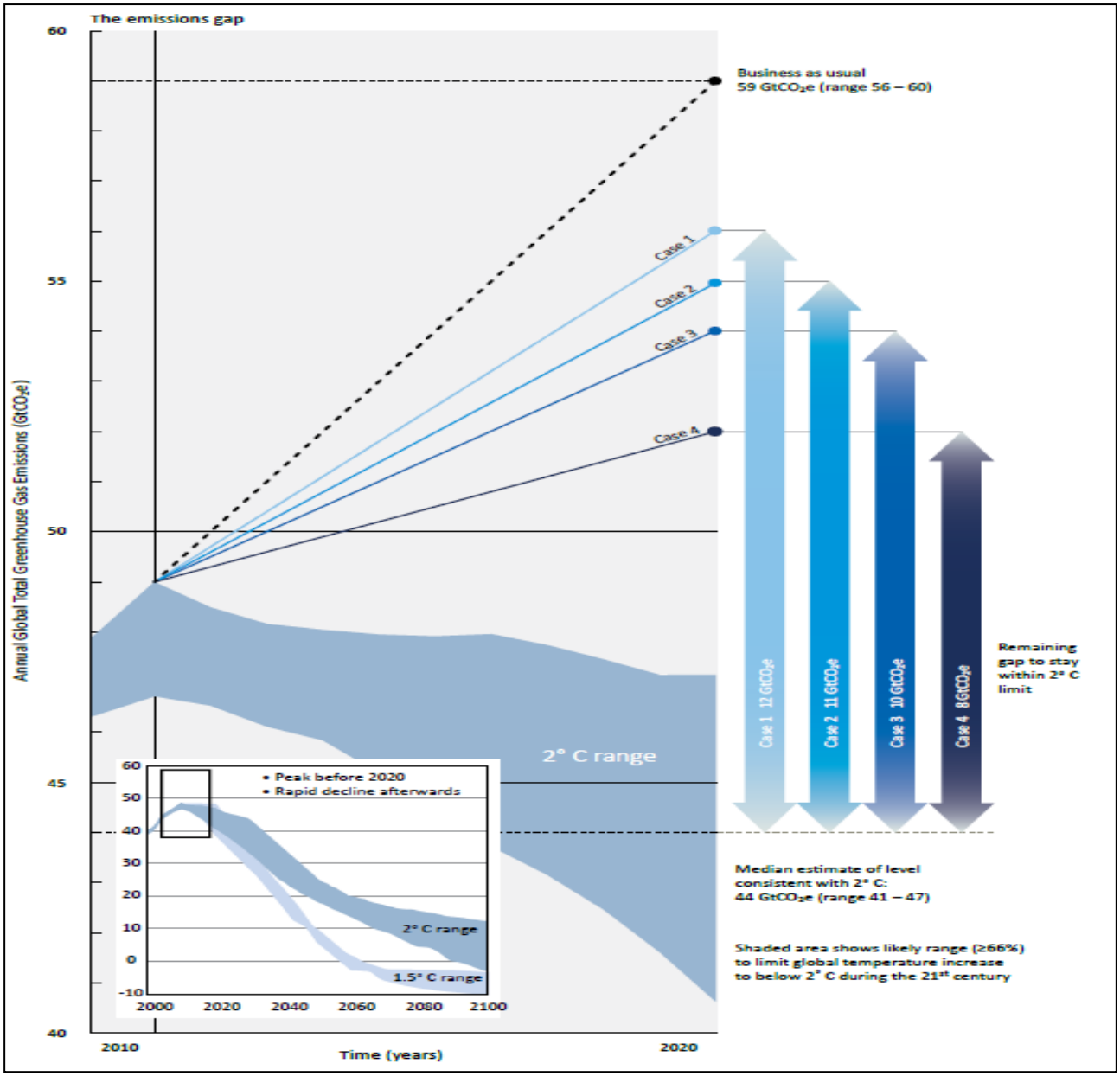
The AR5 deviates from the approach taken so far to develop emission scenarios which indicate consequences for temperature increases from the point in time when global emissions peak and the rate at which they decrease thereafter (Special Report on Emission Scenarios). Instead, it presents four Representative Concentration Pathways (RCPs). Each RCP expresses a different total radiative forcing by 2100, showing 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) relative to the average year 1850 to 1990. The RCP2.6 is a stringent mitigation scenario assuming peaking CO_2 emissions in the decade 2015-2024, with peaking atmospheric CO_2 concentration below 450 ppm around 2050 and declining concentration thereafter due to net CO_2 removals from the atmosphere. This stabilises and then slowly reduces the radiative forcing after the mid-21st century.

As the principal driver of long-term warming are 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 (Gt) carbon to keep the temperature rise (i.e. with a probability greater than 66%) below 2°C, 515 Gt carbon (range 445 to 585 Gt) of which had already been emitted by 2011. If non-CO_2 greenhouse gases are considered as well, the cumulative emissions in 2100 result in a lower remaining budget for CO_2 emissions of 790 Gt carbon. Thus, aggressive mitigation is necessary to keep temperature rise below 2°C (IPCC 2013).

The 2013 "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 global GHG emissions including LULUCF are estimated at 50.1 Gt CO_2e for the year 2010 (with a 95% uncertainty range of 45.6 – 54.6) (UNEP 2013).

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 56 $GtCO_2e$, within a range of 54-56[1] $GtCO_2e$.

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 55 $GtCO_2e$, within a range of 53-55 $GtCO_2e$.

Case 3 – "Conditional pledges, lenient rules"

Some countries offered to be more ambitious with their pledges, but linked that to various conditions. If the more ambitious conditional pledges are taken into account, but accounting rules are "lenient", median estimates of emissions in 2020 are 54 $GtCO_2e$ within a range of 52-54 $GtCO_2e$.

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 50-52 $GtCO_2e$.

Source: UNEP 2013.

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

Under business as-usual projections, global GHG emissions are expected to increase to 59 Gt CO_2eq in 2020. Taking into account the emission reduction proposals, which have been submitted by Parties under the Convention, the expected emission level in 2020 is within a range of 52 – 56 Gt CO_2eq., depending on how pledges are implemented (see section 2.1.5 and 2.1.7).

Nevertheless studies show that for limiting global warming to 2°C, emission levels of approximately 44 Gt CO_2eq (range: 38 – 47 Gt CO_2eq) in 2020 would be necessary. Thus the estimated emissions gap in 2020 is 8 to 12 Gt CO_2eq (depending on how reduction pledges are implemented), even if countries keep on track with their emission pledges (UNEP 2013).

A new policy brief published by the Climate Action Tracker in 2014 concludes that the emissions gap of 12 Gt CO_2 eq in 2020 could be closed by 23 %, if China and the US would apply global best practiced standards in each policy area. In 2030 this would lead to reductions of 6.7 GtCO_2eq/a or 10 % below the Climate Action Tracker's global current policy projections (Höhne et al. 2014).

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 displacements 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 (World Bank 2012).

2.1.4. 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 Gt CO_2eq, at marginal costs below USD 50-100/t CO_2eq reduction. This potential includes the power sector, industry, transport, buildings, forestry, agriculture and waste. Yet, time is running out to implement these reductions 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 2013).

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, phasing out HFCs and achieving 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 et al. 2013).

2.1.5. Mitigation commitments of developed countries

Shortly after 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 they have not been converted into legally-binding commitments in an international agreement. Overall, the mitigation pledges of Annex I Parties under the Convention did not change much compared to the pledges submitted until 2012 during the course of 2014. The only countries which changed their pledges were New Zealand and Japan, which lowered the ambition of their targets and Kazakhstan, which increased the ambition of its target by changing the base year from 1992 to 1990. For comparability, an overview of countries' reduction pledges is given in Table 1.

Current reduction targets by Annex I countries aggregated together only achieve a 3-16 % emission reduction in 2020, depending on whether only the unconditional or also conditional targets are implemented and whether strict or lenient accounting rules are applied (UNEP 2013). Due to available surplus emission allowances (see below), pledges for 2020 are likely to be met without the implementation of further mitigation measures. At the same time, current pledges by all countries at the end of 2013 were estimated to lead to a warming of 3.7°C by the end of this century. Japan's change of its target has effectively enlarged the 2020 emissions gap by 3-4 % in 2020 (Fekete et al. 2013).

In addition to the shortfall between scientific needs and Parties' pledges, three more aspects decrease the environmental effectiveness: Assigned Amount Unit (AAU) surplus, the impact of the accounting of emissions and removals from land-use, land-use change and forestry and the potential impact of offsets.

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 overall emission increases in recent years, these countries are still significantly below their commitments in the first commitment period. Therefore, a large amount of these unused Assigned Amount Units (AAUs) will be available; estimates amount to 6 % of the aggregate Annex I emissions in 1990 to be carried over into the second commitment period. These units 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 shall transfer surplus AAUs that are carried over into a "previous period surplus reserve". 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 can be transferred to other Parties. As 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), demand for surplus AAUs is expected to be low (Kollmuss 2013). In addition countries which are not participating in the second commitment period are not allowed to sell their surplus AAUs to a country with a commitment for the second commitment period. Units generated from the Kyoto Protocol's flexible mechanisms (the CDM and JI) each can be carried over up to 2.5 % of the initial assigned amount and there is no limit on their use. Thus, in practice the

AAU surplus may have limited impact in the second commitment period, yet the surplus could potentially lower ambition to a significant extent.

Land use, land-use change and forestry (LULUCF):

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.

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[2].

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[3] 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 1 shows the targets proposed by the high end of the pledges under the Copenhagen Accord and the range of outcomes of the different effort sharing proposals.

[2] See http://unfccc.int/resource/docs/2012/tp/05.pdf.

[3] 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 1: Absolute emission targets and reductions of Annex I Parties (in Mio t CO_2 eq. excl. LULUCF)

Country or group of countries	1990	2005	2010	2020 BAU	Target 2020		Base year	Pledges for 2020 compared to base year (%)	
					Low	High		Low	High
Annex I countries	**19,217.0**	**18,348.9**	**17,577.8**	**18,759.9**	**17,814.7**	**16,639.2**	***1990***	***-7%***	***-13%***
Australia	416.0	527.8	542.7	594.0	530.1	418.5	2000	-5%	-25%
Belarus	139.2	84.2	89.4	112.0	132.2	125.3	1990	-5%	-10%
Canada	589.0	739.8	692.0	720.0	745.0	658.5	2005	-17%	-17%
Croatia	31.5	30.2	28.6	41.7	25.2	22.0	1990	-20%	-30%
Iceland	3.5	3.8	4.5	3.3	3.0	3.0	1990	-15%	-15%
Japan*	1,266.7	1,342.1	1,257.4	1,334.0	1,342.1	1,291.1	2005	0%	-3.8%
Kazakhstan**	360.1	234.3	262.7	290.0	342.1	342.1	1990	-5%	-5%
Liechtenstein	0.2	0.3	0.2	0.3	0.2	0.2	1990	-20%	-30%
Monaco	0.1	0.1	0.1	0.1	0.1	0.1	1990	-20%	-20%
New Zealand*	59.8	76.5	71.8	83.5	56.8	47.8	1990	-5%	-20%
Norway	49.8	53.8	53.9	59.0	34.9	29.9	1990	-30%	-40%
Russian Federation	3,348.7	2,120.3	2,201.9	2,651.0	2,846.4	2,511.5	1990	-15%	-25%
Switzerland	53.1	54.4	54.2	55.1	42.4	37.1	1990	-20%	-30%
Turkey	187.0	329.9	401.9	510.0	510.0	510.0	2020	0%	0%
Ukraine	929.6	417.4	383.2	492.0	743.7	743.7	1990	-20%	-20%
USA	6,161.5	7,178.7	6,802.2	7,291.0	5,963.6	5,963.6	2005	-17%	-17%
EU-27	5,621.3	5,155.5	4,730.9	4,523.0	4,497.0	3,934.9	1990	-20%	-30%

Source: Fenhann 2013.

Note: Numbers are in Mio t CO_2 eq. excl. LULUCF

The pledges for Annex I are calculated based on the sum of Annex I pledges in comparison to a 1990 base year, there are no official pledges for Annex I countries as a total

* Revised targets from Japan and New Zealand have been calculated according to information from http://unfccc.int/resource/docs/2014/sbsta/eng/inf06.pdf.

** Revised targets from Kazakhstan have been calculated according to information from its biennial report submitted on February 2014 to UNFCCC (Kazakhstan 2014).

2.1.6. Achievement of targets for the first commitment period by the EU

A recently published report of the EEA based on complete inventory data for the first commitment period (CP1) of the Kyoto Protocol comes to the conclusion that the EU is on track to over-achieve its 8 % reduction target compared to base year levels for the 2008-2012 period. During this period, total GHG emissions of the EU-15 were on average 11.8 % below base-year emissions.[4] Partly, the achieved emission reductions occurred due to the economic recession. Yet, policies to lower the energy intensity of the economy and to reduce the carbon intensity of the energy mix contributed their share as well. Overall, the EU-15 is on track to overachieve its target by 1 billion tons for the first commitment period, taking into account the effect of allowance allocations under the ETS, the use of carbon sinks and the assumed use of flexible mechanisms[5].

Of the other European countries which have a target for the first commitment period (27 EU Member States, Iceland, Liechtenstein, Norway and Switzerland), all except Italy are on track to achieving their own Kyoto targets. It is crucial for Italy to close its current gap by increasing its use of flexible mechanisms by the end of 2015 because each of the EU-15 Member States has to achieve its individual target set under the burden-sharing agreement in order for the EU as a whole to achieve compliance under the KP.

Germany, Ireland, Finland, Portugal, France, UK, Greece, Sweden, Slovenia, Croatia, Czech Republic, Poland, Slovakia, Hungary, Bulgaria, Estonia, Lithuania, Romania, Latvia and Iceland achieved their Kyoto targets through domestic reductions only. Austria, Belgium, Denmark, Italy, Liechtenstein, Luxembourg, the Netherlands, Norway, 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 (EEA 2014a).

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 2013 by approximately 18 %, so it is already very close to reaching its 20 % emission reduction target. The EU is also on track to meet its target for renewable energy consumption by 2020 - renewables contributed with 14 % to final energy consumption in 2012, a share expected to further increase to 20 % by 2020. Progress on increasing energy efficiency is sufficient to meet the 20 % target by 2020 as well (EEA 2014b). Overall, there is therefore an unused potential to increase ambition to reduce emissions in the EU.

2.1.7. Pledges for mitigation action from developing countries

Developing countries, including all major emitters, have committed to implementing NAMAs, which they had submitted at the beginning of 2010 as well. These pledges were included in a UNFCCC information document which is not a legally binding commitment.

[4] Excluding emissions and removals from the LULUCF sector.

