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Background paper for the ministerial-level consultations, including policy options emanating from the President's summary of the ministerial consultations during the twenty-fourth session of the Governing Council/Global Ministerial Environment Forum

Discussion paper presented by the Executive Director

Summary

The present document provides background information intended to stimulate discussion and highlight issues to be addressed by ministers and heads of delegation during the ministerial consultations. The document outlines a range of policy options relevant to the two themes for the consultations: Theme I: "globalization and the environment: mobilizing finance to meet the climate change challenge"; and Theme II: "international environmental governance and United Nations reform".

Mobilizing sufficient financing to meet the climate challenge extends well beyond global mechanisms negotiated under the United Nations Framework Convention on Climate Change (UNFCCC). It will also require efforts at the local and national levels to engage with the private sector to achieve the necessary additional investment and financial flows. Such efforts which will provide the focus for the ministerial consultations on theme I, the participants in which will include leaders from Governments, the United Nations system, the international financial institutions, the private sector and civil society. Ministers and other heads of delegation will be provided with a state-of-the-art overview of pathways for the future, drawing upon work of the UNFCCC secretariat, the United Nations system, Governments and the private sector, and will have the opportunity to draw world attention to innovative initiatives.

The Governing Council/Global Ministerial Environment Forum has noted the evolutionary nature of strengthening international environmental governance; many formal and informal initiatives in the area are currently under way. Ministers and heads of delegation will be provided with an up-to-date review of current initiatives within the United Nations system and initiatives being lead by groups of Governments. Ministers will have the opportunity to assess the current status of the various initiatives under way, consider how the issue can be moved forward and determine what signal the world's environment ministers want to send to the world on the issue.

A suggested focus for the consultations together with key questions to be considered are outlined in the annex to the present document.

* UNEP/GCSS.X/1.

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I. Suggested policy options

1. Ministers and heads of delegation attending the tenth special session of the Governing Council/Global Ministerial Environment Forum may wish to consider the following policy options, which are suggested for use as a basis for interactive discussions during the ministerial consultations.

A. Theme I: globalization and the environment – mobilizing finance to meet the climate challenge

1. Suggested policies to promote investment in mitigation

(a) ***Promote the need for large institutional investors,[1] such as pension funds, special government reserves and foundations, to integrate carbon liabilities*** and climate change risk considerations into their long-term investment policy and investment decision-making activities across their entire portfolios;

(b) ***Work to improve the availability of appropriate forms of financing for climate mitigation technologies, companies and projects*** through new regulatory approaches including emissions trading and carbon finance, public funding and public or private risk sharing. A list of suggested policies and actions is included in annex I A;

(c) ***Increase the focus on energy efficiency,*** as there is significant emission reduction to be achieved through supply and demand side energy management. Specific policy recommendations to reach a goal of, for example, doubling the global historic annual rate of energy efficiency improvement to 2.5 per cent per year, are included in annex I B;

(d) ***Increase the share of renewable energy supply*** within the energy and transport sectors. Set necessary targets and design, implement and enforce regulations and provide incentives needed by the finance sector to mobilise the capital needed to meet these targets. Recommended policies are included in annex I C;

(e) ***Address the environmental, social and political challenges associated with large hydro power***. Few low-cost hydroelectric resources remain in the Organisation for Economic Cooperation and Development (OECD) countries. Opportunities exist, however for increased utilization of hydropower in the developing world. A range of best practice guidelines and practical examples are available which should be used when considering further site developments;

(f) ***When considering the role of nuclear powe*****r**, which is expected to increase in some emerging economies and is being revisited in parts of the developed world, countries, in addition to technology and cost issues should factor in existing concerns over nuclear safety, proliferation issues, spent fuel, waste management, transboundary consequences and decommissioning;

(g) ***Accelerate development of carbon capture and storage***, which currently is only technically and economically feasible for select site conditions and energy and or industry processes, and generally remains in the research and demonstration phases;

(h) ***Develop new strategies for reducing emissions from deforestation and degradation.*** Proposals for global and regional funds for reducing emissions from deforestation and degradation are evolving rapidly in the wake of the recognition of its major contribution to green-house gas emissions. Strategies on reducing emissions from deforestation and degradation require innovative policy approaches and positive incentives that also achieve shared benefits for livelihoods and biodiversity conservation, while ensuring that emerging carbon markets are not affected negatively;

(i) ***Increase the access of poorly served populations in developing countries to clean and affordable energy and transport technologies and services.*** Many climate mitigating technologies are well adapted for distributed use and therefore can provide both increased access in hard-to-reach areas and reduced carbon dioxide emissions;

1 Controlling more than US$ 12.5 trillion, representing some 25 per cent of global capital market value, these significant investors have a considerable influence along the entire investment chain such as amongst large companies on publicly traded exchanges and increasingly in private equity transactions.

(j) ***Strengthen capacities*** in all aspects of climate mitigation markets development, including policy formulation and implementation; technology research and development and commercialization; business planning and development; reporting on green-house gas; business and project financing and consumer outreach and awareness;

(k) ***Liberalize tariff and non-tariff trade barriers*** for environmental goods and services through the World Trade Organization negotiations that could lead to increased trade in, and dissemination of, climate-friendly technologies;

(l) ***Eliminate or sharply reduce fossil fuel price subsidies***. They are not economically sustainable and distort investment decisions. Moreover, studies have shown that such subsidies primarily benefit the more privileged people in a community rather than the poorest.[2];

(m) ***Develop a coordinated and credible process for delivering government climate mitigation targets*.** Strength, clarity and stability are decisive characteristics of the policy framework that attracts capital to low-carbon projects: that framework must be specific enough to improve the bankability of projects and provide conditions for market growth in the respective sectors.

2. Suggested policies to promote investment in adaptation

(a) ***Increase the resilience of development activities by "climate proofing" new policies and investments while enhancing efforts to maintain critical ecosystem services***. The first step in a country's adaptation strategy is an assessment of its exposure to climate change and increased climate variability. Countries should look to ensure a systematic approach to adaptation that integrates climate change into existing and new development programmes including specific plans for disaster reduction or management and sustainable development.[3];

(b) ***Ensure adequate international financial assistance to and provide effective funding mechanisms for least developed countries, which bear the brunt of climate change***. These should be additional to commitments for poverty alleviation and achievement of the Millennium Development Goals;

(c) ***Increase public financing of adaptation measures***. As the commercial markets for adaptation are still immature, Governments have to cover a large share of the financing requirements. Investments are needed in basic infrastructure and services, including coastal areas, water, health, education, and new areas of economic development;

(d) ***Strengthen capacitie*s** especially in developing countries at individual, institutional and society levels to deal with the impacts of climate change; and support building resilience into development in sectors of national priority. Adaptive capacities, including the development and transfer of new technologies, also need further public investment;

(e) ***Enact and enforce regulations to limit the potential negative impacts of climate change***. For instance, the construction of buildings in exposed areas should be prevented. New and innovative regulatory measures are needed as incentives for adaptation. An example is the transfer of development rights to parties that have an economic incentive to decrease vulnerabilities;

(f) ***Introduce new labour-intensive infrastructure programmes*** to "climate proof" rural settlements and urban slums to strengthen the resilience of local populations and reduce poverty through employment and income opportunities as well as new skills development.

B. Theme II: international environmental governance and United Nations Reform

2. The ministerial consultations on theme II will provide ministers and heads of delegation with an overview of developments during the past year and an opportunity to indicate how they wish to see the processes move forward.

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2 Clean Energy Investment Framework Working Group II: Renewable Energy, World Bank, July 2007.

3 CEO briefing: Carbon Crunch – Meeting the Cost, UNEP FI Climate Change Working Group, December 2007.

3. The United Nations Environment Programme (UNEP), in accordance with its mandate, is delivering on the Cartagena Package,[4] which includes the following key elements:

(a) Strengthening the role, authority and financial situation of UNEP;

(b) Improving coherence in international policy-making, including the role and structure of the Governing Council/Global Ministerial Environment Forum;

(c) Addressing universal membership of the Governing Council;

(d) Strengthening the scientific base of UNEP;

(e) Improving coordination and coherence between multilateral environmental agreements;

(f) Supporting capacity-building, technology transfer and country-level coordination;

(g) Enhancing coordination and cooperation across the United Nations system, including through the Environment Management Group.

4. ***The UNEP Medium-term Strategy 2010–2013 is based upon the existing UNEP mandate*** as well as measures taken within UNEP to strengthen international environmental governance rooted in the Cartagena Package.

5. During the ministerial consultations ministers and heads of delegation may wish to initiate a process for identifying and assessing the challenges of environmental change faced by institutions responsible for environmental governance with a view to identifying, among other things:

(a) Ways and means through which environmental institutions can best work with other sectors to support the integration of environmental concerns into development;

(b) The existing normative basis that provides the rationale for international environmental governance and its support to and interface with development cooperation and measures for enhancing the effectiveness of institutional arrangements in this respect;

(c) The effectiveness of the Governing Council/Global Ministerial Environment Forum as a subsidiary body to the General Assembly in performing its United Nations system-wide functions, in particular with regard to:

(i) Keeping under review the world environmental situation in order to ensure that emerging environmental problems of far reaching international significance receive appropriate and adequate consideration by Governments;

(ii) Periodically keeping the implementation and effectiveness of environmental programmes within the United Nations system under review;

(iii) Providing general policy guidance for the direction and coordination of environmental programmes within the United Nations system;

(iv) Providing advice and technical and financial support for the formulation and implementation of environmental programmes by other intergovernmental bodies in the United Nations system;

(v) Maintaining under continuing review the impact of national and international environmental policies on developing countries and their development plans and priorities;

(d) How to foster further deliberations on international environmental governance in an effort to take the issue forward.

