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**AD HOC WORKING GROUP ON LONG-TERM COOPERATIVE ACTION
UNDER THE CONVENTION**

Fourth session

Poznan, 1–10 December 2008

Item 3 (a–e) of the provisional agenda

Enabling the full, effective and sustained implementation of the Convention through long-term cooperative action now, up to and beyond 2012, by addressing, inter alia:

A shared vision for long-term cooperative action

Enhanced national/international action on mitigation of climate change

Enhanced action on adaptation

Enhanced action on technology development and transfer to support action on mitigation and adaptation

Enhanced action on the provision of financial resources and investment to support action on mitigation and adaptation and technology cooperation

Ideas and proposals on the elements contained in paragraph 1 of the Bali Action Plan

Submissions from Parties

Addendum

1. In addition to the 32 submissions from 19 Parties contained in document FCCC/AWGLCA/2008/MISC.5, 10 further submissions from three Parties have been received.
2. As requested by the Ad Hoc Working Group on Long-term Cooperative Action under the Convention, these submissions have been posted on the UNFCCC website.¹ In accordance with the procedure for miscellaneous documents, they are attached and reproduced* in the language in which they were received and without formal editing. The secretariat will continue to post on the relevant web page the submissions received after the issuance of the present document.

¹ <http://unfccc.int/meetings/ad_hoc_working_groups/lca/items/4578.php>.

* These submissions have been electronically imported in order to make them available on electronic systems, including the World Wide Web. The secretariat has made every effort to ensure the correct reproduction of the texts as submitted.

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* This submission is supported by Bosnia and Herzegovina, Croatia, the former Yugoslav Republic of Macedonia, Montenegro, Serbia and Turkey.

** This submission is supported by Croatia, the former Yugoslav Republic of Macedonia, and Montenegro.

PAPER NO. 1: COLOMBIA

Submission of Colombia on adaptation under the AWG LCA

A work program on adaptation under the Bali Action Plan must:

- Be guided by the principle of common but differentiated responsibilities under the United Nations Convention on Climate Change.
- Facilitate access to new, additional, predictable and stable financial resources for adaptation in particular for developing countries, including the most vulnerable.
- Facilitate access to capacity building, including financing and technical support, and incorporate adaptation concerns at the national and regional development process.
- Facilitate access to development and technology transfer of technology to development countries that are vulnerable to climate change, including countries with distinctive climate patterns due to the specific relation between mountainous ecosystems and low lying coastal areas, in order to establish specific regional climate change information for adaptation planning in the short, medium and long term.
- Technology transfer should be based on sector specific needs and take into account vulnerability assessments and capacity building, at the national and regional level.
- Establish Regional Adaptation Excellence Centers in Latin America, which should take into account regional adaptation needs and vulnerabilities, to promote information exchange on short, medium, and long term climate change challenges and risks in the region, capacity building, research, and development and transfer of technologies.
- Enhance exchange and access to information, lessons learned in local communities, as well as research on adaptation, including those based on ecosystem based approach strategies and the role of local communities. Shared knowledge on adaptation should include public information and awareness.
- Create regional workshops on adaptation to exchange information and lessons learned and to develop regional adaptation strategies.
- Promote professional development through scholarships and other learning opportunities.
- Enhance the assessment of costs for adaptation for developing countries, in particular related to vulnerability (including social, economic, environmental and gender aspects), means of implementation of adaptation measures, and cost benefit analysis of adaptation projects and programs. Costs of adaptation should take into account ecosystem based approach strategies.
- Risk management and risk reduction strategies should be based on the effective use of climate projection scenarios, early warnings, vulnerability maps and risk assessments that allow identify short and long term priorities of adaptation in each country. Risk management and risk reduction strategies should be articulated through national and international entities that are implementing risk and adaptation activities, taking into account the role of local communities.
- Enhance atmospheric simulations in Andean Countries through climate change scenarios

PAPER NO. 2A: FRANCE ON BEHALF OF THE EUROPEAN COMMUNITY AND
ITS MEMBER STATES

This submission is supported by Bosnia and Herzegovina, Croatia, the Former Yugoslav Republic of Macedonia, Montenegro, Serbia and Turkey

Paris, 14 November 2008

Fourth session of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention (AWG-LCA 4)

Poznan, 1-12 December 2008

Subject: A shared vision for long-term cooperative action

1. The EU believes that agreement on a shared vision will play a central role for long-term cooperative action. The shared vision is an overarching element which is essential to ensure development towards a safe and sustainable low-carbon economy, sustainable production and consumption, energy security and resilience in the face of climate change. The agreed shared vision should provide a clear statement of political will, guidance and greater clarity for investment decisions that need to be taken today in all areas to get us on this pathway.
2. The current financial crisis cannot be an excuse to deviate from climate protection policy. We would like to note that climate policies open new opportunities and can stimulate growth in the area of low-carbon technologies and encourage investments in energy efficiency and renewable energy, focusing on real investments.
3. The EU believes that the shared vision should translate the ultimate objective as defined in Article 2 of the Convention into a common and shared understanding on putting the world on a pathway towards a low carbon society that enables global average temperature increase to be limited to not more than 2°C above pre-industrial levels and thereby avoids dangerous climate change while allowing for sustained economic welfare, safeguarding the environment, ensuring that food production is not threatened and strengthening climate resilience.
4. By signing up to the Copenhagen agreement all leaders of States and Governments should be able to confidently state to their constituencies that this agreement will enable Parties to jointly shape the future in a way that takes all interests and concerns into account. The shared vision should embody confidence in the future and should inspire our societies to make things happen.

Shared Vision and sustainable development for all Parties

5. The EU believes that the shared vision should be a vision of sustainable development for all countries – it should describe how all countries are to achieve their development goals, including the Millennium Development Goals, in a low-carbon fashion that safeguards the environment, strengthens climate resilience, provides for access to sustainable energy, and allows for sustained economic welfare. In this respect, the shared vision must include a long-term global goal for emission reductions, but it clearly is more than just that.
6. For the EU the move towards a low carbon society is one that also incorporates sound economic and development policies. Evidently in the current financial climate this is even more relevant and an imperative in terms of shaping our future. The move towards a low carbon society could therefore be framed as a climate, energy and development investment programme for the first half of this century

that will pay off in many ways during the coming decades, economically as well as in terms of security, stability, and the environment. Benefits of strong global early action on climate change far outweigh the economic costs of action. In this respect, a key challenge for the Copenhagen agreement will be to develop in conformity with the Bali action plan an architecture to optimise and mobilise investment and financial flows from various sources and to deliver financing efficiently, effectively and equitably.

A long-term goal to guide short- and medium-term action

7. A long-term goal is needed to guide short- and medium-term action. Midterm targets for emission reductions from developed countries and substantial deviations from baselines from developing countries by 2020 have to be consistent with the long-term goal.

8. Without a long-term goal as a yardstick, our short-term action both on mitigation as well as on adaptation, including decisions on technology and finance risk to fall short of what has to be done to achieve the ultimate objective of the Convention.

9. The long-term goal should be based on science and recognise the scale and urgency of the challenge as outlined by the IPCC 4th Assessment Report. It should aim at avoiding dangerous climate change impacts in particular for the most vulnerable countries, regions, and people.

10. For the EU this means that the international community should pursue a pathway compatible with the limitation of global average temperature increase to not more than 2°C above pre-industrial levels. This will require a reduction in global emissions of at least 50% from 1990 levels by 2050, which means that global greenhouse gas emissions will have to peak by 2020 and decline thereafter. It should also define clear mid-term targets with fair contributions from all Parties, according to the principle of common but differentiated responsibilities and respective capabilities. The EU notes that, based on available elements such as current population projections, such a level of ambition means that, by 2050, global average greenhouse gas emissions per capita should be reduced to around two tonnes CO₂ equivalent, and that, in the long term, gradual convergence of national per capita greenhouse gas emissions between developed and developing countries would be necessary, taking into account national circumstances.

11. The AR4 demonstrates clearly that negative impacts of climate change are already evident and widespread, in particular in vulnerable regions of the world, and are increasingly posing a risk to ecosystems, food productions, the attainment of sustainable development and of the Millennium Development Goals as well as to human health and security. The AR4 also demonstrates that mitigation potential for adequate mitigation policies consistent with keeping the 2°C objective within reach that also entail a wide range of opportunities and co-benefits for other development goals, and that the goal can be achieved by deployment of a portfolio of technologies that are either currently available or expected to be commercialised in coming decades, assuming appropriate and effective incentives are in place. The costs of actions to mitigate climate change are small when compared to the costs of impacts due to inaction.

12. Keeping the 2°C objective within reach implies that all emissions from all sectors have to be addressed appropriately. In particular, emissions from international aviation and maritime transport have to be included in the global mitigation objective with clear and meaningful targets.

13. Reductions in emissions from deforestation and forest degradation must also make a major contribution. The shared vision should include a goal to halt these emissions and reverse them within the next two to three decades, while ensuring the integrity of the climate regime and maximising co-benefits, in particular with regard to biodiversity protection and sustainable development.

14. The shared vision has to be clear on the responsibilities of developed countries to take the lead by committing to ambitious mid-term targets and to support developing countries in the transition to a low-carbon society. At the same time, the shared vision also has to acknowledge that each country must do its fair share to solve the problem.

15. Developed countries have to continue to take the lead by committing to collectively reducing their emissions of GHGs in the order of 30% by 2020, through domestic and international efforts, compared to 1990. We note the information provided by the IPCC, that keeping the 2°C objective within reach implies that developed countries should collectively reduce their greenhouse gas emissions by between 25 and 40% by 2020 compared to 1990 levels, through domestic and international efforts, and transform their economies over the coming decades in order collectively to reduce their greenhouse gas emissions by 80 to 95% by 2050 compared to 1990 levels.

16. We note that, on the basis of information provided by the IPCC, keeping the 2°C objective within reach implies that developing countries in many regions will need to make a substantial deviation of their emissions from baseline by 2020. Recent scientific research indicates that developing countries as a group, in particular the most advanced among them, would have to reduce their emissions by 15 to 30% below business as usual, respecting the principle of common but differentiated responsibilities and respective capabilities, in order to be consistent with the global emission reduction goal.

