



Climate change adaptation in post-2012 architecture

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progressive governance

London, 2008

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Introduction

The United Nations Framework Convention on Climate Change (UNFCCC) is the only international institute that has the mandate to respond to climate change. The ultimate objective of the UNFCCC is to stabilise greenhouse gas (GHG) concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. The convention further states that such a level of concentration should be achieved within a timeframe sufficient to allow ecosystems to adapt naturally; to ensure that food production is not threatened; and to enable economic development to proceed in a sustainable manner.¹ The word “prevent” under the framework convention gives a sense that the world community will work towards avoiding dangerous anthropogenic interference primarily through the reduction of greenhouse gases. The Kyoto Protocol, agreed in Kyoto, Japan in 1997, is the first legally binding instrument that obliges developed country parties² to a quantified emission limitation or reduction target. The overall reduction commitment of the Annex I country parties is to achieve reductions 5.2% below the 1990 level by 2008–2012.³

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demonstrates their lack of commitment to the problem. A GHG inventory of Annex I parties, excluding countries in economic transition, showed that by 2002 their emissions had increased 8.4% over the 1990 level (UNFCCC 2006). Furthermore, a recent assessment of the Intergovernmental Panel on Climate Change (IPCC) reported that global temperature has increased 0.74°C over the last 100 years and is projected to increase by a further 1.8 to 4.0°C (best estimates for low and high scenarios) over the next 100 years (IPCC 2007).

An increased understanding of the impact of climate change combined with the relative ineffectiveness of existing response measures and the gradual increase of carbon dioxide in the atmosphere have contributed to the need for more effective responses to climate change, beyond the first Kyoto commitment period of 2012. Discussion and interaction among the parties and research groups urged for greater cuts in greenhouse gases and enhanced cooperation between countries with regard to adaptation. This includes technology transfer and providing resources to developing countries which have been recognised both in the UNFCCC and the Kyoto Protocol.

This paper reviews key proposals on the future architecture of climate change with a special focus on the adaptation component. These include the proposals and submissions from parties during the dialogue on long-term cooperation; proposals under AWG Article 3.9; and future framework suggestions by different research and environmental groups and other international bodies and constituencies.

1. Article 2 of the United Nations Framework Convention on Climate Change.

2. Annex-I Country Parties to the UNFCCC.

3. Article 3 of the Kyoto Protocol.

The first part of this review paper focuses on the different elements of the proposals and on the adaptation component submitted before COP13. The second part summarises the Bali Action Plan and its importance for future adaptation regimes. The third part highlights the required measures to work towards a better climate change regime. This focuses on climate change adaptation and includes details on the required policy support from European countries.

Pre-Bali discussions and proposals

Adaptation in the post-2012 regime is being discussed along with other agenda items, of which, dialogue on long-term cooperative action is important. It may be noted that in the official discussion under the Framework Convention on Climate Change and Kyoto Protocol there is no separate agenda item concerning adaptation. Furthermore, even if there was no agenda concerning post-2012 issues in the COP before the 10th session of the parties, the majority of the countries, including the United States and other developing countries, were not in favour of starting any formal negotiations on what should be done after the first commitment period of the Kyoto Protocol.

However, it does not mean that there was no discussion and interaction outside the official session. A number of groups held discussions on different elements of the future climate change regime. These south-north dialogues (Ott et al. 2004) include the “three-track proposal”—Kyoto, decarbonisation and adaptation—from the Climate Action Network (2003); and “contraction and convergence” by Aubrey Meyer and the Global Commons Institute in the UK. Moreover, these developments were followed by the Global Leadership for Climate Action (GLCA) suggesting different elements of the post-2012 regime, including adaptation.