4 The Cartagena Package refers to the recommendations of the Open-Ended Intergovernmental Group of Ministers or their representatives on International Environmental Governance. The report of the group, containing its recommendations, was adopted by the Governing Council in its decision SS.VII/1 of 15 February 2002 and is set out in the appendix to that decision.

II. Policy options emanating from the President's summary of the ministerial consultations during the twenty-fourth session of the Governing Council/Global Ministerial Environment Forum

6. The President's summary of the ministerial roundtable discussions on globalization and environment and United Nations reform during the twenty-fourth session of the Governing Council/Global Ministerial Environment Forum identified a number of options for action by Governments, UNEP and the international community. The document outlines a range of policy options relevant to the two themes: Theme I: "Globalization and the environment: mobilizing finance to meet the climate change challenge", and Theme II: "International environmental governance and United Nations reform". The focus of the consultations and the key questions to be considered are outlined in annex II to the present document. The fourth Global Environment Outlook report (GEO-4) provides an assessment of climate change and how it interlinks with other environmental challenges (UNEP/GCSS.X/3 and UNEP/GCSS.X/INF.8). Furthermore, the feature focus of the UNEP Year Book 2008 (UNEP/GCSS.X/INF.2) addresses the use of markets and finance to fight climate change.

7. ***The Council/Forum will also consider the draft Medium-term Strategy 2010–2013 (UNEP/GCSS.X/8).*** The Strategy identifies six cross-cutting thematic priorities, including resource efficiency, ecosystem management and climate change, and focuses on the inter-linkages between these priorities and on significantly enhancing the capacity of UNEP to deliver on the Bali Strategic Plan for Technology Support and Capacity-building. The strategy frames the future programme of work for UNEP, which is the main vehicle for the UNEP contribution to addressing challenges related to globalization and environment and United Nations reform.

8. The follow-up actions of the Executive Director on a number of the policy options, working with relevant partners, are as follows:

(a) The suggestion to explore and develop a conceptual framework on the linkages between globalization, ecosystem services, human well-being, fairness and equity has for example been alluded to in GEO-4. The conceptual framework of GEO-4 expanded the approach of the Millennium Ecosystem Assessment by integrating ecosystem services and human wellbeing into the driver-pressure-state-impact-response (DSIR) concept. It conceptualised the interaction between human society and environment at multiple scales. A number of questions related globalisation, fairness, equity and linkages between environment and development were addressed in the assessment which is before the council/forum for its consideration.

(b) A number of studies have been undertaken to address the options for actions identified in the summary. It includes the production of : "Global Trends in Sustainable Energy Investment 2007" with the Sustainable Energy Finance Initiative, an analysis of linkages between trade and climate change, carried out in partnership with the WTO; a study on opportunities to create "green jobs" – conducted in partnership with the ILO and others; and a paper on maximizing benefits of the Clean Development Mechanism – UNEP in partnership with UNDP.

(c) The need for UNEP to promote coordination and collaboration between multilateral environmental agreements to maximize the use of resources and achieve synergies has been further pursued. One example is the establishment of the multilateral environmental agreement management team, which convenes executive heads of UNEP-administered multilateral environmental agreements to enhance effective administration, communication and better cohesion in addressing substantive issues of common interest, recognizing the authority and autonomy of relevant governing bodies of the parties. Interaction and cooperation with multilateral environmental agreement secretariats have been improved through establishment of a multilateral environmental agreement focal point in the Executive Office.

III. Theme I: globalization and the environment – mobilizing finance to meet the climate challenge

A. Outcomes from Bali

9. ***At its thirteenth session, held in Bali, Indonesia in December 2007, the Conference of the Parties*** to the United Nations Framework Convention on Climate Change reached agreement on a roadmap and a timetable for a two-year process of negotiations designed to reach a new climate treaty by 2009. The decision includes a clear agenda for the negotiation of key issues, including actions for climate change adaptation, approaches for mitigation, climate-friendly technology deployment and

financing both adaptation and mitigation measures. Although the Bali text includes no direct reference to reduction targets, all countries, both developed and developing, are called upon to reduce greenhouse gas emissions. It includes the important issues of deforestation, technology transfer and aid for developing countries.

10. ***Finance ministers and their deputies from 37 countries***, along with heads of a number of development banks and the OECD, met informally in Bali to start a discussion and dialogue on financing climate change. Some of the key conclusions were that appropriate policies needed to be developed to provide stable policy frameworks for attracting private sector investment; that there was a need to boost energy efficiency and to reduce carbon intensity; and that there was a broad range of policy approaches that needed to be better understood.

B. The need: capital requirements for meeting the global climate challenge

11. ***The global climate needs to be stabilized soon.*** Studies have been begun to estimate both the economic effects that climate change will have on global society as well as the costs of possible mitigation and adaptation measures. Although the capacity to enact either a mitigation or adaptation strategy is based on country-specific conditions, technology, and information availability, models have been used to calculate the approximate cost to stabilize atmospheric emissions at different levels. Today greenhouse gas emissions in the atmosphere are approximately 455 ppm CO_2-eq[5] and CO_2 – the main greenhouse gas – is rising 1.9 ppm/year[6] due to annual emissions of 49 gigatonnes (Gt) of CO_2 equivalent (CO_2-eq).[7] The Intergovernmental Panel on Climate Change (IPCC) has concluded that to stabilize atmospheric concentrations of CO_2 at 535–590 ppm, global emissions in 2050 will need to decrease to within the 18–29 Gt CO_2 range worldwide and emissions must peak between 2010 and 2030,[8] depending on model scenarios.

12. *Hundreds of billions of dollars will be needed for mitigation.* The UNFCCC secretariat estimates a GDP cost of 0.3–0.5 percent in 2030 to return emissions to 2004 levels, equivalent to 1.1-1.7 percent of global investment, or $200–210 billion in additional capital mobilization across the economy.[9] Although these costs are large by some standards, the overall effect on world income has been calculated to result in a delay in GDP of only a few years,[10] partly since some capital requirements could be diverted from business as usual investment activities or paid for by lower fuel costs and other savings.[11] In general, stabilization costs are lower if measures are implemented sooner via a well-planned response.[12] By taking a top-down modelling approach, IPCC estimated the global mitigation potential of greenhouse gas emissions based on a range of carbon prices in 2030. Potential reductions of 9–18 Gt CO_2-eq are possible for a price of $20/t CO_2-eq, 14–23 Gt CO_2-eq for $50/t CO_2-eq, and 17–26 Gt CO_2-eq for $100/t CO_2-eq.[13] This cost analysis trend is similarly reflected in bottom-up analyses. For the sake of comparison, in 2006 the average price of a Clean Development Mechanism Certified

5 IPCC, "IPCC Fourth Assessment Report AR4 Synthesis Report. Climate Change 2007: Summary for Policymakers of the AR4 Synthesis Report." Table SPM.6, p. 21.

6 IPCC. "IPCC Fourth Assessment Report – Working Group 1Report, 'The Physical Science Basis." Chapter 2, p. 131.

7 IPCC, Working Group III Technical Summary, p. 27. Figure quoted is for 2004.

8 IPCC, Fourth Assessment Report, Table 5.1 and Figure 5.1, pp. 5-6

9 Specifically, the UNFCCC secretariat projects mitigation investment requirements of $148 billion in new power generation, $36 billion in industrial efficiency, $51 billion in building efficiency, $88 billion in greener transport, $56 billion in agriculture and forestry and $35–$45 billion in technology research and development. (Investment and Financial Flows to Address Climate Change, UNFCCC, 2007, report page 5.)

10 Chritian Azar Christian and Stephen H. Schneider, "Are the economic costs of stabilising the atmosphere prohibitive?", *Climatic Change* 42, pp. 73–80.

11 Greenpeace, for instance, has projected that shifting the power sector to a low carbon pathway could generate fuel cost savings of $202 billion per year by 2030. Greenpeace International. "futu[R]e investment – A Sustainable Investment Plan for the Power Sector to Save the Climate." July 2007, Table 1, pp. 9. Savings figure stated in 2000 dollars.

12 This conclusion is mostly based on the fact that infrastructure investments have very long operating lives and cannot be easily retrofitted to reduce greenhouse gas emissions. For example, if much of the estimated $22 trillion to be invested on energy infrastructure between today and 2030 (WEO2007) is not climate neutral then the chance of meeting a safe stabilization target is limited.

13 IPCC. "Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change "Summary for Policymakers." Table SPM-2, p. 9. Approved 30 April–4 May 2007.

Emissions Reduction Unit was $11[14] and the current price of an allowance under the European Union's emissions trading scheme is €23.[15] IPCC estimates that the impact on global GDP of reducing greenhouse gas emissions would range from a cost of 0.2–2.5 percent in 2030 and 4 percent in 2050 to a slight increase (i.e., benefit) in both periods.[16] The Stern Report[17] concluded that the cost of stabilizing emissions at 550 ppm CO_2-eq would average 1 percent of global GDP, approximately $134 billion in 2015 and $930 billion in 2050.[18]

13. ***Hundreds of billions of dollars more will be needed for adaptation.*** Adaptation cost scenarios are not as well quantified as those for mitigation, due to the limited historic data on which to base assumptions. The Stern Report offers broad estimates ($15–150 billion/year or 0.05–0.5 percent of GDP in OECD countries) of the cost for adapting infrastructure, assuming an added investment of 1–10 percent to limit future damage,[19] as does the World Bank for developing countries ($10–40 billion /year, of which one-third is associated with public finance or an extra 10–20 percent added to construction costs).[20] The UNFCCC secretariat has projected that by 2030 the additional investment costs of adaptation will include about $14 billion for agriculture, forestry and fisheries; $11 billion for new water supply infrastructure; $5 billion for treating increased incidence of diarrhoeal disease, malnutrition and malaria; $11 billion for beach nourishment and dykes; and between $8 and $130 billion for construction of new facilities which are more resilient to climate change.