[5] Without taking into account the surplus of allowances and international credits held by ETS operators in the EU ETS.

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. Officially announced mitigation actions have been submitted by 17 countries (Table 2).

Table 2: Emission reductions from NAMAs in developing countries (Mio t CO_2eq including LULUCF)

Country or group of countries	1990	2010	2020 BAU	Target 2020		Base year	Deviation from Business as usual (BAU) scenarios in 2020	
				Low	High		Low	High
Non- Annex I countries	**16,989.9**	**31,349.4**	**37,656.4**	**34,485.3**	**33,199.8**		**-8%**	**-12%**
Major developing countries and countries with mitigation pledges officially announced	**7,939.3**	**19,489.2**	**27,761.4**	**24,590.3**	**23,385.8**		**-11%**	**16%**
Antigua and Barbuda	0.3			0.3	0.3	1990	-25%	-25%
Brazil	1,389.1	2,478.0	3,236.0	2,067.8	1,977.2	2020	-36%	-39%
China PR	3,650.1	10,101.0	14,280.0	13,561.2	13,561.2	2020	-2%	-2%
Chile	33.2					2020	-20%	-20%
Costa Rica	8.5	10.0	14.0	0.0	0.0	2020	0%	0%
India	1,228.5	2,400.0	4,600.0	4,370.0	4,232.0	2020	-5%	-8%
Indonesia	464.6	2,500.0	2,950.0	2,183.0	1,740.5	2020	-26%	-41%
Israel	62.7	75.0	107.0	86.4	86.4	2020	-20%	-20%
Maldives	0.2	0.2	0.0	0.0	0.0	2020		
Marshall Islands						2009	-40%	-40%
Mexico	425.3	748.3	960.0	960.0	672.0	2020	0%	-30%
Moldova	41.2	12.5	42.9	32.2	32.2	1990	-25%	-25%
Papua New Guinea	4.6			2.5	2.5	1990	-50%	-50%
Samoa	0.5	-0.4		0.0	0.0			
Singapore	26.9	40.0	74.0	62.2	62.2	2020	-16%	-16%
South Africa	330.4	560.0	721.5	721.5	476.2	2020	0%	-34%
South Korea	273.3	564.7	776.0	543.2	543.2	2020	-30%	-30%

Source: http://unep.org/climatechange/pledgepipeline/, Jørgen Fenhann, UNEP Risø Centre (1 November 2013).

Note: The pledges for developing countries are calculated based on the sum of pledges in comparison to the BAU scenario; there are no official pledges for developing countries in total.

Overall, emissions resulting from non-Annex I pledges are estimated to be 7-9 % (UNEP 2013) or 9% to 12% (den Elzen et al. 2013) lower than BAU emissions. The latter figure corresponds to absolute emission reductions between 3.2 and 4.5 $GtCO_2eq$ in 2020. This implies that "the non-Annex I countries' goals fall, collectively, short in reaching the 15–30 percent deviation from business-as-usual which is also used as a benchmark for emission reductions" (den Elzen and Höhne 2008 and 2010 as quoted in UNEP 2013, p. 8).

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 (den Elzen et al. 2013).

Under the open invitation to communicate NAMAs under the Subsidiary Body for Implementation (SBI) (previously AWG-LCA, included in decision 1/CP.16) in total 57 countries (or 35 % of developing countries with almost half of them being African countries) as well as the Africa Group have submitted mitigation actions (UNFCCC 2013a)[6].

Some countries have changed their NAMAs or underlying assumptions in 2014. Notably, Mexico has changed the BAU scenario underlying its 30 % reduction target compared to BAU levels until 2020 so that the emission level resulting from the pledge was corrected upwards to 672 $MtCO_2eq$ in 2020 from 618 $MtCO_2eq$ under the previous projection (Climate Action Tracker 2013a).

In Doha, the COP decided to establish a work programme to further the 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. Discussions in Warsaw focused more on how the NAMA registry can more effectively match available support with funding needs than on specific assumptions of the NAMAs themselves.

Several NAMAs have not been officially submitted to UNFCCC. According to the NAMA database set up by Ecofys, 107 NAMAs and 23 feasibility studies in 37 countries have been communicated by 7th October 2014. According to Table 3, 98 NAMAs were recognised in the database in June 2014. The number of NAMAs submitted for seeking support has increased over time, while only a small number of NAMAs are in the status of being implemented. Most recognised NAMAs have been submitted by South American countries. The energy supply sector followed by the waste, transport and building sector are the sectors with the most appropriate mitigation potential.

[6] As decided at COP 16 and COP 17, NAMAs can be submitted through a web-based registry (http://www4.unfccc.int/sites/nama/SitePages/Home.aspx) 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: Overview of all NAMAs in the NAMAs database (by Ecofys) as submitted by June 2014

Country	NAMAs		Phase of development		Sectors engaged						
	TOTAL NAMAs	NAMAs also in the UNFCCC registry	Under development	Implementation	Energy supply	Transport	Forestry	Waste	Agriculture	Buildings	Industry
Latin America	**42**	**11**	**38**	**4**							
Argentina	1		1		■				■		
Barbados	1		1		■						
Chile	10	3	9	1	■	■	■	■			
Colombia	5		4	1		■		■			
Costa Rica	4		3	1				■	■	■	
Dominica	1	1	1	0	■	■	■	■	■	■	■
Dominican Republic	2	2	2					■			■
Mexico	9	1	8	1	■	■				■	■
Peru	5		5		■	■		■		■	
Uruguay	4	4	4		■			■		■	
Africa and the Middle East	**25**	**12**	**23**	**2**							
Gambia	7		7		■		■	■	■		
Jordan	9	9	8	1	■			■			■
Kenya	1	1	1		■						
Mali	2	2	2		■		■				
Morocco	1		1		■						
South Africa	2		1	1	■					■	
Tunisia	3		3		■			■		■	
Asia and the Pacific	**18**	**5**	**16**	**2**							
Cook Islands	1	1	1		■						
Georgia	2	1	1	1	■		■				
Indonesia	6	2	5	1	■	■		■		■	■
Kyrgyzstan	1		1		■						
Mongolia	1	0	1		■						
Pakistan	2	1	2					■		■	■
Philippines	2		2		■			■			
Vietnam	3		3		■			■			■
Europe	**13**	**12**	**13**								
Serbia	13	12	13		■	■				■	
Total	**98**	**40**	**90**	**8**							

Source: Röser et al. 2014, NAMAs recognised in the database by June 2014.

2.1.8. Negotiation process in 2014

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 2014 mainly under the ADP process and there was broad recognition of the existence of this 'ambition gap'. Under workstream 2, Parties outlined a number of options to help bridge the gap, but did not agree on any specific action to be taken (see section 1.3.2). In 2014, no significant increase of ambition until 2020 has been pledged by Parties under the UNFCCC.

The process launched in Doha to review the long-term temperature goal between 2013 and 2015 in a structured expert dialogue (SED) in order to verify the magnitude of climate change continued in 2014. At the SED in Bonn, Parties discussed the 5th Assessment Report of the IPCC. While IPCC experts presented their findings on impacts and risks of climate change, paths of transformation, opportunities for mitigation and costs of mitigation, they did not make political recommendations regarding financial support or the need to increase the 2°C target to a 1.5°C target. Parties agreed that two additional expert dialogues should take place during COP 20 and in spring 2015.

In the work programme on clarification of quantified economy-wide emission reduction targets of developed country Parties agreed in Doha, Parties have discussed how to identify common elements for measuring progress towards the achievement of emission reduction targets and views on how efforts can be made comparable. In 2014, Parties discussed assumptions regarding the use of land-use, land-use change and forestry and market-based mechanisms for the achievement of their targets under the work programme. Yet, this work programme did not aim to amend the pledges made by developed countries in 2012 under the Convention as new pledges are supposed to be made under the ADP. It is to be concluded by COP 20.

Under the work programme to further the understanding of the diversity of nationally appropriate mitigation actions (NAMAs) from developing countries, Parties shared further information on their NAMAs in 2014. Additionally, the extent of the matching of NAMAs with financial, technical and capacity-building support under the registry of NAMAs has been considered under the work programme and is rather low with 2 NAMAs that have been matched with available support under the registry (UNFCCC 2014i). The work programme shall be concluded in Lima with conclusions on the activities conducted and issues addressed.

2.1.9. Position of Parties

In 2014, a number of Parties submitted their views on how the outcomes of the 2013-2015 review of the long term goal will inform the work of the ADP. Most countries agree that further sessions of the SED to be held shall consider the work of Working Group II and III of the IPCC.

The Environmental Integrity Group (EIG), Canada, Japan, Norway, New Zealand, the USA and the EU believe that the review shall assess the adequacy of the global goal and whether the international community is on track to achieving it and which recommendations are to be formulated for pre- and post-2020 mitigation. The EIG, Canada, Japan, Norway, New Zealand and the USA state, that the targets communicated by Parties shall be considered with regard to reaching the global goal, but not individually assessed. AOSIS and China on the other hand argue that the review should provide a basis for evaluating the adequacy of the INDCs that are brought forward and inform the whole ADP process. China additionally calls for an assessment of the adequacy of countries' finance commitments in the light of the global goal. AOSIS asks the review to intensively investigate the consequences of a 1.5° or 2°C goal to ensure that the impacts on low-lying coastal states are taken into account.

In 2014, no submissions were made on the work programmes to clarify the quantified economy-wide emission reduction targets of Annex I countries under the Subsidiary Body for Scientific and Technological Advice (SBSTA) and to further the understanding of the diversity of NAMAs under the SBI. Instead, countries submitted their views under the ADP under workstream 2 on how to enhance pre-2020 mitigation (see section 1.3.2).

2.2. 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 Least Developed Countries (LDCs) and Small Island Developing States (SIDS), are already experiencing adverse climate impacts today. Their ability to cope with these impacts 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 poses 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.

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 mobilising adaptation activities in all Parties and by relevant international, regional and national organisations and institutions. Existing institutions at national and regional level should be built upon and strengthened where necessary.

There are several bodies under the UNFCCC which are dealing with adaptation issues. Primarily, at COP 16, the Cancún Adaptation Framework was established with the aim of enhancing action on adaptation through international cooperation and coherent consideration of matters relating to adaptation under the Convention. Also, the Adaptation Committee (AC) was established at COP 16 which is the main body dealing with the implementation of enhanced action on adaptation 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 (Kreft et al. 2013).

Furthermore, the work programme on loss and damage (see section 2.3) 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.

To finance adaptation projects in developing countries, the Adaptation Fund was established in 2001. It is financed with share of proceeds from the CDM (2 % of Certified Emission Reductions (CERs) issued for a CDM project activity) and other sources of funding. It is supervised by the Adaptation Fund Board and until 2015 the World Bank will continue to play the role of acting as a trustee for the Adaptation Fund.

2.2.1. Background: Key issues for the negotiations in Lima

The main question for Lima will be the role that adaptation is going to play in the 2015 agreement under the ADP. Developing countries want adaptation to be part of the INDCs

that countries will bring forward as their proposed commitments and call upon developed countries to clarify which means of finance and support they will make available for adaptation activities in developing countries. Developed countries agree that adaptation shall play an important role in the 2015 agreement but do not want to make specific finance commitments for adaptation as part of their INDCs. Furthermore, they want to improve the monitoring of adaptation activities and their effectiveness to ensure that money is being used in a meaningful way. Monitoring of adaptation activities will thus be an important issue for the discussions in Lima as well.

Additionally, a major question for COP 20 relates to the definition of a global goal for adaptation under the ADP that countries were supporting in the last ADP session in October 2014. It remains yet to be elaborated how such a goal should look like. Moreover, a key issue at stake will be what role existing institutions for adaptation will play in the new agreement. While there is emerging consensus that the new architecture should build on existing institutions, it still needs to be negotiated how exactly these institutions should function and where in the new architecture they shall be placed.

2.2.2. Agreement achieved in Warsaw

In Warsaw, the COP considered the report of the Adaptation Committee (AC) in which the AC presents progress made from December 2012 until October 2013, including in the areas of promoting coherence in adaptation under the Convention and synergies with organisations outside of the Convention, providing technical support and guidance to Parties on adaptation actions and means of implementation and outreach and sharing of information. Furthermore, the report made suggestions to SBSTA on how the NWP could support the work of the AC, namely through undertaking joint activities to enhance synergy and coherence, catalysing further actions in relation to the provision of information and supporting the engagement of adaptation stakeholders (UNFCCC 2013b). The COP noted the progress of the AC to implement its three-year workplan (2013-2016), called upon the AC to increase exchange with other stakeholders in- and outside the Convention and encouraged the AC to continue supporting National Adaptation Plans (NAPs).

Also, progress was made on the NAPs itself. It was planned to further elaborate the guidelines for developing such plans in Bonn. The G77 and LDCs supported a decision on this issue in order to increase visibility of national adaptation planning. In the decision, the COP recommends to the Adaptation Committee to increase support for national adaptation planning in developing countries and refers to existing financing opportunities from the Strategic Climate Change Fund.

In Warsaw, 48 LDCs had finalised a comprehensive set of plans of National Adaptation Programmes of Action (NAPAs) to deal with climate change impacts. These plans will serve to better assess the immediate impacts of climate change and enable countries to determine the support and actions they require to become more resilient.

On the NWP, the COP decided to continue and to enhance the programme through activities that are linked to practical issues, development of linkages with other relevant workstreams and bodies under the Convention and the development of knowledge products to improve the understanding and assessment of impacts, vulnerability and adaptation. The need to take a gender-sensitive approach was emphasised. The NWP is to be reviewed in 2018.

With regard to the Adaptation Fund, it was decided in Doha that for the second commitment period, the Adaptation Fund shall be further augmented through the 2 % share of the proceeds levied through the KP's flexible mechanisms. In Warsaw, the report of the Adaptation Fund Board stressed that further clarifications from the CMP were necessary to operationalise the provisions on the levies that go to the Fund. The report of

the Fund also highlighted a significant increase in the number of adaptation projects financed and national implementing entities accredited. Developed countries were able to meet their financial target of capitalising the Adaptation Fund with USD 100 million, so that it can now continue funding priority projects.

2.2.3. Negotiation process in 2014

In Bonn, progress was made on funding for the NAPAs submitted by LDCs through the Least Developed Country Fund (LDCF).

A member of the Board of the Adaptation Fund communicated a new fundraising target of USD 80 million per calendar year for 2014 and 2015. However, the lack of sustainable, predictable and adequate financial resources for the Adaptation Fund was emphasised.

On the NWP the SBSTA agreed on a number of actions to enhance the effectiveness of the NWP modalities, including: enhancing collaboration with global and regional knowledge networks and NWP partner organisations, inviting regional centres and networks to serve as regional knowledge platforms for the implementation of activities under the NWP and considering web-based activities. The secretariat was requested to produce information on available and implemented tools and methods for adaptation planning processes until COP 21.

