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UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE

**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 intergovernmental organizations

1. The Ad Hoc Working Group on Long-term Cooperative Action under the Convention (AWG-LCA), at its second session, invited Parties to submit to the secretariat ideas and proposals and, where appropriate and to the extent possible, specific textual proposals on the elements contained in paragraph 1 of the Bali Action Plan (decision 1/CP.13) taking into account the interlinkages among the elements and the specific subparagraphs under each of the elements, in order to focus the consideration of all the five elements by the AWG-LCA.¹
2. At its third session, the AWG-LCA invited its Chair to prepare a document assembling the ideas and proposals presented by Parties on the elements contained in paragraph 1 of the Bali Action Plan, taking into account the ideas and proposals presented by accredited observer organizations. The ideas and proposals shall be those received by 30 September 2008 in response to the invitations contained in the Bali Action Plan and in the conclusions of the first and second sessions of the AWG-LCA, as well as those that were presented during the first three sessions and in the in-session workshops.²
3. Given the large number of submissions that arrived soon after 30 September, the Chair, in preparing the document referred to paragraph 2 above, intends, to the extent possible, to take into account submissions received by 10 October.
4. The secretariat has received seven submissions from international organizations. As requested by the AWG-LCA, they have been posted on the UNFCCC website.³ In accordance with the procedure for

¹ FCCC/AWGLCA/2008/8, paragraph 25.

² FCCC/AWGLCA/2008/12, paragraph 27.

³ <http://unfccc.int/parties_and_observers/igo/items/3714.php>.

miscellaneous documents, these submissions are attached and reproduced* in the language in which they were received and without formal editing. The secretariat will continue to post on the UNFCCC website any submissions received after the issuance of the present document. The secretariat will also issue an addendum to this document prior to the fourth session of the AWG-LCA to include submissions that are received after 10 October.

5. Submissions received from Parties are compiled in document FCCC/AWGLCA/2008/MISC.5. Submissions received from non-governmental organizations will, in line with established practice, be posted on the UNFCCC website, at <http://unfccc.int/parties_and_observers/ngo/items/3689.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.

CONTENTS

	<i>Page</i>
1. FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS AND THE INTERNATIONAL FUND FOR AGRICULTURAL DEVELOPMENT (Submission received 30 September 2008).....	4
2. SECRETARIAT OF THE GLOBAL CLIMATE OBSERVING SYSTEM (Submission received 23 September 2008).....	8
3. INTERNATIONAL LABOUR OFFICE ⁴ (Submission received 30 September 2008).....	10
4. UNITED NATIONS DEVELOPMENT PROGRAMME (Submission received 30 September 2008).....	15
5. UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION WITH THE INTERNATIONAL ATOMIC ENERGY AGENCY ON BEHALF OF UN-ENERGY (Submission received 22 October 2008).....	19
6. UNITED NATIONS INTERNATIONAL STRATEGY FOR DISASTER REDUCTION (Submission received 29 September 2008).....	24
7. WORLD METEOROLOGICAL ORGANIZATION (Submission received 6 October 2008).....	29

⁴ The International Labour Office is the permanent secretariat of the International Labour Organization.

PAPER NO. 1: FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
AND THE INTERNATIONAL FUND FOR AGRICULTURAL DEVELOPMENT

Financing Climate Change adaptation and mitigation in the agricultural and forestry sectors

Submission by the Food and Agriculture Organization (FAO) and the
International Fund for Agricultural Development (IFAD)

We urge governments to assign appropriate priority to the agriculture, forestry and fisheries sectors, in order to create opportunities to enable the world's smallholder farmers and fishers, including indigenous people, in particular in vulnerable areas, to participate in, and benefit from financial mechanisms and investment flows to support climate change adaptation, mitigation and technology development, transfer and dissemination. We support the establishment of agriculture systems and sustainable forest management practices that positively contribute to the mitigation of climate change and ecological balance.

Paragraph 7b of the Declaration adopted by the *High-Level Conference on World Food Security: the Challenges of Climate Change and Bioenergy*, held in Rome on 3-5 June 2008.

Introduction

This submission is made with a view to making available, to Parties, work undertaken in other intergovernmental processes. FAO and IFAD would like to draw attention to the Declaration adopted by the High-Level Conference on World Food Security: the Challenges of Climate Change and Bioenergy (HLC), particularly its paragraph 7b, reproduced above.

Also covered in this submission are related issues concerning financing of climate change adaptation and mitigation in the agriculture and forestry sectors that were highlighted in the context of the High-Level Conference, attended by a large number of Heads of State and Government. These issues are largely drawn from the HLC background document *Financial Mechanisms for Adaptation to and Mitigation of Climate Change in the Food and Agriculture sectors* (<ftp://ftp.fao.org/docrep/fao/meeting/013/k2396e.pdf>hyperlink), jointly prepared by FAO and IFAD. At the heart of these issues is the message that **agriculture and forestry – the land use sectors – have significant potential for climate change mitigation, but to realize this potential, financing/incentive mechanisms need to target better these sectors and reach small-scale land users.**

As REDD is already being discussed in AWG-LCA, a technical paper on mitigation in the agriculture sector is being prepared by the UNFCCC Secretariat for the AWG-LCA in Poznan, and a workshop on the same is scheduled for the following AWG-LCA in Bonn in 2009, these issues are both timely and relevant to discussion being undertaken in the AWG-LCA.

Issues

Source, sink and important co-benefits

According to the IPPC AR4, roughly 14% of global greenhouse gas (GHG) emissions are from agriculture sector and 17% are from forestry, including land use change through deforestation. Together they are roughly one-third of all global GHG emissions. The potential for additional carbon sequestration from land use sectors - linked to REDD, sustainable forest management, afforestation and reforestation, agro-forestry techniques, soil conservation in agriculture and renewable energy from biomass—is

substantial, corresponding to 5-10 billion tonnes of CO₂e per year by 2030 (IPCC, AR4, WGIII). As agriculture accounts for 50 percent and 60 percent of global emissions from other GHGs, namely methane and nitrous oxide, it also offers ample opportunities for their reduction. At the same time, agriculture and forestry sectors are perhaps the most climate-sensitive of all sectors and hence potentially the most vulnerable. Predicted climate change hot spots appear to coincide with areas where food insecurity will be a major problem.

There is thus large potential in these land-based sectors for generating emission reductions for which financing/incentive/payment mechanisms will be needed. Financial flows to these sectors in developing countries, estimated to be as high as US\$20-100 billion in 2030, would be of great relevance, not only to climate change mitigation but also to meeting the expected costs of adaptation and to the generation of such co-benefits as food security, livelihoods/income for the rural poor, provision of environmental services and substantial contributions to the economies of LDCs.

Actions aimed at safeguarding food security and rural livelihoods under climate change in the coming decades, a key focus for FAO and IFAD, must necessarily focus on synergies between adaptation and mitigation strategies for the rural poor—in order to address climate, environmental, social and economic concerns expressed within both the UNFCCC and the MDGs. Farmers and forest-dwellers must be seen as economic players in light of the valuable services they can provide to counter climate change. Nationally appropriate mitigation measures in the agriculture and forestry sectors in developing countries offer the opportunity to address mitigation from within the dominant economic sectors of most poor developing countries, with possibilities for strengthening their sustainable development.

Accessibility to financing mechanisms: more flexibility in scope, size and procedures

A review of the different existing financing mechanisms showed that there are opportunities for enhancing the ability of financing mechanisms to reach poor countries and communities in developing countries, by broadening their scope to be more inclusive of agriculture and forestry sectors, simplifying their procedures and making them more flexible. Many agricultural and forestry activities are currently eligible under a number of voluntary schemes and pilot funds, but apart from afforestation and reforestation, they were excluded under the CDM, the largest of the existing carbon markets. 2007 data from the UNFCCC showed that only one out of some 1,100 CDM-registered projects addressed afforestation and reforestation.

Eligible Chicago Climate Exchange (CCX) carbon offset activities with relevance to agriculture and rural livelihoods in developing countries are carbon sequestration in soils (low/no tillage and pasture conservation) and methane capture and flaring - from animal waste management systems - for renewable energy. Allowed CCX forest carbon offset categories, of relevance to rural livelihoods in developing countries, include afforestation and Sustainable Forest Management. If the CCX continues to increase in size and adopt, as expected, new emission reduction goals after 2010, its potential for mitigation activities in the agriculture and forestry sectors could be substantial. Projects in developing countries are expected to play a more important role in future, thereby opening the door to a range of agriculture and forestry activities of relevance to the rural poor. In addition, because CDM CERs can be traded within the CCX, an expansion of this market may increase demand for CDM projects supplying offsets from land-based sectors.

