



Grantham Research Institute on
Climate Change and
the Environment

IN-PROCESS PRELIMINARY DRAFT

Possibilities for Africa in Global Action on Climate Change

ELEMENTS OF A GLOBAL CLIMATE
CHANGE AGREEMENT

June 2009

Elements of a global climate change agreement

Summary for African leaders

Purpose of this paper

This document has been prepared by the Grantham institute as a high-level summary of the global climate change negotiations. Significant contribution to this work has been provided by a number of sources, especially the UNFCCC, and generous support for this work has been provided by the European Climate Foundation. We are also grateful for the contribution from McKinsey & Company which provided analysis.

This paper aims to provide a high level summary of the requirements that a global agreement on climate change to be negotiated in Copenhagen in December 2009 must fulfil, in order to limit global warming to 2 degrees C.¹ The paper summarises the discussions on the goal of the Global Deal, the important negotiating elements and related negotiating issues, potential sources of finance and financing mechanisms, and the negotiating process leading to Copenhagen.

EXECUTIVE SUMMARY

A global climate change agreement must align countries on six elements:

1. **Long-term emissions targets.** To avoid major risks associated with climate change, temperature increases should be limited to 2 degrees Celsius. In order to limit temperature increases, long term emissions targets have to be set.
2. **Intermediate targets.** To reach long term targets, an intermediate target to reduce emissions by approximately 17 GtCO₂e by 2020 (relative to a baseline of ~ 61 GtCO₂e) is required

¹ UNFCCC revised draft decision, COP 13

3. **Support for low carbon growth.** Developed countries should continue leading the global mitigation effort and should also support low-carbon growth in developing countries.
4. **Support for adaptation.** Despite the mitigation efforts, temperatures are forecast to increase by 2 degrees Celsius. Developed countries should provide technical and financial support to developing countries to adapt to the new climate.
5. **Technology transfer and dissemination.** Financial support alone will not be enough; both adaptation and mitigation efforts will need to be supported by accelerated technology development and diffusion.
6. **Adequate institutions** The agreement will not work if the necessary institutional framework is not in place. This framework will need to consider principles of fairness, minimal transaction costs, and clear accountability systems, and be adaptable to changing context

A number of submissions to the UNFCCC have been made around these six elements including the Algerian proposals submitted on behalf of Africa.

Substantial funding will be required to support both adaptation and mitigation. To fund future adaptation and mitigation measures, clear financial architecture criteria have to be defined, funding sources have to be ramped up, and allocation mechanisms for both adaptation and mitigation measures have to be designed. The funding sources and allocation mechanisms may need to be tailored to meet Africa's specific requirements.

- New financing sources and mechanisms will have to be set-up to collect and allocate these funds. The new sources and mechanisms should follow 12 principles: scale, scope, speed, efficiency and effectiveness, mutual accountability, transparency, equity, reliability, additionality, incentives, leveraging existing institutions, and ease of access
- The four main sources of financing are: public funds from developed countries, international transport levies, self-financing, and offset markets.
- Different allocation mechanisms are being discussed for mitigation and adaptation. The main ones for mitigation are: project level schemes; programmatic level schemes, and sectoral schemes. Fund allocation for adaptation is likely to be based on national adaptation plans.
- Enabling Africa's access to carbon markets requires: tailoring market mechanisms to Africa's opportunities; and designing a phased approach to

market access to allow Africa build its capabilities. To meet Africa's needs, offset market mechanisms should include specific opportunities such as REDD; accommodate small scale projects; and guarantee further capability building. Africa's access to markets has to be done in a phased approach. In the short term (2010–2015) initial mitigation measures and pilots might be financed by public finance such as mitigation funds, before gradually shifting on the long term to private funding through offset markets.

A global deal could contribute to making the necessary adaptation and mitigation technologies available to Africa. While some of the suitable technology already exists and can be transferred by attracting private investors, development and IP related issues for future technology could be addressed in the negotiations (e.g. patent protection exemption in developing countries for critical adaptation and mitigation technologies).

A process is in place to develop a common African negotiating position. The AMCEN (African Ministerial Conference on Environment) is currently preparing a common proposal that will be discussed at the African Union summit in July.

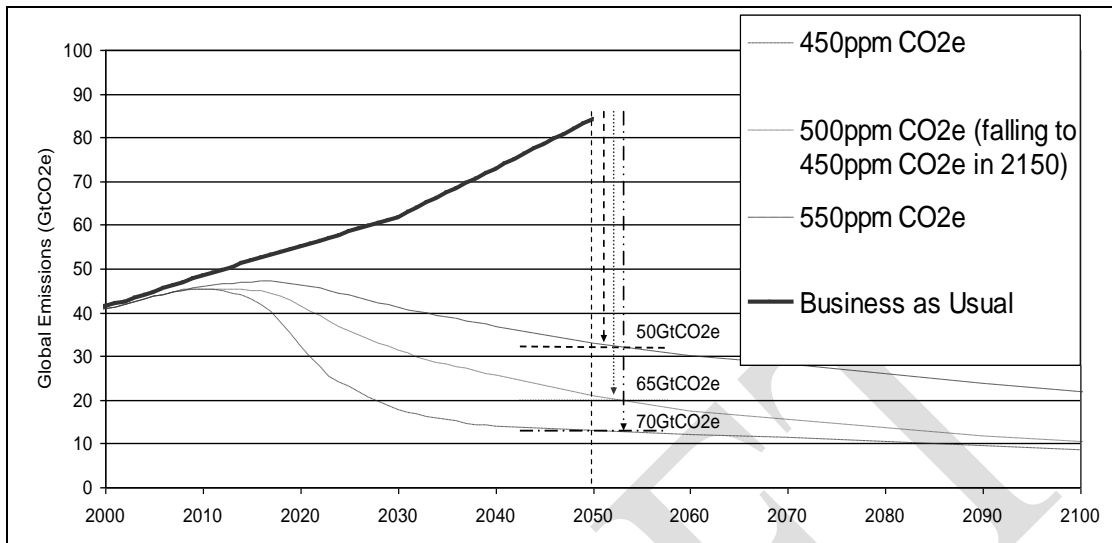
I WHAT A GLOBAL AGREEMENT MUST ACCOMPLISH

