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UNITED NATIONS ENVIRONMENT PROGRAMME

Financing a Global Deal on Climate Change

A Green Paper produced by the
UNEP Finance Initiative
Climate Change Working Group

June 2009

UNEP Finance Initiative
Innovative financing for sustainability

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The United Nations Environment Programme Finance Initiative (UNEP FI) is a strategic public-private partnership between the United Nations Environment Programme (UNEP) and approximately 180 financial institutions globally. For the purposes of this paper, the term UNEP FI refers directly to the members of the UNEP FI Climate Change working group (CCwg) plus those UNEP FI member institutions directly involved in the consultation process undertaken during its development.

The content of this paper is based on input gathered from numerous signatory institutions as well as the operational working groups of UNEP FI in an effort coordinated by UNEP FI's CCwg. Unless expressly stated otherwise, the opinions, findings, interpretations, and conclusions expressed in the paper are those of the various contributors. They do not necessarily represent the decision or the stated policy of the United Nations Environment Programme, nor the views of UNEP, the United Nations, or its Member States. Neither do they represent the consensus views of the member institutions of UNEP FI. UNEP and UNEP FI believe that this paper will lead to greater understanding of issues related to the financing of climate change mitigation and adaptation, and thus contribute to agreement among parties to the UNFCCC in Copenhagen.

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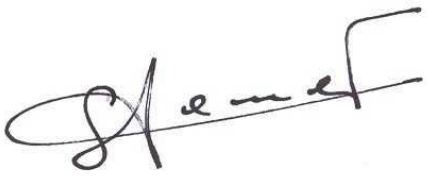
Foreword

It is clear that our collective ability to catalyse private finance and investment into those evolving ideas, entrepreneurs, technologies, and companies that will address both the challenges and opportunities presented by climate change adaptation and mitigation will be pivotal in coming decades.

The role of public finance in fostering effective climate responses and in supporting the emergence of new markets will remain critical. The fusion of public sector financial mechanisms with the entrepreneurial drive and innovation that the private sector can bring is one of the defining challenges of this century. For this reason the United Nations Environment Programme (UNEP) is delighted to have worked with our partners in private financial services sector, through the UNEP Finance Initiative, to present this report: "Financing a Global Deal on Climate Change".

As we prepare for the landmark United Nations Framework Convention on Climate Change (UNFCCC) summit in December 2009 in Copenhagen, Denmark, we hope that this report will contribute in a meaningful way to the debate of how best to boost private finance and investment flows through supportive policy mechanisms and well-engineered public financing. I would like to thank all of those who have contributed to this report: Robert Tacon, the Chair of UNEP FI and the Standard Chartered representative in the partnership, the Co-Chairing institutions of UNEP FI's Climate Change working group, namely, Allianz and HSBC, and all the dedicated UNEP FI financial service executives, who have invested time and effort to design and articulate concrete proposals to stimulate innovation and meet the challenges ahead.

Yours sincerely



Sylvie Lemmet
Director
UNEP DTIE

Executive summary

The UNEP Finance Initiative[1] is a unique global partnership between the United Nations Environment Programme and over 170 financial institutions from the banking, investment and insurance sectors across the globe. The Initiative aims to promote linkages between the environment, sustainability and financial performance through a comprehensive work programme, including research and training. Over the past 15 years, the Initiative has been working to build an effective financial response to the challenge of climate change across a range of issues including carbon markets, renewable energy, energy efficiency, adaptation and vulnerability as well as reporting and disclosure. This has included active participation in the UNFCCC's Conference of the Parties (COPs) to ensure that the financial sector perspective is integrated into the international framework for climate action.

This Green Paper builds on this experience and focuses on the priorities identified by UNEP FI to mobilise the skills and resources of the banking, investment and insurance sectors behind an effective, efficient and equitable global deal on climate change at COP15 in Copenhagen. The Paper addresses the types of decisions that governments could take in Copenhagen to stimulate financial involvement; it does not cover the equally important issue of how to expand the take-up of best practice measures in the financial sector to manage climate change risks and opportunities.