Shared vision and the building blocks of the Bali Action Plan

17. On mitigation and adaptation: The EU believes that the shared vision has to guide our concrete short and medium-term enhanced mitigation and adaptation actions. A shared vision in line with keeping the 2°C objective within reach requires urgent action on mitigation. Such a shared vision takes into account both the limits of adaptation as well as urgent action on adaptation as some impacts are already unavoidable due to the inertia of the climate system.

18. Even limiting global warming to not more than 2°C implies climate change impacts that affect sustainable development in all countries. The EU is of the view that the goal of adaptation is to strengthen resilience, reduce the vulnerability of economic, social and ecological systems, to minimise the negative impacts of climate change on human health and welfare and on sustainable development and to make full use of any opportunities. Climate resilient development is essential to achieve sustainable development and to reduce poverty and inequalities. Adaptation should be mainstreamed into all relevant decision-making processes, across all sectors at all levels, taking particularly into account the needs of the poorest and the most vulnerable.

19. With regard to the supporting building blocks: decisions on technology, finance and investment critically depend on the pathway related to the shared vision. A shared vision provides guidance on the scale of the investment required both to reach the long-term goal and a sustainable low-carbon society as well as to adapt to unavoidable climate change and increase climate resilience. The shared vision can help driving innovation by increasing the credibility of the policy framework that private investors are operating with.

20. The shared vision and long-term goal is critical for the decisions we take on necessary technology research, development and deployment. A pathway consistent with keeping the 2°C objective within reach requires different decisions with regard to aggressively scaling up of deployment of low-carbon technologies to achieve the necessary deep emission reductions, including possibly globally negative emissions. The IPCC AR4 gives evidence of this.

21. The EU presents specific proposals and ideas with regard to the four building blocks and how they relate to the shared vision in separate submissions on mitigation, adaptation, technology, and finance, respectively.

Shared vision and the architecture of the Copenhagen agreement

22. Finally, the EU would like to emphasise that the shared vision including the long-term goal has implications for the structure and architecture of the agreement we want to reach in Copenhagen.

23. The EU believes that the Copenhagen agreement should build on and broaden the Kyoto Protocol architecture. For that reason our work in 2009 should be guided by principles for a common shared vision aiming at a comprehensive and ambitious Copenhagen agreement. This includes the need to exploit synergies between the negotiation tracks to prepare the successful conclusion in 2009 of negotiations under both the Convention and the Kyoto Protocol in a comprehensive agreement.

PAPER NO. 2B: FRANCE ON BEHALF OF THE EUROPEAN COMMUNITY AND
ITS MEMBER STATES

This submission is supported by Bosnia and Herzegovina, Croatia, the Former Yugoslav Republic of Macedonia, Montenegro, Serbia and Turkey

Paris, 14 November 2008

Subject: Enhanced action on technology development and transfer to support action on mitigation and adaptation

1. Rationale and Context

Meeting a shared vision will require a massive shift in the scale and pace in the global development and deployment of technologies for mitigation and adaptation.

The EU believes that the Convention will play an important role in this process, but underlines that the scope of the technology challenges stretches beyond the remit of the UNFCCC alone. A future climate change agreement should acknowledge the efforts undertaken outside the Convention in line with Article 11.5 of the Convention. The activities of the Convention should focus on issues and areas where they make a real impact on the overall technology challenges.

The existing technology transfer framework (4/CP.7) and the additional set of actions to enhance implementation of Article 4.1c and 4.5 of the Convention (3/CP.13 and 4/CP.13) provide a sound foundation for future action. However, as highlighted in the Bali action plan (1/CP.13), enhanced action on technology development and transfer is needed to support action on mitigation and adaptation.

An enhanced Framework on technology for mitigation and adaptation should include agreement by:

- Developed country Parties to scale-up both their RD& D efforts and support related to technology through assistance to support developing countries efforts for technology needs assessments, human and institutional capacity building, design of national deployment schemes, and participation in voluntary cooperative technology-oriented agreements;
- Developing country Parties to define and implement technology-related PAMs for enabling environments, elaborate needs assessment and deployment scheme. Developing countries could also take action on technology deployment through sectors. In addition, developing countries could take action in voluntary technology-oriented agreements.

Specific details of mechanisms, tools and institutional arrangements that will make this Framework deliver results on the ground should be discussed in the negotiations.

2. Proposals for an enhanced framework on technology

The EU proposes to develop an enhanced framework for technology, aimed at strengthening the implementation of technology related commitments under the UNFCCC and elaboration of the Bali Action Plan, and that is linked to the implementation of national mitigation programmes and national planning related to adaptation (see the EU submissions on mitigation and adaptation). This enhanced framework on technology can consist of the following elements.

2.1 Key actions to enable technology development and transfer

Technology needs and needs assessments

Technology needs assessments (TNAs) provide essential information and clear orientation on technology priorities in developing countries. In addition, TNAs are valuable in informing technology-related support by developed country parties and further going cooperation.

To improve TNAs and the use of them, the EU suggests that:

- **TNAs should be fully elaborated** taking into account the findings of the 2006 TNA review¹; TNAs should also be shared and made publicly available to all relevant stakeholders within and outside the countries (e.g. through national communications);
- **TNAs' scope should be expanded** to cover also more in-depth assessments of obstacles in the functioning of relevant technology innovation systems, including detailed assessment of technology capacity and markets.

Enabling environments

All parties are required to improve enabling environments for technology diffusion through the identification and removal of barriers that can serve to expand commercial and public technology transfer to developing countries (4/CP.7). The EU acknowledges the ongoing efforts made by many developing countries in this area.

For a future climate change agreement the EU proposes that:

- **Technology-specific policies and measures (PAMs) should be defined/strengthened and implemented.**
- **These PAMs should include deployment schemes for low-carbon technologies and national energy and climate policies** (e.g. standards for energy efficiency and emissions limitations, abolishment of perverse incentives for carbon intensive technologies, IPR protection regulation, public procurement).

Capacity building

Technology related capacity building should be a country-driven activity informed by countries needs. However, the future climate change agreement could also outline specific areas for capacity building, taking into account the various activities completed or underway on a bilateral or multilateral basis.

The EU proposes:

- To explore specific supportive actions for technology-related capacity building (to be implemented by appropriate existing institutions);
- That Capacity building for technology is mainstreamed within an enhanced framework for capacity building for mitigation and adaptation (cf. 2/CP.7);
- That knowledge, technical and other necessary expertise in existing institutions and organisations, including regional centres and networks is developed, used, shared and sustained at the regional and national levels.

¹ The EU notes that with regard to adaptation under the Nairobi Work Programme as well as in implementing decision 1/CP.10, technology needs have also been assessed in NAPAs.

2.2 Additional actions to strengthen technology development and transfer

Technology oriented agreements (TOAs)

Cooperative actions and partnerships outside the UNFCCC play an important role at contributing to the development, transfer and deployment of technologies relevant to mitigation and adaptation. Several of these activities are also engaging the private sector and civil society organisations.

To this end, the EU proposes:

- **The establishment and recognition under the UNFCCC of focused voluntary TOAs.** Such cooperative TOAs would include, *inter alia* **cooperative R&D and large scale demonstration projects** (e.g. energy, transport, infrastructures, CCS, concentrated solar power, adaptation-related technologies), **technology deployment projects** (e.g. on energy efficiency, renewable energy), cooperation on specific sectors or gases, such as F-gases, **cooperation on climate observation and warning systems** for enhancing resilience.

Technology information

The EU notes that there are a number of valuable gateways for information sharing related to the UNFCCC, (e.g. TT:Clear and the web-based Adaptation Practices Interface within the Nairobi Work Programme on Adaptation). The EU sees the need to strengthen and link the different existing information sharing systems to facilitate a flow of information between Parties, organisations, other stakeholders (e.g. IPCC, UN agencies, International Energy Agency, World Meteorological Organization). The EU suggests the enhancement of an efficient information system to facilitate the flow of information between the different stakeholders. It would serve as a useful tool for promoting South-South cooperative activities to share experience and best practices in various technology sectors, including endogenous technologies.

The EU proposes:

- The development of a **technology information platform (TIP)**, which would be continuously updated and sector-specific. It would collect information on technologies and best practices on publicly and privately held technologies, including on intellectual property rights and licensing, availability, costs, abatement potentials, and manufacturers of technologies.

2.3 Means of implementation

Finance

Scaled-up finance related to technology should include assistance to support developing countries efforts for technology needs assessments, human and institutional capacity building, design and implementation of national deployment schemes, and participation in voluntary cooperative technology-oriented agreements. There will be a central role for national governments to implement regulatory and market-based incentives to attract public and orient private finance towards the deployment of low carbon technologies. Public finance should, wherever possible, spur and catalyse the involvement of the private sector to provide leverage on private flows as private investment will be the bulk of the scaled-up finance, particularly for mitigation, and will play a major role in driving economic and technological changes. The EU notes there are many existing significant funds and bodies financing activities related to climate-friendly technologies. Public financing for technology should focus on market “gaps” identified along stages of technology innovation chain.

The EU supports the ongoing work of the EGTT regarding the identification and analysis of existing and potential new financing resources and vehicles.

Institutional arrangements

Finally, with regard to institutional arrangements, the EU believes there is a need to support the delivery of the technology provisions of the Convention in the future climate change agreement. These arrangements will need to help guide, support, verify and monitor the activities and commitments related to technology within the Convention. They will also monitor the activities related to technology beyond the Convention since many organisations are undertaking and will undertake important work on technology. These arrangements would also be useful in providing a “home” for technology information dissemination. The formal aspects of these arrangements should also be finalised by taking into account the possible institutional needs raised in the other *building blocks* of the negotiation.

ANNEX

Draft outline of key messages from EU at the AWG-LCA 4 workshop on R&D:

“Cooperation on research and development of current, new and innovative technology, including win-win solutions”

In order to meet the Convention and the medium and long term mitigation and adaptation objectives, a wide range of technologies has to be mobilised. The EU believes that there is an enormous mitigation potential from existing technologies. However, there is a clear need to scale-up the development of new and emerging technologies through investment in research, development and demonstration (RD&D). As an example, RD&D is critical to unlock the potential of energy efficiency and ensure the integration of renewable energy. A future climate regime should include specific provisions to promote and scale-up investments in RD&D that are appropriate to the stage of technological development.

What role for the UNFCCC in the field of RD&D?