The Bali roadmap, agreed in December 2007, aims to chart the course to a successor to the Kyoto global agreement on climate change, in response to the IPCC Fourth Assessment report establishing that warming of the climate is unequivocally happening, and that deep cuts in global emissions would be required.² To achieve the objective of the convention, a global deal agreed in Copenhagen in December 2009 would have to accomplish the following:

- *Agreement on the long term emission targets:* To avoid the major risks associated with climate change, global warming should be limited to 2 degrees C. This requires long term stabilisation of CO₂e content at 450 parts per million (giving a 40-60 per cent chance of achieving the 2 degrees C goal). The IPCC estimates this would translate into required global emissions cuts of 50% to 85 % by 2050 from 2000 levels (Figure 1). As illustrated in Figure 2, despite a reduction by 90 % below 1990 level Annex 1 countries emissions, non-Annex 1 countries will also need to significantly reduce their emissions.

² UNFCCC revised draft decision, COP 13

Figure 1: CO2 concentration paths



Source: Stern Review

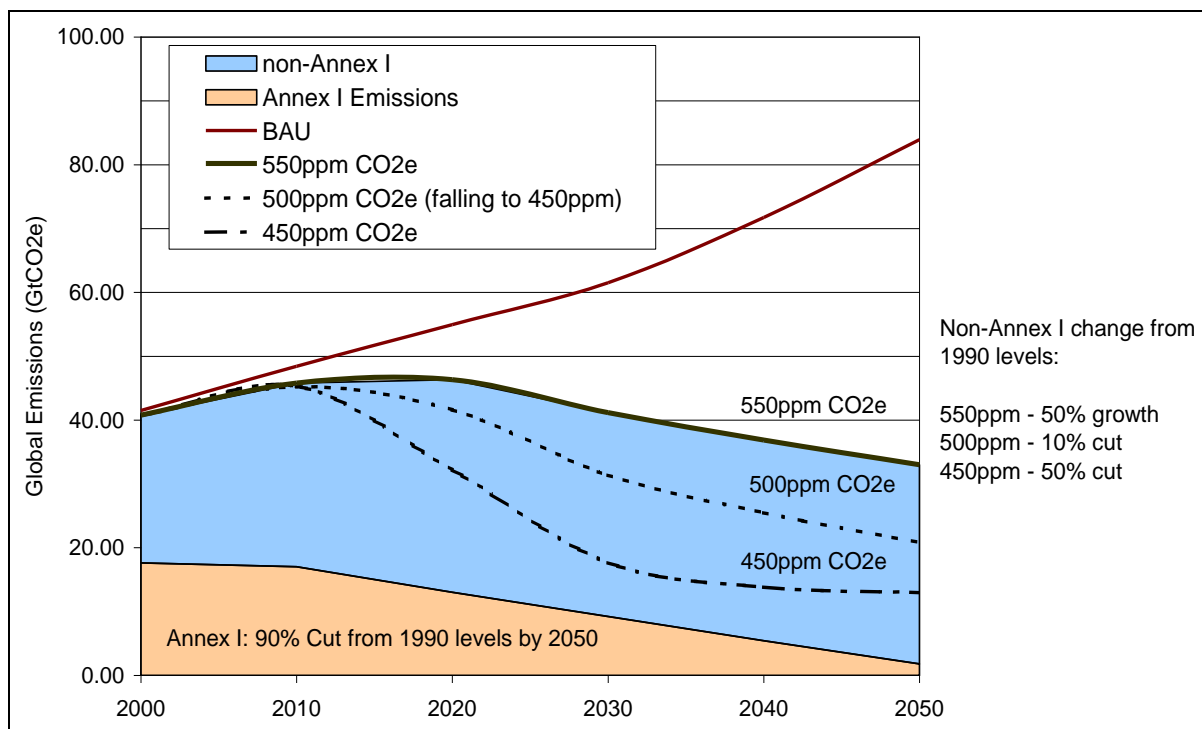
- Intermediate targets towards the long-term target:* To achieve the 2050 emission target will require emission reductions of 17 Gt CO₂e relative to a "business as usual" case of ~61 Gt CO₂e³ emissions per year globally by 2020. The IPCC states that required reductions by Annex I Parties in 2020 for a stabilization scenario at 450 ppm have been estimated to be between by 25-40%, relative to 1990.⁴ To achieve the 450 ppm target, will also require commitment on emissions reductions from middle income countries. For example, reaching the 450 ppm target without commitments from China - the world's biggest emitter with 7.6 Gt of CO₂e in 2005 - is virtually impossible.⁵ For least developed countries, emission targets should not impact development goals.