Our approach is based on three key pillars:

- First, the science demands the agreement of ambitious emission reduction targets over the short, medium and long-term as well as accelerated action to manage the unavoidable impacts of climate change, particularly on the poorest communities;
- Second, the capital expenditure required to decarbonise and adapt the global economy will have to be mobilised jointly by the public and private sectors; the lion's share of the investment is expected to come from the latter which will require a range of public policy measures including carbon markets and taxes, regulations and standards, as well as financial support mechanisms to mobilise private capital; and
- Third, particular attention needs to be focused on how to expand the flow of public and private finance to the developing world for both mitigation and adaptation.

Based on these pillars, this Green Paper seeks to identify the priority actions that financial institutions need in a future agreement to enable them to provide the scale of finance and support required for both mitigation and adaptation. Our proposals focus on six critical areas to enhance finance sector involvement in a post-2012 regime:

I. Reducing the risk of low carbon investments in developing countries: Increasing financial sector interest in investing in low carbon development in developing countries is currently constrained by a range of barriers including a lack of policy predictability as well as an absence of the transparent rules and procedures needed to provide stable conditions for investment into low carbon technologies. A range of public finance mechanisms are available to address these risks, including debt guarantees. In particular, UNEP FI suggests the creation of a mechanism whereby the home government of a foreign investor issues guarantees in order to

1 For the purposes of the current version of this paper the term UNEP FI refers directly to the members of the UNEP FI Climate Change working group (CCwg) plus those UNEP FI member institutions directly involved in the consultation process to date. In coming months and towards CoP15 in Copenhagen we will seek to secure the explicit support for the paper from all UNEP FI member institutions as the consultation proceeds. The paper's aim is to provide detailed input explicitly from a financial services and investment standpoint to assist the processes leading up to CoP 15

facilitate low carbon investments in host countries. Credit risk guarantees and other risk sharing instruments can considerably lower the investment barriers for many investors and keep the risks associated with direct investments at a reasonable level. .

II. Improving the operation of flexible mechanisms: UNEP FI welcomes the current efforts of the international climate community to focus attention on areas where the Convention's flexible mechanisms such as the CDM and JI are not attracting sufficient private capital, either in terms of sector (e.g. energy efficiency; reforestation and afforestation), region (e.g. Africa and Central Asia) or scale (e.g. smaller project sizes, programmatic activities). UNEP FI fully supports, therefore, the expansion of small-scale CDM as well as programmatic CDM (Programmes of Activities – PoAs). Achieving this will require the formulation of clear standards, the reduction of procedural complexity and intensive capacity building on local and regional levels. UNEP FI suggest that increased funding of PoAs could be promoted via the use of credit guarantees issued by governments, development banks or agencies located in the country of origin of the participating financial institution. A guarantee addressing the perceived counterparty and/or country risk will, for instance, enable commercial financial institutions to become more proactive in financing PoAs.

III. Establish funding for low carbon technology development and deployment in developing countries: Public finance could be usefully deployed at the margin to (1) stimulate equity investments in technology through venture capital (VC) and (2) mobilise private finance and investment (in the form of project/corporate finance and private equity) for low-carbon technology deployment in developing countries. UNEP FI proposes that this could be structured either as two single international funds for low carbon technologies (a Technology Development Fund and a Technology Deployment Fund) – building on existing national and international experience on how best to leverage private capital – or as a suite of regional and/or sector-focused funds. The fund(s) would support entrepreneurs across developing countries, and the contribution of capital from private investors would enrich the fund's perspective by providing technology insights and expertise to investment decisions. In essence, such funds would create the confidence needed for early stage technology development and deployment financing and enable a public-private partnership structure allowing sufficient flexibility and shared perspectives for all parties involved.[2] The Technology Deployment Fund would accelerate technology transfer, e.g. towards low carbon infrastructure, by reducing the financing cost of low-carbon (best available) technologies in developing countries, relative to that of conventional technologies. The public component of the fund could be used to reduce the cost of capital invested and borrowed; the private component would provide the actual bulk of investment. The spread between the interest rates collected from borrowers and the competitive returns paid back to investors could be financed from public sources. This would represent a very small fraction relative to the overall financing ultimately mobilised.