- A future climate regime can be an important catalyst for scaling-up investment in innovative technologies, including by enabling codification of initiatives progressed outside of the UNFCCC.
- Developing countries will be required to identify their technology needs and to implement policies and measures, in order to reinforce enabling environments for attracting investment.
- Developed countries will need to strengthen their national RD&D programs and provide the appropriate support through finance and technical assistance, in particular for capacity building (e.g. education, enhanced skills and knowledge base, research institution collaboration, etc.), and leveraging international projects.
- In addition, the EU also proposes to further explore the establishment and recognition under the UNFCCC of focused voluntary technology-oriented agreements, especially in the field of RD&D, to guide and facilitate cooperation between two or more Parties within and outside the UNFCCC.

Which principles should drive RD&D cooperation under the UNFCCC?

- Scaling-up and optimising RD&D public investments for both mitigation and adaptation technologies
- Energy efficiency and renewable energy should account for a reasonable share of public support on RD&D
- International RD&D projects and programmes should be flexible enough to accommodate different stakeholders including public-private partnerships, and varying numbers of participants.
- Public funding will aim at leveraging private investments.
- Systematic consideration of domestic RD&D plans should be taken into account.
- Create incentives to scale-up investment in R&D by elaborating technology standards
- RD&D cooperation should focus on the immediate, medium and long-term technology mitigation and adaptation objectives of the Convention.
- Both North-South and South-South cooperation should be encouraged through consortia.
- RD&D projects should aim to support in-country application of appropriate technologies

PAPER NO. 2C: FRANCE ON BEHALF OF THE EUROPEAN COMMUNITY AND
ITS MEMBER STATES

This submission is supported by Bosnia and Herzegovina, Croatia, the Former Yugoslav Republic of Macedonia, Montenegro, Serbia and Turkey

Paris, 14 November 2008

Fourth session of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention (AWG-LCA 4)

Poznan, 1-12 December 2008

Subject: Enhanced national/international action on mitigation of climate change

1. France, on behalf of the European Community and its Member States, welcomes the opportunity to submit further views, ideas and proposals on the elements contained in paragraph 1 of the Bali Action Plan (BAP). This submission builds on the one we submitted before the third session of the AWG-LCA in Accra, Ghana.

Enhanced mitigation action by developed and developing countries (BAP paragraphs 1(b)(i) and (ii))

Consistency with Shared vision

2. Enhanced mitigation action by developed and developing countries must be guided by and consistent with the shared vision of getting the world on a pathway to ensure development towards a safe and sustainable low-carbon economy, sustainable production and consumption, and resilience in the face of climate change.

3. In particular, short- and mid-term action and targets have to be guided by and consistent with the goal of peaking global greenhouse gases emissions by 2020 and reducing them by at least 50% by 2050 compared to 1990 levels. The EU notes that, based on available elements such as current population projections, such a level of ambition means that, by 2050, global average greenhouse gas emissions per capita should be reduced to around two tonnes CO₂ equivalent, and that, in the long term, gradual convergence of national per capita greenhouse gas emissions between developed and developing countries would be necessary, taking into account national circumstances.

Developed countries

4. The EU is of the view that the Copenhagen Agreement should define the overall and individual targets for developed countries for 2020 consistent with global emission pathways in line with keeping the global average temperature increase limited to not more than 2°C above pre-industrial levels.

5. Developed countries have to continue to take the lead by **committing to collectively reducing their emissions of GHGs in the order of 30% by 2020**, through domestic and international efforts, compared to 1990, consistent with the range of 25-40% as included in the 2007 IPCC Fourth Assessment Report (AR4). We also note the information provided by the IPCC that keeping the 2°C objective within reach implies that developed countries should collectively reduce their GHG emissions by 80 to 95 % by 2050 compared to 1990 levels.

6. The EU has already endorsed an objective of a 30% reduction in GHG emissions by 2020 compared to 1990 as its contribution to a global and comprehensive agreement for the period beyond 2012, provided that other developed countries commit themselves to comparable emission reductions and that economically more advanced developing countries contribute adequately according to their responsibilities and respective capabilities. The EU has also made a firm independent commitment to achieve at least a 20 % reduction of GHG emissions by 2020 compared to 1990 levels. It calls upon on all developed countries to propose not later than mid-2009, economy-wide medium-term targets that involve a comparable level of effort. In respect of the issue of medium-term targets for the group of developed countries we would also like to refer to our views expressed in several submissions to the AWG under the Kyoto Protocol.

7. **Comparability of efforts** amongst developed countries should primarily be considered in terms of emissions reductions commitments, based on binding absolute quantified emission limitation and reduction objectives (QELROs) for all developed countries. When defining differentiated QELROs relevant differences in respect of *capability, responsibility, mitigation potentials* and *national circumstances* between developed countries should be acknowledged. In particular, cost-effectiveness of mitigation is important to enable ambitious targets. Thus the use of flexible mechanisms should be included when assessing costs of mitigation targets as this can enable the achievement of ambitious targets (please refer to our submission on mechanisms in the context of the AWG-KP for more detailed views). Moreover, the mitigation efforts undertaken and achievements in emission reductions by developed countries should also be taken into account.

8. The current system for reporting of national communications and annual inventories to the UNFCCC with the independent review structures is a good basis on which to build for measurability, reportability and verifiability (MRV) of mitigation targets by developed countries.

Developing countries

9. **Many developing countries are already very active on mitigation of greenhouse gas emissions, often in conjunction with pursuing broader development objectives.** A number of countries has already formulated national programmes of mitigation in the context of development, including China, India, South Africa, Mexico and Brazil. Further work under the AWG-LCA should build on these valuable contributions. In order to enhance the status of such national mitigation programmes, South Africa and the Republic of Korea have also proposed to create a registry for nationally-appropriate mitigation actions under the UNFCCC.

10. In accordance with Articles 4.1(b) and 12.4 of the UNFCCC, such programmes could indeed become the underpinning structure of enhanced contributions by developing countries to global mitigation efforts, and a valuable tool to identify needs for support to enable the implementation of such actions in the context of sustainable development. These programmes could for example take the form of national low-carbon development strategies or mitigation plans, building inter alia on existing climate action plans and strategies formulated by developing countries so far. These would help to make concrete progress in the elaboration of nationally appropriate mitigation actions by developing countries in the context of sustainable development, and the way these would be supported and enabled by technology, financing and capacity-building, in application of the Bali Action Plan, paragraph 1(b)(ii).

11. **The EU is of the view that the overall level of ambition for developing countries for 2020 in the context of the Copenhagen agreement should be consistent with global emission pathways in line with keeping the 2°C objective within reach. On the basis of information provided by the IPCC, keeping the 2°C objective within reach implies that developing countries in many regions will need to make a substantial deviation of their emissions from baseline by 2020.** Recent scientific research indicates that developing countries as a group, in particular the most advanced among them, would have to reduce their emissions by 15 to 30 % below business as usual, respecting the principle of common but

differentiated responsibilities and respective capabilities, in order to be consistent with the global emission reduction goal. The level of effort by developing countries should reflect aspects of capability, responsibility, mitigation potentials and national circumstances.

12. The EU is of the view that developing countries (apart from LDCs) should establish and implement national programmes of mitigation in the context of sustainable development, as mentioned above, building upon the climate action plans and strategies formulated by developing countries so far. Guidelines could be agreed that might help individual parties in developing and implementing such programmes, including accessing support in terms of technology, financing and capacity-building, and in evaluating overall level of ambition.

13. At the third session of the AWG-LCA the EU presented its ideas on the issue of differentiation. In this regard we consider that the level of ambition, the nature of the nationally appropriate mitigation actions, and the types of support and mechanisms available to assist parties in implementing them should take account of the different levels of development and the respective capabilities of developing countries.

14. While describing the nationally appropriate mitigation actions they could undertake, developing countries might usefully distinguish between:

- nationally appropriate actions that can be implemented unilaterally by the country (including actions at low or negative costs or those where co-benefits outweigh costs, possibly with some support for addressing implementation barriers) and
- additional nationally appropriate actions that can be supported and enabled by technology, financing and capacity-building. Combined with the unilateral contribution these actions should lead to an appropriate deviation from baseline by 2020.
- further mitigation actions beyond those identified above that could be supported by using international carbon crediting mechanisms.

15. The EU is of the view that the Copenhagen Agreement should define the timescale for delivery and review of these programmes to ensure that nationally appropriate mitigation action in the context of sustainable development is taken within a timeframe consistent with the long-term goal.

16. Implementing nationally appropriate mitigation actions in a major part of globally key emitting sectors in developing countries will contribute to the effectiveness of the strengthened climate regime.

- Therefore **coverage** of certain sectors (“which sectors to include”) would depend on both relevance (the contribution of emissions of these sectors to global emissions within these) as well as capability of countries to take action in those sectors. For countries with high capability, coverage can extend to all sectors (e.g. economy-wide targets for Non-Annex I Parties that are at comparable levels of development compared to some developed countries)
- **The type and scale of action for sectors covered, the timing and ambition of the own action** in relation to these sectors should depend on capability. Similarly the **type and scale of support** will also depend on this capability.

17. Depending on capacity, the type of actions can include sectoral approaches including sectoral trading and crediting, carbon pricing, technology deployment programmes or standards (e.g. for renewable energy), energy efficiency standards and sustainable development policies and measures (SD-PAMs).

18. According to paragraph 1(b)(ii) of the Bali Action Plan, nationally appropriate mitigation actions by developing countries should be measurable, reportable and verifiable and be supported and enabled in a measurable, reportable and verifiable manner.

19. With regard to MRV of support for developing countries actions we consider that such support can most effectively be provided, monitored and verified if based on the needs identified by developing countries for enhancing the implementation of their nationally appropriate mitigation actions. Support for actions may be needed in many different forms and would be delivered through a variety of channels, thus measurement, reporting and verification of support needs to be comprehensive to cover all relevant efforts.

20. We acknowledge that many developing countries already take important mitigation actions, but as such these are not being recognised at international level. Introducing appropriate MRV would rectify this imbalance. In addition, appropriate MRV will help us assess that as a world community we are on the pathway compatible with the 2°C objective. In respect of MRV for developing country actions we therefore consider that:

- Measuring (monitoring) should be done at a national level following internationally agreed guidance and needs to include outcomes of actions, i.e. aggregate emissions, at least for key emitting sectors;
- Reporting needs to become more frequent and follow internationally agreed guidance (e.g. building on existing IPCC guidance and any subsequent guidance deemed necessary by Parties), taking into account the agreed principles of transparency, accuracy, consistency, comparability and completeness, and the outcomes of actions should be reported to the UNFCCC; and
- Verification needs to occur at an international level under the auspices of the UNFCCC and should build on existing independent expert review processes for Annex I Parties inventories.