Figure 2: The role of non-Annex 1 countries on emissions

³ McKinsey & Company: Pathways to a Low Carbon Economy, 2008

⁴ UNFCCC, July 2007: Synthesis of information relevant to the determination of the mitigation potential and to the identification of possible ranges of emission reduction objectives of Annex I Parties

⁵ McKinsey & Company: Pathways to a Low Carbon Economy, 2008



Source: Stern Review

- *Support for low-carbon growth in developing countries.* Developing countries can and should contribute to the global mitigation effort. However, this must be achieved without limiting Africa's development aspirations. Sufficient funding must be available to support developing country policies and actions, including through a scaled-up, efficient and development friendly carbon market. Estimates suggest the funding needs could be of the order of \$70-100 billion per year on average between 2010 and 2020.⁶
- *Support for adaptation:* financial and technical support must be provided for the most vulnerable countries to adapt to climate change already underway. Developing countries face the greatest risks from climate change, but have the least historical responsibility for it. Global estimates for incremental funding requirements for adaptation in developing countries increase from \$15-86 billion per year by 2015⁷ to \$28-68 billion per year by 2030.⁸ However, the latter costs could rise if the

⁶ Project Catalyst estimates converted using 0.79 Euro / US Dollar

⁷ Lower end based on lower range of Project Catalyst estimate (not including social adaptation) and upper end based on UNDP HDR estimate (including social adaptation)

⁸ UNFCCC estimates (not including social adaptation)

infrastructure needs in developing countries up to 2030 are greater than assumed in the UNFCCC estimates and that the costs of social adaptation will go up between 2015 and 2030. This is in addition to existing support for development needs, which also need to be met. Successful adaptation builds on successful development.⁹

- *Technology transfer and dissemination:* Technology development and diffusion must be accelerated for both mitigation and adaptation. This should be driven by strong domestic policy support for deployment. In addition, the level of funding support for developing country actions must also enable technology deployment on a commercial basis
- *Adequate institutions:* The agreement must be supported by institutions that create trust and can evolve over time. Such an agreement will be built on the principles of fairness, minimise transaction costs, create clear accountabilities and have mechanisms for MRV (Measuring, Reporting, Verifying), leverage new and existing institutions effectively, and be able to adapt to changes in science, economics and technology.

II. IMPORTANT NEGOTIATING ELEMENTS AND RELATED NEGOTIATING ISSUES

By building on existing agreements in the United Nations Framework Convention on Climate Change (UNFCCC or 'the Convention'), the Bali Action Plan, and emerging areas of consensus in the negotiations, it is possible to create an agreement that meets the design requirements outlined above:

1. A long-term target for limiting global emissions
2. Developed country commitments for reducing emissions in the medium term
3. Dramatic scale up of financial and technical support for adaptation
4. Support for low-carbon growth in developing countries through "nationally appropriate mitigation actions"¹⁰ and reform of the global carbon market
5. Support for technology deployment on both adaptation and mitigation

⁹ Samuel Fankhauser, 2009

¹⁰ UNFCCC

6. An enduring yet flexible institutional architecture

Recent Norwegian and Mexican proposals on the financing have attracted significant interest. Norway is proposing to set aside a small proportion of the revenues generated by the auctioning of AAUs allocated under a new global agreement to provide a fund used primarily to finance adaptation in developing countries. Mexico has proposed a similar global level climate change fund, used for mitigation, adaptation and technology transfer, but funded instead by direct (voluntary) contributions by every country, calculated according to a formula based on the polluter pays principle, equity, ability to pay and efficiency.

A more detailed comparison between the African negotiating position and the other negotiating position can be found in the table below:

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Table 1: Elements of a global agreement on climate change

Element of a global agreement	Major negotiating issues	Selected elements of Africa proposal (LCA negotiation text 8 April 2009)	Other selected proposals elements
A long-term target for limiting global emissions	<p>What date to set a long term target for? Any intermediate target dates?</p> <p>What should the target be? Emissions per capita? Absolute GHG concentration levels?</p> <p>How to define a numerical target e.g., percent reduction below 1990, absolute level of emissions in Gt CO₂e; a concentration target (e.g., 450 ppm), a temperature target (e.g., 2 degrees C), or a per-capita target (e.g., 2 tons per person per year)</p>	<p>"Solving the climate problem will only be possible if undertaken in context of developing countries need for development space"</p> <p>"Long term goal of at least halving global emissions relative to historic levels by mid-century, underpinned by ambitious mid-term targets"</p>	<p>IPCC: a 50-85 percent reduction in annual CO₂e emissions versus 2000 by 2050 is consistent with stabilization below 450 ppm</p> <p>Absolute emissions goal (for example ~20 Gt per annum in 2050) could be consistent with the IPCC goal, avoids arguments over base year, is directly measurable</p> <p>Stricter targets have been proposed and a target expressed at 2t of emissions per capita in 2050 has also been proposed by India. This reflects developing country concerns of equity and fairness, but might be difficult to reach by 2050, given wide disparity between countries today. Convergence could be included as long term principle into an overall agreement particularly keeping in mind the 2 tonnes of CO₂e per capita overall target by 2050.</p> <p>Several proposals have been made on determining the responsibility of each country to contribute to the global reduction target. These include basing contributions on GDP, GDP per capita, historical responsibility for emissions, emissions per capita, technical abatement potential, and deflections versus likely future emissions growth</p>
Developed	What constitutes comparable	Annex 1 Parties reduce emissions to 40%	Many proposals for developed country reduction