IV. Creating an international carbon insurance vehicle: UNEP FI recognises the importance of readily available commercial insurance to provide a sound environment for new low-carbon technologies and carbon projects across host countries and market environments. UNEP FI therefore proposes the creation of a Carbon Insurance Vehicle equipped with public funds but open for private insurer participation. The insurance vehicle should be used to insure the carbon credit generation and delivery risks of projects under a future Convention. Such an insurance vehicle would help to scale-up project activities and be of specific help in developing countries, especially LDCs, which so far have not seen, as a result of perceived risks, much carbon finance activity. This vehicle could either be designed as a stand-alone mechanism under the Convention. It could be more effective and efficient, however, if it consisted of a system of national Carbon Insurance Vehicles managed by national Export Credit Institutions. These could

2 Such funding mechanisms at the international level should go hand in hand with policy reforms on the national level including, for instance, fiscal incentives for low-carbon business models and technologies. Such incentives on the national level will be complementary to mechanisms under the Convention and equally necessary for the transition to low-carbon economies, especially in developing countries

indeed be the same vehicles issuing credit guarantees for climate change mitigation projects as described under Proposal 2 above.

V. Enabling enhanced investment in low carbon buildings: The UNFCCC has yet to fully exploit the potential for low and no cost investments in low carbon buildings. UNEP FI proposes a focused effort under the Convention to boost incentives and standards for accelerated low carbon investment in the property sector. Over and above crucial policy actions with global relevance such as improving and standardising information metrics on building emissions, making standards and building codes materially more demanding and extensive, and ensuring cities develop in compact form, UNEP FI believes there is room to establish an interconnected suite of regionally based property funds to support entrepreneurs gain experience in reducing the environmental impacts of existing and new stock. The on-going process to reform the CDM should also aim to promote more investment in CO_2 abatement in the building sector.

VI. Expanding the application of insurance mechanisms for adaptation: UNEP FI supports the development of an International Adaptation Fund whereby commercial finance institutions could add expertise and leverage publicly available funds through commercial contributions. UNEP FI also proposes to expand the application of risk pooling and risk transfer mechanisms such as natural catastrophe bonds, weather derivatives and climate proofed micro-products to increase the adaptability of clients in exposed locations. UNEP FI supports the proposal set out by the Munich Climate Insurance Initiative on the role of insurance adaptation which foresees the creation of two insurance pillars under a multilateral adaptation fund, one for prevention and risk assessment in vulnerable regions, the other offering insurance cover for extreme weather events and support for new disaster insurance systems.

1. Background

The UNEP Finance Initiative[3] is a unique global partnership between the United Nations Environment Programme and over 170 financial institutions from the banking, investment and insurance sectors across the globe. The Initiative aims to promote linkages between the environment, sustainability and financial performance through a comprehensive work programme, including research and training. Addressing climate change will require a transformation of business practices in the transition to a low carbon and climatically resilient global economy. The global finance sector's work with UNEP through the Initiative is an example of the sort of business engagement that will be increasingly required for this transformation to be successful.

Over the past 15 years, the Initiative has been working to build an effective financial response to the challenge of climate change across a range of issues including carbon markets, renewable energy, energy efficiency, adaptation and vulnerability as well as reporting and disclosure. This has included active participation in the UNFCCC's Conference of the Parties (COPs) to ensure that the financial sector perspective is integrated into the international framework for climate action. In all regions of the world, UNEP FI signatories are taking a range of actions to integrate climate factors into their business. These include:

- Reducing their operational carbon footprint, for example, through energy efficient buildings;
- Incorporating climate change risks in lending, investment and insurance decisions;
- Identifying and financing new business opportunities for low carbon growth and the transition to a low carbon economy;
- Engaging with employees, customers, suppliers and society at large on how best to make progress;
- Reporting climate activities and performance;
- Supporting the development of sound climate policy; and
- Engaging in private public partnerships to provide adequate climate finance.

This Paper addresses the last two elements. It focuses on the priorities identified by UNEP FI to mobilise the skills and resources of the banking, investment and insurance sectors behind an effective, efficient and equitable global deal on climate change at COP15 in Copenhagen. UNEP FI believes that it is imperative that there is a successful conclusion to UNFCCC negotiations at COP15 in order to provide the finance sector with the confidence and incentives to support long-term mitigation and adaptation activities. The Paper therefore addresses the types of decisions that governments could take in Copenhagen to stimulate financial involvement; it does not cover the equally important issue of how to expand the take-up of best practice measures in the financial sector to manage climate change risks and opportunities.