In the voluntary over-the counter market, carbon offset forestry projects have generated to date a large share of VERs (Verified or Voluntary Emissions Reductions credits, corresponding to one tonne of CO₂e) accounting for about 36 per cent of the market. These projects include reduced deforestation, afforestation/reforestation with mixed native tree species, and carbon sequestration activities in forests. VERs originating from methane recovery at livestock farms are few, approximately 1.1 percent of the total.

Compared to the UNFCCC regulatory markets, VERs markets have a higher proportion of forestry based credits out of total market transactions than the CDM (36 percent as compared to 1 percent for CDM), and a slightly higher proportion of credits sourced from Africa (6 percent as compared to 3 percent for CDM). They are already providing carbon finance for reduced deforestation projects. The voluntary markets are also more open than the CDM to smaller offset projects. This feature currently provides greater opportunities for voluntary markets to contribute to sustainable development in small rural communities, compared to CDM.

The large share of small-scale projects generating VERs is also probably related to the possibility of making up-front payments to project owners, helping them to cover start-up costs. This reduces the development burden on small producers, but also results in payments being made for reductions that have not yet occurred. By contrast, CDM buyers typically purchase credits only after CERs have been generated and verified. Small projects in a VERs market are also encouraged by the ability to use simpler methodologies and flexible mechanisms for monitoring and verification. At the same time, this may also limit scaling up such markets, compared to the CDM, since the absence of stringent oversight mechanisms may negatively affect the quality of the VERs produced. In order to reduce such concerns, several independent voluntary standards have been established in recent years, aiming at enhancing the credibility of offset projects.

It may be beneficial for financing mechanisms under a post-2012 regime to draw on the experiences of voluntary markets with a view to increasing incentive schemes for mitigation in the land-use sectors, which are inclusive of small-scale land users and for which better methodologies and more user-friendly tools are available.

Linking adaptation and mitigation: premium carbon credits

Adaptation activities leading to increased agricultural and forestry system resilience, as well as improved natural resources management and productive practices, may be attractive to carbon markets because of their associated mitigation value. No regrets, win-win strategies include: forest management, agro-forestry, agricultural “good practices” (including conservation and organic agriculture) that conserve or restore soil and water resources, and properly scaled bioenergy projects for rural communities, with potential co-benefits in terms of food security, rural incomes and environmental services.

A possibility for enhancing the role of several of these land-based project activities, relevant to the rural poor, is the development of “Premium credits,” i.e. carbon credits generated in projects that not only sequester carbon, but also enhance adaptation capacity through improved ecosystem resilience. On top of likely demand from voluntary markets and carbon funds, a regulated market could be created under post-2012 arrangements, by requiring compliance buyers to include a fixed percentage of such credits in their portfolios. The resulting higher prices for premium credits, compared to standard offsets, may significantly increase direct financial flows to project participants in rural communities.

Barriers and bundling

FAO and IFAD have found that land-based climate change mitigation project activities in rural areas face several barriers to entering the carbon market, including: high start-up and transaction costs; expensive entry fees; insufficient knowledge about project registration cycles; small project scale and fragmentation. Overcoming these constraints will require capacity building, technical support, innovative policy and institutional solutions at both the national and international levels, as well as simplification of procedures as mentioned above. The costs of overcoming these constraints must be taken into consideration when designing incentives for land-based mitigation.

In order to overcome limits on the size of projects and provide “economies of scale”, the individual emission reductions of many small project activities can be bundled together, so that they become cost-effective and thus attractive to carbon and compliance buyers. The CDM Programme of Activities (PoA) also provides the means for linking projects. A PoA is made up of CDM Programme Activities (CPAs). Multiple CPAs can be included at the time of registration and additional CPAs added at any time during the life of the PoA.

Integrated approaches to natural resource management in the context of climate change, including medium-to-large-scale ecosystems, may also provide opportunities for linking projects.

Synergistic linking of development funds with new and additional resources for climate change.

The estimated costs of climate change adaptation and mitigation in the agriculture and forestry sectors far exceed public and private resources currently available. Financial leveraging to generate the US\$20-100 billion a year in 2030 through large-scale land-based mitigation will require mobilization of both public and private resources, including linkages with existing investment and financial flows to rural development. These flows - comprising international debt, FDI, and ODA - are small compared with the expected costs of adaptation and mitigation in agriculture and forestry sectors. Yet, if utilized together with new and additional resources for climate change, positive synergies could be obtained.

Conclusion

Within the framework of international climate policy and its associated mechanisms, under the United Nations Framework Convention on Climate Change (UNFCCC), a key challenge is how to enable agriculture and forestry to contribute to climate change mitigation in line with its potential, while taking fully into account the other economic, social and environmental goods and services they provide.

Central to this challenge is how millions of small-scale land users in these sectors, which constitute 75% of the poor in developing countries, could adopt practices that sequester greenhouse gases effectively. This in turn depends on how they could, appropriately and to a greater extent than is presently the case, participate in and benefit from incentive/financing mechanisms, including the growing carbon market, in order to mobilize the financial resources, technology and capacity necessary for adoption of nationally appropriate mitigation actions and reduction of their vulnerability in the coming decades.

Crucial to meeting this challenge is the development of (i) national needs assessment against which required support can be verified, reported and measured; (ii) technical methodologies for setting baselines, against which verification, reporting and measurement of emission reductions can take place; (iii) incentive/payment schemes; (iv) ways of capturing potential co-benefits and challenges such as permanence and leakage in the agriculture and forestry sectors. It will be important to build on existing technical sectoral knowledge, technologies and experience in developing easy-to-use but robust methodological approaches.

In deciding upon the design and functioning of financing/incentive mechanisms within a post-2012 regime, consideration of the issues covered in this FAO/IFAD submission could be taken into account.

PAPER NO. 2: SECRETARIAT OF THE GLOBAL CLIMATE OBSERVING SYSTEM

Preliminary GCOS views on adaptation under the AWG-LCA

Submitted by the Global Climate Observing System Secretariat

23 September 2008

Adequate high-quality observations of climate and climate-related variables are essential if adaptation to climate change is to be based on deliberate planning leading to better adaptation policies. Good observations acquired over extended periods make possible an understanding of the frequency of extreme events as well as average climate conditions. They thereby contribute to better planning and decision making related to agriculture, coastal zone management, water resources management, health, tourism, and disaster risk management. Observations also play a key role in validating and initializing models to enable long range statistical predictions of seasonal, inter-annual, and decadal climate, which in turn, can be of great importance in designing effective adaptation strategies. Although not sufficient in and of themselves, adequate observations of the climate are the indispensable foundation on which many successful adaptation policies will be designed.

To assist the Chair of the Ad Hoc Working Group on Long-Term Cooperative Action Under the Convention (AWG-LCA) to prepare a document assembling the ideas and proposals from Parties and accredited observer organizations on elements of the Bali Action Plan, the Secretariat of the Global Climate Observing System (GCOS) would like to propose the following:

1. National Adaptation Planning

- i. Both developing and developed countries should be encouraged to give very high priority to national needs for observations in their national adaptation planning. For example, a section on climate observing system needs should be included in National Adaptation Plans of Action when these are prepared or revised.
- ii. All countries should be encouraged to appoint GCOS National Coordinators and to establish GCOS National Committees. The importance of this need is now firmly recognized. The future effective functioning of GCOS and the value of observations for adaptation purposes will depend greatly on the degree to which efficient cross-discipline and cross-agency coordination mechanisms are put in place at national and regional levels.

2. Streamlining and Scaling Up Financial and Technological Support

- i. GCOS has supported the development of 10 Regional Action Plans that identify priority observing system needs in developing regions. Many projects proposed in the Plans have not yet been implemented due to lack of resources. SBSTA and COP have on several occasions encouraged developed Parties to assist in the implementation of these Plans. They should continue to press Parties to provide resources for the implementation of the Regional Action Plans.
- ii. The Climate for Development in Africa Programme has been officially endorsed by the Heads of State of the African Union and has attracted the interest of many potential donors, but it has still not been funded. This important programme could lead to substantial and necessary improvements in climate observing systems and climate services in support of adaptation in Africa. It is essential that Parties in a position to do so be encouraged to support this programme.