Element of a global agreement	Major negotiating issues	Selected elements of Africa proposal (LCA negotiation text 8 April 2009)	Other selected proposals elements
<p>countries agree to undertake quantified emissions reduction targets that are "measurable, reportable, and verifiable" (Bali)</p>	<p>commitments between developed countries?</p> <p>How to define the quantified reductions: whether a percent target against a single year should be used (e.g. 2020), or whether a longer-term path is defined (e.g. a full path to 2050)?</p> <p>How to ensure MRV?</p> <p>How much offsetting will be allowed?</p>	<p>below 1990 levels by 2020, and 80-95% below 1990 by 2050</p>	<p>targets by 2020 are in the range suggested by the Bali Action Plan of 25-40% below 1990 levels</p> <p>Various proposals have been made on the pathway to achieve these reductions, including on the date of emissions peaking, the latter ranging from 2010 to ~2030</p> <p>Some developed countries have laid out their own potential reduction targets, e.g. Iceland has the aspiration to cut emissions by 50%-75 % by 2050.</p> <p>China has set a 15% renewable target by 2020 and put in place feed-in tariffs to support this</p> <p>Argentina has gone beyond the range and proposed a 45% reduction in developed country emissions by 2020 and at least a 95% reduction by 2050, both with respect to 1990 levels</p> <p>The EU has suggested quantified deviations from BAU for developing countries: 15-30% below 2020 BAU, in context of its broader sustainable development strategy</p>
<p>Ramp up of mitigation financing the global carbon market system</p>	<p>How to recognize a diverse set of potential developing country actions, for example, sectoral targets, energy intensity targets,</p>	<p>At least \$200 bn per year by 2020 to support mitigation (0.5% of GDP of Annex II Parties)</p> <p>New and innovative sources of funding,</p>	<p>Several proposals to raise finance to be distributed to developing countries for mitigation have been made, with sources ranging from revenues from auctioning AAUs, shares of developed country GDP, a levy on international maritime and aviation</p>

Element of a global agreement	Major negotiating issues	Selected elements of Africa proposal (LCA negotiation text 8 April 2009)	Other selected proposals elements
	<p>deflections from business as usual</p> <p>What can be provided by the carbon markets and what must be funded through other funds?</p> <p>How should the carbon market system work?</p>	<p>with major source being the public sector</p> <p>Developing countries can choose from a toolbox of NAMAs, including SDPAMS, programmatic CDM, and others"</p> <p>REDD-Plus to accommodate different national circumstances reportable through national communications if done with own resources and in a separate registry for those with multi-lateral, MRV support</p> <p>Verification through UNFCCC for multi-laterally supported actions; through national entities for actions with own resources</p>	<p>emissions.</p> <p>Proposals to harness the carbon market by generating credits from developing countries to be used by developed country offsets are controversial.</p> <p>The EU has made a legal commitment, agreed by all 27 member states, to reduce its emissions by 20% below 1990 levels by 2020. It is willing to increase this target to a 30% reduction if it finds the agreement in Copenhagen acceptable. To reach this target it will allow ~130Mt of international offsets into its emissions trading scheme every year from 2013-2020 and an additional number for the use of EU member state governments in making reductions in non-ETS sectors.</p> <p>A bill drafted by two US Congressmen is passing through the US legislature at the moment. It proposes economy wide GHG emission reduction targets of 20% below 2005 levels by 2020, 42% by 2030 and 83% by 2050. The numbers in the bill may well change before it is passed – and this may not happen before Copenhagen – but the intention to make deep cuts in emissions is clear and supported by President Obama. The bill sets out a large emissions trading scheme, covering eventually 85% of all US emissions. The import limit for international offsets into this scheme is high at 1Gt</p>

Element of a global agreement	Major negotiating issues	Selected elements of Africa proposal (LCA negotiation text 8 April 2009)	Other selected proposals elements
			<p>per year, rising potentially to 1.5Gt if the supply of domestic offsets is insufficient.</p> <p>Mexico has proposed an Environment Fund, a world climate change fund to finance mitigation, adaptation and technology options. All countries would be invited to contribute according to a formula based on the polluter pays principle, equity, ability to pay and efficiency. Developed countries could only draw up to 30% of their contributions, while developing countries would be net recipients.</p> <p>National Plan related mechanisms:</p> <ol style="list-style-type: none"> 1. The EU, US, [other developed countries]: developing countries should have in place an LCDS covering all key emitting sectors by 2012. EU: Distinction between 1) own actions, 2) those requiring support and 3) those supported by the carbon market. <p>Sector Related mechanisms:</p> <ol style="list-style-type: none"> 1. Norway: Under its auctioning of carbon credits proposal, a share of allowances issued is held back from distribution in a set aside reserve. This could be accessed by developing countries if they introduce a cap and trade system or a carbon tax by an agreed date with agreed specified sector

Element of a global agreement	Major negotiating issues	Selected elements of Africa proposal (LCA negotiation text 8 April 2009)	Other selected proposals elements
			<p>coverage</p> <ol style="list-style-type: none"> 2. China: NAMAs shall be country driven, supported by developing country funding. Sectoral schemes and priority technologies targeted for support. 3. Japan and EU: sector no lose targets (or hard caps) should be used to generate carbon credits to be sold on international carbon markets. Efficiency targets for key industries (steel, etc) would be possible <p>Initiative level mechanism:</p> <ol style="list-style-type: none"> 1. Panama et al: NAMAs can be used on carbon markets as offsets <p>Offsets:</p> <ol style="list-style-type: none"> 1. Philippines: only 10% of developed country emission reductions can come from offsets. 2. China: Emission reduction credits generated from NAMAs by developing countries with the support of developed countries shall not be used by developed country parties to offset their quantified emission reduction targets 2. Indonesia: Developed countries can use

Element of a global agreement	Major negotiating issues	Selected elements of Africa proposal (LCA negotiation text 8 April 2009)	Other selected proposals elements
			<p>offsets from NAMAs in developing countries, as long as they are for emission reductions additional to no lose target reductions in developing countries</p> <p>3. Panama, Paraguay and El Salvador: NAMAs can be used on the carbon markets as offsets under CDM. Non-offsetting NAMAs by developing countries recognised as abatement – funded by developed countries</p> <p>4. NZ: Cross-sectoral NAMAs can be used to generate carbon credits</p> <p>5. Lesotho on behalf of LDC's: Financial support for creating MRV</p>
Dramatic scale-up of adaptation financing	<p>What will funding be used for and how much is required?</p> <p>How will it be raised?</p> <p>What is the allocation mechanism?</p>	<p>"Adaptation...is urgent and must be accorded the same level of priority and emphasis as that given to mitigation"</p> <p>At least \$67 bn per year by 2020 to support adaptation in developing countries</p> <p>Developing countries governments should have authority on how the funds should be allocated</p>	<p>Lesotho on behalf of the LDCs: Immediate implementation of NAPAs. Revise co-financing requirements for LDCs and direct budget support.</p> <p>India: 0.5-1.0% of developed country GDP to go into a fund overseen by a COP-appointed board for mitigation, adaptation and technology transfer – grant based especially for adaptation</p> <p>Brazil: Consideration of transfer mechanisms such as insurance can also be taken into account to address loss and damage associated with climate</p>