14. ***Much of the needed funding will have to come from public sources.*** In sectors with privately owned physical assets, the private sector will mobilize some of the needed investment. Public finance, however, will be needed to encourage private investment and in some cases will be needed in lieu of it. Additional funding will be needed in particular for sectors and countries that are already highly dependent on external support, for example in the health sector in least developed countries, or for coastal infrastructure in developing countries that are highly vulnerable to sea level rise.[21]

C. The response on mitigation: low-carbon investment trends

15. ***New analyses have been tracking climate investment.*** In 2007 a global analysis prepared by the UNFCCC Secretariat of investment needs across the climate sectors[22] and an investment trends analysis in the renewables and efficiency sector prepared under the UNEP Sustainable Energy Finance Initiative and New Energy Finance[23] provided new insight into the magnitude of the climate investment challenge and the response to date.

16. ***Since 2004 investment in renewables and energy efficiency has taken off.*** Financial transactions in the sustainable energy sector – defined as new renewables (such as large hydro) and energy efficiency – have increased significantly in recent years, surpassing $100 billion in 2006[24] and reaching $160 billion in 2007.[25] The most significant change occurred in late 2004, when wind and solar companies in Europe and Japan began to generate significant revenues and investments in them in the financial markets began to shift from relatively long-term future technology investments to relatively near-term industrial grade investments.[26] Wind power now receives more investment annually than large hydropower or nuclear, making it the leading climate mitigation technology in the eyes of

14 "State and Trends of the carbon market 2007", The World Bank, May 2007

15 EUA price on October 17, 2007 for a December 2008 delivery.

16 IPCC, "IPCC Fourth Assessment Report – Synthesis Report. Topic 5." Table 5.2, p. 8.

17 Sir Nicholas Stern et al, "Stern Review on the Economics of Climate Change" (Stern Review).

18 Ibid, section 9.8, p. 233.

19 Stern Review, supra, sections 19.2 and 20.5, pp. 425-426, 442.

20 The World Bank. "Clean Energy and Development: Towards an Investment Framework," for the 23 April 2006 Development Committee Meeting, pp. 33, 144.

21 Investment and Financial Flows to Address Climate Change, UNFCCC, 2007.

22 Ibid.

23 Global Trends in Sustainable Energy Investment 2007, UNEP SEFI and New Energy Finance.

24 Global Trends in Sustainable Energy Investment 2007, UNEP SEFI and New Energy Finance.

25 Including $117 billion of new investment and $42 billion of refinancing (mergers/acquisitions/buy-outs). Figures released 2/1/08 by New Energy Finance.

26 This change can be seen by examining figure 21 in the UNEP SEFI Global Trends report, where the NEX renewable energy index closely tracked the technology focused NASDAQ index until late 2004, after which its growth accelerated while NASDAQ remained flat.

financiers. In some instances renewables subsidiaries have become too large for parent companies and are being spun off as independently listed companies.[27]

17. ***Engagement from the finance community has broadened.*** The quickest growth in sustainable energy capital mobilization has come from four sectors of the financial community that had previously shown little interest: venture capitalists and private equity investors, who provide the risk capital needed for technological innovation and commercialization (up 69 percent in 2006 and 27 percent in 2007); public capital markets, which mobilize the resources needed to take companies and projects to scale (up 124 percent in 2006 and 80 percent in 2007); and investment banks, who help refinance and sell off companies, allowing the all important exit liquidity needed for markets to grow and for first mover investors to realize returns (up 34 per cent in 2006) and 43 per cent in 2007.[28] The engagement of these four new sectors signals an increasing mainstreaming of sustainable energy financing and, owing to the big names involved such as Goldman Sachs and some of California's most prolific venture capitalists, these actors have had a strong knock-on effect that has further strengthened investor resolve to expand the climate mitigation sector.

18. ***Engagement from the finance community has started to shift towards large developing countries.***[29] With $15billion of sustainable energy financing in 2006, developing countries accounted for 21 percent of global investment in the sustainable energy sector, up from 15 percent in 2004 and far surpassing the growth rates of developed countries. Large emerging countries account for the majority of those investments, with China, India and Brazil representing 9 percent, 5 percent and 4 percent, respectively, of global investment; all three countries are now major producers of and markets for sustainable energy, with China leading in solar, India in wind and Brazil in biofuels. China has seen the quickest growth in recent years and Indian companies have been the largest net buyer of companies abroad, spending more than $800 million in 2006 to acquire principally European manufacturers. The results in the rest of the developing world, however, have been less promising and require increased engagement from Governments and the development finance community.

19. ***Renewables growth must be seen in perspective.*** Compared to the conventional power sector, it is estimated that new renewables now provide 5.5 percent of global power capacity and that in 2006 they received 18 percent of new power generation investment ($22 billion), with wind alone accounting for 12 per cent of newly installed capacity. On top of investment in generating capacity, the renewables and efficiency sectors received an additional $34 billion in new technology and manufacturing investment, suggesting that a quickened pace of new capacity additions can be expected in the coming years. For countries at the forefront, the economic development benefits are also becoming clearer. For instance in 2006 there were over 2.3 million jobs in the renewable energy sector alone, more than the 2 million in oil and gas and over half the 4 million jobs globally in the air transport industry (ICAO-2006). UNEP has launched a "green jobs" initiative with the International Labour Organization and the International Trade Unions Congress to draw attention to the prospects for new employment and skills generation in the climate sector and to point out the risk of employment loss, especially in developing countries, from not addressing environment and climate challenges such as resource depletion, loss of biodiversity and storms, floods and droughts.[30]

20. ***Energy efficiency investment, although largely invisible, seems to follow a similar trend as investment in renewables.*** Energy efficiency is normally financed internally and is not generally identified as an investment unless it is undertaken on a significant scale. According to the UNFCCC secretariat $1.5billion was spent on "external investments" in energy efficiency in 2005.[31] According to UNEP half of this was in new technology development, a segment that on its own grew to just over $1 billion in 2006. These figures, however, are quite difficult to isolate from other industrial

27 The Spanish Utility Iberdrola, for instance, spun off its renewables subsidiary through an initial public offering in December 2007, following on the success of France's EDF in listing EDF Energies Nouvelles. The latter's initial public offering raised $6.6 billion, an amount six times greater than the previous largest renewable energy initial public offering. With a capitalization of $33 billion, this new Spanish renewables operator has a larger market value than all but the biggest European power utilities.

28 New Energy Finance Analyst Reaction (28/12/07) and Global Trends in Sustainable Energy Investment 2007, SEFI and New Energy Finance.

29 Global Trends in Sustainable Energy Investment 2007, UNEP SEFI and New Energy Finance.

30 As part of this initiative UNEP has commissioned a report from World Watch Institute to be finalized by May 2008. A draft executive summary from that report is available at https://www.unep.org/civil_society/Publications/index.asp.

31 Source: table IV-8 on page 43, UNFCCC investment flows report.

improvement activities. From the macro perspective the impacts of investments in energy efficiency are easier to quantify. Improvements in supply side and demand side efficiency have been helping to decrease global energy intensity (i.e., the ratio of energy consumption to economic or physical output), which on average has been dropping 1 to 1.5 percent per year.[32] Since 1990, energy efficiency has met 52 percent of new energy service demands in the world while new energy supplies have contributed 48 percent.[33] Most analyses expect future efficiency improvements to be in the range of 1.5–2.2 percent. According to a modelling analysis undertaken by the Joint Global Change Research Institute, however, if the rate of energy efficiency improvement could be increased to 2.5 percent worldwide it would be possible to keep carbon dioxide concentrations in the atmosphere below 550 ppm through the end of the century.[34]

21. ***Established low-carbon energy sectors also continue to attract investment, although with more modest levels of growth.*** Large hydro and nuclear generation investment amounted to $44.1 billion according to International Energy Agency (IEA) 2005 figures. IEA[35] estimates that new nuclear power plants can compete with gas-fired generation when gas costs more than $4.70 to $5.70 per MBtu, corresponding to a crude oil price of $40 to $45 per barrel. Further, it is predicted that a price of about $10 per tonne of CO_2 can make nuclear energy competitive with coal. The size of the investments, however, at $2 billion to $3 billion each, and the risks involved have made their financing on purely commercial terms difficult. In liberalized markets nuclear power is seen by many investors as too risky for project financing,[36] contrary to wind power, which requires that large corporations finance plants on their balance sheets. To enable such investment Government support is generally required. For instance, the United States of America's 2005 Energy Policy Act provides the nuclear industry with a production tax credit, loan guarantees and a standby guarantee that according to the IEA provides a benefit to the utility of about US 2.5 cents/kWh over the life of a plant. By comparison the United States Federal Production Tax Credit for wind, biomass and geothermal currently amounts to a benefit of about 1.9 US cents/kWh.