21. The EU proposes the development of a cooperative partnership to help ensure the elaboration of a robust system to measure, report and verify both the results of nationally appropriate mitigation actions in developing countries and support in terms of technology, financing and capacity-building, building on lessons learned with the implementation of the Convention and the Kyoto Protocol, including for emissions inventories and policy development.

Conclusion

22. The EU aims at developing an international climate regime that is both fair and effective in addressing greenhouse gas emissions and looks forward to learning about other Parties' views on this important issue and is ready to further explain its vision in Poznan.

PAPER NO. 2D: FRANCE ON BEHALF OF THE EUROPEAN COMMUNITY AND
ITS MEMBER STATES

This submission is supported by Croatia, the Former Yugoslav Republic of Macedonia and Montenegro

Paris, 19 November 2008

Subject: EU submission on reducing emissions from deforestation and forest degradation, and the role of conservation, sustainable management of forest and enhancement of forest carbon stock, in the context of the AWG-LCA and the SBSTA

Introduction

EU is pleased with progress at Accra AWG-LCA workshop on reducing emissions from deforestation and forest degradation, and the role of conservation, sustainable management of forest and enhancement of forest carbon stock, which showed increasing consensus in key areas.

These include:

- the need for future agreements to incentivise additional action on conservation and sustainable management of forests as well as on deforestation and forest degradation,
- the need for an effective, sustainable and predictable financial mechanism to stimulate actions to reduce emissions from deforestation and forest degradation in developing countries, including possible linkages to carbon market,
- that the methodologies exist to support a future agreement, though we need readiness activities to ensure that systems are in place,
- that mitigation effort by developing countries in the forest sector should be additional to the overall mitigation effort by developed countries.

The EU wants to maintain the current momentum and achieve a substantial COP decision in Poznan on reducing emissions from deforestation and forest degradation, and the role of conservation, sustainable management of forest and enhancement of forest carbon stock, that will contribute to a successful outcome in Copenhagen.

The EU would like to avoid duplicating discussions in the SBSTA and AWG-LCA frameworks in Poznan, and therefore suggests to work on such a decision in the context of the SBSTA discussions in Poznan. The EU suggests that a Poznan decision might be based on the elements set out in Annex A to this submission.

The work of SBSTA at Poznan could also consider in more detail methodological elements that might be contained in a decision at Copenhagen. These methodological elements are indicated in Annex B. In the EU's view the requirements for monitoring reporting and verification should be based on the methodological elements set out in Annex B.

The remainder of the submission is in four parts covering the three areas identified in paragraph 28 (a) to (c) of the Summary of the Chair of the AWG-LCA workshop on policy approaches and positive incentives held in Accra, and the EU's views on the possible content of a Poznan decision.

Discussion of issues raised in the Summary of the Accra workshop on policy approaches and positive incentives

(a) Issues relating to the design of policy approaches and positive incentives

The EU believes that, in order to achieve the ultimate objective of the Convention, policy approaches to reduce emissions from deforestation and forest degradation should lead to eliminate and reverse emissions from deforestation within two or three decades.

In the EU's view we need to address the full range of national circumstances, because success in reducing emissions from deforestation and forest degradation is likely to increase pressure on countries where forest carbon stocks are relatively stable. Incremental change achieved by additional action to promote and implement forest management in a sustainable manner, and enhancement of forest carbon stocks could be assessed relative to an agreed reference level¹.

The EU notes the need to focus on deforestation and forest degradation and a test of the success of the overall agreement will be that emissions from deforestation and forest degradation decrease.

The EU stresses that the REDD mechanism should lead to additional, greater and permanent mitigation of emissions.

The EU notes that in accordance with the principle of common but differentiated responsibility, there would be greater need to provide readiness assistance to least developed countries. Views of the EU on differentiated contributions by developing countries to mitigation actions are expressed in a separate submission.

(b) Methodological implications of market and non-market approaches

The methodological issues are similar between market and non-market approaches and the two approaches are compatible – public funding will be necessary for readiness work and existing national and regional carbon markets are unlikely to have sufficient capacity initially. In the context of the deep commitments for annex I parties proposed by the EU, the EU is willing to consider how to harness public financing and carbon market to support activities in developing countries related to reducing emissions from deforestation and forest degradation.

(c) Implications of different options to address issues related to permanence, additionality and displacement of emissions.

Permanence is addressed where there is long-term responsibility for forest carbon stocks. Leakage is covered by national baselines and broad participation by countries. Additionality requires understanding of historical emissions or stabilisation levels so that the targets agreed incentivise additional action. It will be important to ensure that the sum of emissions implied by targets agreed is less than the historical rate of emissions from deforestation and forest degradation, and to be on track to eliminate and reverse deforestation within two to three decades.

¹ In the EU's view afforestation and reforestation could also be treated in this way, and there would be advantages in doing so to promote a consistent approach to forestry activities.

ANNEX A - Possible content of an Poznan COP decision on reducing emissions from deforestation and forest degradation, and the role of conservation, sustainable management of forest and enhancement of forest carbon stock

In the EU's view we could agree in Poznan to a COP decision with the following elements:

- 1) Note good progress made since Bali, notably at SBSTA28, in the Tokyo methodological workshop and in Accra.
- 2) Note need to address, in a consistent fashion the full range of national circumstances, policy approaches and positive incentives relevant to reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks.
- 3) Make reference to indigenous peoples and other local communities participation, biodiversity, other related processes.
- 4) Note agreement on methodological elements.
- 5) Recognise usefulness of the UNFCCC web platform.
- 6) Agree that implementation in developing countries should cover readiness, initial implementation of policies, and participation on a national basis consistent with future climate change agreements.
- 7) Recognise usefulness of demonstration activities.
- 8) Note that whatever the ultimate source of support, substantial public sector funding will be necessary in the medium term, and welcome emergence of initiatives to address this. Note need for a consistent approach to funding and types of activities supported and provide any relevant guidance.

ANNEX B - Illustrative methodological elements for consideration at Poznan in anticipation of decision in Copenhagen

- 1) For the purpose of this decision, deforestation is change from forest land to another land use and forest degradation is a persistent decline in forest carbon stocks without land use change.
- 2) Emissions from deforestation shall be estimated using the Good Practice Guidance and other relevant guidelines developed by the Intergovernmental Panel on Climate Change, using the methodologies for transition to non-forest land uses and the relevant cross-cutting guidance.
- 3) Emissions from forest degradation, leading to be the long run reduction of forest carbon stocks and shall be estimated using the Good Practice Guidance and other relevant guidelines developed by the Intergovernmental Panel on Climate Change, using the methodologies for forest remaining forest and the relevant cross-cutting guidance.
- 4) Incremental emissions/removals due to management of forests shall be estimated using the Good Practice Guidance and other relevant guidelines developed by the Intergovernmental Panel on Climate Change, using the methodologies for forest remaining forest and the relevant cross-cutting guidance.
- 5) Changes in emissions and removals within a participating developing country shall be assessed on a conservative basis relative to a reference emissions level² to be agreed on a conservative basis by Parties taking account of information on representative historical emissions or removals from deforestation, degradation, or management of forest remaining forest, and other factors³ and the relevant IPCC cross-cutting guidance.
- 6) The period for assessing changes in emissions and removals from deforestation, forest degradation, or management of the forest, should be x years starting in year y. Accounting should reflect responsibilities over successive and contiguous periods.
- 7) The incentive to reduce emissions from deforestation or forest degradation, and to increase removals from management of forests, shall be in the form of a payment proportional to the amount by which the emissions are below the reference emissions level for a year within the assessment period, or the magnitude of removals is above the reference removal level.
- 8) If emissions are above the reference emissions level during the assessment period, the difference is to be carried forward.
- 9) Updated reference emissions levels for participating countries should be agreed no later than z years before the end of an assessment period, and used for the subsequent assessment period, on the same basis, with any carryover under the provisions of paragraph 8 taken forward.
- 10) Participating countries may, as full or partial alternative to the positive incentives referred to above, choose to accumulate a buffer to be used to reduce or avoid the need for carryover under the provisions of paragraph 8.
- 11) The UNFCCC Secretariat should organize periodic reviews to assess the application of these modalities, including the data derived from them, in an unbiased fashion.

² National emissions reference levels should be ambitious, yet realistically achievable, and should take into account the principle of common but differentiated responsibilities.

³ Reference emission level may need modification to reflect causal understanding of socio-economic factors that determine rate of deforestation or forest degradation, rather than simply being set equal to the historical rate.

PAPER NO. 3A: INDIA

Government of India Submission to UNFCCC on enhancing action on adaptation

Background

The UNFCCC has given equal importance to both adaptation and mitigation as part of the response to climate change. Articles 4.1(e), 4.4, 4.8 and 4.9 provide the basic framework and outline the responsibilities of the different Parties. The Marrakech Accords at COP7 (2001) brought the need and urgency for adaptation to the foreground in the UNFCCC negotiations. They identified the need for predictable and adequate levels of funding for Parties not included in Annex I and the need to develop appropriate modalities for burden sharing among Parties included in Annex II¹. Three new funds² were established under COP7 to support adaptation activities. 18³ areas of assistance on adaptation were identified, including for GEF funding and process of development of National Adaptation Programmes of Action (NAPAs) for LDCs were also achieved under COP7.

The Adaptation Fund created as a part of the Marrakech Accords was finally operationalized at CMP3 in Bali. The process involved decisions regarding the basic elements of the fund (28/CMP.1), principles underlying operation and management (5/CMP.2) and giving specific form to these arrangements (1/CMP.3) under which the Adaptation Fund Board is serviced by a Secretariat and a Trustee. GEF would provide the Secretariat services and World Bank would serve as the trustee, both on an interim basis. This outcome was the result of sustained and concrete efforts by Parties to set up a new approach for managing the Funds, recognizing the very different way in which money is being sourced (as opposed to typical donor contributions).