3. Enhancing Knowledge Sharing

- i. Data sharing will be increasingly important if countries are to be able to take full advantage of the opportunities that new and improved regional modeling presents. The outputs of regional models are likely to be very useful in the design of adaptation strategies, but only so if modeling results can be trusted. The GCOS Secretariat therefore encourages greater data exchange, at least among regions if not more broadly, and is persuaded that this will benefit all countries.
- ii. Likewise, the development and dissemination of tailored climate services—based on improved climate observations—will benefit sectoral users in the design of adaptation strategies. The AWG-LCA should encourage sharing of, and capacity building to use, these climate products.

4. Institutional Frameworks for Adaptation

- i. Developed countries in a position to fund improvements in climate observing systems should be encouraged to actively participate in the annual GCOS Cooperation Board (GCB) Meeting, usually held in parallel with mid-year SBSTA meetings. An engaged GCB will be one important means of facilitating the improvements in observing systems in developing countries that are so greatly needed.

PAPER NO. 3: INTERNATIONAL LABOUR OFFICE

Submission on the Bali Action Plan to the AWG-LCA

The International Labour Office¹ welcomes the opportunity to express our views and proposals regarding the Bali Action Plan (BAP).

Regarding paragraph 1 (a) of BAP:

- ***The role of equity between and within countries as the backbone of a future agreement***

The agreed outcome of the comprehensive process which is taking place at present should be guided by the principle of equity. Broad access to employment and income opportunities created in the transition to low carbon economies which are resilient to climate change is key to equitable outcomes. Due consideration of the principle of equity will be fundamental for arriving at a new agreement and for the political sustainability needed to provide a stable investment climate.

Therefore the shared vision for long term cooperative action should provide a global framework ensuring a just transition to a low-carbon, sustainable economy for all. It should enhance the opportunities for development, for employment in decent jobs, for poverty reduction and the capacities to both seize opportunities and also reduce negative impacts in those countries, regions, sectors and social groups facing challenges.

The principle of equity should not only apply between, but also within countries, being a guiding principle for all policies, measures and actions for adaptation and mitigation. It relates to both the costs and the benefits of actions for mitigation and adaptation.

- ***Involvement of stakeholders in equitable solutions and just transitions to low carbon economies***

A transition to a progressively clean model of investment and growth that has a triple dividend for the climate, for clean economic growth and for social development is possible but it will not be automatic. Articulation between the environmental, economic and the social dimensions of development is essential to meet the challenge of climate change. This challenge is much more than an environmental issue. It is about the need for a profound transformation in the way we produce and consume.

For the cost and negative impacts to be minimized and for the benefits to materialize environmental, economic and social policies and programmes need to be well informed, coherent, broadly supported and able to engage stakeholders.

The task is complex but can be accomplished by involving the main stakeholders -governments, employers, and workers- in social dialogue for the design and implementation of policies. Social dialogue has been successfully used for decades to reconcile conflicting interests, build constructive consensus for action and to address challenges including overcoming economic recessions, restructuring and international trade.

Dialogue will be essential also for dealing with the downside of reducing emissions of greenhouse gases. Workers and entrepreneurs should be assured that a green environment for society does not mean an unemployment slip for them: re-training, social security schemes, active labour market policies and

¹ The International Labour Office is the permanent secretariat of the International Labour Organization.

programmes to diversify economies need to be put in place to soften the blow for them. These are some of the measures to achieve a Just Transition to a sustainable and low-carbon world.

Regarding paragraph 1 (b) i, ii (Mitigation)

- *Ways for turning the response to climate change into a development opportunity (mitigation context)*

A drive towards equity and inclusion across countries as well as regions, sectors and social groups within each country can turn addressing climate change into a global opportunity for sustainable development for all countries and all people².

While the IPCC report has emphasized the significant potential to create new employment of mitigation and adaptation efforts, generally employment only features marginally in the climate debate as a “co-benefit” of these measures. This view overlooks the fact that the benefits for employment and development are vital for making many mitigation measures technically feasible, economically viable, socially acceptable and politically sustainable. Besides that, much environmental degradation is poverty-driven: reducing poverty through productive employment is an important route toward greater environmental sustainability.

Millions of green jobs are already in existence, and are growing fast in areas like renewable energy, energy efficiency and recycling. While identifiable green jobs look set to be a growing source of employment and clean development into the future, greening of enterprises and redefinition of many jobs is a further challenge.

Economic growth at the expense of environmental quality is unsustainable and self-defeating even in economic cost/benefit terms. Opportunities and constraints for clean growth vary however by country, region and sector. Good analysis of possible labour market impacts is therefore vital for the design of effective policies, including accompanying measures to smoothen the transition. A crucial tool to employ in analysis and policy making is social dialogue among those most affected by these transitions – workers, employers and governments- to work towards fair, efficient and balanced in their cost and benefits policies

Economic sectors and individuals enterprises can make a major contribution to reducing both emissions of greenhouse gases and the environmental footprint in general through labour-management initiatives resulting in greener workplaces. Gains are often quickly achieved, at a very low cost and without the need for major capital investment.

Employment and labour policies can contribute to a smooth transition to more sustainable growth by identifying opportunities for green jobs, greening existing jobs, and easing the phasing out of unsustainable jobs.

² The report entitled “Green Jobs: Towards Decent Work in a Sustainable, Low-Carbon World” is the first comprehensive study on the emergence of a “green economy” and its impact on the world of work. The report is the first result of the the Green Jobs Initiative, which is a joint initiative by the United Nations Environment Programme (UNEP), the International Labour Organization (ILO), the International Employers Organization (IOE) and the International Trade Union Confederation (ITUC). It has been launched to assess, analyze and promote the creation of decent jobs as a consequence of the needed environmental policies. More information in: <http://www.ilo.org/integration/greenjobs/index.htm>

Capacity building as a decisive element for mitigation

The success of the whole range of mitigation policies and measures will depend on the capacities of those who need to respond and implement these decisions in enterprises and at workplaces. Both the UNEP/ILO/IOE/ITUC report on green jobs and studies by the Mc Kinsey Global Institute conclude that an effective response to climate change needs to mobilize millions of entrepreneurs and workers. Capacity building of employers, workers and related government services will therefore need to play a major role in tackling climate change at all levels, national, regional, local and sectoral. Only with governments with adequate institutional capacity, workers skilled in low-carbon technologies and production methods, and enterprises of all sizes well informed about how to shift to a lower emission production, will it be possible to successfully face the challenge of climate change.

Regarding paragraph 1 (c) i, ii, iii, iv (Adaptation)

- ***Ways for turning the response to climate change into a development opportunity (adaptation context)***

The response to the diverse climate change crises could help to make countries and local communities more resilient if aimed at adapting livelihoods rather than providing short-term disaster relief which recreates the pre-disaster situation. Access to basic social protection also cushions the impact of climate-related disasters and helps prevent temporary loss of earnings becoming chronic poverty or a driver for forced migration. All aspects of adaptation require new technical, vocational and often also entrepreneurial skills.

Investments in infrastructure will account for a large share of the adaptation effort. They could be a major development opportunity if they relied on labor-based methods. This widely proven approach uses appropriate and environment-friendly technology emphasizing the use of local labour and resources. It applies effective participatory planning, a quality assurance mechanism, productivity-based remuneration systems and occupational safety and health safeguards. The advantages of such approach are the following:

- ✓ Increased cost-effectiveness and reduced fossil energy demands in the reconstruction and operation and maintenance of infrastructure
- ✓ Increased environmental protection and energy-efficiency through the use of appropriate technology and approaches
- ✓ More and more productive employment opportunities, increased household incomes and improved income distribution
- ✓ Increased productivity of scarce production factors
- ✓ Enhanced relevance, sustainability and quality of investment in infrastructure through community participation
- ✓ Increased productivity of created infrastructure assets (e.g. in rural roads, irrigation, water and soil conservation, forestry)
- ✓ Increased spin-off and multiplier effects on the local economy (e.g. on domestic small-scale construction sector)
- ✓ Better opportunities for social protection

- ✓ Greater access to technology and finance for small enterprises, communities and disadvantaged individuals

Analyzing the adaptation requirements from a wide angle perspective rather than only elements of a comprehensive approach (flood control, water management, soil protection etc), will make it possible to deal with the whole range of issues which are responsible for the vulnerability of areas and communities affected by climate change. Adaptation to climate change can be very effectively integrated into broader national and local development strategies.

In that sense, successful adaptation needs to take into account diverse social development issues, such as long term policies for employment creation and entrepreneurship promotion for unemployed, youth and women. Social dialogue in the planning of adaptation strategies and as part of national and local delivery mechanisms will ground adaptation in sectoral and local realities and generate synergies between private and public investments.