On NAPs, countries agreed that it was too early in Bonn to review and revise the guidelines for national adaptation planning because countries have not made sufficient experiences with the guidelines. On the basis of subsequent meetings including the Adaptation Committee and Parties' submissions, the process of adaptation planning shall be further considered in Lima.

The Adaptation Committee (AC) held its fifth and sixth meeting in 2014. Among other issues, it was discussed how to do outreach activities on experiences with adaptation actions, how to improve monitoring and evaluation of adaptation and how to promote greater coherence on adaptation under the Convention. Moreover, a joint meeting of the AC and the NWP took place in 2014 which focused on available tools for the use of indigenous and traditional knowledge and practices for adaptation, needs of local and indigenous communities and the application of gender-sensitive approaches for adaptation.

2.2.4. Position of Parties

Generally, developing countries criticise insufficient funding for adaptation in all of the funding entities that exist under the Convention. For the Adaptation Fund, the Africa Group suggests to allocate 10 % of the carry over units under the Kyoto Protocol to the Adaptation Fund, to stabilize the price of CERs including through raising mitigation ambition, to apply voluntary levies to national or regional emission trading schemes, to assess the scale of contributions from Annex B Parties to the Kyoto Protocol in a replenishment process, to consider other available sources and to channel funds of the GCF through the Adaptation Fund to adaptation activities. Against the backdrop of developments under the Kyoto Protocol and the unlikelihood of a third commitment period, the Africa Group and the LDCs stress that the future of the Adaptation Fund is uncertain. Therefore, the Africa Group suggests placing the Adaptation Fund as well as the Least Developed Country Fund and the Special Climate Change Fund which are currently located under the Kyoto Protocol under the Convention.

On NAPs, developing countries (LDCs) call for a stronger standardisation of these plans and for clarity of the support for implementation of the plans. Also, they want gaps and needs regarding the implementation of NAPs to be examined.

LDCs and other developing countries also put a strong emphasis on the importance of adaptation in the post-2015 agreement (see section 1.3.1).

Furthermore, the G77, BASIC, the LDCs and AILAC stressed the need to focus on adaptation in the discussions on agriculture.

In 2014, the EU and Mexico submitted information on good practices in and lessons learned from national adaptation planning. The EU emphasises the importance of monitoring and evaluation of adaptation activities.

2.3. 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 (cf. UNFCCC 2014f).

2.3.1. Background: Key issues for the negotiations in Lima

After the establishment of the Warsaw international mechanism for loss and damage (see following paragraph), the key issue at stake in Lima will be the finalisation of the arrangements of the mechanism (composition and procedures for the executive committee). Furthermore, a central question relates to the relationship between adaptation and loss and damage in the 2015 agreement: Parties need to work out to what extent loss and damage shall be treated as an issue independently from work on adaptation or whether and how it should be integrated into the post-2020 adaptation framework. It also remains to be clarified how the newly established mechanism on loss and damage will be institutionally anchored in the new agreement.

2.3.2. Agreement achieved in Warsaw

As a major breakthrough, the Warsaw international mechanism for loss and damage was established in Warsaw under the Cancún Adaptation Framework (decision 2/CP.19).

The COP also established an executive committee of the Warsaw international mechanism which shall be working under the guidance of the COP and report annually to the COP through the subsidiary bodies. It consists of two representatives from the Adaptation Committee, the Least Developed Countries Expert Group, the Standing Committee on Finance, the Technology Executive Committee and the Consultative Group of Experts on National Communications from non-Annex I Parties.

The functions of the mechanism include:

- to enhance knowledge of comprehensive risk management approaches to address loss and damage;
- to strengthen dialogue and coordination among relevant stakeholders;
- to enhance action and support to address loss and damage.

In exercising these functions, the mechanism will play a coordinating role under the Convention as well as for stakeholders outside the Convention to implement action on loss

and damage. Parties are invited to develop institutions and networks at sub-national levels to enhance the implementation of relevant approaches to address loss and damage.

The composition of and procedures for the executive committee will be considered by the COP and finalised at COP 20 in Lima. The whole mechanism for loss and damage will be reviewed at COP 22 in 2016.

2.3.3. Negotiation process in 2014

In Bonn, the SBI and SBSTA initiated consideration of the composition of and procedures for the Executive Committee of the Warsaw mechanism for loss and damage. Conclusions shall be taken at COP 20. Open questions relate to the balance between Annex I and non-Annex I Parties in the Executive Committee and the tasks and procedures of the Committee.

The initial meeting of the Executive Committee of the mechanism took place in March 2014 and was resumed in September. At the meetings, the draft two year plan of the Executive Committee was discussed. It contains activities to fulfil the functions of the mechanisms as listed above.

2.3.4. Position of Parties

A major point of debate is whether to integrate the mechanism on loss and damage created in Warsaw under the new agreement (LMDCs) or whether to keep it separate and anchored in the Cancún Adaptation Framework (Canada).

Members of AOSIS and the Africa Group want the mechanism to include provisions of support and that funding for actions on loss and damage come from a dedicated source separate from adaptation finance. Thus, the decision text which "requests" developed countries to provide financial support is a weak compromise for them. Developed countries on the other hand, repeatedly emphasised that the mechanism is part of the Cancún Adaptation Framework and it should be avoided to duplicate structures under the existing framework.

Regarding the composition of the executive committee of the loss and damage mechanism, developing countries demand the composition to be based on regional groups, which would give developing countries a majority. Also, there should be special seats for LDCs and small island developing states. In terms of the work and procedures of the committee, developing countries claim facilities for technical as well as for financial support for recovery of damages and reconstruction. Industrialised countries consider these claims to stretch the Warsaw mandate for the mechanism too far. They favour an equal distribution of seats between developed and developing countries and to focus the work on technical issues.

In Bonn, the G77 and China together with the Africa Group also criticised the lack of transparency regarding the work of the interim Executive Committee of the mechanism on loss and damage.

2.4. Financial support

2.4.1. Background: Key issues for the negotiations in Lima

The key issue related to financial support for Lima is whether developed countries will be able to provide some indication of how they aim to mobilise the promised USD 100 billion annually from 2020 onwards. This will be important to generate trust in the negotiations as climate finance is considered to be a major building block for the 2015 agreement. Additionally, a key question at stake is which countries shall be obliged to provide climate finance in the post-2020 period and how existing institutions for the provision of financial

support shall be integrated into the new agreement. To be able to track the amounts of climate finance provided, the recently established negotiation process on how to improve MRV systems for climate finance will be continued in Lima. A persisting point of contention is the role of the private sector in providing climate finance and how its contributions should be tracked and accounted for.

2.4.2. Agreement achieved in Warsaw

Long-term climate finance

Climate finance continues to be a key issue in the negotiations with crucial importance for the negotiations of the 2015 agreement. In Warsaw, many developing countries stressed that "a successful outcome in 2015 depends on progress on predictability, accountability and sustainability of long term finance" (Earth Negotiations Bulletin 2013, p. 4). Debates on the provision of sufficient climate finance do not only take place under specific agenda items on finance, but figure prominently in other agenda items on adaptation, loss and damage, technology transfer and capacity-building as well.

From 2010-2012 developed countries committed themselves to providing new and additional resources approaching USD 30 billion with balanced allocation between adaptation and mitigation (fast-start financing). 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 and money was mostly not channelled through multilateral funds (Ciplet et al. 2012).

In Durban in 2011, Parties had agreed on a work programme on long-term finance which aimed at contributing to ongoing efforts to scale up the mobilisation of climate change finance after 2012. The work programme was extended for one year in Doha in 2012 in order to support developed countries in their efforts to identify pathways for mobilising scaled-up climate finance to USD 100 billion by 2020 and to support Parties in enhancing their enabling environments.

In Warsaw, the work programme on long-term finance came to an end. The COP in its decision on long-term finance concluded by urging developed countries to continue to mobilise climate finance at increasing levels from the 2008-2012 fast-start finance period from a variety of sources, while also calling on them to channel a substantial share of public funds to adaptation. Furthermore, it requested Parties to enhance their enabling environments and policy frameworks and requested developed countries to prepare biennial submissions on their strategies and approaches for scaling up climate finance from 2014-2020 (decision 3/CP.19). Pledges made so far by developed countries were acknowledged and the COP decided to continue deliberations on long-term finance thenceforth, including through in-session workshops and to convene a biennial high-level ministerial dialogue on climate finance from 2014-2020 (Decision 3/CP.19).

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 countries have announced new financial contributions in Warsaw to funds under the Convention:

- The Republic of Korea pledged USD 40 million to the GCF;
- Sweden pledged about USD 45 million to the GCF; and
- seven European countries pledged USD 72.5 million to the Adaptation Fund.

Yet, these pledges were insufficient to build confidence among developing countries that the promise of USD 100 billion per year by 2020 would be realised. They pointed to the fact that climate finance pledged through multilateral funds decreased by 71 % in 2013 (Earth Negotiations Bulletin 2013). It is likely that a large share of climate finance will come from private capital.

Emerging economies which belong to non-Annex I countries rejected any proposal that would enlarge the group of countries with obligations to provide support.

Developing countries keep pushing for concrete numbers and reassurance about the levels of climate finance for the coming years. However, specific long-term finance commitments are very difficult for many Annex I Parties 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.

Standing Committee on Finance

The Standing Committee was 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, it was renamed as the Standing Committee on Finance and its roles, functions, and working modalities were further defined.

Its mandate includes inter alia:

- 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.

The COP in Warsaw endorsed the workplan of the SCF for 2014-2015 and took note of information on the biennial assessment. It also invited the SCF to consider ways to increase work on monitoring, reporting and verification (MRV) of support and to consider ongoing work on definitions of climate finance, including private finance in preparing the first biennial assessment. This assessment shall be agreed upon at COP 20. It will give an overview of public and private climate finance flows between 2007 and 2012, assess these flows in terms of thematic balance, geographical distribution, the 2°C goal, CO_2 impact/performance, country needs and ownership and access modalities. Lastly, it will consider ways to strengthen methodologies for reporting climate finance.

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). Ms. Heda Cheikhrouhou from Tunisia who previously worked for the African Development Bank was appointed as Executive Director of the Fund's Independent Secretariat in June 2013.

As confirmed at the 7th Board meeting of the CGF in 2014, the Fund will have thematic funding windows for mitigation and adaptation and it will also have a private sector facility to finance private sector mitigation and adaptation activities. The need for additional windows will be considered in the future.

In Warsaw, the COP agreed to the arrangements between the COP and the GCF that had been developed over the course of 2013. The relationship between the GCF and the COP had been a contentious issue with regard to the role of the COP in supervising the GCF. Developing countries have been in favour of a strong role for the COP regarding the work of the GCF. In the arrangements as agreed by the COP, the arrangement that the GCF will be accountable to and work under the guidance of the COP was specified by, inter alia, the following agreements:

- the COP will after each of its sessions, communicate guidance to the GCF;
- the COP will provide guidance based, inter alia, upon a thorough consideration of the annual reports of the COP;
- the COP may provide additional guidance to clarify policies, programme priorities and eligibility criteria as they impact funding decisions;
- the COP will make assessments of the amount of funds that are necessary to assist developing countries in implementing the Convention;
- the GCF shall receive guidance from the COP, including on matters related to policies, programme priorities and eligibility criteria;
- the Board of the GCF has full responsibility for funding decisions;
- the Board of the GCF will establish an independent redress mechanism that will report to the Board; and the CGF will include the recommendations of the mechanism and any action taken by the Board in response to those recommendations in its annual reports to the COP;
- the GCF will include information on its activities, adherence to the guidance received by the COP and on resource mobilisation and the available financial resources.[7]

Furthermore, the COP decided to provide initial guidance to the GCF on policies, programme priorities and eligibility criteria. Specifically, it asked the GCF to balance the allocation of resources between adaptation and mitigation, pursue a country-driven approach and take into account the immediate needs of vulnerable developing countries in allocating resources for adaptation and confirm the eligibility of all developing countries.

MRV of finance

Against the background of a lack of clarity of how to mobilise USD 100 billion annually until 2020, and a general lack of definition of what constitutes climate finance, MRV of climate finance is high on the agenda under the UNFCCC. Specific measures have been taken to enhance MRV of finance, such as the preparation of the biennial assessment and overview of climate finance flows to be prepared by the SCF. Generally, developing countries have

[7] See http://unfccc.int/resource/docs/2013/cop19/eng/10a01.pdf#page=14.

often called for increased clarity on the amounts of finance, timelines and sources. It will be difficult to discuss MRV of finance without agreeing on basic definitions of climate finance first. In Warsaw, the importance of MRV of finance was highlighted, but no agreement on such definitions was found.

2.4.3. Negotiation process in 2014

In 2014 climate finance was discussed in several work streams under the COP (SBSTA work on MRV of finance, the Standing Committee's work on several finance issues, the Adaptation Fund as well as the review of the financial mechanism) and under the Board of the GCF.

Long-term finance

After the conclusion of the work programme on long-term finance in Warsaw, the COP included three types of activities on long-term finance for the period 2014 to 2020 in Warsaw (decision 3/CP.19), including biennial submissions of developed country Parties on their updated approaches and strategies for scaling up climate finance, continued deliberations on long-term finance through in-session workshops and biennial high-level ministerial dialogues on climate finance.

In 2014, an in-session workshop on long-term finance was held in Bonn in June. It dealt with strategies to scale up climate finance from 2014 to 2020, cooperation on enhanced enabling environment and support for readiness activities and the needs for support of developing countries. Opportunities to mobilise additional finance that were discussed include the development of project pipelines, policies and regulatory frameworks incentivising private sector participation and enabling environments in developing countries.

Discussions on long-term finance in 2014 also highlighted the need to find an appropriate balance between mitigation and adaptation.

Standing Committee on Finance

The SCF met three times, in March, June and October 2014, to discuss, inter alia, 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. Additionally, it was discussed how to ensure coherence and coordination of climate finance with regard to finance for forests. The SCF also provided input on the review of the financial mechanism of the Convention, which is to be finalised at COP 20.

While the first forum of the Standing Committee on Finance in May 2014 tackled various issues related to climate finance, the second forum in June 2014 was – upon the request of the COP in Warsaw – focused on mobilising finance for adaptation.

Green Climate Fund

The GCF Board has met three times in 2014 in February, May and October. In February, the agenda included accreditation procedures, the results management framework of the Fund, modalities that enhance direct access, the Private Sector Facility and initial resource mobilisation. Yet, only few decisions could be taken at the 6th Board meeting on the terms of reference for several accountability mechanisms for the Fund and Fund-wide benchmarks for how GCF resources will be allocated. There was disagreement on competing approaches on how the GCF should support the paradigm shift towards low-carbon and climate-resilient development in recipient countries and the future relationship of the Fund to the UNFCCC in

its operations. The Board confirmed that a split of 50:50 is planned between mitigation and adaptation "over time" and reserved a minimum half of all its adaptation spending for particularly vulnerable countries. A far-reaching decision on gender considerations could be taken as well (Schalatek 2014b).