Adaptation issues are also considered in two separate agenda items under the COP and its subsidiary bodies. Decision 10/CP.9 requested the SBSTA to “initiate its work on scientific, technical and socio-economic aspects of impacts of, and vulnerability and adaptation to climate change” and to facilitate exchange of information and practical experiences among the Parties⁴. A five-year programme of work was adopted at COP11 through decision 2/CP.11 and was renamed as the Nairobi Work Programme at COP12.

COP 10, 2004, also adopted the “Buenos Aires programme of work on Adaptation and response measures”⁵ which seeks to support the implementation of concrete adaptation activities. At COP 13, 2007, Parties continued to consider progress on the implementation of decision 1/CP.10 and at SB 28 in June 2008 agreed on a set of specific activities up to COP 14 in Poznan, Poland to address the adverse effects of climate change, article 4.8, decisions 5/CP.7 and 1/CP.10.

Adaptation is one of the pillars of the Bali Action Plan and further action on adaptation is being considered under the AWG-LCA. Decision 1/CP.13 paragraph (c) identifies the following areas for consideration under enhanced action on adaptation - International cooperation to support planning and implementation; Risk management and reduction, including through insurance and disaster reduction strategies; Economic diversification; Strengthening catalytic role of the Convention in enhancing and integrating action by other entities, in developing countries that are particularly vulnerable to the adverse effects of climate change, LDCs and SIDS.

¹ Article 1(b) and 1(d) of Decision 7/CP.7

² SCCF and LDCF were established by decision 7/CP.7; Adaptation Fund was established by decision 10/CP.7

³ Decision 5/CP.7

⁴ Decision 10/CP.9

⁵ Decision 1/CP.10

Key findings from the IPCC AR4

It would be appropriate for future deliberations on enhancing implementation of adaptation to be informed by the findings of the Fourth Assessment Report of the IPCC. Some of the key findings from the AR4 with respect to vulnerability & adaptation are:

- Adaptation is necessary in the short and longer term to address impacts resulting from the warming that would occur even for the lowest stabilization scenarios assessed (WG2 SPM, p.19).
- More specific information is now available across a wide range of systems and sectors concerning the nature of future impacts, including for some fields not covered in previous assessments. Key impacts would be in water, food, ecosystems, coasts and health sectors (WG2 SPM, p.11).
- Though adaptation measures are seldom undertaken in response to climate change alone (WG2, Ch. 17, p.719), in several sectors, climate response options can be implemented to realize synergies and avoid conflicts with other dimensions of sustainable development (AR4 Synthesis Report, p.18).
- More specific information is now available across the regions of the world concerning the nature of future impacts, including for some places not covered in previous assessments. In addition to LDCs and SIDS (which are already acknowledged as vulnerable regions under the Convention) other regions have been identified (WG2 SPM, p.13), for example (examples extracted from WG2, Ch. 19, Sec. 19.3.3, p. 791-792):
 - Africa is likely to be the continent most vulnerable to climate change especially with respect to food security and agricultural productivity, particularly regarding subsistence agriculture, increased water stress, potential for increased exposure to disease and other health risks, increased risks to human health. Approximately 1 billion people in South, South-East, and East Asia would face increased risks from reduced water supplies decreased agricultural productivity and increased risks of floods droughts and cholera.
 - Tens of millions to over a hundred million people in Latin America would face increased risk of water stress.
 - Low-lying, densely populated coastal areas are very likely to face risks from sea-level rise and more intense extreme events.
 - Human settlements in polar regions are already being adversely affected by reduction in ice cover and coastal erosion.
- A wide array of adaptation options is available, but more extensive adaptation than is currently occurring is required to reduce vulnerability to future climate change (WG2 SPM, p.19).

Views of the Parties⁶

Recent dialogue on adaptation under the Convention has underscored that that political commitment to adaptation in the UNFCCC process needs to receive the same level of attention as that given to mitigation. In recognition of this urgency, Parties called for prompt actions on adaptation to be undertaken, in accordance with paragraph 1 of the Bali Action Plan. Parties expressed concern over what was described as the current fragmented approach to adaptation as well as the fragmentation of available funding both within and outside the UNFCCC process and stressed the need to ensure a structured work programme for the AWG-LCA on adaptation, which would not duplicate but build on work being undertaken under the UNFCCC process. With regard to the likely financial and technological needs for adaptation, it was argued that current levels of funding, technology transfer and capacity building are inadequate. In particular, it was suggested that international action on finance is required to assist in the implementation of adaptation plans; specifically, to simplify and enhance access to existing funding opportunities and to scale up the level of financial support available for adaptation. Many Parties called for a coherent approach to financing adaptation programmes and streamlining current and future funding

⁶ FCCC/AWGLCA/2008/6

in order to enhance accessibility. In addition, many Parties expressed the view that new and innovative funding will be required, possibly including the extension of the adaptation levy to all flexibility mechanisms under the Kyoto Protocol, as well as the creation of other financial instruments.

Views of India

Enhancing the implementation of adaptation is a priority for India, given our high vulnerability to climate change and the fact that climate change impacts can pose a significant risk to economic and social development and poverty alleviation efforts. Recognizing that there is a diversity of views and needs, a pragmatic approach might be to focus on a set of core principles that would guide the approach for enhancing the implementation of adaptation. These principles could cover, inter alia, the generation of resources, the delivery of resources and the institutional arrangements required for this purpose. These principles may be given a more precise operational form through the ongoing deliberations, and a new mechanism for adaptation that captures these principles may be created through the negotiations under the BAP.

Such an approach was adopted with some success in the case of the Adaptation Fund, where the deadlock on the institutional arrangements for the Fund was resolved by first reaching consensus on the general principles for governance and operational modalities, subsequently followed by a decision on the specifics.

Principles underlying a new mechanism for adaptation

The generation of resources for adaptation should be guided by:

- *Adequacy*: The resource pool for financing adaptation should be *adequate*, in terms of being able to finance the different categories of adaptation interventions in developing countries.
- *Predictability*: The resources for adaptation need to be made available in a *predictable* form, so as to enable responses to be planned and implemented more effectively.
- *Automaticity*: The generation of resources should incorporate a certain level of *automaticity* so as to ensure adequate and predictable flow of funds. An example of automaticity already exists for the Adaptation Fund, which is financed through a 2 percent levy on the CER's generated by the CDM activities. This could be extended to other kinds of carbon market transactions. Alternatively, or in addition, a scheme of defined contributions could be adopted.
- *New and additional*: The need for new and additional resources has been recognized. The generation of these resources should follow the principles of the UNFCCC. This means that there can be no internalization of costs by developing countries and similarly there can be no redirection of investment in developing countries from development programmes.

The resources for adaptation should be used to meet the agreed additional costs of adaptation:

Climate change poses a specific additional burden in different sectors and regions and in different contexts. There are many situations where this additional imposed burden goes beyond what may be reasonably expected as part of a development objective of managing risk. Therefore, this 'additional cost' should be supported. Further, since this is responding to the effects of global negative externality, this financing ought to be in the form of grant, or at least concessional finance.

The determination of agreed additional costs: Since adaptation interventions are often multi-sectoral and closely linked with the ongoing development programmes, it is difficult to estimate the cost of

baseline course of action and the incremental action that will enhance adaptation. Recognizing further that the level of funding available will not be adequate for financing full cost of adaptation even in the most optimistic scenarios of fund availability, financing the additional cost of adaptation should be based on a negotiated set of co-financing or cost-sharing levels. The approach to be followed for this determination should be:

- *simple*, avoiding project-by-project calculations to the extent possible
- *predictable*, in the sense that approximate levels of co-financing levels possible for different types of interventions in different sectors will be known
- *flexible*, to accommodate varying country, sector and project-specific conditions
- *comprehensive*, to ensure that the resource needs of the large variety of adaptation interventions possible can be addressed

The **institutional arrangements** for the new mechanism for adaptation⁷ should include:

- an *executive board* that is responsible for the management and delivery of the resources. This governing body will be constituted by, and will be accountable to the COP, and will have a defined structure, composition, powers and functions. The composition should have balanced representation from the Annex-1 and non-Annex 1 Parties
- an *advisory body* that will assist the executive board particularly with regard to methodologies and guidance for additional costs and for establishing templates and metrics for adaptation project design, reflecting sector-specific characteristics⁸.
- a *Secretariat*, to support the operation of the arrangements
- a *Trustee*, for managing and disbursing the funds

The institutional arrangements should provide for direct access to the resources by interested Parties, with provisions for expeditious processing, enabling quick approvals and reviews at the project proposal development phase and speedy disbursement of funds once the project has been approved.

Categories of adaptation interventions

Concrete adaptation projects: Two broad categories of concrete adaptation interventions may be recognized. Responding to climate change which poses a specific, additional burden that goes beyond what may be reasonably expected as part of a development objective of managing climate risk would constitute a concrete adaptation project. For example, infrastructure may need to be redesigned to accommodate a change in the climate risk that is directly due to climate change – such as an intensification of monsoon rainfall. Similarly, climate change leading to persistent drought that goes well beyond a normal coping range will require an adaptation intervention specific to this additional risk. The second category is where climate change poses new and unique risks that may arise in future, that may be non-marginal, and beyond the baseline of climate variability (one of the important insights from the IPCC AR4).

Adaptation technologies: Technology will play an important role in enabling adaptation. The proposals regarding a new mechanism for technology ought to also address technologies for adaptation. To the

⁷ In this respect, we may follow the models for Adaptation Fund Board and the Multilateral Fund for the Montreal Protocol. In fact, the Adaptation Fund Board could itself be given an expanded mandate and a strengthened structure. Of course, this is a Protocol Fund. Alternatively, if a new mechanism is created the AF Board could be subsumed into it.

⁸ In this respect, it may function in a manner somewhat analogous to the Methodologies Panel of the CDM. The idea of a Group of Experts (or Adaptation Committee of Experts) has been brought up by many Parties.

extent adaptation technologies help in reducing the impacts of a global bad, they may be treated in a manner similar to mitigation technologies, with regard to issues of IPR, grant finance and support for technology development and transfer. The general concept of financing additional cost will be applicable to this category of interventions as well.