22. ***Carbon capture and storage moves through early stages of development and demonstration.*** Carbon capture and storage (CCS) is still in the early stages of development and although it may eventually play a major role in CO_2 emissions reduction, existing doubts over technical and cost challenges prevented IEA from including CCS in either its Reference Scenario or its Alternate Policy Scenario out to 2030. IEA envisages that at least two generations of pilot and demonstration plants will be required before large scale deployment can occur.[37] The UNFCCC secretariat is more optimistic, assuming a significant uptake of CCS for power plants and industrial facilities in its mitigation scenario, with projected investment to be at least $75 billion by 2030. In the energy sector, UNFCCC projects that by 2030 CCS will be a feature of 70 percent of new coal capacity and 35 percent of new gas capacity, corresponding to $63 billion additional investment flows, of which 43 per cent will be in UNFCCC non-annex 1 countries.[38] In its special report on the technology, the IPCC estimated that applying CCS to power plants would cost an extra US$0.01–0.05/kWh in 2002 dollars and that cost reductions of 20–30 percent were possible by 2015.[39] These estimates equate to a net cost of CO_2 capture of US$13–74/t CO_2. Today three large scale CCS projects are in operation in the oil and gas sector, in Algeria, Norway and on the Canada–United States border. A fourth Norwegian project is due to begin operation by the end of 2007 and around 20 other major projects have been announced.[40]

23. ***The land use and forestry implications of climate change must be taken into account.*** It is estimated that the world's forests store 1,040 Gt of CO_2 in their biomass alone and that the volume of CO_2 stored in forest biomass, deadwood, litter and soil together exceeds the CO_2 in the atmosphere by roughly 50 per cent. For the world as a whole, carbon stocks in forest biomass have decreased annually by 4 Gt CO_2 (equivalent to 4 billion 25kg sacks of charcoal).[41] Reducing emissions from deforestation

32 IEA, 2006 "Energy technology perspectives 2006: scenarios and strategies to 2050".

33 Realizing the Potential of Energy Efficiency, UN Foundation, 2007.

34 Ibid.

35 World Energy Outlook 2006, Prospects for Nuclear Power, pp. 375 – 384.

36 Ibid, pp. 375–376.

37 Footnote 11, page 97 WEO 2007.

38 Most of this will take place in China and India, where most of the new coal generation plants will be built.

39 IPCC, Special Report Carbon Dioxide Capture and Storage, Summary for Policymakers, 2005, p. 10.

40 Source: IEA world energy outlook 2007 page 219.

41 UNEP Billion Tree Campaign.

and the degradation of forests is of particular concern because deforestation accounts for a significant portion of total emissions: in the 1990s between 1.8 and 9.9 Gt CO_2 emissions per year were attributed to land use change, including deforestation.[42] The recent decision taken by the UNFCCC Conference of the Parties at its thirteenth session, entitled "reducing emissions from deforestation in developing countries: approaches to stimulate action", aims at finding approaches that can ensure and finance the preservation of native forests. The announcement by the Government of Norway that it would provide new financing of approximately US$2.7 billion over the next five years will provide a new incentive for action. A Stern Report-commissioned study costed avoided deforestation at an average of approximately $1-2/t CO_2, with the planting of new forests at $5-15/t CO_2.[43][44] Although carbon sequestration discussions at the meeting of the UNFCCC Conference of the Parties in Bali mostly centred on forestry, it is important to note that half of land use sequestration potential lies within grassland, peatland and wetland ecosystems. Furthermore, in addition to lowering atmospheric greenhouse gas concentrations, poverty alleviation and increasing resilience of ecosystems are co-benefits of sequestration that should also be considered.

24. ***Research and development investment trends are still mixed,*** with spending from public sources stagnating and that from private sources in decline. The IEA research and development database shows a decline of 50 percent in low-emission (renewables, conservation, and nuclear) research and development between 1980 and 2004 and although overall government research and development has been increasing, the share devoted to energy research and development fell from approximately 12 percent to 4 percent between 1980 and 2005.[45] To attain the level of innovation necessary to achieve a stabilization target of 550 ppm, Stern estimates that the support needed from carbon pricing plus direct incentives for innovation would need to rise from $33 billion today to $90 billion by 2015 and $160 billion by 2025.[46]

25. *Subsidies continue to have a major impact,* with studies showing that removal of some consumer energy subsidies could reduce global CO_2 emissions by 5–6 percent.[47] Globally energy subsidies total approximately $250–300 billion per year, excluding taxes, with non-OECD countries receiving the bulk of these. Fossil fuels are the most heavily subsidized, with an estimated total of $180–200 billion. Support to low-carbon energy sources amounts to an estimated $33 billion each year: $10 billion for renewables (e.g., biofuels), $6 billion for biofuels and $16 billion for existing nuclear power plants. Opportunities exist in many countries to reduce CO_2 emissions through improvements in the subsidy framework.

D. The response on mitigation: the role of carbon finance and emissions trading

26. ***Carbon finance is becoming a real financial market.***[48] During 2006 88 megatonnes (Mt) CO_2-eq of Clean Development Mechanism projects were registered, with expected Certified Emissions Reduction (CER) revenues of $1–$1.5 billion and underlying capital requirements of about $7 billion. A further 144 Mt of projects were in the pipeline with total expected CER revenues of $2–$2.5 billion and underlying capital requirements of $26.4 billion. The joint implementation market is just starting up and by the end of 2006 no projects had been registered but 15 Mt CO_2-eq was in the pipeline with estimated emission reduction unit revenues of $0.1–0.3billion per year and underlying capital requirements of $6 billion. Emission reduction revenues are starting to become a significant financial flow for the

42 IPCC, Working Group I Summary for Policymakers, pp. 2-3.

43 Stern Report, supra, section 9.4, pp. 216–217.

44 Further, recent reviews of carbon sequestration projects have noted the following ranges of cost efficiency for carbon removal in specific projects: $3/t CO_2 afforestation, $3-$9.6/t CO_2 forest management and protection, $4/t CO_2 reduced impact logging, $5/t CO_2 community forestry, $12/t CO_2 agroforestry, $10-28/t CO_2 forest rehabilitation and agroforestry, and $187/t CO_2 dryland rehabilitation. Source: "IPCC Special Report on Land Use, Land-Use Change And Forestry," and FAO "A Review of Carbon Sequestration Projects." Document No. AGL/MISC/37/2004. Table 1, pp. 9-13. 2004.

45 International Energy Agency, "World Energy Outlook 2007 – China and India Insights", fig 6.1, p. 236.

46 Stern Report, supra, section 16.8, figure 16.7, p. 371.

47 Source: UNFCCC "investment and financial flows" report page 44

48 Carbon finance covers a variety of greenhouse gas emission reductions markets: Kyoto Protocol mechanisms, the European Union's emissions trading scheme, other emission trading schemes in Norway, the United Kingdom of Great Britain and Northern Ireland, Australia, the United States and a range of other voluntary markets. Activity on those markets does not necessarily reflect new investments as one tonne of carbon could be subject to several trade transactions. New investments can be approached through the Clean Development Mechanism and joint implementation markets (primary market), carbon funds and the voluntary market.

renewables and efficiency sectors. For example, an estimated $5.7 billion of investment was mobilized for renewables or efficiency-related Clean Development Mechanism projects registered during 2006.[49] The expected CER revenues alone expected from these projects are similar in size to the official development assistance for energy policy and renewable energy projects in the same countries in 2005.[50]

27. ***The carbon finance market includes a small but critical voluntary market.*** The voluntary carbon offsets market has existed for more than a decade and has been used by companies (54 percent) and individuals (30 percent) to offset their emissions voluntarily. Operating outside regulatory frameworks, their integrity can vary from one project to another. The less constraining markets in which they operate, however, also provide the opportunity to test out new approaches or deal with sectors still poorly addressed by the formal markets. In 2006 the market was estimated to be 10-20 Mt and $55-$200 million in contracted revenues.[51]

28. ***The carbon finance market also includes a growing array of intermediary actors.*** Carbon funds are vehicles for pooling investments in the carbon market. By March 2007 58 funds totalling $11.8 billion were operating,[52] 37 as compliance funds that purchase only emission reductions and 21 that also finance underlying project developments and take part in intermediary trading.

29. ***Emissions trading is also gaining traction***, mostly through the experience of the European Union's Emissions Trading Scheme, which saw 362 Mt CO_2 traded in 2005 during its first year of operation, with an estimated value of 7.2billion euros.[53]

30. ***In summary, climate mitigation markets have indeed started to grow in response to strengthening policy frameworks.*** Climate change investment decisions by financial actors are and will remain policy driven. The linkage between policy frameworks and investment uptake is perhaps nowhere better seen than with renewables. Targets for renewables now exist in 58 countries, including 13 developing countries; 36 countries have adopted feed-in tariff policies for renewable electricity and 44 have enacted renewable-portfolio-standard policies that mandate future shares of power generation for renewable energy.[54] Mandates for blending biofuels have been enacted in 11 developing countries and in 30 states and provinces in Canada, India and the United States. Dozens of major cities around the world have joined in and set targets for renewables and CO_2 reduction. Although clearly policy driven, the number of supportive policies currently in place for renewables provides stability to the markets. In any climate mitigation sector, clear and long-term policy signals are needed for commercial capital to start flowing and the better the policies the lower the cost of such capital and the lower the cost of delivered emissions reductions.

E. The response on mitigation: support needed for investment in developing countries

31. ***Emerging markets are seeing improved access to foreign direct investment***, but face problems of volatility in both domestic and international financial markets. Even so, the domestic markets of many are beginning to provide long-term, fixed-rate local currency financing; the fundamentals are therefore in place for infrastructure development. The main challenge is how to ensure that this infrastructure is low-carbon, how to pay the incremental costs of developing it and how to help industry overall in lowering its carbon footprint. Industry in emerging markets is starting to face issues similar to those faced by industry in developed countries. UNEP is launching a new Sustainable Energy Finance Alliance to get public finance institutions to work together on new approaches to financing the growth

49 Renewable energy and energy efficiency Clean Development Mechanism projects represented 80 to 90 percent of the capital investment of the Clean Development Mechanism projects registered in 2006, even though they represented only 20 percent of the emission reductions. These projects are more costly to build as they are dual purpose, producing both emissions reductions and energy production or savings.

50 Source: UNFCCC "investment and financial flows" report page 141.

51 World Bank, CDC, Capoor & Ambrosi, Hamilton et al, as quoted by the UNFCCC in "investment and financial flows" report page 149.