Under the COP agenda, an informal exchange of information on actions relating to mitigation and adaptation took place in the UNFCCC Seminar of Governmental Experts (SOGE) in May 2005 in Bonn. But the Conference of the Parties, at its 11th session in Montreal, Canada, began the process for formal discussion on the “beyond-2012” climate regime. Considering the important role of non-Kyoto parties, and in an effort to find ways to engage them, the COP took decision 1/CP.11, the “dialogue on long-term cooperative action to address climate change by enhancing implementation of the convention”. This is a non-binding agreement to exchange experiences and to analyse strategic approaches for long-term cooperative action on climate change. It identified four major areas for discussion: a) advancing development goals in a sustainable way; b) addressing action on adaptation; c) realising the full potential of technology; and d) realising the full potential of market-based opportunities.⁴ The dialogue process continued up to Bali and ended with a report based on the dialogue. The report recognised the effectiveness of dialogue as a response to climate change and suggested a variety of process options that might be considered by the COP.

The first workshop, “dialogue on long-term cooperative action”, provided a platform for discussion on advancing development goals in a sustainable way, and gave the parties the chance to exchange views. It also addressed action on adaptation and included discussions around realising the full potential of technology and market-based opportunities (IISD 2006a). The second workshop

4. Decision 1/CP.11, FCCC/CP/2005/5/Add.1, 30 March 2006.

focused on concrete actions for development goals and market-based opportunities, as well as on effective and appropriate national and international responses to climate change.⁵ The third workshop recognised the importance of adopting a firm scientific basis for urgent action; adaptation in the context of sustainable development; future cooperative action; and current international efforts to support adaptation. To facilitate the dialogue it identified a) enhancing the assessment process; b) increasing adaptive capacity, particularly of the most vulnerable communities; c) supporting the mainstreaming of adaptation into national planning and analysis of needs; d) future funding and other supports paradigms; e) the role of technology; f) capacity development, experience sharing and regional collaboration; g) the need for a holistic cross-cutting and integrated approach; and i) possible initial areas of adaptation action for further consideration.

Issues relating to adaptation were, a) strengthening the methodological basis for the adaptation needs assessment process, for example, by expanding the scope of the NAPA process and the number of countries participating in it; b) focusing on practical actions that would enhance current adaptive capacity with a view to responding to future impacts; c) mainstreaming of adaptation both in national policy and in development support programmes; d) building upon potential regional synergies and synergies within other developmental and environmental objectives; e) instituting adequate and innovative arrangements for international support for adaptation, including for additional financial resources; f) enhancing international cooperation on adaptation; and g) instituting functioning national systems to address adaptation.

The necessity of a holistic approach which would be able to integrate these elements and lead to a successful international response was also identified.⁶ The final outcome of the dialogue summarised all of the discussion under four building blocks, one of which was adaptation. The decision on “consideration of commitments for subsequent periods for parties included in Annex I to the convention under Article 3, paragraph 9, of the Kyoto Protocol” is also important as the scale of adaptation response in the future will depend on the level of reduction, commitment and achievement. It also invites parties to submit their views on Article 3.9.⁷ From Bonn in 2006 to Bali in 2007, the AWG has held four sessions with one extended session discussing commitments for beyond the 2012 climate regime. The group will continue their work in the next two years in order to complete their work programme. Over the last two years, parties expressed their views, exchanged experiences and suggested strategic approaches for long-term cooperative actions.

The Gleneagles Plan of Action (G8 2005) states that it will take forward action in six areas, of which “managing the impact of climate change” is one. Four paragraphs under this section reaffirm the importance of the IPCC and welcome the extensive analysis of research being undertaken to complete its fourth assessment report by 2007 (para. 30). It also states that all countries need further access to information, and that countries need to develop the scientific capacity which will allow their governments to integrate climate, environmental, health, economic and social factors into development planning and resilience strategies. It notes that Africa’s data deficiencies are greatest and warrants immediate attention (para. 31). It also notes the role of the UNFCCC in supporting the efforts of developing countries to improve their capacity for adaptation and mitigation. This

5. Oral report at COP12 by the co-facilitators on dialogue on long-term cooperative action.

6. Dialogue working paper 4 (2007).

7. Decision 1/CMP.1, FCCC/KP/CMP/2005/8/Add.1, 30 March 2006.

includes the adaptation priority of the Global Environment Facility (GEF, para. 32). Furthermore, the Gleneagles Plan of Action looks forward to further discussions on how development and energy strategies can be strengthened in order to build resilience to climate impacts, including at the Millennium Review Summit in September 2005 (para. 34).