The 7th Board meeting in May 2014 has been labelled as the "most crucial Board meeting in the short history of the GCF". At this meeting, decisions on six out of the eight operational policies which belong to the "essential requirements" to start initial efforts for mobilising the Fund were taken. Participants managed to achieve the minimum agreements necessary for the GCF operations to begin and for starting the process of initial resource mobilisation. The first pledge was made in Oslo in the beginning of July. At the 8th Board meeting in October 2014, Board members were able to take a number of decisions necessary for the GCF to receive funds and to begin accrediting entities that will implement projects and programmes from next year onwards.

Nevertheless, a long list of postponed and contested items remain on the long-term agenda of the GCF. They include items around country ownership such as enhanced direct access and a no-objection procedure for private sector investment proposals, more deliberations on adaptation focus areas or the terms and conditions for GCF loans and grants. These issues need to be resolved in order to ensure that the Fund is fully open for business in 2015 (Schalatek 2014a).

In 2014, the following pledges on funds for the GCF, summing up to about USD 2.3 billion, were made (GCF 2014):

- Germany: USD 1 000 million;
- France: USD 1 000 million;
- Korea: USD 100 million;
- Switzerland: USD 100 million;
- Denmark: USD 70 million;
- Norway: USD 33 million;
- Mexico: USD 10 million;
- Luxemburg: USD 6.8 million;
- Czech Republic: USD 5.5 million.

MRV of finance

At COP 17 it was agreed to discuss methodologies for the reporting of financial information and this process was initiated in June 2014 in Bonn under SBSTA. The Standing Committee on finance is considering monitoring and reporting of financial flows as well. This discussion is also linked to the revision of reporting guidelines for national communications. The initial discussion took stock of the existing work. While developing countries generally ask for more transparency of the information on climate finance, the USA and other Annex I Parties believe that the current system to report on the provision of support is already adequate. The discussion will continue in Lima, however a decision is only expected for COP 21 in Paris. The conclusions made in Bonn on this agenda item mainly refer to work on this item that is being undertaken by the SCF in preparing the first biennial assessment and by the SBI in the context of the revision of reporting guidelines for national communications by Annex I Parties.

In their submissions on appropriate methodologies and systems to measure and track climate finance, the EU, Japan, New Zealand, Switzerland and the USA considered ways to enhance MRV of finance (see section 2.4.4).

In September 2014, a workshop was organised by the Adaptation Committee on the monitoring and evaluation of adaptation. Also, the multilateral assessment process which is being organised this year for the first time and which will review countries' reporting on climate finance might further advance the debate on MRV of finance.

Moreover, work on the MRV of finance is also being undertaken outside of the UNFCCC by the OECD, multilateral development banks and think tanks.

2.4.4. Position of Parties

Climate finance continues to be a heavily contested issue in the negotiations. Discussions on finance and a lack of transparency of the availability of funds also affect negotiations of other agenda items on adaptation, technology transfer and capacity-building.

Many developing countries stress the priority of predictable and accountable funds by developed countries as a precondition to undertake ambitious mitigation actions and to be able to find agreement in Paris. They criticise that it remains unclear how to reach the target of USD 100 billion climate finance annually by 2020 as quantified pathways have not been defined. The G77 and China proposed that developed countries should provide at least USD 700 million annually from 2016 to make sure that the USD 100 billion goal can be reached.

On the other hand, Annex II Parties (those with financial obligations under the Convention) stress the need for effectiveness of climate finance and for enabling environments in developing countries. So far they have rejected the definition of quantified pathways towards the USD 100 billion goal, and instead pledged selective contributions to individual funds.

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 respectively. The US, Japan and the EU stress the need to incentivise both public and private climate finance.

So far, the EU is the only country that has made a submission in 2014 on strategies and approaches for scaling up climate finance. It strongly emphasises the need for enabling environments in all countries as an essential precondition for the mobilisation and effective deployment of climate finance and highlights country ownership. Also, the EU voices support for the implementation of carbon pricing at the global level. Regarding ways to reach the USD 100 billion goal, the EU says that it will contribute its share, but does not make any more concrete commitments. On adaptation finance, the EU is saying that it is making efforts to channel a "substantial share" of public climate finance towards adaptation without concretising any numbers.

On MRV of finance, submissions were made by developed country Parties only. Most submissions do not make very concrete suggestions for how to improve methodologies for tracking climate finance and highlight the need for flexibility related to definitions or the domestic systems that track finance. Switzerland in its submission emphasises the importance of enabling environments in developing countries and calls for moving beyond the pure MRV of project co-financing towards a measuring and tracking system which includes and values market transforming measures. It advocates to build upon existing measurement and tracking tools such as the OECD Development Assistance Committee's (DAC) reporting on development assistance. The US hold the view that the current tracking

and reporting system for public climate finance under the UNFCCC is comprehensive and robust. Reporting arrangements under the UNFCCC shall be flexible in order to be applied to all Parties which have different national systems. The EU states that the role and nature of the information included in biennial reports and national communications should be further clarified. It lists work being done under other international institutions as a reference point for developing a reporting framework under the UNFCCC. As recommendations to improve tracking and reporting of climate finance, the EU mentions: comparability of data, feasibility and cost-effectiveness, cross-coordination between all bodies, clarification of the role and nature of the reports under the Convention, developing a common understanding on key terminology for reporting under the UNFCCC, increasing the range of multilateral flows reported and reporting on all financial instruments while elaborating fair accounting methodologies.

Overall, in the discussion specific views and proposals from developing countries are missing to address the weaknesses that they identified in the discussions.

2.5. 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.

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)**. The TM should support action on mitigation and adaptation.

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. The role of the CTCN is focused more on the implementation of technology transfer.

2.5.1. Background: Key issues for the negotiations in Lima

Regarding technology transfer, the central question for the negotiations in Lima is whether and how to integrate existing institutions into the post-2020 climate architecture. Furthermore, key issues of debate are the availability of finance that is specifically dedicated to technology transfer and overcoming barriers resulting from intellectual property rights which developing countries want to be specifically addressed.

2.5.2. Agreement achieved in Warsaw

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. Also, the Advisory Board of the CTCN was established through which the CTCN is accountable to the COP (decision 14/CP.18). In Warsaw, the modalities and procedures of the CTCN, as well as the rules of procedure of the CTCN's Advisory Board were adopted. The COP acknowledged the Global Environmental Fund's (GEF) support to non-Annex I Parties in conducting their technology needs assessments and invited further consultations on future GEF support to the CTCN.

In Warsaw, no agreement could be found on the joint annual report of the TEC and the CTCN, mainly due to disagreement on whether to include a reference to intellectual property rights and to barriers to technology transfer in the report.

2.5.3. Negotiation process in 2014

In 2014, the TEC has held two meetings so far. Central topics on the agenda were questions of finance for technology transfer, namely a thematic dialogue on climate technology financing and links of the technology mechanism with the financial mechanism on which the TEC developed elements for draft recommendations to COP 20. A background paper on this issue lists existing institutional linkages between the two mechanisms as well as possible inputs into the decision making process of the operating entities (GEF, GCF, SCF) of the financial mechanism (TEC 2014).

Also, the CTCN Advisory Board held two meetings in March and October in 2014, arranged by UNEP as the host of the CTCN. Measures to support the full operationalization of the CTCN were discussed, particularly with regard to guidance for national designated entities the network will work with and links to other institutions which expressed their interest. A list of the national designated entities for the development and transfer of technologies is available under http://unfccc.int/ttclear/templates/render_cms_page?TEM_ndes.

In the conclusions in Bonn, the SBI invited the TEC to evaluate the Poznan strategic programme on technology transfer. Furthermore, countries were asked to enhance the process of technology needs assessments (TNAs) whose implementation is to be funded by the GEF. Also, consultations on support of the GEF to the CTCN shall be held for further discussions in Lima.

2.5.4. Position of Parties

The disagreement on the joint report of TEC and CTCN underlined the question of how to deal with intellectual property rights as a major issue of discontent among Parties. Many developing countries, including the Philippines, China, Nigeria, Uganda, Iran, Kazakhstan and Argentina, want to enhance the functions of the TM by explicitly mentioning that intellectual property rights need to be addressed under the TM. Annex I Parties have opposed to this request.

Furthermore, finance for technology transfer is subject to debate. The LMDCs, China, and other developing countries call for a direct link of the TM to the financial mechanism and call for a funding window under the GCF on technology transfer.

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

2.6.1. Background: Key issues for the negotiations in Lima

Besides discussions on the monitoring, reporting and verification (MRV) and accounting rules for the 2015 agreement (see section 1.3.1), negotiations on the revision on the reporting guidelines for Annex I national communications and guidelines for the review of their GHG inventories will continue in Lima. This work process follows from the Durben agreement and deals with the reporting requirements established under the Convention related to GHG inventories and periodic national communications. Another issue of debate will be the use of metrics to calculate the effect of greenhouse gases in terms of CO_2 equivalents. Also, in Lima, the first multilateral assessment of Annex I biennial reports and the mitigation targets reported therein will take place and is likely to generate attention.

2.6.2. Agreement achieved in Warsaw

Under the heading of MRV for Annex I Parties, several work streams under the UNFCCC are summarized:

At COP 19, revised UNFCCC **reporting guidelines on annual GHG inventories for Annex I Parties** were agreed (decision 24/CP.19), which shall be used from 2015 onwards for the reporting of mitigation commitments until 2020. With this decision, the work on inventory reporting guidelines was completed.

Under the work programme on the revision of review guidelines progress was also made and a decision (decision 23/CP.19) was agreed that adopted **review guidelines for biennial reports and national communications of Annex I Parties**. These guidelines describe how the secretariat establishes expert review teams, how these review teams assess the biennial reports and national communications, outlines the tasks of these review teams as well as the organisation of the review and the communication between expert review teams and Parties. With this decision, the work programme is only partially completed and will continue in 2014.

2.6.3. Negotiation process in 2014

Work programme on the revision of the guidelines for the review of GHG inventories for developed country Parties

The outstanding part of this work programme concerns the **review guidelines for GHG inventories of Annex I Parties.** It is necessary to prepare new review guidelines for GHG inventories due to the following reasons:

- Guidelines for the reporting of GHG inventories under the Convention were revised in Warsaw, which requires a subsequent revision of guidelines for the review process;
- the fact that more Annex I Parties are withdrawing from the Kyoto Protocol's thorough review procedures should lead to more rigorous review procedures under the Convention in order to achieve a comparable verification process of emission data for Kyoto and Non-Kyoto developed countries;
- as existing review procedures for annual GHG inventories, biennial reports and national communications (every four years) are time-consuming and costly some general streamlining of the review procedures and modalities that increase the efficiency of the implemented procedures have been proposed by developed countries.

However, developing countries are sceptical with regard to any approaches to streamlining existing review procedures for Annex I Parties The outcome of these debates will have considerable cost implications in the future.

Another area of disagreement concerns the power of review teams to quantify potential underestimations of emissions by Parties in their reports. The EU, supported by G-77 Parties, proposes that this approach which currently only exists under the Kyoto Protocol should be introduced under the Convention as well. This increased rigor of the review is not supported by those Annex I Parties that are not Parties to the Kyoto Protocol, such as USA and Canada, but also Japan and New Zealand preferred to keep review reports that only provide recommendations without any quantification of the problems identified.

The revision of the review guidelines for GHG inventories of Annex I Parties is planned to be completed by COP 20 in Lima.

Review of reporting guidelines for national communications of developed country Parties

In 2014, a work process started that is revising the reporting guidelines for national communications of Annex I Parties. The national communications (submitted every four years) include information on GHG emissions, policies and measures, GHG projections, climate change impacts and adaptation activities, financial support provided to developing countries, research activities and education and awareness rising. The current reporting guidelines are rather outdated and they include overlapping areas with biennial reports where the guidance is inconsistent. Therefore a process for revision was started which should improve the consistency between guidelines for national communications and biennial reports and update the outdated sections. G-77 Parties in particular stress the need to improve the information on financial, capacity-building and technology transfer support provided to developing countries. A decision is envisaged for COP 20 Lima, however some Parties (EU, G-77) are in favour of a later completion of this discussion to reflect the outcomes on improved methodologies for the reporting on financial support.

Metrics to calculate CO2 equivalence of greenhouse gases

Under this agenda item Parties discuss whether there is a need to change the metrics used to calculate CO_2 equivalence of greenhouse gases. For the current reporting of emissions, gases are converted by using so-called global-warming potentials (GWPs) for a 100-year time horizon based on GWP values provided in the IPCC's 2nd Assessment Report. Annex I Parties will use GWP values from the 4th Assessment Report from 2015 onwards. The IPCC Assessment Reports continuously updated the GWP values based on most recent science. The IPCC's 5th Assessment Report provided revised GWP values, but also new values for a different metric, the so-called Global Temperature Potential (GTP). In the GTP approach the short-living greenhouse gases such as methane have considerably lower conversion values (4 for methane instead of currently 25). Therefore, the use of GTPs would lower the contributions of these gases to the overall emissions of a country and would also change the contribution of different sectors to the national GHG emissions. Brazil strongly supports a change to the GTP concept while most other Parties prefer to keep the current GWP approach. Agreement could not be found on this issue in June in Bonn so that the item was forwarded to the Lima session.

Multilateral assessment of Annex I Parties' biennial reports

In 2015, the first round of **International Assessment and Review (IAR)** established by decision 2/CP.17 will take place for Annex I Parties. This verification process consists of two elements; first a technical review of Parties' Biennial Reports (BR) followed by a **Multilateral Assessment (MA**) under the SBI. The MA will be a process of high political importance with questions and answers on the quantified economy wide emission reduction targets for 2020 and progress in implementation of policies and measures towards reaching these targets. The first round of MA will comprise two parts of question and answering (Q/A) along the following steps:

1. Written questions are submitted to the Party under assessment in September 2014 for Parties that will be included in the MA in Lima.
2. Written answers should be provided by the Party under assessment until the end of November and the secretariat will compile all questions and answers for all parties in a report that will be published on the UNFCCC website.
3. An oral question and answer process will take place during the 41st SBI session in Lima, organized as a SBI working group session (on Saturday 6th, Monday 8th and

Tuesday 9th December 2014). A webcast will be made for each Party and published as part of the Party's record of the MA on the UNFCCC website.