The climate change challenge is global, but meeting it requires sustained and appropriate transformations in enterprises at local level. In this regard local development programmes should be enhanced through the social dialogue among governments, business and workers organizations, among others tools.

Regarding paragraph (d) (i) and (ii) (Technology Transfer)

- ***Skills as a bottleneck for the effective transfer and deployment of technology and ways to close the skills gaps***

While most attention is focused on the development and transfer of existing and new technologies, experience demonstrates that access to technology and finance are necessary but not sufficient conditions. Without qualified entrepreneurs and skilled workers, available technology and resources for investments can either not be used at all or cannot deliver the expected environmental benefits and economic returns. The weakest link in the production chain will determine the level of performance that can be attained.

Skills gaps and shortages have emerged as binding constraint for the greening of economies in industrial and developing countries alike. Examples range from energy efficiency in Australia to the biofuels industry in Brazil, and from the building industry in China to the booming renewable and environmental industry in Germany. All suffer from a lack of skilled workers, machine operators, technician and engineers³. The human resource bottleneck slows growth and is costing valuable time in achieving targets for emission reductions.

Creating a map of skill requirements is an urgent and vital first step as it can inform ad hoc programs for potential skills upgrading. In parallel, measures are needed to equip education and vocational training systems for coping with new skills demands and with the re-profiling of many existing jobs in low-emission economies.

- ***Wide angle perspective technology transfer programmes***

Technology transfer programmes should be planned from a wide angle perspective, development point of view.

³ Details of that information in the report “Green Jobs: Towards decent work in a sustainable, low-carbon world” (<http://www.ilo.org/integration/greenjobs/index.htm>).

The participation of local stakeholders, including local governments, workers and entrepreneurs, is essential for the assessment of the technology needed, both for mitigation and especially for adaptation.

Regarding paragraph (e) (iii), (iv) (Finance)

- ***The need for greater access to technology and finance for small enterprises, communities and disadvantaged individuals***

Investments into adaptation and mitigation can result in a quantum leap for economic and social development if the countries and the people who need them most are targeted: the 1.3 billion working poor, the 190 million unemployed and the 500 million young job seekers arriving on the labour market over the next 10 years.

Experiences in Bangladesh, Brazil, China, India, Nepal, South Africa and other many countries highlight the big returns from investing in small enterprises and communities to create decent jobs, generate income and improve the quality of life. South-south cooperation can play a major role in transferring proven technology and know-how about implementation.

Progress is very slow however, because vast numbers of individuals and enterprises are still excluded from clean development and need access to small loan and micro-finance schemes and to payments for environmental services. The financial mechanism needs to provide the volume required as well as the ability to target resource flows. There are similar problems with turning adaptation into an engine for development.

The vast majority of enterprises in the world are of small firms which may not possess either the financial wherewithal, or the information on climate change, or both in order to adjust their business practices. Moving to a sustainable development trajectory will require a particular focus on small enterprises.

- ***Innovative micro-finance institutions, with a social element as a tool to better cope with those risks and damages caused by climate change in countries and sectors where the difficulty to access to a traditional financial services is bigger.***

Using financial instruments with a social goal can help the most vulnerable to cope better with those risks and damages caused by climate change, while diversifying their economies and creating income-generating opportunities for the poorest.

The traditional financing services may not be adequate to meet the needs generated by climate change and different and creative solutions such as micro-credit and micro-insurance are required. Evidence from countries such as Bangladesh, India and Ghana demonstrates that successful technology transfer, economic diversification and local sustainable development will often depend on micro-finance solutions. To understand the types of services that might be required to reduce vulnerability, it is necessary to consider the most vulnerable segments of the population.

The benefits of such instruments will have direct impacts on the recipients but also indirectly in the whole community due to the increase in the competitiveness, job creation, education opportunities rising and poverty alleviation.

PAPER NO. 4: UNITED NATIONS DEVELOPMENT PROGRAMME

Submission of the United Nations Development Programme (UNDP) to the Ad Hoc Working Group on Long-Term Cooperative Action under the Convention (AWG-LCA)

The Ad Hoc Working Group on Long-term Cooperative Action under the Convention (AWG-LCA), at its third session, invited its Chair to prepare, under his own responsibility, a document assembling the ideas and proposals presented by Parties on the elements contained in paragraph 1 of decision 1/CP.13 (the Bali Action Plan), taking into account the ideas and proposals presented by accredited observer organizations. The ideas and proposals shall be those received in response to the invitations contained in the Bali Action Plan and in the conclusions of the first and second sessions of the AWG-LCA, as well as those that were presented during its first three sessions and in the in-session workshops of the AWG-LCA.

In response to this invitation, the United Nations Development Programme (UNDP) makes the following submission.

1. Overall objective.

Nearly all sectors of society contribute to greenhouses gas emissions and are affected by climate change. The magnitude and the impact of the problem give this generation the opportunity to craft an effective and rational response, under the aegis of the United Nations Framework Convention on Climate Change (UNFCCC), that not only moves societies (production and consumption patterns) towards less carbon intensive pathways, but that at the same time, makes major inroads towards achieving the Millennium Development Goals and long term sustainability, and reduce poverty.

The scale and scope of the response needed to address climate change requires a new development paradigm in support of this transition towards sustainable economies. Every policy and investment decision has to be assessed in light of its greenhouse gas reduction capacity and its contribution to long term sustainability.

In light of this overall objective, it is important that any new financial architecture agreed upon under the UNFCCC reinforces and is coherent with poverty reduction strategies and aid effectiveness agendas, emphasizing, amongst others, government ownership, donor alignment and aid effectiveness.

Any agreed outcome on long-term cooperative action must therefore focus on concrete elements that can directly improve the well being of billions of poor and vulnerable people in the areas most adversely impacted by the effects of global climate change. A new regime should not only promote climate change mitigation and adaptation but also bring important development benefits to the poor.

2. Possible key action/decisions.

UNDP is ready to enhance its own capacity and be fully available to support any new regime Parties may agree upon. Key actions/decisions to ensure that development agencies such as UNDP provide support to this possible transition towards long term sustainability include:

2.1. Promoting mechanisms for integrated delivery, at the national level, of development assistance and assistance to address climate change

Under the guidance of the COP, services of agencies like UNDP should ensure integrated delivery of development assistance at the national level by ALL development partners, including UN country teams,

multilateral development banks, regional centers of excellence and non-governmental organizations. This requires a new and integrated mode of cooperation between the Bretton Woods Institutions, the UN and various other players at regional, national and local levels.

UNDP, as the development agency of the UN system and as the UN convener at national level, in full cooperation with the UN agencies and multilateral development banks, can play an important role in further supporting UN country teams' integrated assistance to respond to climate change at country level.

A number of existing coordinating mechanisms (such as the UN internal coordinating mechanisms and financial mechanisms such as the GEF) may be further enhanced to support such integrated delivery.

New mechanisms could also be considered, such as country level trust funds for channeling bilateral and multilateral donor funding, or a global UN system wide Multi Donor Trust Fund that would facilitate integrated action at the national level by providing an UN system wide, coherent financial mechanism to complement climate financing from multilateral development banks and other emerging and existing sources, such as the GEF. This will enable the UN system to provide strong and integrated support to developing countries upon their request, with the UN capacity development, policy and advisory functions complementing the infrastructure financing from the development banks and other investors.

2.2. Enhancing the supportive role agencies such as UNDP can provide to developing countries to develop long term planning addressing climate change across various economic sectors

It is important to ensure that *additional support to address climate change is fully integrated with development support* so that addressing multiple development challenges and climate change are mutually supportive. Agencies such as UNDP that are working across various economic sectors could assist countries to ensure that action on and financing for climate change also address poverty, security, food, fuel and energy provision, and that the goals and aspirations of the Convention on Biological Diversity and the Convention to Combat Desertification are met in a cost effective and coherent manner.

UNDP is ready to enhance its *capacity to support countries in designing and implementing integrated climate change (adaptation, mitigation) policies, strategies and action plans and budgets that promote long term sustainability and poverty reduction.*

2.3. Enhancing the supportive role that agencies such as UNDP can provide to developing countries in accessing financial support

Capacity development plays a crucial role in supporting countries' ability to negotiate, design and manage finance for addressing climate change. Such capacity is key to ensure that countries are prepared to absorb financial support in a transparent, efficient and results-oriented way. UNDP already plays a key role in strengthening the capacity of national institutions, building aid coordination mechanisms and developing management systems for accessing and utilizing development resources in various sectors and activities.