Element of a global agreement	Major negotiating issues	Selected elements of Africa proposal (LCA negotiation text 8 April 2009)	Other selected proposals elements
			<p>change impacts in developing countries that are particularly vulnerable</p> <p>China: Establish a Subsidiary Body under the Convention, with a majority of members from developing countries, to enhance urgent action for adaptation</p> <p>The Adaptation Fund in place is financed by 2% of the CER's</p>
Support for technology deployment	<p>How to support the full incremental cost of deployment of new technologies in developing countries</p> <p>How to increase developed country R&D investment</p> <p>How to ensure sufficient R&D into technology specific to developing country needs</p> <p>How to support international pilots and demonstration projects for emerging technologies such as CCS</p> <p>How to resolve disputes over IP access, for some technologies with IP barriers</p>	<p>Developed countries commit to the deployment, diffusion, and transfer of technology to developing countries</p> <p>Developed countries commit to providing full costs and full incremental costs (article 4.3)</p> <p>Barriers to technology transfer are addressed</p>	<p>China: Establish a Subsidiary Body for Development and Transfer of Technologies, Action plan to speed development and transfer of ESTs assisted by developed countries and Multilateral Technology Acquisition Fund funded by developed countries to leverage private finance</p> <p>Ghana: create an executive body for Tech development and transfer</p> <p>Guyana: establish regional technology centres and networks, a register of available technologies and how to access and utilize them and a new subsidiary body on technology transfer under the Convention, which would include a strategic planning committee, technical panels focused on different sectors whilst at the same time, maximizing use of existing institutions. IPR reform</p>

Element of a global agreement	Major negotiating issues	Selected elements of Africa proposal (LCA negotiation text 8 April 2009)	Other selected proposals elements
An enduring yet flexible institutional architecture	What new institutions are required?	<p>Compliance mechanism in place to ensure that commitments on delivery are met</p> <p>Commitment to strengthening institutional capacity of developing countries to undertake action</p>	<p>MRV related institutions:</p> <p>Reduction efforts by developed countries to be overseen by existing emission measurement systems existing under the Kyoto Protocol. Several developed countries (including the EU and US) are in favour of extending the obligation for annual emission inventories to all countries.</p> <p>Developing countries should register their NAMAs to achieve international recognition of their mitigation efforts. There is disagreement about the level of compulsion for such recording. Examples of other MRV institutional arrangements include:</p> <ol style="list-style-type: none"> 1. Colombia: Body accountable to the COP shall oversee, verify and certify of reductions achieved through REDD 2. Norway: Short term institutional capability building supported by existing entities such as the UN REDD program or FCPF (World Bank) 3. G77: Single fund created under COP process which sources and allocates adaptation and mitigation and financing. It decides on policies, program priorities and eligibility criteria for funding

Element of a global agreement	Major negotiating issues	Selected elements of Africa proposal (LCA negotiation text 8 April 2009)	Other selected proposals elements
			<p>4. Korea: Establish a registry for NAMA's. Once registered these actions can be recognised as international mitigation actions</p> <p>Adaptation related institutions:</p> <p>There is agreement in the proposals that the UNFCCC should assume a catalytic role in adaptation activities at the international level, including cooperative action by all Parties and by relevant international, regional and national organizations and institutions.</p> <p>A variety of enhanced or new institutions has been proposed, including an adaptation committee or subsidiary body, an expert group on adaptation, adaptation advisory panel evolving from the Least Developed Countries Expert Group, the creation of partnerships among companies and research institutions of developed and developing countries, national coordinating bodies and national and regional centres and networks. Specific country proposals include:</p> <ol style="list-style-type: none"> 1. China, Africa, others are looking at new funds and e.g. regional adaptation institutions 2. Australia: Set-up an adaptation advisory

Element of a global agreement	Major negotiating issues	Selected elements of Africa proposal (LCA negotiation text 8 April 2009)	Other selected proposals elements
			<p>panel based on the existing LEG¹¹ to provide broad guidance for National Action Plan. Set-up regional centres to coordinate adaptation efforts across a region</p> <p>3. Bangladesh, China, India: Adaptation funding and priorities should be under authority and guidance of COP similar mechanism to current Adaptation Fund</p> <p>Technology related institutions:</p> <p>A number of options has been proposed, ranging from enhancing the existing Expert Group on Technology Transfer (EGTT) under the COP and making more use of existing mechanism industry and government partnerships to creating an enhanced mechanism or framework, a Technology action plan, Technology needs assessments, Technology road maps, a mechanism for cooperative research and development, measures to address intellectual property rights, incentive mechanisms and voluntary agreements for technology transfer and national and regional</p>

¹¹ Least Developed Countries Expert Group

Element of a global agreement	Major negotiating issues	Selected elements of Africa proposal (LCA negotiation text 8 April 2009)	Other selected proposals elements
			<p>technology innovation centres and networks.</p> <p>Specific country proposals include:</p> <ol style="list-style-type: none"> 1. China: Multilateral Technology Acquisition fund to be set-up to enhance technology transfer 2. Lesotho on behalf of LDC: Technology committee to advise COP and oversee implementation of development and transfer of technologies <p>Combined institutions:</p> <ol style="list-style-type: none"> 1. Mexico: Environment Fund (see above)

III III. POTENTIAL SOURCES OF FINANCING AND MECHANISMS

Global estimates for mitigation and adaptation costs in developing countries remain uncertain, but it is clear that costs will increase with time. The financial sources and mechanisms will need to be ramped up to meet the incremental costs of adaptation and mitigation measures.