A number of workshops, seminars and stakeholder consultations organised by various policy research institutes in Asia and the Pacific region have been used to discuss countries' future needs and their concerns about adaptation. It is recognised that different adaptation issues are being discussed under different agendas within both the UNFCCC and the Kyoto Protocol, and that a comprehensive formal proposal consisting of all the issues on adaptation under the future regime of climate change beyond 2012 is missing. These important discussions and consultations were carried out by the Institute for Global Environmental Strategies (IGES) in 2005 in six Asian countries in order to establish their concerns, interests and priorities for the climate regime beyond 2012. Further consultation meetings were organised under the APN Capable Project by research institutes in Bangladesh, India, China, Japan, Thailand and Indonesia.

Several proposals, mentioned earlier, on future climate regimes were shared and discussed outside the formal discussions and negotiations under the framework convention and protocol. However, most of the information sharing occurred during meetings involving the parties in attendance at the conference, the subsidiaries and other negotiating parties.

Long-term vision and interdependence

A system of interdependence and a shared vision should underpin the global response to climate change. The need for such a vision was discussed under the UNFCCC dialogue process. Topics discussed included fairness, common but differentiated responsibilities and capabilities, environmental integrity, economic efficiency, flexibility to allow for differing national circumstances and the importance of sustainable development priorities. In terms of the emission reduction goal, dialogue under the UNFCCC and the ad-hoc working group on further commitments for Annex-I parties under the Kyoto Protocol, are very much interdependent.

More mitigation means fewer impacts and therefore less adaptation needs. Therefore, the scale of adaptation in the beyond-2012 climate change regime will depend on the scale of climate change impacts and vulnerability. There was a strong demand from the developing and least developed countries that increases in the global temperature should be kept below 2°C. The European Union supports this, with a view to achieving the ultimate objective of the convention that the global mean surface temperature increase should not exceed 2°C above pre-industrial levels (UNFCCC 2006b). The Sao Paulo Proposal⁸ for an agreement on future international climate policy, and the Adaptation Tract of Climate Action Network echoed the need for the temperature not to exceed a level that would precipitate dangerous interference with the climate system.⁹ It is important to keep in mind that an increase in temperature at global level does not imply the same level of changes at regional, country and local levels. Therefore, an assessment of adaptation needs would be required at local level, taking into consideration local circumstances.

8. Basic workshop, 'Future international climate policy'; The Sao Paulo Proposal for an agreement on future international climate policy.

9. CAN 2003.

Discussion in the AWG under the Kyoto Protocol emphasised that greenhouse gas emissions need to peak in the next 10 to 15 year and subsequently reduce to keep the concentration level between 450 and 550ppm of carbon dioxide equivalent. Another important area of relevance is the mainstreaming of climate change into decision-making processes, including macro-economic planning and insurance. The south-north dialogue on equity stated that keeping targets below 2°C posed an unprecedented global challenge, and that profound infrastructural transitions would be required to allow global emissions to peak by 2020 (Ott et al. 2004).

International cooperation and a response mechanism for capacity building

There is a need for increased cooperation on adaptation, including the capacity to identify the risks most likely to be confronted, and to develop effective strategies to manage the risks and build resilience. Understanding on the fundamentals of adaptation is still limited, and future analysis needs to focus on likely impacts, review of experiences and the exchange of best practices. There also needs to be a capacity for identifying priority adaptation activities at the national level.¹⁰ Similar needs have been identified as the key challenge of adaptation given national circumstances and adaptive capacity (Ott et al. 2004).

The suggestion has been made that capacity building should be built on to existing adaptation activities and mechanisms under the UNFCCC. The Canadian submission stated that the five-year programme of work on impacts, vulnerability and adaptation to climate change (now known as the Nairobi Work Programme (NWP) of the Subsidiary Body for Scientific and Technological Advice (SBSTA)) provides a solid foundation for action on adaptation under the convention (UNFCCC 2006c). Activities under the SBSTA programme include addressing information gaps and improving access to information, sharing experiences, etc. It is important to note that the five-year work programme is under the SBSTA and thus limits adaptation activities on the ground. However, pro-active initiatives by the UNFCCC secretariat have identified developing programmes of work on adaptation and response measures.