UNDP should further assist countries to enhance their capacities to use existing and emerging carbon financing, and other existing and emerging public and private investment mechanisms and financial flows for addressing climate change, to support effective transitions towards sustainable development across sectors and the production and consumption chain.

Through its experience in building capacity to access development finance and poverty alleviation and in supporting various financing mechanisms (such as the GEF and the Multilateral Fund of the Montreal Protocol), *UNDP can assist developing countries as they strive to:*

- ✓ Evaluate and identify the most pressing climate change challenges, policy options and investments, and the associated finance requirements.
- ✓ Assess the mix of public policies and financial instruments that will lead to market transformations that promote sustainable development/investments and to transformations of economies in the long run.
- ✓ Attract, combine and sequence the relevant financial instruments through mechanisms such as the GEF, the MDG Carbon Facility, and the UN REDD partnership.
- ✓ Build the capacities to access the diversity of international funding sources, vertical funds, and investment opportunities; to deal with the different eligibility rules and procedures; and to ensure that investments are not stand-alone but are integrated into the overall development frameworks and national efforts to achieve sustainable development and the MDGs.
- ✓ Develop the capacity to design and implement policies and incentives that will attract and drive private sector investments towards less carbon intensive production and consumption processes, while at the same time advance deployment of sustainable development technologies and practices.
- ✓ Find innovative solutions to address the financial risks associated with investing in developing countries - a key requirement in order to attract the private sector to making climate change investment in developing countries, particularly the least developed countries.

The support of UNDP described above should be covered on a *full cost recovery basis for services provided*, through legal agreements with major funding mechanisms, under the purview of the COP of the UNFCCC. Progress should be reported on a regular basis to the COP.

2.4. Importance to ensure that any new global climate change regime and global development cooperation are coherent and mutually supportive

The financial architecture for enhanced cooperation on climate change being negotiated under the UNFCCC should provide for new and additional, predictable financial resources following the principles of the Convention. Increasing public and market based resource transfers from developed countries and putting in place a transparent tracking system will be key to reaching agreement.

In addition, other international fora and processes will need to consider their impact and relation to the international response to climate change. Similarly, the climate change process can provide a major contribution to the building of a more effective, sustainable and equitable architecture for development financing, trade and progress in addressing global public goods. The explicit overarching objective of these efforts should be sustainable human development for all countries and people.

UNDP proposes the following key considerations to guide more effective complementarity and synergy between global development and climate change efforts:

- Financing for climate action in developing countries must be over and above existing aid commitments;

- Development itself, including development cooperation, needs to adapt to climate change: climate vulnerability and adaptation should be reflected in budgets, policy frameworks and development strategies;
- International assistance must be used in a more strategic manner: even 0.7% of the collective GDP of all industrialized countries would be far from sufficient to respond to climate change. Hence, a proportion of aid must be used strategically to help unlock current and future climate financing to deliver on both climate and development targets, thus multiplying the impact of aid for sustainable development and poverty reduction.

UNDP thanks the AWG-LCA for the opportunity to provide an input to the Chair's document and stands ready to provide any further input or clarification as may be required.

PAPER NO. 5: UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION WITH
THE INTERNATIONAL ATOMIC ENERGY AGENCY ON BEHALF OF UN-ENERGY

Advancing Industrial Energy Efficiency (IEE) under the Bali Road Map

UNIDO with IAEA: **Submission on Behalf of UN-Energy**

Background

UN-Energy was established to help ensure coherence in the UN system's multi-disciplinary response to the energy-related outcomes of the World Summit for Sustainable Development (WSSD) and to promote system-wide collaboration in the area of energy, with a coherent and consistent approach, since there is no single entity in the UN system that has primary responsibility for energy¹.

As an input into the UNFCCC/Kyoto Protocol Bali Road Map (BRM) negotiation process, UN-Energy (Energy Efficiency Cluster) conducted an Expert Group Meeting (EGM) on Industrial Energy Efficiency (IEE)² in Washington, D.C., on 22/23 September 2008. One immediate output of the EGM is this submission by UNIDO (as the current chair of UN-Energy and cluster leader) with the IAEA (as cluster co-leader) on behalf of UN-Energy in response to the call for ideas and proposals on elements contained in Paragraph 1 of the Bali Action Plan included in FCCC/AWGLCA/2008/L.7.

This submission reflects the collective views expressed by 35 experts and UN agency representatives present at the EGM. A full workshop report and an in-depth issue paper elaborating these points will be available by COP14 and will be discussed at a UN-Energy Side Event in Poznan in December 2008. The purpose of this submission is to help encourage investments in energy efficiency and promote the transfer and diffusion of energy-efficiency technologies and practices under the Bali Action Plan.

Introduction

Global assessments of the Intergovernmental Panel on Climate Change (IPCC, 2007) and the International Energy Agency (IEA, 2008)³ point to the need and key role of improving industrial energy efficiency (IEE), while assessing the technology deployment required to meet stabilization targets. However, the uptake of energy efficiency projects under the Kyoto Protocol's Clean Development Mechanism (CDM) remains limited and well short of either the potential or levels required by the assessment scenarios. As meeting reduced levels of CO₂ emissions is an essential part of the Bali Road Map shared vision, it is inexorably linked with large-scale IEE improvements.

By energy efficiency we mean providing more service (such as motive power or process heating) or more output (such as producing a ton of steel) while using less energy. This can be achieved by using

¹ UN Energy members include: Economic Commission for Africa, Europe, America and the Caribbean; Economic and Social Commission for Asia and the Pacific, Western Asia; Food and Agriculture Organization; International Atomic Energy Agency; UN Human Settlements Programme (HABITAT); UN Conference on Trade and Development; UN Development Programme; UN Educational, Scientific and Cultural Organization; UN Environment Programme; UN Framework Convention on Climate Change; UN Industrial Development Organization; UN International Research and Training Institute for the Advancement of Women; World Health Organization; World Meteorological Organization; World Bank; Department of Economic and Social Affairs; Chief Executive Board Secretariat

² Although the EGM was focused on industrial energy efficiency, many of these recommendations are relevant to energy efficiency more broadly.

³ IPCC, 2007: Climate Change 2007: Synthesis Report. Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, Pachauri, R.K and Reisinger, A. (eds.)]. IPCC, Geneva, Switzerland, 104 pp. <http://www.ipcc.ch/ipccreports/ar4-syr.htm>. IEA 2008, Energy Technology Perspectives <http://www.iea.org/Textbase/techno/etp/index.asp>

improved technology, changes in processes and systems, altering behaviour as well as improved management practice. Essentially this is the same as using energy more productively than in normal business as usual practice⁴. Conceptualised in this way, improved energy efficiency can help increase access to essential energy services as countries develop as well as improve the economic efficiency of industrialised nations⁵. Furthermore, it is useful to distinguish between accelerating the deployment of existing best practice and new “breakthrough” efficient end-use technologies, systems and processes.

The next section represents the collective views expressed by participants of the EGM. As such, they do not necessarily reflect the views of UN Energy. (Please note that for cross-referencing purposes, paragraphs are labelled corresponding to negotiation tracks: S – Shared Vision, M – Mitigation, T – Technology Transfer and F – Financing.)

Shared vision

S.1 It is suggested that industrial energy efficiency be highlighted in particular as a part of the shared vision of the BRM; in that context the following are points are made for consideration.

The imperative of Industrial Energy Efficiency

S.2 According to global assessment scenarios, improved industrial energy efficiency (IEE) is one of the lowest cost GHG mitigation options available. Post Kyoto agreements (PKAs) and negotiations could do well therefore to help accelerate its large-scale uptake urgently.

S.3 Improved IEE has the benefit of reducing energy requirements per unit of industrial output. This can help reduce energy imports, improve energy security, and improve producer competitiveness. As such, IEE offers a mitigation opportunity that aligns with other national development goals⁶. PKAs could play an important role to help accelerate national development at the same time as reducing the carbon intensity of an economy. As an outreach to negotiators, clear indications of the full costs and benefits of existing (and effective) IEE programs should be documented and communicated to Member Countries. Not only does this underscore the synergy with broader development, but it also helps further promote the notion of an even more inclusive “shared vision”.

⁴ This is a most distinct notion from simply using less energy, or less energy service. In countries where energy poverty limits development, increased energy productivity/energy efficiency can significantly help increase access to energy services.