Insurance: Insurance is a general tool for addressing climate-related risks and hazards. As such, it may be considered as a part of the development baseline as a variety of insurance products (crop insurance, flood insurance etc.) are already in existence. However, climate change may alter the risk profiles, and given the uncertain and stochastic nature of extreme weather events may lead to the inability of existing insurance mechanisms to cope. A re-insurance mechanism to deal with catastrophic losses arising due to climate hazards may be created. A portion of the global resources generated for adaptation may be assigned for such a re-insurance Fund.

Mainstreaming adaptation in ongoing development programmes: Mainstreaming climate change concerns into ongoing development programmes in critical sectors has been identified as a general approach for enhancing adaptive capacity and promoting adaptation. A number of different types concrete actions for this purpose have been identified by Decision 5/CP.7, including capacity-building; observations, monitoring & forecasting; modeling and assessment and information sharing and exchange. In general, such activities & projects should be eligible for full-cost funding.

PAPER NO. 3B: INDIA

**Government of India Submission on
Financing Architecture for Meeting Financial Commitments
Under The UNFCCC**

Background & the Legal Basis

1. Addressing the impact of climate change and climate variability by raising adaptive capacity i.e. protecting people from climatic adversity; and avoiding the large scale world-wide climate hazards linked to anthropogenic activities i.e. protecting the climate from the production and consumption patterns of people by mitigating GHG emissions are the two major public goods challenges of our time. The current global architecture for delivering and financing these public goods is mandated under the multilaterally negotiated United Nations Framework Convention on Climate Change (UNFCCC).
2. Specifically with respect to financing, the framework provides for new, additional, adequate and predictable financing by developed country Parties to developing country Parties to implement the UNFCCC (hereafter the Convention). In this regard, Article 4.3 (provision of new and additional financial resources to meet the obligations of the developing country Parties under clause 12 paragraph 1 and to meet the agreed full incremental outlays, including for the transfer of technology, required by the developing country Parties for implementing measures included under Article 4.1); Article 4.4 (assistance to meet the costs of adaptation); and Article 4.5 (promotion, facilitation and financing of the transfer of, or access to, environmentally sound technologies and know-how) of the Convention, all lay down legally binding commitments on the part of developed country Parties to provide such financing. Article 4.8 (on funding for response measures especially in vulnerable developing country Parties); and Article 4.9 (on funding for least-developed countries) of the Convention also detail legally binding commitments of developed country Parties to provide funding to developing country Parties.
3. The foregoing commitments by developed country Parties are at the core of the balance of commitments between developed and developing country Parties as reflected in Article 4.7, which states that “The extent to which developing country Parties will effectively implement their commitments under the Convention will depend on the effective implementation by developed country Parties of their commitments under the Convention related to financial resources and transfer of technology and will take fully into account that economic and social development and poverty eradication are the first and overriding priorities of the developing country Parties”. And precisely the same balance is captured under section 1b(ii) of the Bali Action Plan.

Additionality of Resources & Financing Instruments

4. The financial resources committed under the Convention cannot be new and additional if they merely divert any existing or likely resources, including ODA and other net foreign inflows, available for economic and social development and poverty alleviation to developing country Parties.
5. Further, to the extent that the incremental lifetime costs of investment in adaptation and mitigation are positive, they would have to be fully recompensed if economic and social development and poverty alleviation are not to suffer. This is true for both private and official sources of such new and additional funding. Only a grant that results in a resource transfer can truly recompense such

positive incremental costs¹ in full without impacting social and economic development and poverty alleviation – the recognized first priority of the developing country Parties under the Convention. As an example, carbon markets under CDM actually pay for such positive incremental costs in full and thereby preserve the socio-economic viability of the underlying investments despite the higher costs of mitigation. While incremental lifetime costs must only be funded through new and additional grants and resource transfers, the base costs of economic and social development can be funded by a range of current or new financial instruments offered by bilateral, multilateral or domestic/foreign market sources. And indeed Article 11.5 of the Convention specifically refers to such bilateral, regional and multilateral channels being sources for resources for implementation of the Convention. Instruments that fund these base costs can include traditional equity and loan investments, concessional loans, loan guarantees or other risk mitigation structures, and a range of funds for acquisition, development, deployment and diffusion of technologies.

Projected Funding Needs

6. The UNFCCC has estimated a requirement of US\$ 200-210 billion in additional investment in 2030 to return GHG emissions to the current level. Further, additional investment needed worldwide for adaptation is estimated to be US\$ 60-182 billion in 2030 by UNFCCC, inclusive of an expenditure of US\$ 28-67 billion in developing countries. Incremental investment needed by developing countries for adapting to projected impacts of climate change is estimated as US\$ 10-40 billion per annum by the World Bank and Oxfam estimates this number to be US\$ 50 billion per annum. The UNDP estimates that incremental investment needed for adaptation alone could amount to US\$ 86 billion per annum by 2015. Not only do these numbers vary widely among themselves, they are a fraction of UNFCCC's own estimate that peg the incremental cost of addressing climate change at 0.3-0.5% of global GDP or Lord Stern's revised estimate of 2% of global GDP. At current levels of global GDP this range translates to US\$ 165 billion to US\$ 1.1 trillion.
7. The above broad range of estimates is not surprising for we are still struggling to fully understand the science of climate change. Hence, we need to learn by doing and not wait for elimination of all uncertainty because costs of impacts from climate change will be a multiple of the estimates made if we fail to act immediately.

Funding Sources

8. Clearly the magnitude of funding needs is enormous compared to what is available under the current financial mechanism of the Convention. The funding committed to GEF, for various funds managed by it, is US\$ 1.3 billion for the period 2007-10. The funds managed by GEF for adaptation total about US\$ 275 million and since 2005 GEF has provided US\$ 110 million for adaptation projects. The Adaptation Fund to be built up from 2% of CDM flows is expected to amount to US\$ 100-500 million by 2012. Tapping other flexibility instruments will, at best, add increments of similar magnitude. The carbon markets have the potential for raising larger sums. However, this requires very deep emission reduction targets (potentially negative emission obligations for some developed country Parties) that are legally enforceable. And while carbon markets may be able to fund incremental costs of mitigation under certain scenarios, funding for incremental costs of adaptation would require resource transfers or grants.

¹ Incremental costs hereinafter refer to both the incremental investment cost and the incremental lifetime costs where applicable. Such incremental costs will need to be fully recompensed through resource transfers (typically under bilateral arrangements) or grants (typically multi-lateral arrangements) that effectively result in resource transfers to the developing countries.

9. It is stressed that the proposed funding sources cannot be voluntary providers of funds because voluntary contributions are not predictable and cannot service legal commitments under the Convention. Further, the commitments under the Convention to fund the incremental costs of addressing climate change cannot be treated as aid or assistance under a donor-recipient platform. Finally, as already stated, agreed incremental costs of combating climate must be funded with resource transfers or grants. Keeping these requirements in mind, the following funding sources are proposed (as stated above, the base costs would continue to be funded through normal channels in accordance with current practices):
- a) Annual contributions equal to 0.5% of the total GDP of the developed world for funding full agreed incremental costs of adaptation and mitigation through resource transfers or grants. Individual country contributions may be decided multilaterally on the basis of historical responsibility for GHG concentration, current emission levels, per capita GDP etc. Each developed country Party or any grouping of developed country Parties would be free to decide the means for raising these contributions through country specific or region specific auctioning of emission rights, carbon taxes, and specific levies on sectoral emissions or any other means considered feasible within their borders.
 - b) Any levies on international travel or use of marine haulage that are negotiated under the Convention.
 - c) Any private sources of grant funding on a voluntary basis.
 - d) Any other bilateral or unilateral grant funding or contributions on a voluntary basis.

Institutional Base/Governance of the Financial Architecture

10. Although the Convention is silent on the choice of an Institution to manage the funds made available, it is quite explicit in stating under Article 11.1 that the proposed financial mechanism “shall function under the guidance of and be accountable to the Conference of the Parties, which shall decide on its policies, programme priorities and eligibility criteria”. Article 11.2 further states that the “financial mechanism shall have an equitable and balanced representation of all Parties within a transparent system of governance”. While creating the Adaptation Fund (AF) the foregoing provisions were fully adhered to. At Nairobi the second meeting of the CMP actually decided that the AF should be under the ‘authority’ of the COP in addition to the requirement of ‘being under the guidance and accountable to’. The Nairobi decision also adopted “a one country one vote” rule in relation to the operation of the AF and a majority representation for developing countries on the governing body (Decision 5/CMP.2,para 3). CMP.3 at Bali created the Adaptation Fund Board with a majority of members from developing countries and designated representatives from the two main recipient interest groups i.e. Group of Least Developed Countries and the Alliance of Small Island States. Moreover, it was decided that Parties should have direct access to the funds, and the involvement of the GEF and the World Bank in the running of the AF was reduced to an interim provision of secretariat and trustee services respectively. The AF structure succeeded in developing an equitable and balanced representation of all parties within a transparent system of governance as required under Article 11.2 of the Convention. The same is true for the Multilateral Fund under the Montreal Protocol.
11. Anything short of the above precedents would be a step backwards and, hence, the proposed financial architecture must be under the direct control of COP as detailed in paragraph 10. An Executive Board, with an equitable and balanced representation of all Parties, appointed by COP must manage the proposed financial architecture. A professional secretariat and appropriate technical committees that establish eligibility, evaluation and compliance criteria, in conformance with the Convention, would assist the Executive Board. Direct access to funding by developing

country Parties and their involvement in every stage of the process, through the COP, will make the architecture demand driven. A Trustee selected through open competitive bidding among reputed and pre-qualified institutions would administer the funds.

12. It must be recognized that any funding that is pledged or becomes available outside the governance structure foreseen under the Convention and highlighted above, cannot be counted towards the fulfilment of the commitments made by developed country Parties under the Convention. The Convention would be undermined if parallel initiatives outside the governance structure foreseen by the Convention are considered towards fulfilment of commitments of developed country Parties under the Convention

Eligible Countries/Entities

13. Although establishing detailed and formal country eligibility criteria is outside the scope of this note, it is conceivable that differentiated criteria could be established for different developing country Parties or groups of developing Country Parties to match their differing needs and vulnerabilities. In general all developing country Parties would be eligible with special emphasis being laid on the needs of Vulnerable States and Least Developed Countries. For eligible Parties, funds could be made available to national or sub-national governments, private entities within the eligible country or other private or national/sub-national entities (for example, holders of intellectual property rights).