It was highlighted that adaptation has a close relation with development, and thus the participation of development organisations is indispensable (UNFCCC 2006e). Therefore, parties need to remain open to the new and innovative options within and outside the UNFCCC, and examine the role of multilateral and regional organisations, the private sector, aid agencies and civil society organisations in facilitating adaptation, including at a community level. This may include multilateral and bilateral development agencies (UNFCCC 2006c).

Mainstreaming adaptation

Climate change will impact on all countries, and the economic, social and environmental challenges are common, but capacity to address these challenges differs considerably among the parties. To be successful, GHG mitigation, coupled with adaptation measures, should be integrated into broader sustainable development objectives, such as economic development, energy security, public health, air quality and local environmental protection. The United States underscored that the

10. FCCC/CP/2007/4.

convention could give consideration to the integration of climate information, such as recent climate data, trends, observations and forecasts, into planning efforts as an essential step in mainstreaming adaptation into important decision-making processes, since this is an issue that all parties will need to address regardless of their adaptation priorities. This might best be facilitated through the sharing of examples where climate risks are being considered in planning decisions (UNFCCC 2006d).

Necessary support mechanisms for the implementation of adaptation strategies need to be developed, and are an integral part of country development. In order to achieve this, a number of steps need to be taken. These include enhancing the scientific basis for decision making; further developing and using methods and tools for the assessment of adaptation needs, and the results of adaptation measures; continuing to build individual and institutional capacity; increasing public funding; and ensuring the availability of the necessary technological solutions.¹¹

Sustained funding for adaptation

The dialogue concluded in Bali recognised the need for long-term funding and support for the implementation of adaptation activities on a global scale. Existing funds will need to be supplemented by the development of new and innovative sources of funding and instruments, such as carbon finance, the wide engagement of business, disincentives for maladaptation and developing new risk-sharing mechanisms. Further effort will be required to remove the barriers that limit access to existing and new funds. International organisations and implementation agencies can play a key multifaceted role in the area of development cooperation and disaster reduction. Adequate and predictable funding for adaptation, an equitable framework for access, and an equitable burden-sharing framework among developed countries for financing adaptation needs have also been suggested for a beyond-2012 adaptation regime by research groups (Ott et al. 2004).

Expanded adaptation mechanisms are needed in the second commitment period, involving assistance and compensation funded by industrialised countries to deal with the impacts of climate change. Widening levies to other existing and future GHG reduction mechanisms to fund adaptation has been proposed. Considering the principle adopted, ie “new and additional and adequate and predictable”, the present modalities of voluntary contribution have failed to meet the required level of support. Therefore, future climate change regimes should agree mandatory contributions by developed countries, without which the implementation of adaptation will be limited in the developing countries and especially in the least developed countries due to the lack of financial and institutional capacity (Alam 2007).

The proposal recognises that significant funds will be required to finance and support adaptation needs in developing countries, particularly among the LDCs and SIDs which are most vulnerable to the adverse impacts of climate change. Considering the ineffectiveness of the existing funds to address adaptation, an approach which is inadequate and voluntary, there is a need to explore opportunities to expand the funding base, and sources to service adaptation requirements. Adaptation funds under the Kyoto Protocol must consider the emissions trading (ET), joint

11. FCCC/CP/2007/4.

implementation (JI) and clean development mechanisms (CDM), and the charges levied on them. The levy or charge on shares of proceeds from credits should be considerably higher than that which currently prevails, if necessary funds are to be mobilised (Pew Center 2005).

Risk transfer and incentives

There have been calls for the implementation of UNFCCC Article 4.4 (developed country support for adaptation in vulnerable developing countries) and a process to ensure a rapid response to help countries suffering damage. The need for innovative ways of financing, and issues of inadequacy, have also been highlighted. The successful implementation of joint projects aimed at vulnerability assessment, preparedness for natural hazards and risk management were emphasised in the Bonn dialogue workshop (IISD 2006a).