⁵ We note also that there exist verified successes in energy efficiency programs, as well as programs that seek to reduce industrial GHG emissions using IEE as the mitigation measure. (See for example the US DOE’s Energy Efficiency and Renewable Energy Program http://www1.eere.energy.gov/ba/pba/program_evaluation/plans_reports.html as well as the UK’s DEFRA Climate Change Agreements <http://www.defra.gov.uk/environment/climatechange/uk/business/ccl/results.htm>)

⁶ According to one study (Ehrhardt-Martinez & Laitner, 2008): In 2004, the U.S. invested an estimated \$300 billion in energy efficiency. This was about three times the amount invested in traditional energy infrastructure, whether power plants or oil and gas wells. Meanwhile, those investments in energy efficiency are estimated to have generated approximately 1800 PJ of energy savings in 2004 alone — roughly the equivalent of the energy required to operate 40 mid-sized coal-fired or nuclear power plants. Despite these important contributions to the nation’s energy productivity, the analysis points out that the contributions of energy efficiency have, in large part, remained invisible and often go unrecognized. Moreover, the report indicates that efficiency resources, although proven, remain seriously underdeveloped. In other words, substantial gains in efficiency are still available if we decide to pick up the pace of efficiency investments. References: Laitner, J. and Ehrhardt-Martinez, K., 2008. Information and Communication Technologies: The Power of Productivity; How ICT Sectors Are Transforming the Economy While Driving Gains in Energy Productivity. ACEEE Report E081. Washington, D.C.: American Council for an Energy-Efficient Economy.

Capacity building requirements⁷

S.4 It is recommended that capacity building be a strong focus of future activities. Capacity building should include:

- a. Mechanisms and “tools” for country-specific policy assessments at the decision-maker level (see M.1);
- b. At the level of “practitioner”, data collection, industrial plant assessments/audits as well as monitoring, reporting and verification skills need building.

S.5 Based on national capacity to undertake the analysis, it was suggested that reporting an assessment of potential and existing IEE policies in national communications might be considered as a requirement. Furthermore, it was suggested that the development and adoption of indicators to measure the effects of IEE policy should be encouraged.

Mitigation

M.1 A menu of existing (successful⁸) and potential IEE policies and measures (PAMs) should be compiled and documented⁹. Their attributes in terms of full costs and benefits must be catalogued or estimated. It should be noted that policies might be situation specific, varying by region and levels of development¹⁰. They may vary from PAM deployment to new technology development.

M.2 Based on specific IEE PAMs documented, it is suggested that an assessment should be made of their scalability, transferability (from one country/region to another) and their full costs (including institution and human capacity building, program costs, technology costs as well as other transaction costs). Such an assessment is necessary to relate technical mitigation scenarios with clear actions, or commitments. (Note that in this regard often-used marginal abatement cost curves can be misleading¹¹). Furthermore, it was emphasised that allowing entities to adopt the most appropriate policies to suit their mitigation and development goals could be facilitated in future agreements. Clearly, all PAMs considered must include GHG mitigation measurement, reporting and verification as part of their activity.

⁷ Please note, that although these are included under “shared vision”, they are equally applicable and submitted for consideration under “mitigation” considerations.

⁸ At the same time, clearly documenting the failures of programs is needed to ensure reducing potential pitfalls as or when policies are replicated. Such an analysis should include an assessment of possible rebound effects and other key caveats.

⁹ Specific PAMs highlighted during the meeting included as IEE Policies “that work” included, amongst others: (1) *Voluntary Energy Management Standards* with the aim of providing guidance for industrial facilities to integrate energy efficiency into their management practices. (2) *Mandatory Equipment Energy Performance Standards* that aim to eliminate obsolete technology from the marketplace. (3) *Industrial System Optimization* to achieve greater efficiency gains by considering the system, rather than its separate parts. (4) *Target-Setting Agreements* (voluntary or negotiated) between industries in specific sectors and governments to develop appropriate cooperative agreements for mitigation. (5) Appropriate *utility regulation and pricing* aiming to remove barriers from entry to the market. (Please note that this is simply a selection and a broader PAM assessment is required due to the specific nature of individual countries and their policy, capacity and technology contexts.)

¹⁰ Developing countries – for example - often face different sets of objectives (e.g. increased energy access), barriers (e.g. non-cost reflective energy pricing), and opportunities (e.g. more SME related) and, therefore, different challenges and solutions.

¹¹ Marginal abatement cost curves for end-use efficiency technologies should be supplemented by estimates of the cost of delivery of the technology, which is often overlooked in analyses. Addressing market imperfections and barriers to the widespread uptake of high-efficiency equipment, systems and practices that promote energy conservation will require political will, cost money and take time.

In this regard, it was noted that the International Organization for Standardization (ISO), in cooperation with UNIDO, has initiated development of an energy management standard that includes requirements for measuring improvements in energy intensity against a baseline¹².

M.3 It was also noted that measures such as energy auditing, monitoring and verification, equipment and minimum performance standards might be very generally applicable. As a common set of mitigation tools, future PKAs should focus the development environments that enable their adoption.

M.4 It was suggested that making progress and reporting on a set of IEE indicators, as means of encouraging and recognizing needed improvements in IEE, is an essential activity of PKA negotiations.

M.5 The CDM is a mechanism that could help stimulate GHG mitigation through greater energy efficiency in developing countries, but it has not delivered on demand-side EE thus far. It is important to understand the reasons for this failure and develop remedies (suggestions elaborated in section on Financing below).

Please see and include in this section S.4 and S.5.

Technology

T.1 It was suggested that systematic identification of proprietary energy efficiency technologies and processes that have significant energy-savings potential could be institutionalised. That institution would further be tasked with exploring options to facilitate widespread deployment of these technologies in developing and transition economies.

T.2 It was suggested that IEE indicators might include aspects relating to efficient technology adoption¹³.

Financing

F.1 It was noted that changes in end use technology have contributed significantly to energy consumption patterns, yet investment in energy efficiency technology development has been limited. It is important that increased investment of R&D of energy efficient end-use technologies be encouraged and facilitated.

F.2 Based on the mitigation assessment suggested in paragraph S.1 and M.1, a detailed assessment of financing requirements should be undertaken considering different scenarios of IEE policy and technology deployment. This should include the full costs alluded to, including: institution and human capacity building, program costs, technology costs, addressing market imperfections and barriers to the widespread uptake of relatively smaller and dispersed energy efficiency measures, as well as other transaction costs. This must be included in negotiations and could form a supplement to the UNFCCC 2007 report "Investment and Financial Flows to Address Climate Change".

F.3 Based on lessons learned from programs such as the UK's Climate Change Agreements (CCA¹⁴) as well as proposed mechanisms, methods to include carbon revenues in IEE programs should be considered. This is mentioned against the backdrop of low IEE uptake under CDM. It is however noted that methodologies under CDM are not static and new methodologies are evolving¹⁵.

¹² ISO 50001 - Energy management <http://www.iso.org/iso/pressrelease?refid=Ref1157>,
http://www.unido.org/index.php?id=128&tx_ttnews%5btt_news%5d=220&tx_ttnews%5bbackPid%5d=6&cHash=1e43b97766

¹³ This could be supported with survey methods and/or technology sales data.

¹⁴ See: <http://www.defra.gov.uk/environment/climatechange/uk/business/crc/index.htm>

¹⁵ Through the CDM, carbon finance could contribute to providing an additional revenue stream which could be targeted at the barriers and support the delivery of more energy efficiency programs, and thereby help reach - at least partially - the untapped energy efficiency potential. However, the CDM has disappointingly largely by-passed demand-side energy efficiency activities. It is critical to address this, but overcoming the barriers to end-use

F.4 Given the need to include risk in volatile markets and the historical inadequacy of representing IEE investment opportunities only in terms of their cost “payback”, it is suggested that reporting also be made in terms of their risks and returns¹⁶. It should be noted that EE projects are not asset based but based on “savings” concept, which entails a high risk perception.

efficiency under the CDM was not included in the list of 26 possible CDM reforms in FCCC/KP/AWG/2008/L.12, despite widespread recognition of the problem Rules that recognize the specificity of energy efficiency activities and programs are needed.

¹⁶ See for example, Jackson, J., 2008, Energy Budgets at Risk, Wiley ISBN: 978-0-470-19767-7.

**Proposals for the AWG-LCA Chair's Assembly Document
on Enhanced Action on Adaptation**

**Submission by
the International Strategy for Disaster Reduction (ISDR) System
29 September 2008**

Background

This paper provides a set of suggested concrete actions in response to the Bali Action Plan's¹ call for enhanced action on adaptation through consideration of **disaster risk reduction strategies, risk management and risk transfer mechanisms**. It has been developed in consultation with a number of UN and international organizations concerned with disaster risk reduction and humanitarian response².