52 SEFI report, Page 37.

53 Point Carbon, "Carbon 2006," H. and K. Røine ed., 2006, p. 1.

54 REN21 Renewables 2007 Global Status Report.

of the clean energy market.[55] Mechanisms and approaches used today by public finance authorities in the United Kingdom might, for instance, be appropriate for use in China and vice versa.

32. ***In least developed countries the private sector often has difficulty accessing the credit markets***, which due to limited liquidity and market instabilities very seldom offers the sort of long-term local currency financing needed for infrastructure investments. Besides large scale infrastructure, opportunities for more decentralized and cleaner forms of service delivery also exist, for example bio-fuelled mini-grids or solar crop drying. Such approaches, however, require new industry actors and new ways of doing business. Change comes slowly as there is limited capital for financing innovation and the costs of new business development and technology transfer are high. Lack of market scale is also a challenge and aggregating sufficient demand is difficult to do commercially. Banks, for instance, are willing to lend to households for small scale renewables, but only if they can do so on a sufficiently large scale (e.g., 10,000+ customers).[56] Overall, the weak financial markets introduce a bias toward less capital intensive technologies, which in the energy sector means conventional fossil-fuel-based options.

33. ***The development finance community has a particularly important role to play*** in assisting Governments to establish clear and comprehensive legislative and regulatory systems and to contribute financially. Over the last five years the World Bank Group and the regional development banks have together invested over $17 billion in projects that directly or indirectly contribute to lowering carbon emissions in developing countries. The trend is accelerating, with the World Bank, for example, increasing its renewables and efficiency financing last year 67 percent to $1.4 billion,[57] although this still only accounts for 40 percent of overall energy sector commitments. The bilateral development banks such as the German Development Bank (FMO), Agence Française Developpement (AFD), Danish International Development Agency (DANIDA), Swedish International Development Agency (SIDA) and Japan Bank for International Cooperation (JBIC) are also becoming major supporters of climate mitigation. Entwicklungsbank (KfW) is the most active, committing an average of €230 million annually to renewables alone during 2005–2006, and earmarking €1.3 billion for the 2005–2011 period. One of the most important public funding sources for fostering climate investment is the Global Environment Facility (GEF), the financial mechanism of the United Nations Framework Convention on Climate Change. The value of GEF funding for climate change mitigation projects at the end of 2007 stood at $2.5 billion, which the GEF secretariat estimates has funded projects equivalent to almost 1.2 billion tons of CO_2 avoided.

34. The comparative advantage of UNEP includes the ability to give strategic advice and provide incentives aimed at changing attitudes and helping to mainstream climate investment as an important complement to the more financial mandate of the development banks. On an operational basis, UNEP has been working both in-country, helping banks and investors at the forefront to launch new climate-focused financial products, and at a broad industry engagement level, trying to scale-up and mainstream these first mover actions across the commercial finance sector. The in-country work is focused on improving access to seed capital financing and enterprise development support for clean energy SMEs,[58] on helping domestic banks set up consumer loan and micro-credit programmes for small scale energy technologies,[59] on supporting the development and deployment of new risk

55 The Sustainable Energy Finance Alliance will be a grouping of public or publicly-backed institutions each financing development of the clean energy markets in their respective regions. Some examples of the types of instruments to be focused on within the alliance includes business incubators, public-private venture capital funds, contingent loan or credit enhancement facilities, mezzanine finance structures, partial credit guarantees, public-private partnerships and various relevant instruments for technology or project development. For more information see www.sef-alliance.org.

56 UNEP experience working in various countries to help local banks develop clean energy lending portfolios for small scale renewables.

57 World Bank Group Progress on Renewable Energy and Energy Efficiency in Fiscal 2007.

58 The African Rural Energy Enterprise Development programme and its equivalents in Brazil and China have provided seed financing for a portfolio of 45 clean energy companies since 2000 (see www.areed.org). A new Sida funded programme is focusing on providing seed financing and micro finance to developmental social enterprises in the clean energy sector in Africa. A new $10 million GEF and United Nations Foundation supported Seed Capital Assistance Facility is being launched by UNEP in partnership with the Asian Development Bank and the African Development Bank.

59 Between 2003 and 2006 UNEP worked with two of India's largest banks and their micro-finance affiliates to develop a household consumer credit market for solar home systems. Under the Italian funded MEDREP partnership, UNEP has worked with partner banks in Tunisia and Morocco to set up lending programmes for

management tools[60] and on fostering development of the carbon finance markets.[61] The finance industry engagement work on renewables, efficiency and other climate mitigation approaches is done through work of the Sustainable Energy Finance Initiative, the UNEP Finance Initiative Climate Change Working Group and the United Nations Principles for Responsible Investment.[62] In addition, UNEP has a number of programmes working to improve regulatory frameworks and the institutional capacities needed for clean energy uptake and other climate mitigation sectors.

F. The response on adaptation – support needed for reducing vulnerabilities in developing countries

35. ***Adaptation has been a growing priority in the climate discussions***, with UNFCCC Parties committing to undertake adaptation measures and to cooperate in preparing for the impacts of climate change. Efforts to date have focused on identifying vulnerabilities and determining response measures. UNEP has assisted some countries to conduct in-depth assessments of vulnerability and the United Nations Development Programme (UNDP) has assisted others in preparing adaptation needs assessments. Bilateral assistance[63] totalling $110 million has gone to more than 50 adaptation projects in 29 countries.

36. ***Today's emphasis is on prioritizing adaptation options.*** GEF has established as a strategic priority "piloting an operational approach to adaptation";[64] as of June 2007, 11 projects had been financed in the amount of $28 million and a further six are in the pipeline. UNFCCC Parties established three funds dedicated fully or in part to supporting adaptation: the Least Developed Countries Fund,[65] the Special Climate Change Fund[66] and the Adaptation Fund. The Least Developed Countries Fund and Special Climate Change Fund are managed by GEF and are supported by voluntary contributions from donor countries.

37. ***The Adaptation Fund has been established to finance concrete adaptation projects and programmes*** in developing countries that are Parties to the Kyoto Protocol. It functions under the political guidance of the Conference of the Parties to the Convention and the Meeting of the Parties to the Protocol. Financed by a share of CER proceeds, the fund resources are by definition uncertain because they are based on future Clean Development Mechanism flows but are estimated at $80 to $300 million per year until 2012. GEF has been asked to host the secretariat of the Adaptation Fund and the World Bank has been asked to act as trustee. Modalities for operating the Adaptation Fund will be developed in 2008.

38. Even so, the United Nations Framework Convention on Climate Change secretariat report mentions a current adaptation deficit, evidenced by "mounting losses from extreme weather events such as floods, droughts, tropical cyclones and other storms, losses which have been mounting at a very rapid

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domestic and commercial solar water heaters. New solar loan programmes are in development for Albania, Algeria, Chile, Indonesia and Mexico as is an energy efficiency programme for north Africa.

60 With GEF support UNEP and the World Bank are launching the African Risk Geothermal (ARGeo) programme, which will share exploration risks of geothermal developments in the rift valley. As well UNEP has been undertaking a GEF-funded risk management assessment project on renewables that is supported by a number of new instrument developments such as wind derivatives and renewables dedicated insurance facilities (www.unep.fr/energy/finance/risk).

61 UNEP has extended its Clean Development Mechanism support work, providing institutional assistance to national authorities and beyond, to project developers for the successful development and financing of their projects through its CD4CDM programme, the joint UNEP/World Bank Carbon Finance for Sustainable Energy Services in Africa, and the new forestry and bioenergy focused programme CASCADe.

62 http://www.unepfi.net and http://sefi.unep.org.

63 Countries which have provided bilateral assistance are Canada, Germany, Japan, the Netherlands, United Kingdom, and United States.

64 A pilot allocation for GEF eligible countries of $50 million from the GEF Trust Fund was included in the GEF business plan in November 2003.

65 The LDCF supports projects addressing the urgent and immediate adaptation needs of least developed countries as identified in their national adaptation programmes of action (NAPAs). As of September 2007, 18 countries had pledged $163 million to the LDCF, of which $59 million are still outstanding, and $13 million of projects have been approved by the Council.

66 As of September 2007, 13 countries had pledged $72 million to the SCCF, which includes a technology transfer sub-programme, and $30 million of projects have been approved by the Council.

rate over the last 50 years. This increase is most likely due to the expansion of human populations, socio-economic activities, real property, and infrastructure of all kinds into zones of high risk. Moreover most property is built at a substandard level and does not conform even to minimal building codes and standards." The UNFCCC report provides current estimates of investment in the main adaptation sectors, as well as the sources of such investment, and derives from those an estimation of investment required for climate change adaptation. For instance, for ecosytems services the current annual spending to ensure natural ecosystem protection – from all threats and not only from climate change – is on the order of $7 billion from public domestic and external funding, with about 89 percent spent in developed countries. For coastal zones some investment data is available for some parts of the developed world. For example, the annual cost of coastal adaptation for erosion and flooding across the European Union was estimated at 3.2 billion euros in 2001; the flood and coastal management budget of the United Kingdom amounted to £500 million in 2005–2006 (although coastal investment is only part of that amount); in the Netherlands, investment in erosion and flood management is approximately 0.1-0.2 percent of GDP; in Bangladesh the Government has implemented a strategy with flood warnings and the construction of elevated shelters which has proven successful; and a large wall was built around the capital of Maldives in the 1980s with aid from Japan, the cost of which is unknown.