The meeting of African ministers in October 2005 affirmed that “climate change is already happening and that African countries are extremely vulnerable to the adverse effects”. Positive incentives for adaptation could include a risk-sharing mechanism for the adverse impacts of climate change, in which multilateral funding leverages the resources of the (re)insurance industry (UNFCCC 2006a). Innovative risk transfer mechanisms, also suggested by other groups outside the convention, include a dialogue on north-south equity.

Technology transfer

The importance of technology transfer was emphasised in the dialogue and discussions. It is important to build up and share available technologies, information and policy experiences at regional and national levels. Priority should be given to truly necessary measures while making the most of existing frameworks and expertise. Studies on the adaptation options, the development and dissemination of technologies, know-how and practical adaptation measures are also necessary.

The Bali Action Plan and adaptation component

The Bali Action Plan agreed by the Conference of the Parties at the 13th session (CoP13/MoP3) of the United Nations Framework Convention on Climate Change (UNFCCC) established an ad-hoc working group on long-term cooperative action, now, up to and beyond 2012, which includes adaptation as one the building block under the convention. It recognises that deep cuts in global emissions will be required to achieve the ultimate objective of the convention, without setting reduction target.

Enhanced action on adaptation

Enhanced action on adaptation under the Bali Action Plan has incorporated almost all of the elements suggested under the dialogue process. These include a) international cooperation to support the urgent implementation of adaptation actions, including through vulnerability assessments, the prioritisation of actions, financial needs assessments, capacity-building and

response strategies; b) the integration of adaptation actions into sectoral and national planning, specific projects and programmes; c) the means to incentivise the implementation of adaptation actions, and other ways to enable climate-resilient development and reduce the vulnerability of all parties, taking into account the urgent and immediate needs of developing countries that are particularly vulnerable to the adverse effects of climate change, especially the least developed countries and small island developing states, and further taking into account the needs of countries in Africa affected by drought, desertification and floods; d) enhanced adaptation action including risk management and risk reduction strategies, risk sharing and transfer mechanisms such as insurance, disaster reduction strategies and means to address the loss and damage associated with climate change impacts in developing countries that are particularly vulnerable to the adverse effects of climate change; and e) ways to strengthen the catalytic role of the convention in encouraging multilateral bodies, the public and private sectors and civil society, building on synergies among activities and processes as a means to support adaptation in a coherent and integrated manner.

Post-Bali discussion and challenges

The ad-hoc working group established by the Bali Action Plan on long-term cooperative action—now, up to and beyond 2012 under the convention—shall complete its work in 2009 and present the outcome of its work to the Conference of the Parties for adoption at its 15th session. This process allows two years to discuss the different elements of adaptation in the post-2012 regime. The critical issues and challenges that need to be addressed in the next two years are presented below.

Setting GHG reduction targets

The Bali Action Plan recognises that deep cuts in global emissions will be required to achieve the ultimate objective of the convention. It emphasises the urgency of addressing climate change, as indicated in the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC). The IPCC predicts that the global mean temperature will increase above pre-industrial levels at equilibrium (using “best estimate” which ranges from 2.0 to 2.4 where peaking year for CO₂ is 2000–2015; and 4.9 to 6.1 where peaking year for CO₂ is 2060–2090). The report also suggests that under most equity interpretations, developed countries as a group will need to reduce their emissions significantly by 2020 (10–40% below 1990 levels) and to lower levels further still by 2050 (40–95% below 1990 levels) for low to medium stabilisation levels (450–550ppm CO₂-eq). Under most of the regime designs considered for such stabilisation levels, developing-country emissions need to deviate below their projected baseline emissions within the next few decades.

Considering the very wide range of potential temperature change and peaking years for CO₂ emissions, the work programme of the ad-hoc working group should initiate a discussion and agree on the global mean temperature increase and peaking year for CO₂ for a future climate regime. The future scale of adverse impacts of climate change will depend on the scale of reduction of greenhouse gas emissions. Therefore, efforts should be made to agree that the global mean

temperature should not increase from 2.0 to 2.4, and the corresponding peaking year for CO₂ should be 2000-2015.