Risk-related strategies and mechanisms comprise an important component of the broader spectrum of actions required to adapt to climate change. Enhancing the implementation of these strategies will advance adaptation by substantially reducing vulnerabilities and future losses—in human lives and in the social, economic and environmental assets of communities—associated with increases in the frequency and intensity of meteorological, hydrological and climate-related hazards. This applies not only to rapid-onset events like storms and flash floods, but also to longer term changes and stresses such as heat waves, drought, food insecurity, coastal inundation, and health impacts.

This paper proposes that efforts to reduce vulnerability and build resilience to extreme events should be prioritized in the short term. Actions should build on and scale up existing widely available good practices. This prioritization will help avoid humanitarian and economic losses in the short term, as well as secure development gains and provide a more secure basis for other adaptation action over the long term.

The *Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters* provides the international foundation for reducing disaster risks, as agreed by Governments at the World Conference on Disaster Reduction in January 2005. Based on a review of successes and failures in reducing disaster risks worldwide, the Hyogo Framework sets out five priorities for action³. This paper proposes that Parties draw upon the Hyogo Framework in the design and implementation of adaptation actions.

Specific Proposals to Advance Adaptation

The following proposals follow the “possible areas of focus” identified by the AWG-LCA Chair⁴ in the design of a framework to support, facilitate and implement adaptation. They are based on decades of experience in reducing, managing and transferring disaster risk at all levels – from international through to community levels.

¹ FCCC/CP/2007/6/Add.1 Decision 1/CP.13, sub-paragraphs 1 (c) (ii) and (iii).

² Please see the box on page 5.

³ Please see the annex.

⁴ FCCC/AWGLCA/2008.11 page 7.

1. National Planning for Adaptation

The following actions will strengthen national plans for adaptation:

- **Implement or strengthen legislation** to reduce risks from natural hazards so that it addresses climate change impacts, identifies lines of responsibility and engagement at all levels, mandates inter-sectoral cooperation, ensures linkages into development planning and makes provisions for budgets at all levels of government.
- **Ensure wide engagement of stakeholders and decentralized planning** in national, provincial, city and local government, and with the private sector and civil society; promote community participation in disaster risk reduction; and recognise the differing vulnerabilities and capacities of men, women, children and people with disabilities.
- **Conduct assessments of changing hazards, vulnerabilities, risks and capacities** to provide national and community baselines and priorities for intervention. These should be updated regularly.
- **Strengthen early warning systems**, by improving capacities for detecting and forecasting current and future hazards and associated vulnerabilities and risks, ensuring that warnings reach all populations, and enabling people's preparedness to respond to emergencies.
- **Implement disaster-reducing activities as part of sector-specific adaptation plans**, with allocated budgets, that particularly address:
 - Protection of critical infrastructure, including schools, hospitals and other health facilities.
 - Strengthening of land-use zoning, infrastructure development planning and building codes, including revisions to address the changing frequency and severity of extreme events.
 - Consideration of risk and risk reduction strategies in national integrated plans for food security, environmental management, water resource management, coastal zone management and human security.
- **Update emergency preparedness programmes and contingency plans** for effective response to disasters, supported by legislation, institutions, resources and coordination mechanisms.

The preparation and implementation of national adaptation plans should include:

- Strong inter-ministerial and multi-stakeholder platforms or committees addressing disaster risk reduction that comprise all relevant sectors, such as planning and finance, education, health, agriculture, food security, environment, emergency response, and that include private sector, scientific and other civil society representation. Such committees or platforms should:
 - Incorporate long-term climate change risk planning and support related climate change platforms.
 - Respond to ministerial-level mandates and direction and engage the planning and finance ministries.
 - Identify incentives to guide and influence decisions of the private sector and local development actors.
 - Recognize communities' priorities and capacities.

2. Enhancing Knowledge Sharing

Knowledge of risk related areas of adaptation can be enhanced by the following actions:

- **Strengthen existing regional centres and mechanisms** that address disaster risk reduction and risk management for sectors such as water, agriculture, health, and humanitarian response.
 - Link regional sectoral centres concerned with adaptation into a global adaptation network to share sectoral experience for adaptation within and across regions.
 - Engage existing experienced centres and organizations as front line actors and institutional partners in adaptation planning and implementation.
 - Prioritize the sharing of information and tools required to enable the prompt development of national and regional risk and capacity baselines, especially in high-risk areas.
 - Support the replication of successful initiatives in community-based disaster risk reduction and community-based adaptation to strengthen people's livelihoods resilience.
- **Strengthen technical institution capacities** at international, regional and national levels, to facilitate the development of standard methodologies and tools founded on best science and to provide climate information and climate projections for adaptation and disaster risk reduction strategies and measures.

3. Streamlining and Scaling Up Financial and Technological Support

Improved financial and technological support for adaptation requires *inter alia* the clear identification of adaptation needs and outcomes, and the strengthening of existing capacities and mechanisms. This approach recognizes the close linkages between development, adaptation and risk reduction, countries' concerns about the complexity of accessing multiple sources of funding, and the need to draw on the best available knowledge and technology.

- **Strengthen existing funding mechanisms for risk reduction** such as the UN Trust Fund for Disaster Reduction and the Global Facility for Disaster Reduction and Recovery to support risk-related adaptation requirements.
- **Incorporate consideration of changes in risks in emergency-related funding mechanisms** such as the Central Emergency Response Fund, the Consolidated Appeals Process and the Emergency Flash Appeal mechanism, and allocate sufficient additional funds to cover climate change related disaster preparedness and response needs.
- **Use the Hyogo Framework's priorities for action** where possible to structure risk-related funding priorities and criteria for allocations.
- **Develop risk financing instruments at all levels to reduce financial impacts and shocks and to promote risk-reducing action, through microfinance and micro-insurance, insurance markets⁵ social funds and catastrophe pools.**
- **Implement national systems for tracking investment and for tracking outcomes** in respect to risk reduction and adaptation.
- **Formalize collaboration with local governments and community organizations** with experience in risk reduction, to ensure that new adaptation-funding mechanisms respond to local concerns and build on existing capacities.
- Implement adaptation action as far as possible within the framework of **national development planning processes** and supporting mechanisms such as the UNDAF and PRSP processes, in order to maximize their coherence and effectiveness.

⁵ Please see paper submitted to UNFCCC by the Munich Climate Insurance Initiative on insurance instruments.

- **Tailor existing risk reduction technologies for adaptation purposes** and widely disseminate these technologies.
- **Prioritize disaster risk reduction methodologies and tools** for scaling-up purposes, in particular for risk assessment and monitoring, early warning systems, flood management systems, drought monitoring and management, emergency management, and hazard resilient construction.

4. Institutional Frameworks for Adaptation

To create enabling environments at all levels and to stimulate adaptation action by all stakeholders, it is proposed that:

- Adaptation efforts should take advantage of the **multi-stakeholder ISDR system**, including its monitoring processes for risk and risk reduction, national-level platforms and networks, regional risk reduction strategies and platforms, and the Global Platform for Disaster Risk Reduction.
- Adaptation efforts in respect to humanitarian preparedness and response should take advantage of the **multi-partner Inter-Agency Standing Committee (IASC) system**, and its policy development and operational coordination capacities.
- The **efforts by the UN System to coordinate its action** to support Parties in respect to climate change and specifically provide support for adaptation practices should be continued.

Concluding Recommendations

1. Ensure that UNFCCC institutional enabling environments and regional supporting mechanisms for knowledge sharing, capacity building and technology support, build on existing mechanisms, tools and capacities for disaster risk reduction.
2. Take account of, and manage, the humanitarian consequences of climate change, and protect human security, through the systematic reduction of disaster risks, including emergency preparedness and reinforcement of response and recovery mechanisms.
3. Acknowledge that social and economic development is essential for reducing the increasing risks related to climate change and hence is a foundation for successful adaptation.
4. Substantially scale up contributions for disaster risk reduction action as an essential component of adaptation. Ensure that the criteria for funding are fully consistent with the principles of the Hyogo Framework.

This paper was prepared by the UNISDR secretariat in discussion with a number of partners of the ISDR system and the Inter-Agency Standing Committee. Inputs were provided by FAO, IFRC, OCHA, ProVention Consortium, UNDP, UNEP, UNICEF, UNU, WHO, WMO, World Bank.