4. After the MA session each Party has two months to submit 'other observations' that will be published as part of the outcome of the IAR (which could be answers to oral questions that were not answered from the floor).

At the beginning of October, the EU and 13 EU Member States that participate in the first round have received around 100 questions related to the EU's climate policy and 2020 target. Questions to the EU were mostly raised by Brazil, China, Saudi-Arabia, Algeria and the USA. Apart from the EU, the USA, Switzerland and New Zealand will also be part of this first round of MA.

This process may also be important for the question how the verification process will be implemented under the 2015 agreement under the ADP for the post-2020 period. It is thus essential to build trust through enhancing transparency of action by developed countries now in order to potentially include other countries with quantified economy-wide reduction targets in this process in the future.

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

2.7.1. Agreement achieved in Warsaw

The major outstanding work related to MRV for developing Parties was agreed in Warsaw. This included:

- **Guidelines for domestic MRV of domestically supported NAMAs by developing Parties:** Guidelines were agreed which however do not include much substantive provisions.
- **Composition, modalities and procedures of the team of technical experts under international consultation and analysis:** In Warsaw a decision 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 agreed which completed the outstanding work related to MRV for developing countries related to their 2020 targets.
- **The NAMA registry,** a publicly available online platform operated by the UNFCCC secretariat, was further implemented. Its purpose is to increase opportunities for implementation of and recognition for Nationally Appropriate Mitigation Actions (NAMAs) in developing countries. The registry allows developing countries to record information for all NAMAs seeking support for development or implementation. Parties are also encouraged to enter information for NAMAs that they have implemented without external support in order to be recognized for their mitigation efforts. Another essential purpose of the registry is to facilitate financial, capacity-building, and technology support for NAMAs by providing Annex I Parties and other organisations a mechanism to publicly announce their available resources.

2.7.2. Negotiation process in 2014

No issues related to MRV of developing countries are on the agenda for COP 20 in Lima under the subsidiary bodies. The discussion on accounting and MRV related to a new agreement in 2015 has been described in section 1.3.1.

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

2.8.1. Background: key issues in the negotiations

About 8 % of global annual GHG emissions are due to deforestation (FAOSTAT, 2013 as quoted in IPCC 2014a). There is international consensus that these emissions should be addressed 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. Also REDD+ plays a role in the ADP negotiations because many Parties see it as an important factor in reducing emissions prior to 2020 as well as after 2020. Additionally, there is a REDD Web Platform and a REDD Discussion Forum[8] where experts and stakeholders can exchange information and experiences.

Substantial finance for REDD+ activities was already provided as part of the fast start finance and finance for REDD+ is also addressed under the Green Climate Fund.

The REDD+ incentive scheme on forest emissions covers the following 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 Lima discussions will continue on the development of systems for providing information how all the safeguards are being addressed and respected and whether further guidance is needed related to the information on safeguards. Also the first meeting on the coordination of support for the implementation of activities in relation to mitigation actions in the forest sector by developing countries will take place in Lima as agreed in Warsaw. Furthermore, it will be a key question how to include REDD+ in the 2015 agreement.

2.8.2. Agreement achieved in Warsaw

COP 19 adopted 7 decisions of the **Warsaw Framework for REDD plus** and added a major step in the implementation of REDD+ activities.

The decision on the **Work programme on results-based finance** (decision 9/CP.19) to progress the full implementation of the REDD+ activities

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

- encouraged financing entities, including the Green Climate Fund in a key role, to channel adequate and predictable results-based finance in a fair and balanced manner;
- decided to establish an information hub on the REDD Web Platform, to publish information on the results and corresponding results-based payments; and
- requested the Standing Committee on Finance to consider the issue of financing for forests in its work on coherence and coordination.

The decision on **Coordination of support for the implementation of activities in relation to mitigation actions in the forest sector** by developing countries, including institutional arrangements (decision 10/CP.19)

- invited interested Parties to designate a national entity or focal point to serve as liaison with the secretariat and bodies under the Convention on coordination of support, and it may also be nominated to receive and obtain results-based payments;
- encouraged national entities/focal points, Parties and relevant entities financing REDD+ to meet, on a voluntary basis, to discuss the needs and functions identified to address issues relating to coordination of support.

The decision on **modalities for national forest monitoring systems** (Decision 11/CP.19)

- decided that national forest monitoring systems should be guided by the most recent IPCC guidance and guidelines, as adopted or encouraged by the COP; and
- decided that national forest monitoring systems should provide data and information that are transparent, consistent over time, suitable for MRV, and build upon existing systems while being flexible and allowing for improvement.

The decision on the **timing and the frequency of presentations of the summary of information on how all the safeguards are being addressed and respected** (Decision 12/CP.19)

- agreed that the summary of information on how all of the safeguards are being addressed and respected throughout the implementation of the activities could also be provided, on a voluntary basis, via the REDD Web Platform;
- decided that developing country Parties should start providing the summary of information after the start of the implementation of activities;
- also decided that the frequency for subsequent presentations of the summary of information should be consistent with the provisions for submissions of national communications and, on a voluntary basis, via the REDD Web Platform.

The decision on **guidelines and procedures for the technical assessment of submissions from Parties on proposed forest reference emission levels and/or forest reference levels** (Decision 13/CP.19)

- decided that each submission of forest reference emission levels and/or forest reference levels shall be subject to a technical assessment;
- invited Parties and relevant international organizations to support capacity-building for development and assessment of forest reference emission levels and/or forest reference levels;
- adopted the guidelines and procedures for the technical assessment, as contained in the annex to this decision.

The decision on **modalities for measuring, reporting and verifying** (Decision 14/CP.19)

- decided that measuring, reporting and verifying emissions and removals related to REDD+ is to be consistent with existing methodological guidance by the COP (inter alia as provided in decision 4/CP.15);
- decided that data and information should be provided through a technical annex to the biennial update reports;
- further decided to include two additional LULUCF experts in the technical team of experts for the review of results-based actions reported in the biennial update reports;
- also agreed that results-based actions that may be eligible to appropriate market-based approaches that could be developed by the COP may be subject to any further specific modalities for verification.

The decision on **addressing the drivers of deforestation and forest degradation** (Decision 15/CP.19)

- encouraged Parties, organizations and the private sector to take action to reduce the drivers;
- also encouraged to continue work to address drivers, and to share information; and
- further encouraged developing country Parties to take note of the information shared.

2.8.3. Negotiation process in 2014

The discussion continued on the implementation of REDD+ support under the Green Carbon Fund (GCF). Considerable progress was made in the GCF related to the implementation of funding for REDD+ activities.

Apart from the discussions under SBSTA and SBI, developing countries also brought REDD+ in the ADP discussions. The draft text of the ADP chairs on the elements for a 2015 agreement includes the proposal to create a REDD+ mechanism under the 2015 agreement as well as specific institutional arrangements for REDD+.

2.8.4. REDD+ partnership

At the Oslo Forest Climate Conference on 27 May 2010, representatives of 50 governments agreed to establish a partnership for reducing emissions from REDD+. 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. 76 countries have joined the partnership so far.

Two meetings of the REDD+ partnership were held in 2014. A **global REDD+ Partnership Meeting** took place in June in Bonn. This meeting mainly discussed the status of a voluntary REDD+ database, funding for REDD+ activities and the launch of a partnership assessment to be presented before COP 20 to provide a basis to partners to decide on the future of the REDD+ partnership.

A **REDD+ Partnership African Regional Meeting** took place in May 2014 in Ghana. The meeting focused on the specific context faced by African Least Developed Countries (LDCs) in REDD+. The workshop objectives were to explore forests in the context of development, finance and complementary goals within LDCs, to better understand the unique perspectives, challenges, and constraints of African LDCs in participating in REDD+ and

accessing REDD+ funds; and to exchange experiences and lessons on undertaking REDD+ readiness.

2.8.5. UN-REDD programme

The UN-REDD Programme is a further global initiative on reducing emissions from the forest sector in developing countries. that was launched in 2008. The UN-REDD Programme supports nationally-led REDD+ processes and promotes the informed and meaningful involvement of all stakeholders, including Indigenous Peoples and other forest-dependent communities, in national and international REDD+ implementation.

The Programme currently supports 47 partner countries spanning Africa, Asia-Pacific and Latin America, of which 16 are receiving support to National Programme activities.

In addition to supporting partner countries through UN-REDD National Programmes, the UN-REDD Programme also provides complementary support to countries through common approaches, analyses, methodologies, tools, data and best practices developed through the UN-REDD Global Programme.

2.8.6. Forest carbon partnership facility (FCPF)

The Forest Carbon Partnership Facility (FCPF) is a global partnership of governments, businesses, civil society, and Indigenous Peoples focused on REDD+ activities.

The four strategic objectives of the FCPF are:

- To assist countries in their REDD+ efforts by providing them with financial and technical assistance in building their capacity to benefit from possible future systems of positive incentives for REDD+;
- to pilot a performance-based payment system for REDD+ activities, with a view to ensuring equitable benefit sharing and promoting future large-scale positive incentives for REDD+;
- within the approach to REDD+, to test ways to sustain or enhance livelihoods of local communities and to conserve biodiversity;
- to disseminate broadly the knowledge gained in the development of the Facility and the implementation of Readiness Preparation Proposals (RPPs) and Emission Reductions Programs (ERPs).

The FCPF has two separate but complementary funding mechanisms — the Readiness Fund and the Carbon Fund — to achieve its strategic objectives. Both funds are underpinned by a multi-donor fund of governments and non-governmental entities, including private companies that make a minimum financial contribution of $5 million. The FCPF includes 47 developing countries (18 in Africa, 18 in Latin America and the Caribbean, and 11 in Asia), 15 financial contributors (15 developed countries, 2 private sector participants, one NGO) with a total contribution of $825 million.

2.8.7. 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 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. Any outstanding issues related to support for REDD+ activities should be considered in relation to the discussions on long term finance;

- 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.

The wider range of views on the individual issues exceeds the scope of this paper as various non-Annex I Parties have many specific views on REDD+. 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 relationship between REDD+ and carbon markets is a key area of divergence within developing countries. ALBA countries (Bolivarian Alliance for the Peoples of our Americas) oppose market mechanisms, but also Brazil is sceptical about the link of a REDD+ mechanism with carbon markets.
- 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.
- The LDCs emphasise the importance of adaptation co-benefits and other non-carbon benefits of REDD+, which should be addressed by provisions of technical and financial support.
- Developing countries support specific institutional arrangements and bodies for REDD+ while developing countries in general prefer to work through existing institutions.

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

2.9.1. Background: Key issues for the negotiations in Lima

In 2013 the technical work on the implementation of accounting provisions for LULUCF activities under the Kyoto Protocol was completed. No items are on the agenda for Lima.

However, the discussion on accounting modalities for the LULUCF sector has started under the ADP in relation to the 2015 agreement. Many Parties highlighted the importance of accounting rules for the LULUCF sector, and information on the accounting of the land-use sector is part of the up-front information included in the draft decision of the ADP chairs. The discussion has not yet reached a more detailed level. In Lima, it will be important to agree on specific overarching principles that should guide accounting in the LULUCF sector under the new agreement.

2.9.2. Agreement achieved in Warsaw

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 2020 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), agreement could be achieved on many issues. 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.

In Warsaw the technical work was completed that implemented these changes in the accounting modalities in the MRV framework under the Kyoto Protocol.

2.10. Flexible mechanisms

2.10.1. Background: Key issues for the negotiations in Lima

Regarding flexible mechanisms, discussions in Lima will centre upon the future of new and existing market-based mechanisms and their role in the 2015 agreement. These mechanisms include:

New market-based mechanisms

Putting a price on carbon through the use of carbon markets 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 enhance mitigation by taking into account own contributions of developing countries to global mitigation efforts. Other parties suggest a Framework for Various Approaches (FVA) designed to recognise outcomes of domestic mitigation policies towards other countries' commitments under the UNFCCC.

These new market-based mechanisms are also seen as a prerequisite for agreeing to ambitious targets by developed countries since they provide more flexibility in achieving such targets. Moreover, the international carbon market could generate up to USD 308

billion a year in additional financial flows to developing countries by 2020 (UN 2010). Thus, 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. This was expected to decline to some 10 % in the period 2013 to 2015 (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 in the second commitment period. Yet, in 2013, the CDM market declined considerably. Prices for CDM credits, which varied between 10 and 15 €/t in 2010 and declined to values between 3 and 6 €/t further declined after 2012 to prices clearly below 1 €/t (EEX 2014). Registration of new projects developed accordingly, increasing continuously from 2005 and peaked in 2012 with some 275 projects per month. However, since then registration collapsed to some 25 new projects being registered per month (UNFCCC 2014c).

2.10.2. Agreement achieved in Warsaw

New market-based mechanisms

In Warsaw, Parties conducted 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 addressed 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 considered 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.

Some Parties also suggested establishing an information sharing platform for the voluntary exchange of information on domestic market-based policies. Yet, other countries raised concerns that this could result in a duplication of efforts since such information can already

be shared in national communications. In addition, several countries were reluctant to agree to such platform as they feared that providing information could turn into recognition of domestic policies without any review or approval under UNFCCC. As a result, Parties did not conclude on any of these three agenda items and only agreed to continue discussions in 2014.

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 was meant to improve the mechanisms' environmental integrity, streamline the project registration process and reduce transaction costs. In Warsaw, Parties requested the Executive Board (EB) of the CDM to simplify the registration of projects which are automatically deemed additional with the view to enhance the use of such projects. Moreover, they urged the EB to evaluate the voluntary tool for estimating the contribution of CDM projects to sustainable development and requested the EB to develop tools that help domestic authorities in monitoring sustainable development benefits of CDM projects. Parties also requested the Joint Implementation Supervisory Committee (JISC) to develop recommendations for aligning the accreditation system of CDM and JI.

In relation to the review of the modalities and procedures of the CDM, Parties requested the Secretariat to prepare a technical paper addressing issues such as membership of the EB, liability of designated operational entities (DOE), length of crediting periods, streamlining the project cycle, etc. and agreed to continue the negotiations in 2014. In the negotiations on possible changes of the JI guidelines, Parties agreed to abolish the track in which host countries could issue Emission Reduction Units (ERU). In the future, ERU will only be issued by the Joint Implementation Supervisory Committee (JISC). In addition, Parties agreed to improve the determination of additionality and to introduce approaches to ensure net mitigation of JI projects. Remaining issues which still need to be negotiated in 2014 include eligibility criteria for participation as well as transition provision.