39. ***The development of commercial financial adaptation instruments is just beginning.*** In 2006, the World Food Programme partnered with French reinsurer AXA Re to pilot a programme to provide cash payouts to Ethiopian farmers in the event of severe drought. They are now working to expand the programme, hoping to raise $230 million in insurance and contingency funds to cover 6.7 million people. In September 2007, Swiss Re launched a Climate Adaptation Development Programme designed to provide financial protection against drought conditions for up to 400,000 people in 10 African countries. More broadly, Munich Re has set up a Climate Insurance Initiative forum to assess new adaptation insurance products. Among the product developments being considered are microinsurance, natural catastrophe pools and schemes and alternative risk transfer products such as weather derivatives and catastrophe bonds.[67]

G. Climate neutrality

40. Following an initiative of the United Nations Secretary-General announced on World Environment Day (5 June 2007), the United Nations system, including its specialized agencies, funds and programmes, are engaged in a process to move increasingly toward sustainable management of their operations through reducing their emissions of greenhouse gases and other pollutants, by engaging in sustainable procurement practices and by setting climate-neutral targets. This initiative is being facilitated and coordinated by the United Nations Environment Management Group, which is chaired by the Executive Director of UNEP and for which UNEP provides the secretariat. Specifically, at the 28 October 2007 meeting of the Chief Executives Board (CEB) the heads of all United Nations agencies, funds and programmes committed themselves by stating as follows:

> "(a) In particular, by the end of 2009 we will:
>
> i. Estimate our greenhouse gas emissions consistent with accepted international standards;
>
> ii Undertake efforts to reduce our greenhouse gas emissions to the extent possible; and
>
> iii. Analyze the cost implications and explore budgetary modalities - including consulting with governing bodies as needed - of purchasing carbon offsets to eventually reach climate neutrality."
>
> (b) We make this commitment with a view to achieving the goal of climate neutrality at a date to be set in the future, by reducing emissions first and then offsetting the remainder through the purchase of offsets from the CDM, that meet high international standards of additionality, transparency and verification and which promote sustainable development in developing countries.

67 UNEP Finance Initiative "Insuring for Sustainability" report, 2007.

(c) We support the further development and implementation of a UN system-wide strategy reaching climate neutrality; for monitoring our collective efforts; and for reporting back on progress and difficulties encountered."[68]

41. Some agencies (e.g., the United Nations Conference on Trade and Development, UNEP and the World Bank group) have already completed their first inventories, while others are beginning. The World Bank has been carbon neutral in its operations at headquarters for the last three years. UNEP will begin to be carbon neutral in its operations worldwide by 1 January 2008[69]. Others are to follow as their administrative arrangements allow. During the next two years, in addition to the agencies following up on the decision of the Chief Executives Board, there will be a joint effort through the Environment Management Group to improve methodologies, consider different options for procuring offsets and generally to exchange experience on the whole exercise, in order to be ready with a quality package when the time comes for setting formal carbon neutrality targets. While such approaches are being developed, different agencies are setting funds aside in specially designated account for their present emissions. The Environment Management Group has been requested to report back to the Chief Executives Board on progress achieved and difficulties encountered.

42. ***Several countries have pledged to "go" carbon neutral as their response to the climate change challenge.*** Those countries include Costa Rica, New Zealand, Norway and the Holy See. In addition, many cities, including over 300 in the United States and some in developing countries such as Bangkok, are setting or contemplating setting greenhouse gas emission reduction targets. Some have announced carbon neutral strategies for some areas of their urban operations; e.g., Albuquerque, New Mexico, in the United States has for example announced that all new buildings must be carbon neutral.

43. The Executive Director is currently exploring with interested parties the ways and means of establishing a climate neutral network of countries and other public and private entities that have pledged to attain carbon neutrality, which will be launched in Monaco at the tenth special session of the Governing Council/Global Ministerial Environment Forum.

IV. Theme II: International environmental governance and United Nations reform

44. Reversing the current trend of global environmental degradation will require a strengthened international institutional structure for environmental governance. At present, international institutions and processes lack coherence and effectiveness in addressing important global environmental challenges, including emerging challenges. Environmental ministers from around the world expressed a shared concern on this point when they met in Malmö, Sweden, for the first session of the UNEP Governing Council/Global Ministerial Environment Forum, in May 2000, which led to a series of intergovernmental debates on international environmental governance in 2001 and the adoption of decision SS.VII/1 on the subject by the Governing Council/Global Ministerial Environment Forum at its seventh special session, which took place in Cartagena, Colombia, in February 2002. The Cartagena Package adopted in decision SS.VII/1 noted the evolutionary nature of strengthening international environmental governance and to date the Cartagena Package is still recognized as an important policy issue.

45. The 2005 World Summit Outcome,[70] which sets a the global policy agenda agreed by world leaders, addresses, among other issues, international environmental governance, especially in the context of United Nations reform. In paragraph 169 of the Outcome, Governments agreed to explore the possibility of a more coherent institutional framework, including a more integrated structure, for environmental activities in the United Nations system by improving the key areas of concerns, including enhanced coordination; improved policy advice and guidance; strengthened scientific knowledge, assessment and cooperation; better treaty compliance, with due respect for the legal autonomy of treaties; and better integration of environmental activities in the broader sustainable development framework at the operational level, including through capacity-building.

68 Excerpt from a decision adopted unanimously by the heads of all United Nations agencies, funds and programmes at the 28 October 2007 meeting of the Chief Executives Board in New York.

69 In addition, as part of its effort to engage the business community, UNEP has joined the United Nations Global compact and World Business Council for Sustainable Development in launching the "Caring for climate" platform, a statement signed in 2007 by chief executives of 198 companies".

70 General Assembly resolution 60/1 of 16 September 2005.

A. Recent developments in international environmental governance

46. Following up on paragraph 169 of the World Summit Outcome, the General Assembly initiated in 2006 an informal consultative process on the institutional framework for the United Nations' environmental activities, work on which continued in 2007. The co-chairs of the informal consultative process issued on 14 June 2007 an options paper that highlights the following main shortcomings of international environmental governance as identified by Governments during the informal consultative process:

(a) Scientific assessments: lack of coherent and authoritative scientific advice to decision makers; overlaps and ignored interlinkages; lack of early warning mechanism;

(b) Institutional complexity and fragmentation within the United Nations and other multilateral organizations: an important number of delegations mentioned the lack of a single, recognized platform to offer policy advice on environmental issues at the global level; lack of an effective and authoritative environmental pillar within the United Nations system; and a lack of coordination among United Nations agencies;

(c) Institutional complexity and fragmentation among multilateral environmental agreements: fragmentation and a lack of coherence in the environmental legal framework; a heavy burden on member States, particularly in terms of reporting obligations and meetings of the conferences of Parties;

(d) Implementation of existing obligations and commitment: lack of implementation of prior decisions and existing commitments; and insufficient capacity-building and technical assistance;

(e) Funding: complex and inefficient funding mechanisms; complicated funding application and approval procedure of the Global Environment Facility; unproductive competition for scarce funds; insufficient, unstable and unpredictable funding base of UNEP;

(f) Partnerships: insufficient use of partnerships with civil society, private business and the scienctific and academic community in the United Nations framework; current rules of procedures limiting cooperation between the United Nations and its partners.

47. In the options paper, the Co-Chairs state that the consultative process had confirmed that there was broad support for enhancing international environmental governance in terms of efficiency, effectiveness and impact in order to build a system which has authority and credibility and mirrors enhanced capacity of the multilateral system to respond to the increasing challenges of environmental degradation. The principles, premises and conditions for guiding the process of enhancing international environmental governance, as often referred to by delegations during the consultation, include the following:

(a) Place action on international environmental governance in the context of sustainable development;

(b) Maintain the principle of shared but differentiated responsibility in a strengthened international environmental governance system;

(c) Enhance policy coherence and focus on implementation, compliance and capacity-building at the same time;

(d) Build on the strengths of the present system (specificity) while expanding cooperation between the different parts of the system;

(e) Advance environmental mainstreaming in areas such as trade, development, health, humanitarian action and disaster relief without adding new conditionalities;

(f) Make available sufficient, timely and predicable resources;

(g) Support broad understanding of capacity-building, including in the areas of research, science, technology transfer, legal frameworks, policy formulation and operational delivery;

(h) Strengthen environmental governance at the national, subregional, regional and global levels;

(i) Strengthen good management and good governance efforts in parallel;

(j) Include civil society, science and business communities in global governance.

48. The Co-Chairs stated that during the consultations there had been remarkable unanimity that the different functions of international environmental governance needed improvement, including the identification and assessment of the state of the environment; the normative and policy work of the system; implementation at different levels; and policy assessment and support functions, including capacity-building, technology transfer, information technology, finance, advocacy and partnerships.

49. In addition to the informal consultative process of the General Assembly just described there have been initiatives by a group of Governments to address international environmental governance in the past year. At the Paris Conference for Global Ecological Governance held on 2 and 3 February 2007, the participants adopted the Paris Call for Action, which, among other things, states that the participants support the efforts of the nations who are taking action to strengthen international environmental governance and calls for the transformation of UNEP into a fully fledged international organization or a United Nations Environment Organization. In follow-up to the Paris Conference, a ministerial meeting of the Group of Friends of the United Nations Environment Organization was held in Agadir, Morocco, on 12 and 13 April 2007. Furthermore, the United Nations System Joint Inspection Unit has been undertaking a management review of environmental governance within the United Nations system, which is now in its final stage of completion.