The global requirement for funding to support adaptation and the incremental cost of mitigation in **developing countries** have been estimated by various sources:

- The Algeria proposal, on behalf of African nations, targets funding of \$67 billion per year for adaptation and \$200 billion per year for mitigation by 2020 for developing countries (calculated as 0.5% of Annex II GDP, rather than by a bottom-up approach)
- The UNFCCC¹² estimates "incremental investment costs" for developing countries of \$28-68 billion per year for adaptation and \$45-170 billion per year for mitigation by 2030
- Project Catalyst indicates costs of \$85-125 billion per year on average between by 2015 for developing countries, of which \$15-25 billion per year is for adaptation in the most vulnerable countries and \$70-100 billion per year is for mitigation¹³
- The UNDP estimates adaptation costs, including social adaptation, of \$86 billion per year by 2015 for developing countries.

A number of funds are already in place. There are public funds available from multilateral organisations (African Development Bank, Global Environmental Facility, UNDP, and the World Bank), and from selected bilateral sources (Japan UK, European Commission, Germany and Australia). In addition private funds are available through the clean development mechanisms. (CDM funding is primarily for mitigation but through an adaptation levy 2% of proceeds are devoted to adaptation) These financing sources provide for mitigation, adaptation, and technology.¹⁴ Existing sources will have to be complemented with additional sources of funding to meet the future financing needs.

¹² UNFCCC Investment and financial flows to address climate change: an update, 2007/08

¹³ Converted at rate of 0.79 €/€

¹⁴ UN-ECA: Financing Climate Change Adaptation and Mitigation in Africa: Key Issue and Options for Policy-Makers and Negotiators

Financing for incremental costs of mitigation and adaptation should be in addition to meeting ODA commitments. ODA commitments for 2015 to Africa should rise to ~\$185 billion (assuming continued 55% share of 0.7% of developed country GDP); \$55 billion per year were disbursed in 2005.

Financing sources and mechanism should follow twelve principles:¹⁵

1. **Scale** – system needs to mobilize funding at a scale commensurate with the mitigation and adaptation challenge
2. **Scope** – consistent with the Convention and the Bali Action Plan, support should cover developing country mitigation and adaptation actions, plus provide support for technology, at full incremental cost (also discussed below).
3. **Speed** – funding should yield mitigation and adaptation results as quickly as possible.
4. **Efficiency and effectiveness** – system should prioritize highest impact and most cost-effective actions, mobilize private capital, and utilize market mechanisms where appropriate.
5. **Mutual accountability, not conditionality** – system should be built on principles of mutual accountability, i.e. developed countries accountable for commitments to provide support, developing countries accountable for performance in delivering NAMAs and NAPAs based on that support.¹⁶
6. **Transparency** – all Parties must have clear visibility on both sources and uses of funds.
7. **Equity** – equitable governance between developed and developing Parties, and equitable contributions amongst developed Parties.
8. **Reliability** – in order for developing countries to plan actions and for private sector to support, funding flows must be predictable and reliably delivered.
9. **Additionality** – funds must be additional to existing ODA commitments.
10. **Incentives** – incentives for national actions and private sector investment.

¹⁵ UN-ECA May 2009: Financing Climate Change Adaptation and Mitigation in Africa: Key Issues and options for Policy-Makers and Negotiators; Project Catalyst

¹⁶ NAMAs are “nationally appropriate mitigation actions” from the Bali Action Plan. NAPAs are “national adaptation programs of action”.

11. **Leverage existing institutions** – where appropriate, existing institutions should be leveraged, and new institutions created where necessary

12. **Ease of access** – while ensuring the above principles are met, the system should minimize transaction costs and barriers to action, as well as be flexible and able to adapt to changing circumstances.

There are four main sources of financing: public funds from developed countries, international transport levies, developing country self-financed support, and off-set markets¹⁷

Multiple possible sources of funding exist, and a combination would be needed to meet the developing countries requirements outlined above:¹⁸

- **Public funds from developed countries:** could be raised from general tax revenue, carbon-specific taxes, domestic emissions trading system auction proceeds, or the sale of international credits (AAUs) which could be held back and auctioned (the Norwegian proposal). As the funds would be raised through national treasuries the additionality of government transfers would be difficult to ascertain. A rough estimate across the set of public sources yields potential of \$37–62 billion per year, depending largely on budgetary and political considerations.¹⁹ Public funds from developed countries could fund both mitigation and adaptation efforts
- **International transport levies:** a levy on international aviation and shipping emissions could yield \$12–25 billion per year in 2015. Funds generated by transport levies could fund both adaptation and mitigation efforts
- **Developing country self-financed support:** some middle income countries have been, and will likely continue to, fund some aspects of low carbon development themselves, out of self-interest and as contributions to the global effort – for example, China has set a 15% renewable target by 2020 and put in place feed-in tariffs to support this. Developing countries could self-finance selected mitigation and adaptation opportunities depending on political priorities