2.10.3. Negotiation process in 2014

New market-based mechanisms

At the SBSTA session in June 2014 Parties have intensively discussed their views on how the FVA, the NMA and the NMM should be operationalised. The main outcome of these discussions are summarised below:

- Parties agreed that the work on all three agenda items is relevant for the work being conducted under the ADP;
- Parties were also encouraged to sharing information on domestic approaches relevant to these agenda items;
- in addition, Parties were invited to submit their views, focussing on specific aspects for each of the agenda items:
    - FVA: whether and how approaches meet standards that are comparable to standards under the UNFCCC, enable the accounting of mitigation outcomes at the international level, allow for participation, including through possible eligibility criteria, provide co-benefits, including their contribution to sustainable development, poverty eradication and adaptation, have effective institutional arrangements and governance, and relate to international agreements;

- NMA: lessons learned from developing and implementing non-market-based approaches, options for international cooperation, and co-benefits of such approaches;
- NMM: design and governance, possible elements of its modalities, meaning of "a net decrease and/or avoidance of global GHG emissions," lessons learned from Kyoto Protocol mechanisms, relationship with the FVA and Kyoto Protocol mechanisms, and relationship with enhanced mitigation ambition.

Parties also requested the Secretariat to prepare a technical paper for consideration at SBSTA 41 which takes into account Parties' submissions as well as other relevant materials.

CDM/JI

At SBSTA 40, Parties continued their consultations on the review of the CDM's modalities and procedures. They disagreed on options how the CDM could evolve to a mechanism which generates net atmospheric benefits, whether there is a need for a technical paper on that issue, and whether the CDM Executive Board should identify such options. These consultations will be continued at SBSTA 41 in Lima.

Similarly, Parties continued consultations on the review of the JI guidelines. Parties agreed on many issues including that in the future

- credits should only be issued by the Supervisory Committee;
- procedures for determining additionality of projects should be strengthened among others by introducing standardised baselines; and
- JI projects should provide net atmospheric benefits.

Parties aim at finalizing considerations at SBSTA 41.

2.10.4. 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. In recent years, the EU ETS accounted for some 80 % of the demand on the international carbon market.

The NMM 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 development 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 or Mexico. Other developing countries such as Brazil, China or India are less supportive and highlight the

current lack of demand on the global carbon market. They are reluctant to agree upon additional market mechanisms before the global mitigation effort is agreed. Umbrella group countries such as USA, Japan, New Zealand and Australia 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. As part of the usual guidance to the EB, Parties will address additional issues such as aligning the accreditation systems of CDM and JI, 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.

The first review of the modalities and procedures for the CDM should, according to 1/CMP.3, have been concluded by CMP 9 in Warsaw. Since SBI 38 in 2013 did not start at all, negotiations on this item only started in Warsaw and are therefore continued in 2014. Issues which will be addressed in the negotiations on the review include the reflection of programmatic approaches in the modalities and procedures, the length of the crediting periods, strengthening additionality determination, improving validation of sustainable development as well as initiatives to go beyond offsetting by establishing approaches which achieve a net mitigation including through own mitigation contributions of host countries.

2.11. International aviation and maritime emissions

2.11.1. Background: Key issues for the negotiations in Lima

Emissions from international civil aviation and maritime transport (so called 'bunker fuels') are two of the fastest-growing GHG emission sources. In 2007, they accounted together for some 4.0 % of global CO_2 emissions (Lee et al. 2013). In absolute terms, international aviation emitted approximately 390 Mt CO_2 (1.3 %) and international maritime transport 800 Mt CO_2 (2.7 %); these quantities are comparable to total GHG emissions of Poland (399 Mt CO_2eq) and Germany (939 Mt CO_2eq) in 2012. 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). International aviation and maritime emissions are outside the coverage of Parties' mitigation targets under the Convention and the Kyoto Protocol. Therefore discussions continue on how these growing emissions should be addressed.

2.11.2. Consideration in Warsaw

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). However, in Doha parties could not agree on how to align the principle on common but differentiated responsibility 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. Since then there are no formal negotiations on this

issue, only reports by ICAO and IMO on their activities aiming at reducing GHG emissions in their sectors.[9]

2.11.3. Negotiation process in 2014

At SBSTA 40 in Bonn, ICAO and IMO reported as usual on their efforts to address GHG emissions. 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.

2.11.4. Position of Parties

The EU has been one of the strongest advocates for progress on this issue. 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 only a small share of bunker fuel emissions would be reduced and the contribution of these sectors to global mitigation efforts may turn out to be negligible.

To overcome this dilemma, the EU suggested establishing a global sectoral approach for each of these sectors. Emissions would not be allocated to Parties but addressed directly at the level of vessels and planes, e.g. through a market-based instrument. In the EU's view, absolute emission caps for such global sectoral approaches should be recommended by the UNFCCC. 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 instruments (GHG fund, emissions trading schemes, levy, etc.) in these sectors for climate finance in developing countries. Many 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 support the idea of using revenues to reflect the principle of common but differentiated responsibilities (CBDR). China, India, Brazil, Egypt, Saudi Arabia, Venezuela and Argentina are the countries most opposed to global action in these sectors. Their main concern is that a deviation from the principle of CBDR could be used as a precedent for other sectors.

2.12. Capacity building

2.12.1. Background: Key issues for the negotiations in Lima

Capacity building is a cross-cutting issue which is relevant for an effective implementation of many climate change activities including mitigation, adaptation, MRV, etc. Closely related to the discussions on capacity-building in the negotiations are debates on how means to fund such activities shall be provided.

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.

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

In Lima, they key issue will be to define in what way and through which mechanism capacity-building will be addressed under the 2015 agreement. Furthermore, discussions on a draft decision text on capacity-building under the Convention will continue on which Parties hitherto have been unable to agree.

2.12.2. Agreement achieved in Warsaw

In Warsaw, conclusions on capacity-building could not be found due to disagreement on the implementation of concrete measures of capacity-building. It was decided to continue consideration of the agenda item on capacity-building under the Convention and to adopt conclusions at COP 20. Several reports were considered, including a report on the second meeting of the Durban Forum, a report on the implementation of the framework for capacity-building in developing countries and a report on capacity-building work undertaken by bodies established under the Convention.

On the new work programme to build climate action capacity through education and training, public awareness and public participation in climate change decision-making, the SBI considered the summary report on the 1st annual dialogue on Article 6 of the Convention and decided that the 2nd dialogue shall be convened during SBI 40 in Bonn.

2.12.3. Negotiation process in 2014

In Bonn, Parties were again unable to agree on draft decision texts on capacity-building under the Convention as well as under the Kyoto Protocol that should have been forwarded to COP 20. Consideration of the draft decision text will continue in Lima.

The third meeting of the Durban Forum took place in Bonn in June 2014. Parties, intergovernmental and non-governmental organisations and academia attended the meeting. Participants shared information and experiences relating to the enhancement and/or creation of an enabling environment and on capacity-building of mitigation and adaptation measures. The chairs, co-chairs and members of bodies under the Convention provided an overview of capacity-building elements included in the workplans of these bodies (UNFCCC 2014h).

Additionally, the UNFCCC capacity-building portal was launched in 2014. On this online platform, information is provided on capacity-building activities implemented worldwide and lacking capacity in some countries. It is available under: http://unfccc.int/capacitybuilding/core/activities.html.

2.12.4. Position of Parties

In Warsaw, agreement on conclusions on capacity building could not be found because of disagreement on whether the secretariat should be tasked with the analysis of capacity-building needs in developing countries, which was favoured by the G77. The G77 also called for a work programme on capacity-building in order to implement the results of the Durban Forum through concrete measures. Developed country Parties rejected both proposals.

The Africa Group, AOSIS, China and the LDCs reiterated the call for a formal work programme under the Durban Forum on capacity-building in Bonn and through submissions. The LDCs also stress in their submission the need to reflect national, regional and local sustainable development strategies and priorities in carrying out capacity-building activities.

In their submissions, in 2014, the EU emphasises the importance of capacity-building and highlights its activities to support capacity-building related to climate change. It also stresses the importance of national ownership with regard to capacity-building activities and the need to adapt approaches to the individual situation of each country. The EU also

highlights that monitoring in the field of capacity building is a real challenge which requires efforts from the developing countries to provide information on their experiences, lessons learned and matching of capacity-building with their needs. Also, the cross-cutting nature of capacity building and the importance of a gender-sensitive approach in capacity building activities is underscored by the EU.

No other Annex I country made submissions on capacity-building in 2014.

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.

In 2020 China will reach emission levels between 14.7 and 16.1 GtCO2e, with currently implemented policies. This new calculated trend is higher than previously projected emissions and above current emission levels. Nevertheless the trend for 2020 is still close to the pledge (Climate Action Tracker 2014b).

A new policy brief published by the Climate Action Tracker compares the climate actions carried out by China and the US. This study concludes that if China applied the more ambiguous standards from the US (e.g. reducing emission intensity per kWh electricity to US level, more efficient plants in the iron and steel sector), they could further reduce emissions by 1.2 % in 2020 and 20 % in 2030 below their current policy projections. If China applied the global best practice in each policy area its emissions would peak below 12 Gt CO_2eq. in 2020 (Höhne et al. 2014).

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 are 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 (Höhne et al. 2012).

Since 2012 China has established several pilot programmes for carbon emission trading in different regions. Furthermore several policies to reduce energy consumption exist and also energy efficiency standards for industries, appliances, buildings and cars have been set up (The People's Republic of China 2013).

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).

Intended Post-2020 target: On 12th November, China jointly announced with the USA its post-2020 mitigation targets (Office of the Press Secretary 2014). China intends to achieve the peaking of CO_2 emissions around 2030 and to make best efforts to peak early and intends to increase the share of non-fossil fuels in primary energy consumption to around 20 % by 2030. Both sides intend to continue to work to increase ambition over time and that these targets are part of the longer range effort to achieve the deep decarbonization of the global economy over time. According to the fact sheet released with the announcement, the increase of non-energy fossil fuels will require China to deploy an additional 800-1,000 gigawatts of nuclear, wind, solar and other zero emission generation capacity by 2030 – more than all the coal-fired power plants that exist in China today and close to total current electricity generation capacity in the United States.

If put in the context of previous targets, the 20 % share of non-fossil fuels in primary energy consumption for the year 2030 is 5 percentage points higher than the Cancún pledge of a 15 % share of non-fossil fuels in 2020. The share of non-fossil fuels in primary energy consumption in 2013 was 9.6 % according to (BP 2014). Thus, the non-fossil fuel target seems in line with previously announced targets and the additional 5 percentage point increase in non-fossil fuels in the decade 2020 to 2030 is slower than the increase of about 5 percentage points between 2015 and 2020. The 20 % share of non-fossil fuels in 2030 is part of baseline projections for China, whereas more ambitious scenarios indicate a possible range of 25 to 30 % non-fossil energy sources in China (Chao 2014).

The Chinese announcement of peaking emissions in 2030 does not address the level of CO_2 emissions expected around the peaking year 2030, whether non-CO_2 greenhouse gases are expected to peak as well as, nor whether emissions after the peak are expected to decline or only stabilize.

Table 4: Emissions profile for China

	China	EU 27
CO_2 emissions (2012)		
• Absolute (Gt) without LULUCF	9.9	3.7
• Rank	1	3
• Of global total	28.6 %	10.9 %
• Per capita (t/capita)) with LULUCF	7.1	7.3
• Per GDP (t/mil USD) with LULUCF	1.2	0.22
GHG emissions (2010)		
• Absolute (Gt)) without LULUCF	11.2	5.0
• Rank	1	3
• Of global total	22.3 %	10.0 %
• Per capita (t/capita)) without LULUCF	8.3	10.0
• Per GDP (t/mil USD) without LULUCF	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 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 for 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.

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.

According to China, INDCs should comprise adaptation, mitigation, finance, technology transfer and capacity-building. Developed country Parties should take on economy-wide reduction targets and be obliged to provide a list of up-front information, while there should be flexibility for developing countries to tailor their contributions; they should be able to choose between intensity targets, low carbon strategies and mitigation plans, policies, projects. Further information on these targets is to be provided on a voluntary basis. China opposes any assessment phase of INDCs.

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.

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.

3.2. India

3.2.1. Facts

Cancún agreement pledge: "India will endeavour to reduce the emissions[10] intensity of its GDP by 20-25 % by 2020 in comparison to the 2005 level" (30 January 2010).

Table 5: Emissions profile for India

	India	EU 27
CO_2 emissions (2012)		
• Absolute (Gt) without LULUCF	1.97	3.7
• Rank	4	3
• Of global total	5.7 %	10.9 %
• Per capita (t) with LULUCF	1.6	7.3
• Per GDP (t/mil USD) without LULUCF	1.1	0.22
GHG emissions (2010)		
• Absolute (Gt) with LULUCF	2.7	5.0
• Rank	4	3
• Of global total	5.4 %	10.0 %
• Per capita (t/capita) without LULUCF	2.2	10.0
• Per GDP (t/mil USD) without LULUCF	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 provided a National Action Plan on Climate Change in 2008, which includes eight national missions in key areas. Key areas for emission reduction are the National Mission

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

for Enhanced Efficiency (NMEE) and the National Solar Mission (NSM). Detailed targets on renewable electricity are available in the Strategic Plan for New and Renewable Energy Sector and in the Solar Mission from 2011. The renewable capacity targets for 2017 are 27.3 GW wind, 4 GW solar, 5 GW biomass and 5 GW other renewables, and for 2022 they are 38.5 GW wind, 20 GW solar, 7.3 GW biomass and 6.6 GW other renewables (Roelfsema et al. 2013).

A target for renewable electricity is set up in the Climate Action Plan at 5 % renewable electricity production in 2010 (excluding hydro power), to increase by 1 % each year until 2020, resulting in a 15 % share of renewable energy in 2020 (Roelfsema et al. 2013).

In parallel, India has set up a coal tax to finance renewable energy projects in 2010, but it has not been utilised so far. In 2014 the new government announced to double the coal tax and spend more funding on clean energy and environmental projects (Mittal 2014).

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 in total cover more than 50 % of the fossil fuel used in India (Höhne et al. 2012)[11].

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 second commitment period of the Kyoto Protocol and the outcome of the Bali Action Plan.

According to India, INDCs should comprise adaptation, mitigation, finance, technology transfer and capacity-building. Developed country Parties should take on economy-wide reduction targets and be obliged to provide a list of up-front information, while there should be flexibility for developing countries to tailor their contributions.

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 workstream 2.

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

[11] The aim is to reduce the "specific energy consumption" of the industries concerned, defined as energy 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).