The development of this Paper has benefited from extensive inputs from UNEP FI signatories and others. It was produced by the UNEP FI Climate Change working group (CCwg) on behalf of the wider Initiative. The focus is on those components of the Bali Roadmap most relevant from the perspective of the finance sector and where its potential could be most significant. Many open questions and further agenda items are therefore not addressed here. As a 'Green Paper', this document is intended to communicate the Initiative's initial set of priorities and

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proposals as a basis for discussion and dialogue. UNEP FI intends to produce a second paper in the run up to Copenhagen incorporating feedback and expert comments and looking beyond the topics addressed in this first paper.

This Paper is based on three key pillars:

An ambitious agreement in Copenhagen

Climate science demands the agreement of an ambitious climate agreement in Copenhagen. The Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report indicated that global GHG emissions need to fall by 50-85% by 2050 from 1990 levels to prevent dangerous climate change. This will require emission cuts of 80-95% in developed countries as well as substantial deviations from business as usual projections in many developing countries. In the medium term, this implies emission reductions of 25-40% by 2020 from 1990 levels by the developed world, and accelerated action in developing countries, supported by enhanced flows of finance and technology. Beyond this, intensified action is required to protect societies from the inevitable consequences of a changing climate due to current and past emissions.

Mobilising the financial sector

Addressing climate change on a global scale will require an unprecedented mobilization of financial resources. The IEA estimates, for example, that on average $1.3 trillion in investment will be required to halve GHG emissions from the global energy sector alone by 2050.[4] Only a joint effort of public and private forces will achieve such a mobilization; as, according to the UNFCCC, the lion's share of climate investment is expected to come from private actors[5], its deployment will require a range of public policy measures including carbon markets and taxes, regulations and standards, as well as financial support mechanisms. Here, the Copenhagen process can benefit from the focus on 'green stimulus' measures as part of the government efforts to relaunch the global economy[6] . In addition, private financial institutions require enhanced policy transparency and predictability to reduce investment risk. A lean and efficient structure at macro level which sets clear standards, monitors their implementation and ensures complete public transparency will be essential for the effective implementation of the future Convention. To ensure the efficiency of the Convention's structure, UNEP FI suggests that most, if not all, of the mechanisms and vehicles proposed in this Paper should be governed by the Convention but managed outside of it, be it by multilateral development banks or commercial entities.

Prioritising finance in the developing world

Critical to the successful conclusion of negotiations in Copenhagen will be the design of credible policy mechanisms that can boost public and private flows of finance for both mitigation and adaptation in the developing world. Identifying policy instruments that can contribute to this is the focus of most of this Paper.

UNEP FI welcomes the increasing finance sector involvement in the climate negotiations – evidenced, for example, through the IIGCC / INCR statement on a global agreement on climate change presented in late 2008[7] – and looks forward to working together with other finance initiatives to develop a common voice at the negotiations.

4 International Energy Agency 2008, "Energy Technology Perspectives"
5 UNFCCC 2007, "Investment and Financial Flows to Address Climate Change",
6 UNEP 2009, "A Global Green New Deal" & HSBC 2009, "A Climate for Recovery"
7 Institutional Investors Group on Climate Change (IIGCC) et al. "Investor Statement on a Global Agreement on Climate Change" signed by 135 investment institutions and presented in the run-up to COP 14 in late 2008

2. Financing decarbonisation: mitigation proposals

In order to effectively mobilise private funding for mitigation, two fundamental conditions should be ensured.

- First, a clear agreement on medium- and long-term emission reduction targets for developed countries (OECD) and nationally appropriate mitigation actions (NAMAs) for developing countries which can be measured, reported and verified.
- Second, the establishment of a comprehensive policy framework to implement these targets, including an effective global carbon market, regulatory incentives and standards (for example, to boost renewable energy and energy efficiency) along with public finance mechanisms to reduce risk and boost innovation in critical areas.

Ensuring the right investment climate

Creating a favourable investment environment can be addressed from at least two different angles: through the reduction of financing barriers posed by the local economy, and through the intensification of capacity building and knowledge transfer to increase the awareness of emission reduction opportunities and ability to take appropriate action. Flexible mechanisms under the Kyoto Protocol have developed well in host countries where transparency, accountability of regulators and clear rules have created an investment environment that is attractive for private financial participation.