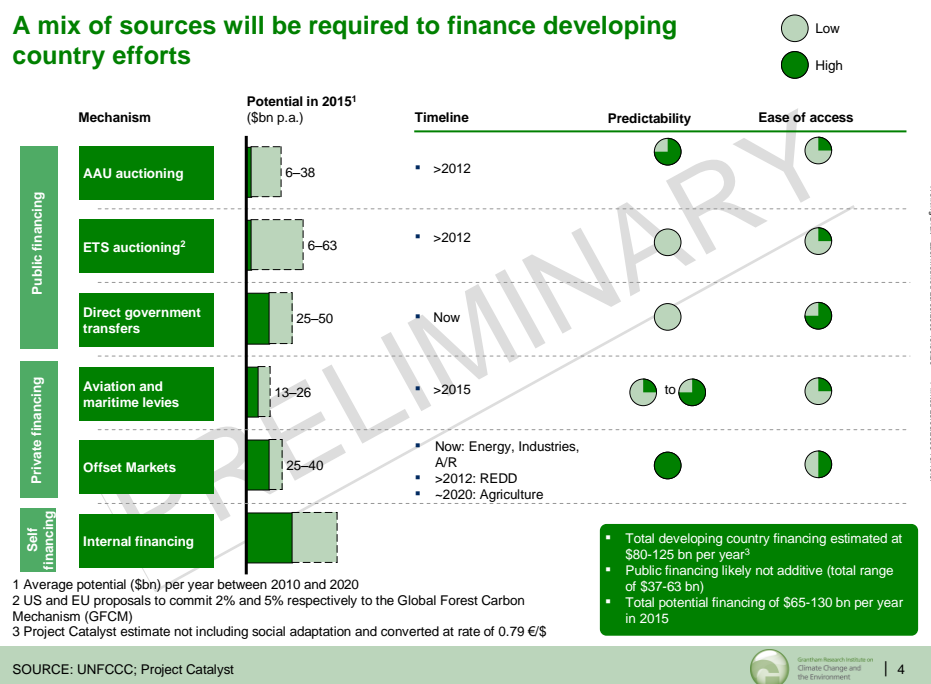
¹⁷ Offsets or carbon offset are financial instruments used for reduction in greenhouse gas emissions. Offsets are measured in metric tons of carbon dioxide-equivalent (CO₂e). They are sold on offset markets to developed countries or companies to offset the emissions above their allowed target.

¹⁸ Project Catalyst estimates, yearly average on the 2010-2020 period

¹⁹ Project Catalyst estimate. Converted at rate of 0.79 €/€

- Offset markets:** Developing countries can choose to participate in offset markets which can generate financing flows to support developing country low carbon investment. A developed world target of 25% reductions below 1990 by 2020 could generate a global demand for up to 4 Gt of offsets. The incremental cost of this mitigation is estimated at \$25-40 billion per year.²⁰ The offset market would finance the related mitigation projects. The size of the offset market and the mechanisms in place will be determined in Global Deal. In the case of a deal that allows for a significant amount of offsets such as the current domestic US climate bill (Waxman-Markey bill), a sectoral mechanism could provide the required scale of financial flows to recipient countries. A deal with fewer offsets may be more compatible with a smaller scale project-level mechanism. In both cases the mechanism in place will allow private sector to fund mitigation measures in developing countries.

A mix of sources will be required to finance developing country efforts



Different allocation mechanisms are being discussed for mitigation and adaptation. The main ones for mitigation are project level schemes; programmatic level schemes, and sectoral schemes. Fund allocation for adaptation is likely to be based on national adaptation plans.

²⁰ Project Catalyst estimate. Calculated assuming CDM only focused on abatements on cost positive abatements (right hand side of cost curve); cost calculated as average of the right hand side of the curve for abatements required for 450ppm pathway. Converted at rate of 0.79 €/£.

The current offset market system (project level CDMs) is expected to create cumulative emissions reductions of 1.3 GtCO₂ by 2012, worth ~\$13-19 billion per year to developing countries.²¹ This corresponds to an average flow of \$2 billion per year, significantly below cost of reaching maximum mitigation potential.²²

To ramp-up the current allocation mechanisms to channel the additional funds several (not mutually exclusive) alternatives have been proposed: project level schemes, sectoral schemes, and wholesale carbon markets, programmatic level schemes

- **Project level schemes:** These are the current mechanisms in place. They currently face high transaction costs, bottlenecks in processing and certifying projects, and so far have shown limited impact. If this type of schemes is to be maintained, the application process needs to be streamlined and private sector capabilities have to be built.
- **Programmatic level schemes:** Options that have been put forward to include the wider use of programmes (e.g. NAMAs or low carbon growth plans), streamlined additionality tests (e.g. standardised baselines) and various operational reforms. The programmes would be assessed against their potential abatement scope and financed accordingly.
- **Sectoral schemes:** Various sector schemes are being discussed, ranging from simple extensions of the CDM programmatic approach to globally agreed sector-wide emission standards for particular industries. Under the most likely form, a developing country would put forward plans to decrease emissions from an industry sector (e.g. power). That plan would have quantified targets corresponding to tonnes of abatement that, after an assessment, would be credited. Such schemes could potential deliver the scale required, but might have the same issues of ensuring additionality, measuring baselines, and verifying the results that have challenged the CDM.

Specific proposals for adaptation allocation mechanisms are still under discussion. However, funds will likely be allocated based on the countries' national adaptation plans. The plans should include identification and costing of short term and long term adaptation needs.²³ The UNFCCC or another international body under the

²¹ UNEP/Riso, Financial value calculated based on 10.1-14.7 \$/t

²² <http://cdmpipeline.org>

²³ UNFCCC: AWG LCA Negotiating text submission, 19th of May 2009

authority of the COP could play a central role in prioritizing the adaptation projects and allocating resources.

Finally, support for upfront investment might be needed in the form of loans or guarantees for capital expenditure. Loan mechanisms exist among development and climate institutions to support these up-front investments – for example, the Clean Technology Fund (World Bank) or the GEF Trust (UN). Additional credit capacity and guarantees specifically targeted (e.g. renewable energies) would support a quicker scaling up of these technologies.