50. The Ministerial Conference on Environment and Sustainable Development: Challenges for International Governance was held in Rio de Janeiro, Brazil on 4 and 5 September 2007. It addressed the current situation and the options for moving forward with the debate on international environmental governance and sustainable development (A/62/356). A co-chairs' summary of the conference, among other things, underscored that international environmental governance must be viewed and implemented taking into account the balance between the three pillars of sustainable development and that environmental sustainability is an essential part of the development process. The current situation regarding international environmental governance must be improved. The status quo is not an option. The United Nations must be the locus for dealing with the issue of international governance, and UNEP is the central environmental pillar of the United Nations. While there is an urgent need for coordination and system-wide coherence, the resources of the multilateral system appear to be insufficient for this coordination and for effectively implementing the UNEP mandate and multilateral environmental agreements. In order for environmental governance to be strengthened, there must also be a strengthening of national and regional capacities. A follow-up meeting is planned for February 2008, in advance of the tenth special session of the Governing Council/Global Ministerial Environment Forum, the outcomes of which will be shared with ministers and other heads of delegation.

51. The General Assembly, in its resolution 62/195 of 19 December 2007, recognized the need for more efficient environmental activities in the United Nations system and noted the need to consider possible options to address this need, including through the ongoing informal consultative process on the institutional framework for United Nations environmental activities.

B. The UNEP role in international environmental governance and United Nations reform

52. ***UNEP has been and should continue to be the principal United Nations body in the field of the environment.*** The role of UNEP is to be the leading global environmental authority and, as such, to set the global environmental agenda, to promote the coherent implementation of the environmental dimension of sustainable development within the United Nations system and to serve as an authoritative advocate for the global environment. This was emphasized in the Nairobi Declaration on the Role and Mandate of United Nations Environment Programme, adopted by the Governing Council at its nineteenth session, in February 1997, which was further endorsed by the General Assembly at its nineteenth special session, in the same year. The recommendations on international environmental governance contained in decision SS. VII/1 of the Governing Council provide a strategic guidance for UNEP to undertake its mandate and fulfil its role. Recent intergovernmental debate on international environmental governance has illustrated that among Governments believe that UNEP should play a key role in a strengthened international institutional structure for environmental governance. At the same time, their assessment on the current situations of international environmental governance has indicated that there are a number of challenges that UNEP needs to overcome to fulfil its expected role.

53. The Governing Council/Global Ministerial Environment Forum g is a subsidiary body of the General Assembly and has several United Nations system-wide functions. The Council/Forum may wish to keep under review its effectiveness in performing in particular the following functions:[71]

(a) Keeping under review the world environmental situation in order to ensure that emerging environmental problems of wide international significance receive appropriate and adequate consideration by Governments;

(b) Periodically keeping the implementation and effectiveness of environmental programmes within the United Nations system under review;

(c) Providing general policy guidance on the direction and coordination of environmental programmes within the United Nation system;

(d) Providing advice and technical and financial support for the formulation and implementation of environmental programmes by other intergovernmental bodies in the United Nations system;

(e) Maintaining under continuing review the impact of national and international environmental policies on developing countries and their development plans and priorities.

54. For UNEP to be the leading global environmental authority that sets the global environmental agenda, it is essential to further strengthen its scientific base in order to better serve decision-making by the Governing Council and by Governments and other partners at all levels. The Governing Council, at its twenty-fourth session in February 2007, underlined the vital importance in a globalizing world of enhancing infrastructures and capacities which can sustain cooperation on environmental data and information. It was felt that this could lead to reduced transaction costs for national reporting, natural resource accounting and decision-making. The Governing Council supported the ongoing endeavours of UNEP to enhance information networks at the regional and national levels and in doing so taking into consideration existing infrastructures, mechanisms and tools in order to avoid duplication of efforts. The General Assembly, in resolution 62/195, recognized that there was a need to strengthen the scientific base of UNEP, including through the reinforcement of the scientific capacity of developing countries and countries with economies in transition, in the areas of protection of the environment; it noted also that UNEP was engaged in ongoing consultations with Governments and other stakeholders with a view to improving further the proposed “Environment Watch strategy: Vision 2020”as an integral part of the wider UNEP strategic vision. The executive Director will as requested report to the Governing Council at its twenty-fifth session with a revised proposal, which should include cost estimates.

55. Strengthened international institutions and processes for environmental governance needs to be built upon enhanced national institutional structures that mainstream the environmental dimension of sustainable development into national decision-making processes and development policies, including through empowerment by laws and institutions and the provision of adequate resources and support for capacity-building. For this purpose, the full and effective implementation of the Bali Strategic Plan for Technology Support and Capacity-building will be further pursued throughout UNEP programmes through strengthened cooperation with other stakeholders. In this regard, challenges remain at UNEP to secure financial resources that are adequate to provide technology support and capacity-building activities in support of developing countries and countries with economies in transition. The General Assembly, in resolution 62/195, while stressing the need to advance further and to implement fully the Bali Strategic Plan, called upon Government and other stakeholders in a position to do so to provide the necessary funding and technical assistance. Within the overall context of United Nations reform to improve coherence and coordination among United Nations system agencies to deliver as one at the national level, UNEP has actively engaged with United Nations country teams, especially in the One UN pilot countries, as well as through the participation in the United Nations Development Group. The experience gained at UNEP to date, as a non-resident agency, highlights the need for strengthening its strategic presence in regions in order to address effectively the needs in countries associated with integrating the environmental dimension into national sustainable development policies.

56. Stable, adequate and predictable financial resources are essential for UNEP to carry out its mandate. The General Assembly, in resolution 62/195, reiterated this and underlined the need to consider the adequate reflection of all administrative and management costs of UNEP in the United Nations regular budget. While there have been some encouraging signs from donors, a substantial increase in the financial resource base of UNEP is needed to enable it to carry out fully its

71 General Assembly resolution 2997(XXVII) of 15 December 1972, in particular section II.

mandate and the functions envisaged in the programme of work approved by the Governing Council. The requirement that UNEP facilitate the full and effective implementation of the Bali Strategic Plan should be matched with the adequate financial resources provided in a predictable manner.

57. Better coordination of global environmental trust funds and enhanced access to financial resources through lower transaction costs and greater predictability is needed, and UNEP has a central role and mandate to contribute to such improvements. UNEP has complied with its stated comparative advantage as a GEF implementing and has refocused its pipeline of projects towards scientific innovation, advocacy, technical assistance and capacity-building. GEF strategic priorities and projects have also been aligned with the Medium-term Strategy for more effective implementation of the Bali Strategic Plan. UNEP will leverage this integration to better influence and enhance the impact and performance of GEF.

58. ***Multilateral environmental agreements form an integral part of international environmental governance.*** While respecting their legal autonomy, there should be increased coordination and coherence in decision-making processes between the Governing Council and the governing bodies of multilateral environmental agreements, as well as among those governing bodies themselves. Opportunities exist for bridging science and policies through environmental assessment and monitoring or addressing the needs of developing countries and countries with economies in transition to strengthen laws, institutions and environmental management infrastructures necessary to undertake actions to meet their commitment to implement internationally agreed environmental objectives and goals arising from United Nations summits and conferences as well as obligations under the multilateral environmental agreements and commitments made in accordance with decisions of their governing bodies. On the programmatic level, the existing institutional linkage between the United Nations or UNEP on the one hand and selected multilateral environmental agreements on the other hand, particularly through the provision of secretariat functions, should be viewed as an opportunity to enhance cooperation through which international environmental governance could be enhanced.

59. The Environment Management Group is a key to enhancing United Nations system-wide cooperation and coordination in the field of the environment, and its functions should be strengthened. The Group was created to encourage better cooperation among United Nations agencies in their work on the environment and multilateral environmental agreements and thereby to increase the coherence of their environment-related actions in support of countries. System-wide coherence was to be achieved not by superimposing a new organizational layer but by using an issue management approach to enhance cooperation between agencies and conventions on a thematic basis and to find solutions to emerging environmental issues in a collective manner.

60. In his capacity as Chair of the Environment Management Group the Executive Director of UNEP has made renewed efforts to revitalize the Group according to these goals. In that spirit, the Group has established issue management groups focused on “greening” the United Nations by increasingly adopting sustainable management of its operations, moving the United Nations system toward climate neutrality and adopting sustainable procurement approaches. Another issue management group is focusing on the development of practical guidelines for sustainable procurement. UNEP has furthermore established the Sustainable United Nations (SUN) unit to assist United Nations organizations, as well as other public and private entities, with practical hands-on advice on how to become more sustainable and climate friendly.

61. In the light of its strategic role, the Environment Management Group has often been considered an important element of strategies for United Nations reform. In particular, the Group has been requested to facilitate the consideration of environment-related recommendations to enhance United Nations system-wide coherence. In response to a request from the Deputy-Secretary General, the Executive Director, in his capacity as the Chair of Group, tasked the Group’s secretariat with gathering the views of different organizations on international environmental governance and options under consideration by the General Assembly. After a thorough process of consultations, a first set of comments from the organizations was presented by the Group at an informal session of the General Assembly in September 2007. The issue was also considered by the Group at its annual meeting, on 28 October 2007.[72] Currently, the Group’s secretariat is gathering and compiling relevant information on the issues identified by the Group at that meeting regarding how best to enhance coherence within the United Nations system, with a particular focus on cooperative arrangements among multilateral environmental agreements.

72 Further details on the activities of the Environment Management Group can be found on the Group’s website at http://www.unemg.org.

Annex I

Detailed list of suggested policies and actions for mobilizing finance to meet the climate challenge

A. Suggested policies and action to improve the availability of appropriate forms of financing for climate mitigation activities:

1. ***Support new financial and regulatory approaches to addressing the lack of equity and long-term local currency debt financing*** in least developed countries. Without such local financial capacity, mobilizing the investment needed for low carbon infrastructure will remain difficult.

2. ***Develop and promote new forms of public or private risk sharing*** to assist low-carbon investors in managing non-commercial risks. Partial risk guarantee structures and various forms of concessions and public-private partnerships can be used to distribute risks amongst the parties best positioned to manage them.