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 % and 38.9 % below its projected emissions in 2020:

- a reduction in deforestation in the Amazon (range of estimated reduction: 564 Mt CO_2eq in 2020);
- a reduction in deforestation in the Cerrado region (range of estimated reduction: 104 Mt CO_2eq in 2020);
- a restoration of grazing land (range of estimated reduction: 83 to 104 Mt CO_2eq in 2020);
- an integrated crop–livestock system (range of estimated reduction: 18 to 22 Mt CO_2eq in 2020);
- no-till farming (range of estimated reduction: 16 to 20 Mt CO_2eq in 2020);
- biological nitrogen fixation (range of estimated reduction: 16 to 20 Mt CO_2eq in 2020);
- energy efficiency (range of estimated reduction: 12 to 15 Mt CO_2eq in 2020);
- an increase in the use of biofuels (range of estimated reduction: 48 to 60 Mt CO_2eq in 2020);
- an increase in energy supply from hydroelectric power plants (range of estimated reduction: 79 to 99 Mt CO_2eq in 2020);
- alternative energy sources (range of estimated reduction: 26 to 33 Mt CO_2eq in 2020);
- 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 6: Emissions profile for Brazil

	Brazil	EU 27
CO_2 emissions (2012)		
• Absolute (Gt) without LULUCF	0.46	3.7
• Rank	11	3
• Of global total	1.3	10.9 %
• Per capita (t) without LULUCF	2.3	7.3
• Per GDP (t/mil USD) without LULUCF	0.20	0.22
	Brazil	**EU 27**
GHG emissions (2010)		
• Absolute (Gt) without LULUCF	1.6	5.0
• Rank	7	3
• Of global total	3.2	10.0 %
• Per capita (t/capita) without LULUCF	8.3	10.0
• Per GDP (t/mil USD) without LULUCF	0.76	0.31

Source: http://edgar.jrc.ec.europa.eu, http://data.worldbank.org/indicator/NY.GDP.MKTP.CD. http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/8108.php.

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. The national target to reduce deforestation can be considered 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).

There are several forestry laws focusing on the conservation of the native forest, as the national Forest Code and the Action Plan for Deforestation Prevention and Control in the Legal Amazon (PPCDAm) and in the Cerrado (PPCerrado). Currently Brazil is on track to meet its targets in 2020 and, with implemented policies, emissions are well below the target. Nevertheless there is a large uncertainty regarding emissions from agriculture and deforestation, which will affect the achievement of the targets (Climate Action Tracker 2014a).

In June 2014 Brazil submitted a Forest Reference Emission Level for a technical assessment to UNFCCC. This submission is focused on receiving resulted-based payments for REDD+ actions and has no influence on the mitigation action on national level. The projected emissions in the reference scenario in the period 2016-2020 is equal to the mean annual CO_2 emissions associated with gross deforestation from 1996 to 2015, inclusive (UNFCCC 2014a). Brazil uses a large amount of hydropower and biomass and has therefore a rather limited potential for emission reduction in the energy sector. Nevertheless in the 10 Years National Energy Expansion Plan Brazil points out that the country will triple its use of 'new' energy (excluding large hydro) by 2020: from 9 GW of wind and biomass energy and small hydropower in 2010, to 27 GW by 2020. This would result in a 16 % share of renewable electricity by 2020 (Roelfsema et al. 2013).

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

In 2010, Brazil published its second 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 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 considerably impact the relative contribution results.

Taking up the original proposal in its recent submissions to the ADP process in September 2013, Brazil generalises this approach to defining mitigation contributions to all Parties, but states that commitments shall be defined on the national level. The methodology for

quantifying historical responsibilities should be developed by the IPCC until mid-2014 and be based on Parties' individual cumulative greenhouse gas emissions since 1850.

In a recent submission under the ADP, Brazil proposed an approach of 'concentric differentiation' (UNFCCC 2014k). In this proposal developed countries should adopt INDCs that represent quantified, economy-wide emission limitation or reduction targets in relation to a base year while developing countries can choose from several options for mitigation targets, such as economy-wide targets against a business-as-usual projection, specific targets of GHG emissions relative to GDP or population or actions in specific sectors. Least developed countries can opt for non-economy wide actions. In this respect, Brazil opposes a self-differentiation approach via the INDCs and wants to limit the types of mitigation targets under a new agreement. The national mitigation targets should be stored in an online registry which forms part of the new agreement, but should not be inscribed in the agreement itself due to the need of future updating.

According to Brazil, INDCs should include mitigation, adaptation, and means of implementation.

Brazil is strongly in favour of using Global Temperature Potentials (GTPs) as metrics under the ADP to assess the impact of emissions. Changing the use of metrics, the emissions of Brazil would decrease considerably as a large part of its domestic emissions are methane whose impact is lower when using GTPs for calculations.

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

Brazil proposed 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 counted towards the achievement of commitments under the 2015 agreement, provided that they have delivered concrete additional emissions reduction results before 2020. Before COP 19, Brazil proposed that a decision on early action should be adopted under the 2015 agreement. This proposal intends to bring the CERs that developing countries own in their registry accounts as 'early action' into the ADP 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 is 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's 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.

Brazil proposes to include an economic mechanism in the 2015 agreement that comprises general guidelines related to an emission trading system and an enhanced Clean Development Mechanism (CDM) (UNFCCC 2014k). Methodologies, modalities and procedures of such mechanism should be developed by the COP after adoption and before

entry into force of the agreement. Such emission trading system should be linked to the emission levels in the three previous years and would not allow targets that represent higher emissions than in those years. Brazil also proposes a new market mechanism to allow trading of certified emission reductions (CERs) from the Clean Development Mechanism (CDM).

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 7: **Emissions profile for Mexico**

	Mexico	EU 27
CO2 emissions (2012)		
• Absolute (Gt) without LULUCF	0.49	3.7
• Rank	10	3
• Of global total	1.4 %	10.9 %
• Per capita (t) without LULUCF	4.04	7.3
• Per GDP (t/mil USD) without LULUCF	0.41	0.22
GHG emissions (2010)		
• Absolute (Gt) without LULUCF	0.66	5.0
• Rank	11	3
• Of global total	1.3 %	10.0 %
• Per capita (t/capita) without LULUCF	5.8	10.0
• Per GDP (t/mil USD) without LULUCF	0.64	0.31

Source: http://edgar.jrc.ec.europa.eu, http://data.worldbank.org/indicator/NY.GDP.MKTP.CD. http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/8108.php.

Mexico has a detailed legal framework to address climate change. The General Law on Climate Change came into force in 2012 and defines obligations for all levels of government to reduce GHG emissions and adapt to climate change. It established a national climate change fund, mandates regular GHG inventories and periodic updates of the national climate change strategy and climate action plans for each six-year term of the federal administration. In 2013 President Peña Nieto presented the National Strategy on Climate Change (NSCC). The second special action plan on climate change (PECC 2) was published in the official journal in April 2014. In parallel Mexico introduced a carbon tax , a voluntary carbon trading platform and is developing an emissions trading scheme for the energy sector.

According to the NSCC Mexico needs to reduce GHG emissions by 288 Mt CO_2eq by 2020 to achieve the 30 % target compared to BAU. The PECC 2 aims at reducing GHG emissions by 106 Mt CO_2eq until 2018. Other national targets contribute to the GHG objective and are not (fully) included in the PECC 2 estimate. These targets include

- 35 % renewable electricity by 2014;
- zero methane emissions from managed municipal waste disposal by 2018; and
- zero emissions from forestry (no fixed year).

Additionally, many NAMAs in Mexico are under development and implementation has started in some sectors. Mexico's long-term goal is to reduce GHG emissions by 50 % below 2000 levels until 2050.

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.

Mexico holds the view that under the ADP all developed Parties and other Parties in a position to do so shall commit to quantified economy-wide reduction targets. Contributions should include adaptation and finance.

Mexico is the only non-Annex I country which has made a pledge to the GCF.

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 (Climate Action Tracker 2013b).

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).

Table 8: **Emissions profile for South Africa**

	South Africa	EU 27
CO_2 emissions (2012)		
• Absolute (Gt) without LULUCF	0.33	3.7
• Rank	15	3
• Of global total	0.96 %	10.9 %
• Per capita (t) without LULUCF	6.3	7.3
• Per GDP (t/mil USD) with LULUCF	0.9	0.22
GHG emissions (2010)		
• Absolute (Gt) without LULUCF	0.42	5.0
• Rank	17	3
• Of global total	0.8	10.0 %
• Per capita (t/capita) without LULUCF	8.4	10.0
• Per GDP (t/mil USD) without LULUCF	1.2	0.31

Source: http://edgar.jrc.ec.europa.eu, http://data.worldbank.org/indicator/NY.GDP.MKTP.CD. http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/8108.php.

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 which was 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 second national communication including suggestions for carbon taxing, emissions trading and diversification of energy sources in 2011.

South Africa has a very energy-intensive industry and a fuel mix that is based to 90 % on fossil fuels. Due to its geography South Africa has a high potential for renewable energy. In 2009 a renewable electricity feed-in tariff system was established to achieve the government's target of 10,000 GWh of renewable energy production capacity in 2013. As this feed-in-tariff did not prove to be successful the government introduced a bidding process to reach the target. The bidding process under the Renewable Energy Independent Power Producer Procurement Program (REIPPPP) channels private investments and expertise into renewable energy projects in South Africa and seems to be really successful. Since 2012, South Africa has ranked among the top ten countries globally in terms of renewable energy investments (Eberhard et al. 2014).

The new Integrated Resource Plan (IRP) for 2030, updated in 2013 by the Department of Energy, sets up a carbon emission cap and included a renewable energy target of 17.8 GW of renewable capacity installed over the period 2010 to 2030 (Eberhard et al. 2014).

3.5.2. Positions

According to South Africa, Parties should have the flexibility to submit different types of INDCs which should comprise mitigation, adaptation, finance and technology transfer. All Parties shall present mitigation actions. Some developing countries who strive to slow their emissions growth may present intensity targets as economy-wide contributions, others may have the flexibility to submit only individual NAMAs for 2020-2030. Developing countries should indicate support needs for the implementation of NAMAs. Developed countries should make absolute economy-wide emission reduction commitments against 1990 base year.

Together with their INDCs, Parties shall submit up-front information on their targets. For adaptation, this information should include the cost of adaptation and Annex I Parties need to explain how they fund mitigation and adaptation activities.

South Africa is strongly in favour of a process for assessing the fairness of countries' contributions.

In terms of accounting rules, Parties should aim to move to common rules over time, but there should be flexibility for developing countries to select from menus containing different options.

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 continued 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 2012 were 10 % below 2005 levels for total emissions excluding LULUCF and 11 % below 2005 levels for total GHG emissions including LULUCF.

A new policy brief published by the Climate Action Tracker compares the climate actions carried out by China and the US. This study concludes that if the US applied the more ambiguous standards from China (e.g. stronger emission standards for cars in 2020, more efficient plants in the cement sector), they could further reduce emissions by 3.2 % in 2020 and 16 % in 2030 below their current policy projections. If the US applied the global best practice in each policy area emissions could be decreased to -18 % in 2020 and -32 % in 2030 compared to 2005 emission levels (Höhne et al. 2014).

Intended Post-2020 target: On 12th November, the United States announced jointly with China its post-2020 mitigation targets (Office of the Press Secretary 2014). The United States intends to achieve an economy-wide target of reducing its emissions by 26 %-28 % below its 2005 level in 2025 and to make best efforts to reduce its emissions by 28 %. Put in the context of previous mitigation targets, the new target adds a reduction of 9 to 11 percentage point over the additional 5 year period compared to the Cancún pledge of 17 % by 2020. The new U.S. goal will double the pace of carbon pollution reduction from 1.2 percent per year on average during the 2005-2020 period to 2.3-2.8 percent per year on average between 2020 and 2025. Both sides intend to continue to work to increase ambition over time and that these targets are part of the longer range effort to achieve the deep decarbonization of the global economy over time. According to the fact sheet released with the announcement, this new target intends to keep the United States on the right trajectory to achieve deep economy-wide reductions on the order of 80 percent by 2050.

Table 9 presents some key figures related to the US emissions compared to EU-27.

Table 9: Emissions profile for USA

	USA	EU-27
CO_2 emissions (2012)		
• Absolute (Gt) without LULUCF	5.4	3.7
• Absolute (Gt) with LULUCF	4.4	3.4
• Rank	2	3
• Change from 1990 to 2012 (without LULUCF)	+ 5.4 %	-16.2 %
• Of global total	15.1 %	10.9 %
• Per capita (t/capita) without LULUCF	17.12	7.3
• Per GDP (t/Mio. USD) without LULUCF	0.33	0.22
GHG emissions (2012)		
• Absolute (Gt) without LULUCF	6.5	4.5
• Absolute (Gt) with LULUCF	5.5	4.2
• Change from 1990 to 2012 (without LULUCF)	+ 4.3 %	-19.2
• Per capita (t/capita without LULUCF)	20,7	9,0
• Per GDP (t/Mio. USD without LULUCF)	0.40	0.27

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 %)[12]. 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. According to Eurostat data the import shares for hard coal from the USA stays relatively stable at 18.3 % in 2013 in comparison to 19 % in 2012[13]. Between 2013 and 2012 coal consumption decreased in the EU 28 by 5 %[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;
- promoting insurance leadership for climate safety;
- conserving land and water resources;

[12] Based on Eurostat monthly data for coal imports, 2012 corrected with national data for UK.

[13] http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Coal_consumption_statistics.

[14] Öko-Institut own calculations based on Eurostat monthly data.

- 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.

Taking into account these additional measures from the climate action plan, the pledge of minus 17 % could be achieved in 2020 (Climate Action Tracker 2014c).

Furthermore, on regional and state level several policies that tackle climate change and reduce emissions have been implemented. These include GHG emission reduction targets on state level, market based cap and trade programmes as set up by the Regional Greenhouse Gas Initiative, power sector standards or energy efficiency programs (US Department of State 2014).

3.6.2. Positions

Regarding the 2015 agreement, the USA argues in favour of quantified contributions by all Parties unless they have limited capabilities or their contributions to global emissions are not significant. Differentiation of Parties should only occur on the basis of the INDCs and not on the basis of the Convention Annexes. The USA argues in favour of a common transparency framework for all Parties but wants to see appropriate flexibility.

Under workstream 2 of the ADP the USA expressed the following ways to increase pre 2020 ambition[15]:

- 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.

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.

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).

[15] Submission of the United States: ADP Workstream 2: Mitigation ambition, March 11, 2013.

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 10: Emissions profile for the Russian Federation

	Russian Federation	EU 27
CO_2 emissions (2012)		
• Absolute (Gt without LULUCF)	1.7	3.7
• Rank	5	3
• Of global total	5.2 %	10.9 %
• Per capita (t) without LULUCF	11.6	7.3
• Per GDP (t/mil USD) without LULUCF	0.8	0.22
GHG emissions (2012)		
• Absolute (Gt without LULUCF)	2.3	4.5
• Per capita (t/capita)	16.03	9.0
• Per GDP (t/mil USD)	1.14	0.27

Source: http://edgar.jrc.ec.europa.eu, http://data.worldbank.org/indicator/NY.GDP.MKTP.CD. http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/8108.php.