Target Investments For Funding Support

14. The proposed financial architecture should target multiple sectors and support a range of activities that could include though not be limited to the following:
 - a) Incremental costs of mitigation across all economic and social sectors.
 - b) Incremental costs resulting from deployment and diffusion of commercially available low carbon technologies.
 - c) Incremental costs of research and development of clean energy or low carbon technologies
 - d) Incremental cost of building capacity and institutional framework in recipient countries.
 - e) Incremental costs of preparing national communications and national action plans and implementation of the same.
 - f) Full cost of technology patents and license fee for IPRs covering low carbon technologies.
 - g) Full cost of adaptation to climate change.

Funding Verticals and Funding Criteria

15. Establishing various verticals along which funding could be made available under the proposed financial architecture or the various criteria that warrant funding is also beyond the scope of this note. Suffice it to say that the proposed financing architecture should be organized into functional windows to address specific requirements such as a Technology Acquisition and Technology Transfer Fund for available climate friendly technologies, a Venture Capital Fund for emerging climate technologies, Collaborative Climate Research Fund, Adaptation Fund etc. The financing architecture could integrate other funds operating under the Kyoto Protocol to avoid duplication. It might be argued that the proposed financial structure would be unwieldy and ineffective because of

concentration of all activities under one umbrella. It is pointed out that the only unifying force is a common architecture of governance, funding and investment policies under the direct control of and accountable to COP. Each vertical will be operated and will grow independently under this common architecture.

16. The criteria established for funding specific investments would largely be linked to outcomes and shall not enforce co-financing from certain specified sources or harsh conditionalities that go beyond the objectives that address climate impacts as laid down under the Convention. The assessment criteria could, among other measures, include the following:
 - a) Impact on adaptive capacity and mitigation beyond business as usual.
 - b) Adaptive capacity realized or emissions mitigated per unit of investment.
 - c) Conformity to a host country's national program.
 - d) Contribution to the host country's sustainable development objectives.
 - e) Ability to fund the base costs directly or through other sources subject to the proposed financial architecture providing grants or resource transfers to fund all agreed incremental costs related to addressing climate change.

PAPER NO. 3C: INDIA

Government of India Submission to UNFCCC on Long Term Co-operative Action

“ A shared vision for long-term cooperative action, including a long-term goal for emission reductions, to achieve the ultimate objective of the Convention, in accordance with the provisions and principles of the Convention, in particular the principle of common but differentiated responsibilities and respective capabilities”

The focus of paragraph 1 (a) of the Bali Action Plan is **for a shared vision for a “long-term cooperative action” to achieve the ultimate objective of the Convention as set out in Article 2. It includes the issue of how to deal with preventing** overexploitation of the global atmospheric resource in order to prevent dangerous **anthropogenic** interference with the global climate system. The Bali Action Plan emphasizes that this objective must be achieved “in accordance with the provisions and principles of the Convention, in particular the principle of common but differentiated responsibilities and respective capabilities” of Parties.

The *ultimate objective of the Convention* is of a multidimensional nature. Article 2 reads as follows: “*The ultimate objective of this Convention and any related legal instruments that the Conference of Parties may adopt is to achieve, in accordance with the relevant provisions of the Convention, stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a **time-frame** sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner*” [emphasis added].

Thus the “ultimate objective” encompasses three inter-connected elements. First, it prescribes a *method* – “in accordance with the relevant provisions of the Convention”. Second, it calls for *stabilization* of greenhouse gas **concentrations** at a level that would avoid dangerous interference with the climate system. **This underscores the importance of cumulative emissions and the historical responsibility that goes along with contribution to the stock of greenhouse gases in the atmosphere.** Finally, it includes three specific criteria for determining the *time-frame* within which stabilization must be achieved, **including that economic development may proceed in a sustainable manner.**

India’s views on the “ 1(a)” may be summarized as follows:

- (1) **Equity must be central to the way forward.** This requires that the **any** stabilization target should be achieved on the basis of the principle that each human being has an equal right to the common atmospheric resource **accounting also for the historical responsibility of developed countries in building the concentration of greenhouse gases in the atmosphere.** Developing countries cannot be denied access to their **equitable** share of the global atmospheric resource **and carbon space. Equitable sharing of the carbon space, therefore, needs to be urgently agreed to by the international community. As far as India is concerned we have stated publicly that our per-capita emissions will not exceed those of developed countries. We believe that a paradigm of convergence of per-capita emissions of developing and developed countries, also accounting for the historical responsibility of developed countries, provides an equitable approach to fair burden sharing.**
- (2) The Right to Development must be fully respected in the climate change regime. It must be recognized that, for poorer countries, rapid development is not only an

economic and social imperative but also an essential requirement for building up a coping capacity against the adverse impacts of climate change. **In this context, the imperative of development for adaptation is essential even from the point of Right to Life and basic issues of survival.** Thus, addressing paragraph 1(a) must “*take fully into account that economic and social development and poverty eradication are the first and overriding priorities of the developing country Parties*” (Article 4.7).

- (3) In order to send out a clear signal of the urgency and magnitude of the climate change problem **the international community should start** identifying an indicative stabilization target and a time-frame for its achievement **along with an equitable paradigm for sharing the carbon space.** These should take into account the IPCC 4 scenarios and should be based on the principle of equity. Should it be required in light of new scientific data **or changed economic conditions and technologies available,** the initial stabilization target could be updated periodically to ensure that it sends out a sufficiently ambitious call to action. In the interests of integrity and transparency, and in order to prevent any ambiguity in the signal, there should be no tampering with the baseline year used in the Convention and the IPCC reports (i.e. 1990). Targets for emission reductions are meaningless unless the baseline date is clearly established.
- (4) Any stabilization target, howsoever ambitious, cannot be misused to seek a revision of the provisions of the Convention. The “ultimate objective” itself requires that any stabilization target must be achieved “in accordance with the relevant provisions of the Convention”, that is, in accordance with the Commitments set out in Article 4 and the Principles enunciated in Article 2. The Bali Action Plan reinforces this requirement by underlining that long-term cooperative action must be pursued “in accordance with the provisions and principles” of the Convention. We must strictly abide by the terms of Article 2 of the Convention and the express requirements of the Bali Action Plan.
In this context, it would be pertinent to observe that the Convention is so designed that any stabilization level, howsoever ambitious, can be achieved through enhanced implementation of the commitments set out in Article 4. If achievement of a global stabilization goal necessitates mitigation measures in developing countries, the latter must be compensated by the developed countries to the extent of the full incremental costs, in accordance with the provisions of paragraphs 3 and 7 of Article 4. Thus the Convention makes full provision for mitigation measures in developing countries on the basis of full compensation for incremental costs.
- (5) A long-term stabilization target would lack credibility if it is not linked to a medium term target for emission reductions by Annex I Parties, in accordance with their commitments under Article 4, paragraph 2 of the Convention, as well as the provisions of paragraph 1 (b) (i) of the Bali Action Plan. It is a matter of deep concern that the emissions of Annex I countries have been steadily *increasing* since 2000, contrary to the provisions of the Convention. UNFCCC data reveals that total Annex I emissions rose from 17,719 Tg CO₂ equivalent in 2000 to 18, 182 Tg CO₂ equivalent in 2005. **Moreover, there have also been increases in terms of per-capita emissions in the Annex I countries.** This alarming trend must be immediately reversed. All Annex I countries should adopt deep emission reduction targets for the medium term based not only on technology options but also **by adopting specific policies and measures that promote sustainable patterns of**

consumption and production, including life-style changes. IPCC scenarios indicate that such reductions should be **more than** 25-40 percent by 2020, *excluding* life-style changes. We, therefore, call on the Annex I countries to adopt targets for reduction of their emissions by *more than* 25-40 percent by 2020, ***with further reductions through policies and measures that promote sustainable lifestyles*** from the 1990 baseline.

PAPER NO. 3D: INDIA

Government of India Submission to UNFCCC on MRV – BAP 1 (b) (i)

“measurable, reportable and verifiable nationally appropriate commitments or actions, including quantified emission limitation and reduction objectives, by all developed country Parties, while ensuring the comparability of efforts among them...”

Paragraph 1 (b) (i) of the Bali Action Plan sets out the mitigation commitments of the developed countries in conformity with Article 4.2 of the Convention. Two elements of the formulation merit attention.

First, the term “nationally appropriate” may be reasonably interpreted as meaning “nationally determined”, as contrasted with an internationally negotiated commitment. However, in this subparagraph of the Bali Action Plan, the term “nationally determined” is subject to an important qualification. The “nationally determined” commitments or actions must reflect comparable efforts among all developed country Parties. This can be ensured only through negotiations. Hence, though the commitments or actions of a developed country may, in the first instance, be nationally formulated, they must be finalized on the basis of UNFCCC negotiations, in order to ensure comparability of efforts among Annex I Parties.

Second, the paragraph requires ALL developed country Parties to adopt quantified emission limitation and reduction objectives, regardless of whether a Party chooses to describe this as a “commitment” or an “action”. The paragraph requires that the “commitments” or “actions” of any developed country must include a quantified emission limitation and reduction objective.

The Convention requires the developed countries to “take the lead” in climate change mitigation. Regrettably, they have yet to fulfill this pledge. It was envisaged under the Convention that greenhouse gas emissions of Annex I countries would be ‘returned’ to 1990 levels by the year 2000, after which they are to be progressively reduced. It is a matter of great concern that, instead of registering a sharp decline, after 2000, emissions of developed countries actually *increased* by 2.6 % from 16, 527 Tg CO₂ eq in 2000 to 16,748 Tg CO₂ eq in 2005 (without LULUCF). Statistics including LULUCF show a similar trend **though at a lower level. The anthropogenic nature of the increases are furthermore underscored in that increases in Annex I emissions have been led by CO₂. Their per-capita emissions, too, have continued to increase.** A sharp decline in the level of economic activity in the Economies in Transition (non-Annex II developed countries) between 1990 and 2000 resulted in an involuntary reduction of CO₂ emissions in these countries during the first decade of the Convention. This initially masked the rising emissions from other developed countries (Annex II). However, by the end of the decade, the Economies in Transition (EITs) had succeeded in rehabilitating their economies and their emission trends, too, began to exhibit a rising trend. Thus, in the current decade, ghg emissions of the Annex I countries, have shown an alarming rising trend.