**Annex:
The Hyogo Framework for Action**

The Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters was adopted at the World Conference on Disaster Reduction, held in Kobe, Hyogo, Japan, 18-22 January 2005. It provides a strategic and comprehensive global approach to reducing vulnerabilities to natural hazards, and represents a significant reorientation of attention toward the root causes of disaster risks, as an essential part of sustainable development, rather than on disaster response alone. It stresses the need for greater political commitment and public awareness, and defines an expected outcome, three strategic goals and five priority areas of action.

The Framework's implementation is identified as primarily the responsibility of States, but with the active participation of others such as local authorities, nongovernmental organizations, the scientific community and the private sector. Regional and international communities, including the international financial institutions, the UN system and the International Strategy for Disaster Reduction (ISDR), are called on to provide an enabling environment and to support capacity development. The **ISDR system** undertakes international efforts to reduce disaster risk and includes Governments, inter-governmental and non-governmental organizations, international financial institutions, scientific and technical bodies, as well as civil society.

The Hyogo Framework calls for the following priority actions:

- 1. *Ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation***
Planning, budgeting and implementing risk reduction policies to avoid settlement in hazardous areas and to ensure that hospitals and schools are hazard resistant, for example.
- 2. *Identify, assess and monitor disaster risks and enhance early warning***
Knowing the risks and taking action involves identifying, assessing and monitoring disaster risk and enhancing early warning.
- 3. *Use knowledge, innovation and education to build a culture of safety and resilience at all levels***
Raising awareness and educating all, through school curricula and sectoral training for instance, to reduce vulnerability.
- 4. *Reduce the underlying risk factors***
Reducing communities' vulnerability and risk in sectors through land-use zoning and building codes, by protecting ecosystems and natural defences, and developing insurance and microfinance initiatives.
- 5. *Strengthen disaster preparedness for effective response at all levels***
Being prepared and ready to act including by developing and testing contingency plans, establishing emergency funds and coordination systems.

PAPER NO. 7: WORLD METEOROLOGICAL ORGANIZATION

WMO's SUBMISSION FOR AWG-LCA

COP14

POZNAN, POLAND

1 In response to Bali Action Plan, paragraph 1 C (ii):

Risk management and risk reduction Strategies:

1.1 An international climate prediction and information service led by WMO with partners in other UN organizations, regions and nations will fill information gaps at global, national, and local scales. Research, observation, prediction and service delivery constitute the nodes of such a framework. Accelerated weather and climate research is required at both national and international levels in order to develop better tools for adaptation through climate observations and climate change detection, advance regional modelling for adaptation planning, and improve understanding of future patterns of sector-specific climate risks. As an example, high-resolution climate models and other sophisticated downscaling strategies will help reduce uncertainties and enable more effective adaptation policies.

1.2 It is important for Parties to work towards local ownership of capacities to package and interpret climate information and its impending impacts both by the climate providers and users for risk management and sustainable development purposes. In this sense, access to locally relevant climate data and information will be crucially important.

1.3 Good observations acquired over extended periods make possible an understanding of both the frequency of occurrence of significant extreme events and also the identification of climate trends in such extremes and in average conditions. Observational records are essential to draw reliable information for planning needs in the current climate as well as taking proactive measures under reliable future climate projections.

1.4 As a step to further enhance risk management, Parties should seek opportunities and understand constraints in integrating climate risks and uncertainties into the mainstreams of decision-making where in real-world contexts there is sensitivity to climate variability and change. WMO recommends that collaborative mechanisms be developed to facilitate needs and requirements driven activities in climate-related risk management, and that they be used to improve the quality of climate-related risk management to the benefit of all, most especially developing countries and LDCs which lack required human and infrastructural resources to take up such activities.

These mechanisms could promote:

- Evaluation of current climate-related risk management in all relevant sectors
- Better assessments of the value of climate-related risk management
- Establishment of data sets necessary to inform decision making
- Research to improve climate-related risk management
- Development of decision-support tools
- Capacity building in climate-related risk management
- On-going evaluation of outcomes of risk management activities
- The use of suitable financial mechanisms in support of climate-related risk management.

1.5 Climate information and predictions could be used much more effectively in the development of socio-economic policies. Recognizing that climate information that is available for adaptation and mitigation planning is often not used in an optimal manner due to the lack of information services that connect users to the experts generating the information, Parties should be encouraged to ensure access to relevant climate information. At the same time, Parties recognize that National Hydrometeorological Services (NMHSs) and their national partners need to better understand user needs and tailor climate information products to meet societal requirements. For this purpose, it is imperative to Parties:

- To propose a regional mitigation and adaptation frameworks and to identify win-win options for the socioeconomic sectors
- To recommend policy and financial innovations to enable smooth implementation of the regional frameworks
- To explore appropriate options for strengthening information exchange on climate change impacts, especially for the countries that are not able to generate climate information and products.

1.6 Parties should ensure mainstreaming technical capacities such as hydro-meteorological risk assessment and early warning systems in the national disaster risk management plans, legislations and development planning.

1.7 For improved decision making for climate change adaptation and risk management, a mechanism needs to be developed for users to share experiences on how they incorporate climate information and model predictions in their planning processes. Methodologies for translating climate information into social and economic benefits need to be improved and used more widely in the development of effective adaptation and mitigation strategies.

1.8 The scientific and policy communities need continuous dialogue, translation of information for users and vice-versa to understand the possible range of changes. It is proposed that in the face of uncertainty, governments should introduce regulatory practices and adopt flexible policies for climate risk management and adaptation.

2 In response to Bali Action Plan, paragraph 1 (d) (iii):

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

2.1 There is a general consensus within the climate research community that any change in the mean climate is likely to feature significant changes in frequency or severity of extreme climate events and that this would have profound impacts on nature and society. It is thus very important to analyze and model extreme events.

Parties support the following research activities:

- To summarize, compare and assess definition(s) of climate extremes and develop a common language amongst researchers and end users based on their various applications;
- [There are multiple definitions, (eg. As percentiles or thresholds and absolute values) and these have different uses, it is unlikely that a narrow set can be determined];

- To design an inter-comparison framework through which both observations, climate model representations of extremes and projections of climate can be assessed and by which changes in climate extremes can be better evaluated;
- To accelerate progress on the prediction of climate extremes with a focus on developing capabilities and products which facilitate practical applications for stakeholders and regions around the world;
- To assess the observational and dataset framework for study of global extremes;
- To determine how extremes are changing and varying and why (including their relationship to mean variables, physical factors, shape of pdf etc).

3 In response to Bali Action Plan, paragraph 1 (a):

A shared vision for long-term cooperative action:

3.1 A global framework for adaptation practices will better provide support to finer scale networks dealing with variables critical for adaptation. In particular, support is needed for regional and national meteorological networks for obtaining precipitation, temperature, humidity, wind speed, and other adaptation-related data at high frequency. These data form the basis of the description of prevailing climate and the record of past climate.

3.2 As a basis for long-term cooperative action, WMO will implement an Initiative to Support Climate Change Adaptation. The initiative will integrate, coordinate and enhance the provision of user-oriented climate information, products, advisories and services to support national and regional climate risk assessment, climate adaptation planning and implementation practices for sustainable development based on current capabilities.

3.3. WMO along with other UN agencies is organizing The World Climate Conference-3 (WCC-3). As an expected outcome the Conference will establish an international framework to guide the development of climate services, in order to link science based climate predictions and information with climate risk management and adaptation to climate variability and change throughout the world and thereby contribute to the UNFCCC COP15. The WCC-3 will also be the platform to make a significant contribution to the collective efforts of the entire UN System and partners in advancing knowledge and assisting governments and societies in combating climate variability and climate change.

3.4 WMO supports UN System-wide Response to the Challenge of Climate Change. An inclusive and coherent approach to climate change will enable the UN system to provide support for the negotiations of an international agreement on focus areas of Adaptation, Technology Transfer, Capacity Building and Reduction of Emissions from Deforestation and Forest Degradation (REDD) as well as Mitigation/Finance. WMO and UNESCO convene a forum entitled: "*Science, assessment, monitoring and early warning*" for coordination, integration and dissemination of the climate change knowledge developed by the UN system organizations for access and use by the public, policy and decision-makers world-wide, in particular in support of the UNFCCC process and IPCC 5th Assessment Report.

3.5 For a free and unrestricted exchange of data and information for adaptation there should be a high-level political impetus to improve exchange of data. It is widely agreed that there is a need for free access to data under the Convention and Parties recognize the need to clearly identify the costs of 'free exchange' of data, to give providers arguments in raising funds.