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).

There is a large mitigation potential from energy efficiency measures and renewable energy sources in Russia. In 2010 the government established the 'Energy saving and energy efficiency improvement programme until 2020', introducing a mechanism for public–private partnerships in the field of energy efficiency and renewable energy sources. According to the programme Russia committed to reduce energy intensity of GDP by 40 % by 2020 compared to 2007 levels. A governmental decree from 2009 for enhancing energy efficiency through the use of renewables sets the target for the share of renewables in the power mix to be 4.5 % in 2020, excluding hydropower.

Further mitigation effects will result from a government decree in 2009 on reduced flaring from natural gas production. This sets a 5 % limit for gas flaring for the year 2012 and subsequent years with fines imposed if this threshold is exceeded or there is no measurement equipment in place (Roelfsema et al. 2013).

3.7.2. Positions

The Russian Federation argues in favour of differentiating between countries on the basis of scientific information and not on the Annexes of the Convention. Adjustments to enhance commitments should be possible. Each country should set its own commitments pursuant to its level of socio-economic development, natural and geographical characteristics and financial and technical capacity, there should be no top-down delineation of pledges.

The Russian Federation is not participating in the 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.

At the end of the first commitment period Russia held 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.

3.8. Japan

3.8.1. Facts

Cancún Agreement pledge: Japan revised its emission reduction target for 2020 in November 2013. Compared to 25 % emission reduction, as announced earlier, the new target is an emission reduction of 3.8 % by 2020 compared with 2005 levels. "The target does not currently take into account the emission reduction effect resulting from nuclear power, given that the energy policy and energy mix, including the utilization of nuclear power, are still under consideration. A firm target, based on further review of the energy policy and energy mix, will eventually be set" (UNFCCC 2014d).

Table 11: Emissions profile for Japan

	Japan	EU 27
CO_2 emissions (2012)		
• Absolute (Gt)without LULUCF	1.3	3.7
• Rank	6	3
• Of global total	3.8 %	10.9 %
• Per capita (t) without LULUCF	10.0	7.3
• Per GDP (t/mil USD) without LULUCF	0.21	0.22
GHG emissions (2012)		
• Absolute (Gt)without LULUCF	1.3	4.5
• Per capita (t/capita)without LULUCF	10.5	9.0
• Per GDP (t/mil USD) without LULUCF	0.23	0.27

Source: http://edgar.jrc.ec.europa.eu, http://data.worldbank.org/indicator/NY.GDP.MKTP.CD. http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/8108.php.

Due to the nuclear crisis with the shutdown of nuclear plants after the accident in Fukushima 2011, emissions from general electricity utilities increased by 112 million tons between 2010 and 2012 (Government of Japan 2014). This is reflected in the new pledge, as compared to the earlier pledge of 25 % reduction below 1990 by 2020, the new pledge

is comparable to an emission increase of 3.1 % compared to 1990 levels, significantly reducing the ambition of Japan's target.

In April 2014 Japan published the 4th strategic energy plan, trying to find an optimal energy supply-demand-structure for Japans energy strategy within a horizon of 2018-2020. Limiting the dependency on nuclear power is formulated as a starting point in the new energy strategy. The dependency on nuclear power will be minimized "to the extent possible by energy saving and introducing renewable energy as well as improving the efficiency of thermal power generation". Nevertheless according to the new supply structure nuclear power is still an important base-load power source. Due to changing geopolitical risks and low prices also coal becomes an important base-load power according to the new strategic energy plan. With regard to renewable energy sources the government of Japan has accelerated the introduction of renewable energy as far as possible and actively promotes renewable energy. For the new energy supply structure Japan takes into account higher shares of renewables than in the former Strategic energy plans. The ratio of renewable energy in 2020 is supposed to be 13.5 % in total watt hours and in 2030 20 % in total watt hours (Government of Japan 2014).

In July 2012 the feed-in-tariff program started and by the end of 2013 the installed capacity of renewable energy power generation has grown by 34 % (Government of Japan 2014).

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. Mitigation should be at the centre of INDCs. Japan is emphasizing the importance of a review system of mitigation commitments to decide whether Parties' contributions are fair and transparent but says that commitments should be determined nationally.

With the withdrawal of its participation in the second commitment period under the Kyoto Protocol and the change of its pledge to the Convention, Japan has significantly lowered its mitigation ambitions.

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.

3.9. Australia

3.9.1. Facts

Cancún Agreement pledge: Australia will reduce its greenhouse gas (GHG) emissions by 25 % 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 % 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. In fact, one of the campaign promises of the current government had been to repeal the carbon price.

Australian GHG emissions excluding land use, land-use change, and forestry (LULUCF) increased by 31 % between 1990 and 2012 (UNFCCC 2014e). 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 et al. 2013).

Table 12: Emissions profile for Australia

	Australia	EU 27
CO_2 emissions (2012)		
• Absolute (Gt)without LULUCF	0.50	3.7
• Rank	14	3
• Of global total	1.3 %	10.9 %
• Per capita (t) without LULUCF	17.5	7.3
• Per GDP (t/mil USD) without LULUCF	0.26	0.22
GHG emissions (2012)		
• Absolute (Gt)without LULUCF	0.63	5.0
• Per capita (t/capita) without LULUCF	23.9	9.0
• Per GDP (t/mil USD)without LULUCF	0.35	0.27

Source: http://edgar.jrc.ec.europa.eu, http://data.worldbank.org/indicator/NY.GDP.MKTP.CD. http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/8108.php.

In July 2014, under the new government of Tony Abbott Australia repealed its Clean Energy Act from 2011 and therefore its carbon pricing mechanism that had been in place since July 2012 (including the carbon tax and the Australian emission trading scheme). Instead of the Clean Energy Act the new Australian Government has an intention to implement a so-called Direct Action Plan to reduce domestic emissions. The Direct Action Plan is foreseen to operate as a baseline and credit scheme. To date the actual rules remain unclear. Experts have expressed doubts on the White Paper for the Action Plan and modelling shows that it will make reaching the targets more difficult (The Conversation 2014a).

Australia has put in place the Renewable Energy Target (RET) to ensure that 20 % of Australia´s electricity comes from renewable energy generation by 2020. The recently published RET Review advises scaling down the target though, although review models lower electricity prices for all consumers in the long run under the target.

The future of other institutions, such as the Clean Energy Finance Cooperation (CEFC) and ARENA (Australian Renewable Energy Agency) is also unclear. Overall, a range of well-established national climate and clean energy policies has been abolished or scaled back and replaced with the Direct Action Plan whose impact is unclear, mainly in terms of whether reduction commitments can be reached (cf. The Conversation 2014b).

The new government also ended the work of the Climate Commission as well as the Climate Change Authority.

3.9.2. Positions

Australia stressed that mitigation must be core of a post-2015 Agreement. 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.

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:

- the reduction to zero of the net deforestation of primary or natural forests until 2021;
- the modification of the current energy grid, so that renewable energy (non-conventional energy, hydropower and biofuels) represent at least 33 % of the total energy use by 2020;
- 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 13: Emissions profile for Peru

	Peru	EU 27
CO_2 emissions (2012)		
• Absolute (Gt) without LULUCF	0.05	3.7
• Rank	46	3
• Of global total	0.14 %	10.9 %
• Per capita (t) without LULUCF	1.6	7.3
• Per GDP (t/mil USD) without LULUCF	0.26	0.22
GHG emissions (2010)		
• Absolute (Gt) without LULUCF	0.08	5.0
• Rank	69	3
• Of global total	0.15 %	10.0 %
• Per capita (t/capita) without LULUCF	2.6	10.0
• Per GDP (t/mil USD) without LULUCF	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 CO2eq;
- 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 CO2eq;
- capturing and using CH4 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 CO2eq.

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).

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. Africa 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 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 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 second 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.

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[16]; (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 2014 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.

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. AOSIS calls on developed countries to take the lead and stresses that the development of NAMAs should

[16] i.e. to integrate climate considerations into infrastructure planning.

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.

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.

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 have been less present as a group in the negotiations. 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 as 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 2014, the meetings of the Cartagena Dialogue continued and the platform will hopefully again contribute to achieving improved understanding and advancement for the discussions under ADP.

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 workstream 2, 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.

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 stresses the principle of common but differentiated responsibility but calls upon all Parties to act, according to their capabilities.

CAN calls on Parties to urgently address the ambition gap in the pre-2020 period. 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 International Cooperative Initiatives (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.

Furthermore, CAN calls for stronger focus on a long term goal and to take into considerations the long-term implications of the contributions countries' contributions propose.

Developed countries should make clear commitments in terms of climate finance, and particularly increase funding for adaptation. According to CAN, finance and mitigation together define the fair share that a Party is willing to contribute to tackle climate change.

In Warsaw, CAN members participated in a walk out by many civil society organisations from the negotiations to demonstrate their dissatisfaction from Parties' insufficient progress on an ambitious climate agreement.

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 sets 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; and
- engaging in constructive bilateral and/or multilateral consultations and negotiations on the design and implementation of market-based mechanisms.

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 carrier's flag. 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. Task forces and expert groups were established to analyse three options for market-based mechanisms:

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 April 2013 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', EU 2009). In reaction to the ICAO resolution A38-17 the EU extended in April 2014 this initiative until the end of 2016. If, in the EU's view, the ICAO fails to decide on a global market-based mechanism at the 39th Assembly in October 2016, full implementation would continue from 1st January 2017.

In A38-17 ICAO Member States 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 which would avoid distortion in competition and prevent carbon leakage.

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 67 in October 2014 Parties adopted the "Third IMO GHG study 2014" which provides an update of the GHG emission estimate for international shipping. In the period until 2050 business as usual emissions continue to rise considerably by 50 to 250 %, depending on economic development and development of energy prices. Emission growth could be mitigated by efficiency measures. However, their contribution will in all scenarios be lower than the projected emissions growth (IMO 2014).

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 and again. Despite focusing negotiation time on other issues, this delay is mainly due to the fact that Parties' views are still divided as to whether the compelling need for establishing a market-based mechanism under the IMO had been clearly demonstrated or not.

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.

At MEPC 67 IMO Parties discussed proposals by the USA, Japan, the European Commission and Germany to increase energy efficiency in the shipping sector. The USA suggest a phased approach, starting with a two year data collection period followed by a pilot phase before establishing mandatory requirements to improve energy used per hour in service. Japan suggests measuring CO_2 emissions per deadweight-mile, while the European Commission proposed improving energy per mile travelled. Germany promotes reducing the amount of fuel consumed per ship and year and highlights that this approach can be applied to all ships and that it can be introduced immediately without a previous data collection phase since the required data is already available. Parties agreed to establish so-called correspondence groups with the view to prepare a decision on a data collection phase for MEPC 68 in April 2015.

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 in the land sector. 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 adaptation activities, and the latter also to technology transfer.

Many developing countries voiced strong concerns over the GEF was very negative during the Copenhagen Conference with regards to mandatory co-financing, lack of direct access to financing and the lack of predictability of financing for the implementation of adaptation

actions (TWN 2009). The reforms to the GEF-5 in 2010 which have been agreed together with the replenishment fell short of the expectations of many countries. Subsequently, the GEF Council has been looking for input from the UNFCCC on the necessary reforms.

The GEF produced a detailed report to COP 20 (GEF 2014). The main points include:

- the GEF supported activities based on the Cancún agreement, including support for activities that contribute to the implementation of REDD+ related decisions;
- it has approved support for the preparation of INDCs to 7 countries in the fiscal year 2014;
- the GEF has provided USD 2.2 million to support LDCs to advance NAPs, and USD 5.09 million to other developing countries for this purpose;
- it continues to support projects for technology transfer;
- since its inception, the GEF has funded 738 projects with direct impact on GHG emission reductions;
- it has supported various projects on energy efficiency, renewable energy, sustainable transport and LULUCF;
- for the sixth replenishment period (July 2014-July 2018) the GEF will receive USD 4.43 billion from 31 donor countries, including 7 developing country donors.

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:

- 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 WG I report 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 (IPCC 2013, see also section 2.1.3).

The WG II report evaluates how patterns of risks and potential benefits are shifting due to climate change. Furthermore, it considers "how impacts and risks related to climate change

can be reduced and managed through adaptation and mitigation". The report shows that changing precipitation or melting snow and ice are altering hydrological systems and affect water resources in terms of quantity and quality. Also, climate change has impacted living conditions and behaviour of a large number of species. The negative impacts of climate change on crop yields have outweighed positive impacts. Additionally, the report analyses adaptation responses to climate change and the context, in which decisions on adaptation and mitigation activities are taken (IPCC 2014b).

The report of WG III assesses literature on the scientific, technological, environmental, economic and social aspects of mitigation of climate change. It assesses mitigation options at different levels of governance and in different economic sectors as well as the societal implications of different mitigation policies (IPCC 2014c).

The whole AR5 provides 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.

5.6. Industry stakeholders

Industry stakeholders are not as visibly involved in the UNFCCC negotiations as civil society observer groups or international organisations. However, they play a role in various specific agenda items in the negotiations.

In the ADP negotiations, industry stakeholders have figured prominently in the Technical Expert Meetings held under workstream 2. Particularly at the meeting on Carbon Capture and Storage (CCS), a large number of representatives from businesses with a stake in the development of CCS technologies gave presentations and participated in the discussions. Also at the meetings on renewable energy and energy efficiency, a considerable number of industry stakeholders from the energy sector were present. Generally, these stakeholders have voiced support for measures which might provide business opportunities to them.

Moreover, industry stakeholders play a role in the debates on the contribution of the private sector to climate finance and technology transfer, and in the role of market mechanisms to achieve emission reductions. In this context, business representatives have emphasised the need for enabling environments to make environmentally-friendly investment decisions and have highlighted the economic opportunities implied by mitigation activities.

Additionally, business actors have been present at the Ban Ki Moon summit and presented their activities to contribute to mitigation of climate change (see section 1.3.3).

A few submissions have also been made by industry stakeholder groups to the UNFCCC process (e.g. by the World Business Council for Sustainable Development (WBCSD), the Global CCS Institute and partnerships on renewable energy and low carbon transport). IN their submissions, these actors call for ambitious action on climate change while highlighting the economic opportunities implied by such action and the contribution which their specific stakes could make.

Also, at the side exhibitions to the negotiations, a lot of business stakeholders are present to showcase their products or activities and build networks with other stakeholders present at the COPs.

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 Chile, Colombia, Costa Rica, Guatemala, Panama and Peru 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, but in recent years a number of smaller alliances of G77 countries have formed.
- **Group of like-minded developing countries (LMDCs):** 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. The LMDCs are pushing for keeping up the division between Annex I and non-Annex I countries.
- **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 was 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.
- **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.

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