While the total emissions of the Annex II countries (excluding LULUCF) rose by 11% between 1990 and 2005, the increase was significantly higher in the case of the two Annex II countries that had not ratified the Kyoto Protocol by the latter date (2005). In their case, emissions increased by 25.3% and 16.3%, respectively.

Attainment of the ultimate objective of the Convention will be impossible unless these alarming trends are speedily reversed. The developed countries must sharply reduce their emissions so as to release atmospheric space for the development of poorer countries, in a manner that is consistent with achievement of stabilization of the greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous interference with the climate system.

IPCC scenarios suggest that, in order to achieve the stabilization goal, Annex I countries must reduce their emissions by **more than 25-40%** by 2020, from the 1990 baseline. In addition, over and above these reductions, policies and measures must be introduced by them to significantly further reduce their emission through lifestyle changes. **It is important that the real effort continue to focus on reduction of CO2 emissions. Moreover, the Annex I country targets should also be noted and reported in per-capita terms. Changes in the suite of gasses and/or LuLuCF rules should not be used to circumvent the climate imperative for reducing anthropogenic emissions.** Such a target by 2020 is an essential component of any meaningful outcome of the Bali Action Plan.

PAPER NO. 3E: INDIA

Government of India

Submission to UNFCCC on Technology Transfer Mechanism

I. Rationale

Enhanced mitigation and adaptation under the UNFCCC requires an acceleration in the development, deployment, adoption, diffusion and transfer of environmentally sound technologies among all Parties, particularly from Annex II Parties to non-Annex I Parties, in order to avoid the lock-in effects of non-environmentally sound technologies on developing country parties, and to promote their shift to sustainable development paths, thus enhancing the goals of the Convention. There is a critical and urgent need to provide access to technology for adaptation at a regional and national level, enabled by capacity-building and provision of new and additional funding to meet the costs of both integration of adaptation into the development process and stand-alone adaptation activities.

Currently, access to financing is limited, and should be enhanced to deliver technology development, deployment, diffusion and transfer to non-Annex I Parties. Barriers to technology transfer and trade also inhibit the adoption of environmentally sustainable technologies in non-Annex I Parties, highlighting the urgency for access to these technologies while balancing rewards for innovators with the common good of humankind, including jointly developed technology and intellectual property rights (IPR) sharing.

The immediate and urgent delivery of technology development, deployment, diffusion and transfer to non-Annex I Parties requires suitable responses, including a continued emphasis by all Parties on the enhancement of enabling environments, facilitating access to technology, and financing that leverages private sector financial resources. Current institutional arrangements are insufficient to deliver immediate and urgent technology development, deployment, diffusion, and transfer to non-Annex I Parties.

To address these challenges, this mechanism will build on existing activities within the Convention, including the work of the EGTT, and promote coherence by integrating expanding and ongoing activities related to technology. It will provide a means to enhance delivery on the Convention obligations on technology and related finance and capacity building.

II. Objective of a Technology Mechanism

An enhanced institutional mechanism will address all aspects of cooperation on technology research, development, diffusion and transfer in accordance with Articles 4.1(c), 4.3, 4.5 and other relevant articles of the Convention, in order to enable mitigation and adaptation under the relevant paragraphs of decision 1/CP.13.

III. Guiding Criteria

The technology mechanism will operate under the authority and guidance of the COP and be accountable to it. It shall aim to achieve:

- Accessibility, affordability, appropriateness and adaptability of technologies required by developing countries for enhanced action on mitigation and adaptation;
- Provision of full costs and full incremental costs, as per Article 4.1 of the Convention;
- Adequacy and predictability of funds for technology transfer

- Removal of barriers for technology development and transfer.

IV. Institutional Arrangements

The mechanism comprises an Executive Body and a Multilateral Climate Technology Fund operating under the Conference of Parties.

A. Executive Body on Technology

An Executive body on Technology shall be established as a subsidiary body of the Convention in accordance with its Article 7(2)(i) to enable implementing the Convention by enhancing action on technology development and transfer to support mitigation and adaptation. This subsidiary body shall comprise government representatives, (elected by the COP and with balanced regional representation, who are experts on matters related to technology transfer, and be open to input from other experts. The subsidiary would comprise and be supported by:

- i) **Strategic Planning Committee** to develop strategy; provide regular guidance; assess and elaborate technology-related matters; continuously evaluate progress; and develop updates for the Technology Action Plan, as described below, for regular intervals.
- ii) **Technical Panels** to generate and compile current expert information related to: capacity building; policies and measures; intellectual property cooperation; sectoral, cross-sectoral, and cross cutting cooperation; assessment, monitoring and compliance; and other necessary topics. The Executive Board may establish additional technical expert committees, panels or or working groups to or other bodies to provide scientific, technical, and operational expertise, and to consolidate and provide advice to the Executive Body and COP in order to assist it in the performance of its functions. In this context, it shall take fully into account the consideration of regional balance.
- iii) **Verification Group** to verify the financial and technological contributions made to the mechanism in accordance with the overall “measurable, reportable, verifiable” requirement of Decision 1/CP.13.
- iv) **Secretariat** to support and facilitate the activities of the Executive Body. The secretariat will compile and prepared a final report on financial and technological contributions made and reported by Parties to the technology mechanism in accordance with the overall “measurable, reportable, verifiable” Decision of the 1/CP.13.

B. Multilateral Climate Technology Fund (MCTF)

This fund will provide technology-related financial requirements as determined by the Executive Body. The fund will operate under the COP as part of the enhanced multilateral financial mechanism described in the Indian proposal on financial architecture.

- The MCTF shall be financed by assessed contributions from Annex II parties. Contributions to the mechanism shall be additional to other financial transfers to non-Annex I parties and shall meet the costs incurred by such Parties
- An agreed proportion of contributions by developed country parties and other parties included in Annex II of the Convention to bilateral and regional co-operation may be considered as contributions to the MCTF, provided that such co-operation is consistent with the policies and scope of the mechanism.
- Financial transfers to the MCTF shall be counted as measurable, reportable and verifiable commitments under para 1.b(ii) of the Bali Action Plan. Any funding not under the authority

and guidance of the UNFCCC shall not be regarded as the fulfillment of commitments by developed countries under Art. 4.3 of the Convention or Decision 1/CP.13.

- The MCTF shall cover, inter alia, eligible costs of activities approved by the Executive Body; administrative costs of the Executive Body, Secretariat, and Trustee or Trustees; and costs associated with other specific decisions of the Conference of the Parties.
- In the context of the enhanced multilateral financial mechanism proposed by India, the MCTF shall be managed by a trustee or trustees, selected through a process of open bidding, who shall have fiduciary responsibility and administrative competence to manage the MCTF, and shall hold in trust, the funds, assets, and receipts that constitute the Fund, and shall comply with the principles and modalities for their management and disbursement as stipulated by the Conference of the Parties.

V. Technology Action Plan

A Technology Action Plan shall serve as a starting point for the work of the executive body. It will include clear actions and dates for the first three years, and will be updated for successive three-year periods. To realize the full potential of technology, the Action Plan shall support all stages of the technology cycle, including:

- **Research.** The Action Plan will accelerate research and invention through scientific and technical cooperation at all levels, including that of scientists and institutions
- **Development.** The Action Plan will accelerate the rate at which technologies are developed and brought into effect.
- **Transfer and diffusion.** The Action Plan will ensure financing for technology transfer (including all available means to ensure the affordability of technologies, products and related services).

The Technology Action Plan will define specific policies, actions and funding requirements for all relevant technologies, under the following classifications

- **Public domain technologies.** The Action Plan will identify needs, and establish an international cooperation system to ensure lowest cost options, as well as transferring know-how to use and maintain the technologies; to adapt them to local conditions, including endogenous technologies.
- **Patented technologies.** The Action Plan will ensure that privately owned technologies are available on an affordable basis including through measures to resolve the barriers posed by intellectual property rights and addressing compulsory licensing of patented technologies. Technologies with shared ownership (government and private) will be made available on an affordable basis by facilitating transfer of the government proportion on a reduced or no-cost basis. Technologies that are government owned will be made available on an affordable basis by facilitating transfer at reduced or no-cost basis.
- **Future technologies.** The Action Plan will support the establishment of national and regional technology excellence centers and will reinforce north-south, south-south and triangular cooperation, including Joint Research and Development.

VI. Eligible Activities

The mechanism will cover technologies in all relevant sectors and endeavor to remove barriers to effective technology development, deployment, diffusion and transfer. It will articulate with the overarching financial mechanism of the Convention to secure necessary financing. The following list of activities and costs eligible for support by the mechanism is indicative and may be modified by the COP at any time.

Activities eligible for support include, inter alia:

Full Costs

- Promotion, facilitation and implementation of activities along the entire technology cycle to enable the accelerated adoption of ESTs;
- Support for research, development, manufacture, commercialization, deployment and diffusion of technologies for adaptation and mitigation in accordance with Decision 1/CP.13.
- adaptation technologies to address the adverse effects of climate change and finance the removal of barriers to the large-scale transfer of technologies for adaptation;
- capacity building to manage and generate technological change, enhance absorptive capacity, create enabling conditions in developing countries, inter alia, costs of :
 - Research, development and demonstration of new technologies
 - Enhancing human and institutional capacity;
 - Guarantees on foreign direct investment for Environmentally Sound Technologies

Incremental Costs

- Commercialization of new and emerging technologies, inter alia:
 - Venture capital, with public investment leveraging private capital markets for emerging technologies;
 - Research, development, and demonstration of new technologies, financed by venture capital and other sources
 - Joint technology development
- Creation of manufacturing facilities for EST, including low-GHG emission technologies, inter alia, costs of:
 - Compulsory licensing, cost of patents, designs, and royalties;
 - Conversion of existing manufacturing facilities or of establishing new facilities;
 - Research and development activities, including joint research, development, design, and demonstration;
 - Technology adaptation;
 - Retraining and dissemination of know-how;
 - Operation; and
 - Monitoring and verification.
- Procurement of low-GHG emission technologies, including software and hardware, inter alia:
 - Cost of premature modification or of replacement of existing equipment, as well as the cost of new equipment;
 - Cost of retraining and dissemination of know-how;
 - Cost of technical assistance for the design, installation, and stable operation of the technology;
 - Cost of fuel and other operational costs;
 - Cost of monitoring and verification.