Setting adaptation measures and action

Future vulnerability to climate change will depend on real reductions in future GHG emissions. Appropriate adaptation measures and action need to be identified and defined based on vulnerability. Therefore, the work programme should initiate discussion on and agree a range of financial resources for financing both adaptation and mitigation.

It is generally recognised that the types of adaptation actions required, and the group of vulnerable countries affected, are quite broad, and therefore appropriate action measures need to be identified based on the level of vulnerability of a particular country. Therefore, the work programme should include a process to develop a vulnerability index and to categorise countries according to their vulnerability, in order to identify the scale of specific needs and actions for adaptation to climate change. There will be huge challenges, both scientifically and politically, to get endorsement for these measures internationally.

Up to 2009, the urgent and immediate adaptation needs of developing countries that are particularly vulnerable to the adverse effects of climate change—especially the least developed countries, small island developing states, and countries in Africa affected by drought, desertification and flood—can be dealt with alongside other ongoing agenda items under the UNFCCC and Kyoto Protocol.

Agreement on required financial resources

A number of discussions have already been held on the financial resource requirements for both mitigation and adaptation, including under the UNFCCC. The work programme of the ad-hoc working groups should initiate a discussion leading to an agreement on the finance required for adaptation. Without an agreed financial requirement, defining mechanisms to mobilise resources will be difficult.

The ad-hoc working group should initiate a discussion to find different ways and means to improve access to adequate, predictable and sustainable financial resources and financial and technical support, and the provision of new and additional resources. There are a number of ideas for innovative funding means to assist developing country parties, who are particularly vulnerable to the adverse impacts of climate change, to meet the cost of adaptation. Discussion towards an agreement on such a funding mechanism would be a welcome element of the work programme.

Many different meetings and consultations in the Asia-Pacific developing countries and at an international level have noted that the current 2% share of the proceeds from CDM projects to the adaptation fund is inadequate to respond to the adaptation needs expressed by developing countries. Therefore, the future regime should extend the levy to other GHG reduction mechanisms to scale up the size of the adaptation fund. The demand from developing countries to make use of

the Clean Development Mechanism by Annex-I country parties has merits on a number of climate change issues, including the generation of a fund for adaptation.

The idea of introducing market mechanisms through adaptation vouchers or credits, and of using an insurance mechanism for adaptation, seems to be attractive to developing countries that are extremely vulnerable to climate change impacts. However, total reliance on such measures would be inappropriate as private insurance markets are still immature in developing countries.

The elaboration of positive incentives for developing country parties for the enhanced implementation of national mitigation strategies and adaptation action is necessary, and positive incentives along with access mechanisms need to be identified.

The work programme should initiate a discussion on the modalities necessary to ensure “new and additional and adequate and predictable finance”, along the lines of the principle adopted by the UNFCCC. It should work towards agreeing a mandatory contribution by developed countries, without which the implementation of adaptation will be limited in the developing countries and especially in the least developed countries, due to a lack of financial and institutional capacity.

The work programme of the ad-hoc working group should initiate a process to build the capacity of the developing countries to assess the costs of adaptation and determine their financial needs. It may request developed countries, other UN bodies and agencies to provide financial and technical support for capacity-building.

In funding adaptation activities in the developed and developing countries, equity and justice must be central considerations. The recent massive investment by developed countries in climate adaptation measures within their own borders, while reserving potentially billions of dollars to protect themselves in the future, will further widen the gap between north and south. There should be a fair balance between investment in developed countries to deal with climate change, and contributions to adaptation funding for the most vulnerable people in the south

The role of the EU

The European Union continues to play a significant role in shaping a future climate change regime in Europe and many developing countries. In Bali, the role of the EU was very important and highly appreciated by many developing country parties. Its role in the above areas will be vital in the forthcoming political and negotiating process over the next two years.

Increase absorption of south

The inadequacy of adaptation funding for developing countries, including LDCs and SIDS, to deal with climate change is well recognised, and mainstreaming adaptation into development is indispensable. However, developing countries also need adequate capacity to design adaptation projects and mainstream into development, in order to utilise the funds available under adaptation.

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