Typically, investors need planning security and transparency. UNEP FI sees a strong need for long-term regulation which provides a stable investment climate into low carbon technologies. The private sector needs predictability regarding investments and funding based on transparent rules and procedures on national, as well as on international and UN-level.[8]

Financial institutions are usually well experienced in addressing business risks in many developing countries. What are the specific risks that project developers, investors and lenders face when initiating or backing emissions reduction activities in developing countries, and what are the remedies?

- **Reliance on regulatory support:** The type and level of regulatory support is a key determinant of a project's expected returns and thus strongly influences the ability of private financial institutions to offer finance for project development. Limitations in regulatory support are likely to have negative impacts on the level of investment in a given country and to reduce, as a result, the value of the project pipeline of a given developer. Regulatory support includes the existence and efficient functioning of climate change institutions such as Designated National Authorities, as well as the provision of clear and carbon market friendly regulation on fiscal issues and property rights regarding the generation of carbon credits.
- **Changes in the credit environment:** Given the predictable cash and carbon credit flows of many emission reduction projects, it is frequently the case to debt finance a significant proportion of the investment cost. Although the availability of debt funding for such projects has been considerable in recent years in many countries, the situation has now deteriorated following recent credit market developments. Project developers may, as a result, become unable to obtain the required levels of debt funding to meet future investment needs. In

8 UNEP Division of Technology, Industry and Economics (DTIE) Report "Public Finance Mechanisms to Mobilise Investment in Climate Change Mitigation", 2008

light of the necessity for immediate action, confidence and liquidity will have to be brought back to the market as quickly as possible.

- **Project execution:** For a developer and owner of carbon reduction assets, the business model is contingent upon solid project execution. An inability to successfully erect a project on time or to roll-out an expected percentage of the development pipeline are thus relevant investment risks.
- **The volatility of carbon prices** and the unpredictability of carbon market rules often expose carbon investments to considerable risks.

Reducing risks to low carbon investments

A range of policy and other remedies exist to reduce these investment risks, including:

a. The expansion of the global climate change framework targeting a wide range of technologies and mechanisms in order to counteract over-dependency on a few areas of activity:

- Energy efficiency improvements in industrial and building sectors;
- Renewable energy;
- Off-grid electricity projects;
- Various forms of low-carbon transportation;
- Forestry and land-use activities, etc.

b. The provision of long-term local regulation which matches investment horizons, based on economic stability paired with good governance and a sound investment environment. The transparency of investment returns is very important and can be guaranteed by setting rigorous standards and increasing the efficient monitoring of activities.

c. The existence of local infrastructures that create enabling environments for emission reduction activities by putting in place efficient and effective national policies, rules and agencies[9] – these will ensure that local projects benefit from the flexible mechanisms under the Convention.

d. The reliability of the physical electricity infrastructure and the predictability of demand patterns provide a setting for low carbon energy projects to be undertaken with low risk profiles and respectively moderate capital costs.

e. In developing countries, capacity building efforts and the transfer of know-how as well as innovative financing mechanisms are key priorities.[10] This applies both to the project development as well as financing aspects. Here, international financial institutions – and UNEP where capacity building is concerned - backed by private institutions, can play an important supportive role by:

- Training of local financial institutions on how to develop products tailored for the carbon market;
- Offering mechanisms and instruments which are beyond the scope of local private banks, such as risk guarantees or reinsurance facilities that support local project financing and development;[11]
- Speeding up national funding processes by providing additional assets or carbon market related know-how.

f. The use of public finance mechanisms at the margin to mobilise private financial flows. These can include credit lines, loan guarantees, and 'green bond' initiatives.[12] UNEP FI believes that there

9 IETA Green House Gas Market Report 2008, "CDM: The Changing Host Country Landscape" by Jonathan Avis and Courtney Blodgett, EcoSecurities
10 UNEP SEFI, "Public Finance Mechanisms to Mobilise Investment in Climate Change Mitigation", 2008
11 UNEP programme "Assessment of financial risk management instruments for renewable energy projects" with support from the Global Environment Facility (GEF), 2005 – 2008. Brief for the UNEP FI Green Paper, 23 March 2009
12 UNEP SEFI, "Public Finance Mechanisms to Mobilise Investment in Climate Change Mitigation", 2008

is substantial scope for increased allocations from pension funds and sovereign wealth funds to the low carbon economy through the smart deployment of such public finance mechanisms.