Ensuring Africa's access to offset markets requires tailoring the market mechanisms to Africa's needs; designing a phased approach to market access to allow Africa build its capabilities

Africa has not effectively captured the financial flows from offset markets, future market mechanisms will be critical in ensuring Africa's access to future flows.

Up to now, Africa has captured \$39 million (1.6%) of the CDM revenues despite its big potential.

To ensure that Africa can capture the different mitigation opportunities, it requires schemes that: include methodologies and baselines for forestry, agriculture and renewable energy, have a streamlined application processes that can accommodate small-scale projects, and guarantees further capability building to enable access.

Africa's ability to access to offset markets will have to be ramped up over time. Accessing market finance for mitigation requires three things:

- 1) Eligible cost-competitive abatement: African abatement opportunities in agriculture, forestry, and power have to be eligible for mitigation funding
- 2) National carbon regulation and MRV infrastructure: the necessary institutions and capabilities have to be set-up to measure, report and verify mitigation projects.
- 3) A positive business environment: economic and political stability, functioning national institutions, and policies could help attract investors

Currently the largest abatement opportunities for Africa, REDD and agriculture, are not included in the existing CDM mechanisms and may not in the short term be part of an offset market arrangement, partly due to issues of regulation and MRV. Issues with MRV may apply to other sectors in Africa until sufficient capabilities have been built.

In the short term, this may mean that public finance sources are more suited to finance mitigation actions on climate change in Africa, particularly in the forestry and agricultural area.

However, Africa can play a role in this debate by proposing innovative solutions around the MRV of the reductions in emissions in these sectors. A phased approach could be one way to achieve a transition from project based, through programmatic/sector funding, to full carbon market integration in the long term. In a first phase (now to 2012), Africa could develop the necessary knowledge and run the necessary pilots to understand the exact MRV needs and opportunities across the continent. In a second phase (2012-2020), Africa could set-up the necessary MRV capabilities. In third phase (by 2030), Africa could transition completely to market driven mechanism. For example, in forestry, an initial phase could focus public funds on preparation, capability building, and knowledge development. A second phase could consist of building up basic MRV capabilities. Over time as MRV systems develop, funding could transition to market sources and “output” focus including pay-per-policy or pay-per-performance. In the longer term, funding can transition to being predominantly market sourced and “output” focused with pay-per-performance.

IV. TECHNOLOGY AND TECHNOLOGY DEPLOYMENT

The global deal can contribute to making the necessary adaptation and mitigation technologies available to Africa

Beyond funding and capability building support, a global deal on climate change could provide additional technology related support. A lot of the technologies suitable for Africa already exist. In some cases, acquiring these technologies can be done by improving the investment climate and thus increasing investments to deploy the suitable technology.²⁴

The global deal can further improve access and development of a wider range of adaptation and mitigation technologies. The negotiation text indicates that the deal should support short term and long term cooperative actions in technology. These actions should address both technology development and IP issues. It should be done while leveraging existing institutions to the extent possible.²⁵

The two major issues around technology are:

²⁴ UNFCCC: AWG LCA Negotiating text submission, 19th of May 2009

²⁵ UNFCCC: AWG LCA Negotiating text submission, 19th of May 2009

- Joint development A global climate deal should put in place institutional mechanisms to foster public-private, international, regional and global collaboration. This will help identify and develop the necessary technologies (including orphan technologies) at a more affordable price.²⁶
- IP barriers. Different proposals have been put forward to address IP issues: compulsory licensing on specific technology, sharing of publicly funded technologies, and patent protection exemption on selected technology for developing countries²⁷

Current institutions (e.g. UNFCCC) are likely to be enhanced with a technology advisory group. Different proposals suggest that this group should do all or some of the following: provide technical expertise to the governing institution and countries on the required technologies; track the available technologies and how to utilise them; coordinate technology development; and foster technology transfer²⁸

V. SUMMARY OF THE NEGOTIATING PROCESS LEADING TO COPENHAGEN

The African Ministerial Conference on Environment (AMCEN) is responsible for developing a common negotiation position for African countries for the global climate negotiations. A process for developing and refining the position has been defined and is underway. This process involves the AU Commissioner, who will relay the proposed negotiation position to the African Union who will in turn approve it.

- **AMCEN process** –
 - In June 2008, AMCEN agreed to develop a common negotiating position on a comprehensive international climate change regime beyond 2012 for the Copenhagen climate negotiations.
 - April 2009, common Africa proposal submitted to UNFCCC by Algeria
 - May 2009, AMCEN meeting to deepen position heading into Bonn negotiations and to be presented to AU commissioner
 - Oct 2009, final meeting of African negotiators in advance of COP 15

²⁶ UNFCCC: AWG LCA Negotiating text submission, 19th of May 2009

²⁷ UNFCCC: AWG LCA Negotiating text submission, 19th of May 2009

²⁸ UNFCCC: AWG LCA Negotiating text submission, 19th of May 2009

- **AU meetings** – AU Commissioner will present the outcome of the AMCEN process to the thirteenth summit of the AU in July 2009. The AU will also select leader(s) to represent the Africa position at COP 15.
- **UNFCCC meetings** –
 - Bonn Climate Change Talks (1-12 June) – Meeting of negotiators in lead-up to COP 15
 - COP 15 in Copenhagen (7-18 December) – Conference of the Parties (COP) serving as the meeting of the parties to the Kyoto
 - December 2012 – Kyoto Protocol expires
- **UN meetings** –
 - Opening of the UN General Assembly and UN climate change Summit in new York (September)
- **MEF meetings** –
 - Heads of State summit (9/10 July) – Meeting to take place alongside the G8 Summit in L’Aquila, Italy
 - Further meetings in the Autumn likely but not at Heads of State level
- **Other**
 - G8 Summit (8-10 July) in Italy