3. ***Promote an increase in the provision of credit*** to businesses and consumers for investing in climate mitigation technologies and systems. In many developing countries these new credit markets can be domestically financed once the local banking community gains confidence in the sector.

4. ***Support new approaches to financing innovation within small and medium-sized enterprises***. The current lack of innovation capital slows the rate of technology transfer and new business development in the climate mitigation sectors.

5. ***Provide clear and compatible regulations for carbon finance and emissions trading***, to the extent that this is possible, and further globalize these markets to ensure liquidity and effectiveness.

6. ***Stimulate inclusion of research and development*** in new climate mitigation technologies. Innovative forms of public and private financing are needed to help technologies move from the lab bench to the market and arrangements must be found to equitably share and protect intellectual property rights.

7. ***Provide targeted subsidies*** to build the capital and human capacity that will attract private investment to climate mitigation projects and generate new local employment and income opportunities.

B. Suggested policies to improve energy efficiency[73]:

8. For the building sector: ***encourage authorities to adopt stronger building codes and encourage the use of life-cycle efficient technologies and materials***. Specific measures include mandatory audit requirements, energy performance contracting through energy service companies, detailed building and disclosure programmes, demand-side management programmes, fiscal interventions and economic incentives.

9. For industry: ***improve access to information***, decision-making and budgeting processes, financing and technology; and the ability to measure and verify energy savings.

10. For the transport sector: ***establish coordinated standards to reduce vehicle emissions*** and integrate land-use management and infrastructure planning policies to ultimately promote greater use of mass transit and rail transportation.

11. For the appliances sector: ***adopt internationally coordinated minimum performance standards and support research and development*** to help manufacturers meet targets. Promote labelling of energy efficient products and of products manufactured with energy efficient or low carbon processes.

[73] Adapted from the report *Realizing the Potential of Energy Efficiency*, UN Foundation, July 2007. The report presents 21 policy options for G8 countries to reach the goal of 2.5 per cent per year efficiency improvement.

12. On the supply side***: promote innovative utility pricing*** that provides incentives for efficiency; increase the use of combined heat and power installations; improve efficiency in existing generation and transmission infrastructure; and reduce natural gas flaring. Realign utility regulations to create incentives for reduced consumption rather than increased generation.

13. ***Support innovative approaches to financing the energy services industry*** to reduce the risks and provide in advance costs of energy efficiency and, where possible, help address the principal agent problem[74].

C. Recommended policies to increase the share of renewable energy supply

14. ***Enact price-based policies*** such as feed-in laws ***or market-based policies*** such as renewable portfolio standards[75] that promote renewable power generation.

15. ***Provide fiscal support***, including direct capital subsidies or rebates, tax incentives and credits and direct production payments.

16. ***Introduce regulatory measures that improve grid access and foster competition*** by enabling new independent and local power producers to invest in renewable energy projects.

17. ***Enact policies and provide financial support to accelerate the development of second generation biofuels*** while establishing new standards that ensure all biofuels production is sustainable.

18. ***Create support programmes that address other commercial barrier***s, including resource assessment, capacity building, transaction-cost sharing and consumer awareness

[74] Whereby builders use low-cost, inefficient components to keep prices low, even though consumers' interests would be better served with more efficient dwellings and appliances.

[75] Renewable portfolio standards ensure a minimum share for renewables within the energy mix.

Annex II

The focus of the ministerial consultations

A. Theme I: globalization and the environment – mobilizing finance to meet the climate challenge

1. At the beginning of the discussion ministers and other heads of delegation may wish to explore the types of policy frameworks needed to mobilize investments. Ministers may also wish to interact with financiers to discuss whether the financial markets are ready to mobilize the needed investment. Finally, ministers may wish to interact with local industry actors, who could relate their experiences in mobilizing investment for climate projects. These discussions will be developed through interactive dialogue in parallel ministerial roundtable discussions.

1. Role of national policies in enabling investment

2. **The goal of the meeting**, following the recent session of the UNFCCC in Bali, will be to conduct an interactive dialogue on the types of policy frameworks needed to mobilize private and public sector investment in climate mitigation and adaptation. Another goal will be to examine the experiences of certain countries with policy regimes aimed at promoting low carbon energy and transport systems, reduced vulnerabilities and other climate responses, specifically considering the role and response of the financial community and the costs and benefits from the economic and societal perspectives.

3. Key questions for discussion include the following:

(a) How can the scale of investment needed to stabilize and adapt to a new global climate be mobilized? Who must make this investment? Which economic sectors will change? Who will change them? Who are the leaders and how can this leadership be mainstreamed across sectors?

(b) What policies are most appropriate for enabling large-scale deployment of mitigation technologies?

(c) What policies will result in the leveraging of private investment toward reducing vulnerability? For example, how can investment be directed to help achieve fair and responsible water and forest product use or to promote reforestation programs?

(d) What policies are most appropriate for promoting innovation with respect to new mitigation and adaptation technologies? What types of technologies are most appropriate for the various geographic categories of countries such as small island developing States?

(e) How much do such policies cost (to the average citizen; to industry; in terms of required capital mobilization)? How much do they deliver (in terms of CO_2 mitigation, energy access and security, jobs, etc.)? What are the risks (e.g., can the promotion of water intensive crops for export increase vulnerability)?

(f) Where and in what form will public investment be needed, both to stimulate private sector engagement and in some cases in lieu of it?

(g) How can subsidy frameworks be improved to address climate considerations better?

2. Are the financial markets ready to mobilize the needed investment?

4. **The goal of the meeting** is to conduct an interactive dialogue on whether the financial markets are ready to mobilize the significant capital resources needed for investment in reducing emissions and adapting to a changing climate. Another goal is to examine the roles of public and private institutions and the challenges of shifting flows of investment in the developed and developing world and the conditions required to achieve much greater levels of private investment in the developing world.

5. Key questions for discussion include the following:

(a) Are the financial markets ready to mobilize the needed flows of investment?

(b) Are the current upward trends in renewable energy investment enough to make a difference? Are mainstream financial flows shifting over to climate-related investments or is this still a niche activity? Do analysts and investors have sufficient information and reporting methodologies to make climate friendly investment decisions?

(c) Brazil, India and China are starting to see a lot of renewable energy investment activity, but the rest of the developing world still lags behind. How can this be changed?

(d) How can the needed adaptation investment be secured ? How can the incremental or additional costs of adaptation be differentiated from normal development finance needs? Do such costs need to be differentiated? Can differentiated costs be reflected in the form of ecosystem services to the poor?

(e) What conditions are needed to secure the financing of adaptation and mitigation technologies? What are the challenges related to capital mobilization and the role of sub-sector analyses and incentives in this regard?

(f) How can public investment be used to encourage private investment?

(g) Where have public/private models for mobilizing investment in climate mitigation and adaptation been working? What are the challenges?

3. Mobilizing capital – the local perspective

6. **The goal of the meeting** is to conduct an interactive dialogue on the issue of capital mobilization at the local level, bringing together a number of entrepreneurs and local banks to share their experiences with financing climate projects and to explain how different types of public support programmes are helping with their capital mobilization efforts.

7. Key questions for discussion include the following:

(a) What choices do entrepreneurs have when they need to raise money for a climate mitigation or adaptation business? What are the ingredients for success in mobilizing investment? What forms of capital are available for financing innovation in developing countries?

(b) How can businesses mobilize financing for their customers? What public mechanisms can be used to mobilize end-user financing from local banks?

(c) What are the real drivers that prompt industry to take action? How can these drivers be strengthened? What are the advantages and opportunities for a company to be a first mover? What are the costs and risks? How can the actions of today’s climate leaders be mainstreamed across industry? What are the ingredients needed for success and what is the role of government, beyond national policy making, in upscaling such actions?

(d) Why isn't financing available for energy efficiency when improvements are cost-effective? What sort of financing instruments can prompt local banks to lend for energy efficiency?

(e) How can emissions reduction revenues be used to mobilize climate investment in least developed countries?

(f) What type of capacity building is needed in the finance sector? Are local banks aware of the low-climate sectors and able to provide appropriate forms of financing to them?

B. Theme II: international environmental governance and United Nations reform

8. The consideration of theme II on international environmental governance and United Nations reform should take place during a plenary meeting of the ministerial consultations. The ministers and other heads of delegation will hear reports on recent formal and informal initiatives addressing international environmental governance, including from the co-chairs of the informal consultations on environmental activities in the United Nations. The meeting will also include a panel discussion.

9. **The goal of the meeting** is to take stock of the implementation of decision SS.VII/1 on international environmental governance and recent developments of relevance to UNEP under the wider United Nations reform agenda. The meeting will also feature an update on recent informal Government-led initiatives and consideration of how UNEP may best contribute to an enhanced international environmental governance regime.

10. Key questions for discussion include the following:

(a) Given that it is widely acknowledged that the current system is suffering severe constraints, and that the situation will be exacerbated over the coming years, how does the international community move forward in finding solutions to the international environmental governance challenge?

(b) What message do the environment ministers of the world wish to send about international environmental governance and how we respond to the current challenges?

(c) What should be done by the Governing Council, Member States of the United Nations, and the Executive Director, in the short-, medium- or long-term, to further strengthen the functions of UNEP, both at the intergovernmental and secretariat levels, in order for it to play its role as the leading global environmental authority that sets the global environmental agenda, that promotes the coherent implementation of the environmental dimension of sustainable development within the United Nations system and that serves as an authoritative advocate for the global environment?

(d) What should be done by the Governing Council, Member States of the United Nations and the Executive Director to enhance cooperation with multilateral environmental agreements?

(e) How should UNEP be working with other relevant stakeholders and partners in addressing the above questions?

(f) How should progress in any action taken in response to the above questions be monitored and reviewed?