g. Upfront payments for pledged carbon credits can be regarded as otherwise scarce equity and can be pivotal in enabling project initiation. They should, therefore, be further applied by national and multilateral development banks, in conjunction also with private finance institutions. The Asian Development Bank (ADB), for instance, has already set up a carbon fund to invest in carbon projects aimed to generate credits after 2012. ADB will provide up-front financing in the range of 10-30 percent of the total cost of carbon projects.

Proposal 1

Reducing the risk of low carbon investments in developing countries:
Increasing financial sector interest in investing in low carbon development in developing countries is currently constrained by a range of barriers including a lack of policy predictability as well as an absence of the transparent rules and procedures needed to provide stable conditions for investment into low carbon technologies. A range of public finance mechanisms are available to address these risks, including debt guarantees. In particular, UNEP FI suggests the creation of a mechanism whereby the home government of a foreign investor issues guarantees in order to facilitate low carbon investments in host countries. Credit risk guarantees and other risk sharing instruments can considerably lower the investment barriers for many investors and keep the risks associated with direct investments at a reasonable level.

Improving carbon markets and flexible mechanisms

Expanding cap and trade systems

Carbon markets are one of the key mechanisms to finance mitigation in developed and developing countries. UNEP FI is convinced that a credible carbon market with a meaningful carbon price will create a strong signal to the global investment community to set up and direct resources towards technology development and innovation. UNEP FI calls for a linked carbon market including OECD countries in the short term which can gradually be expanded to other regions. Supply and demand of carbon credits have to be kept in balance which requires regulatory stability regarding the expansion of market mechanisms and inclusion of new emitters into the trading system. As the carbon market grows, the finance sector will seize the resulting opportunities and continue developing innovative financial instruments, trading platforms and add the required liquidity to the market.

Private financial institutions have gained valuable experience within the European Union's emissions trading scheme (ETS) which should be considered in the setup and linkage of an OECD-wide market:

- Clear methods on how emissions targets are calculated and verified can help to minimise the political interference often observed in the EU ETS;
- Market distortions regarding the competitiveness of industry sectors relative to players in non-regulated markets should be addressed in a fair and transparent manner consistent with WTO;
- A shortage of emissions allowances is essential for the effectiveness of any emissions trading scheme;
- Methods for allocating emissions allowances to sectors and individual companies have to be as simple and predictable as possible and should in any case strive to limit the opportunity for "windfall" profits at industry level;

- Clear and long-term goals are essential to signal a clear and reliable path to market participants;
- The monitoring and verification of processes should be predictable and synchronised among all market participants.

Improving the financial architecture under the Convention

The financial architecture of the next climate framework needs to be able to handle a sharp increase in project-based and fund-based activities without becoming a bottle-neck to climate financing. To mobilise funding and investments for climate change mitigation, public sector funding, on a concessional basis, should be significantly scaled up while the use of private funds should be maximised. UNEP FI would like to stress that public financial assistance should be tailored to address those areas of activity which have not sufficiently been addressed by private sector mitigation and adaptation investments in the past. These include a lack of CDM / JI activity with regards to certain project types (e.g. energy efficiency, reforestation and afforestation) and geographies (e.g. Africa, Central Asia and Central America), and the omission of certain project size classes.

Scaling up existing flexible mechanisms

In order to improve the regional distribution of flexible mechanisms, UNEP FI urges the Parties to strengthen and further enforce the application of small-scale projects which do not require extensive historical data or expensive monitoring. Currently, small businesses, government entities and organizations in least developed countries (LDCs) face difficulties obtaining data and undertaking extensive monitoring of projects, for reasons of cost and availability.[13] UNEP FI also welcomes the widespread application of programmatic CDM schemes in developing countries which can make small scale activities economically viable by spreading approval, administrative and verification costs across the whole program, meaning a larger number of individual projects.

To expand the current flexible mechanisms most effectively, the private finance sector deems most important: to improve the efficiency of the UN-approval process, reduce administrative costs and expand flexible mechanisms into new sectors. More specifically, existing mechanisms could be enhanced for example by:

- Improving the consistency and transparency of decision making by the CDM Executive Board (EB) and the UNFCCC Secretariat;
- Introducing an independent dispute settlement process with clear rules; and
- Providing sufficient guidance for designated operational entities (DOEs) and other involved parties to be able to function confidently.[14]

UNEP FI supports the further expansion of existing flexible mechanisms via, for instance, programmatic activities which can enhance the geographic and technological distribution of the CDM. For the private sector to finance entire Programs of Activities (PoAs), the issue of counterparty risk needs to be addressed as – rather than one – many small project owners are involved. In addition, the CDM Executive Board (EB) of the UNFCCC needs to provide clear rules and procedures for the validation and monitoring of such programs. Capacity building efforts will not only have to be enhanced at local host country levels but also among private financial institutions that so far have not been involved in financing PoAs. In order for investors to have confidence in the future success of PoAs, the program designs should include a detailed control mechanism and incorporate additionality as well as monitoring and verification requirements.

13 IETA input to the Ad Hoc Working Group on Further Commitments for Annex I Parties to the Kyoto Protocol, "Possible improvements to emissions trading and the project-based mechanisms under the Kyoto Protocol", 6 February 2009 http://www.ieta.org/ieta/www/pages/getfile.php?docID=3244

14 Carbon Markets & Investors Association (CMIA) communication to the UNFCCC on "The scope, effectiveness and functioning of the flexibility mechanisms under the Kyoto Protocol"

UNEP FI believes that it is essential – when considering the introduction of programmatic CDM – that UNFCCC Parties "carefully consider the data availability and increased management requirements of such an enhancement to the CDM, and to plan well in advance for any new data management and governance structure requirements." [15]

Proposal 2

Improving the operation of flexible mechanisms:

UNEP FI welcomes the current efforts of the international climate community to focus attention on areas where the Convention's flexible mechanisms such as the CDM and JI are not attracting sufficient private capital, either in terms of sector (e.g. energy efficiency; reforestation and afforestation), region (e.g. Africa and Central Asia) or scale (e.g. smaller project sizes, programmatic activities). UNEP FI fully supports, therefore, the expansion of small-scale CDM as well as programmatic CDM (Programmes of Activities – PoAs). Achieving this will require the formulation of clear standards, the reduction of procedural complexity and intensive capacity building on local and regional levels. UNEP FI suggest that increased funding of PoAs could be promoted via the use of credit guarantees issued by governments, development banks or agencies located in the country of origin of the participating financial institution. A guarantee addressing the perceived counterparty and/or country risk will, for instance, enable commercial financial institutions to become more proactive in financing PoAs.

Accelerating low carbon technological development and deployment

The availability of innovative, low carbon technology is essential for the promotion of low carbon industrialization in developing countries. UNEP FI supports proposals to improve existing processes and flexible mechanisms to further transfer clean technologies. Private-sector funding such as foreign direct investment, together with joint ventures and guarantees complemented with public-private partnerships generating financial resources for technology development can scale up technology cooperation. Intellectual property rights – which legally ensure that technologies are only copied when royalties are paid to the innovator – have to be protected as an essential condition for the further mobilization of investments towards much needed research and development.

The role of *venture capital* can be critical for entrepreneurs to bridge the gap between a promising low carbon concept and the development of an applicable and economically viable technology. The role of *project/corporate finance* and *private equity* is pivotal to subsequently finance the deployment of developed and proven technologies to actual production sites around the world, often from north to south. The deployment of technologies, e.g. to provide low carbon infrastructure, in developing countries is currently hindered by several financial barriers that should be addressed by a new financial agreement under the Convention. These include:

- Lack of long term local currency financing options and foreign exchange risks for foreign currency loans;
- Lack of appropriate instruments to manage commercial and political risks;
- High transaction costs and timing uncertainties all along the technology innovation process; and
- Lack of appropriate intermediaries or incubators to channel appropriate financing and technical support to new entrepreneurs."[16]

15 IETA input to the Ad Hoc Working Group on Further Commitments for Annex I Parties to the Kyoto Protocol, "Possible improvements to emissions trading and the project-based mechanisms under the Kyoto Protocol", 6 February 2009 http://www.ieta.org/ieta/www/pages/getfile.php?docID=3244

16 World Resources Institute – Discussion Paper "Five components of a new financial agreement under the Convention" by Dennis Tirpak and Britt Childs Staley, December 2008

UNEP FI welcomes the growing number of proposals to apply venture capital and private equity / project finance skills and resources for the further development of low carbon technologies and their effective deployment in the developing world, and wishes to contribute to this debate.[17]

Proposal 3

Establish funding for low carbon technology development and deployment in developing countries:

Public finance could be usefully deployed at the margin to (1) stimulate equity investments in technology through venture capital (VC) and (2) mobilise private finance and investment (in the form of project/corporate finance and private equity) for low-carbon technology deployment in developing countries. UNEP FI proposes that this could be structured either as two single international funds for low carbon technologies (a Technology **Development** Fund and a Technology **Deployment** Fund) – building on existing national and international experience on how best to leverage private capital – or as a suite of regional and/or sector-focused funds. The fund(s) would support entrepreneurs across developing countries, and the contribution of capital from private investors would enrich the fund's perspective by providing technology insights and expertise to investment decisions. In essence, such funds would create the confidence needed for early stage technology-development and deployment-financing and enable a public-private partnership structure allowing sufficient flexibility and shared perspectives for all parties involved.[18] The Technology Deployment Fund would accelerate technology transfer, e.g. towards low carbon infrastructure, by reducing the financing cost of low-carbon (best available) technologies in developing countries, relative to that of conventional technologies. The public component of the fund could be used to reduce the cost of capital invested and borrowed; the private component would provide the actual bulk of investment. The spread between the interest rates collected from borrowers and the competitive returns paid back to investors could be financed from public sources. This would represent a very small fraction relative to the overall financing ultimately mobilised.

Availability of insurance for low carbon technologies and activities

The market has experienced a degree of reluctance among commercial insurers to insure the development of carbon projects (or the carbon components of conventional projects) as risks in CDM-market environments at regulatory, administrative and project level are perceived as relatively high.[19] If a project's carbon component has to be financially significant to make the project "additional", however, no insurance is available against non-performance or credit shortfall, the result is a considerable risk exposure for project developers and their financial backers.

17 Government of India Submission on "Financing Architecture for Meeting Financial Commitments under the UNFCCC", October 2008 & "China Views on the Fulfillment of the Bali Action Plan and the Components of the Agreed Outcome to be Adopted by the Conference of the Parties at its 15th Session", February 2009

18 Such funding mechanisms at the international level should go hand in hand with policy reforms on the national level including, for instance, fiscal incentives for low-carbon business models and technologies. Such incentives on the national level will be complementary to mechanisms under the Convention and equally necessary for the transition to low-carbon economies, especially in developing countries

19 UNEP Division of Technology, Industry and Economics (DTIE) Study "Financial Risk Management Instruments for Renewable Energy Projects", 2004

Proposal 4

Creating an international carbon insurance vehicle:

UNEP FI recognises the importance of readily available commercial insurance to provide a sound environment for new low-carbon technologies and carbon projects across host countries and market environments. UNEP FI therefore proposes the creation of a Carbon Insurance Vehicle equipped with public funds but open for private insurer participation. The insurance vehicle should be used to insure the carbon credit generation and delivery risks of projects under a future Convention. Such an insurance vehicle would help to scale-up project activities and be of specific help in developing countries, especially LDCs, which so far have not seen, as a result of perceived risks, much carbon finance activity. This vehicle could either be designed as a stand-alone mechanism under the Convention. It could be more effective and efficient, however, if it consisted of a system of national Carbon Insurance Vehicles managed by national Export Credit Institutions. These could indeed be the same vehicles issuing credit guarantees for climate change mitigation projects as described under *Proposal 2* above.

Property investment for a low carbon future

Through their occupation and construction, commercial and residential buildings use nearly 40% of the world's energy[20] and are responsible for a similar level of total energy-related CO_2 emissions. The Fourth IPCC Assessment Report identified buildings as having the highest GHG mitigation potential of all economic sectors reviewed. Cost-effective strategies also exist with respect to water efficiency. It is important that standards should incorporate considerations relating to climate change and sustainability, such as resistance to weather impacts, and water efficiency.

Focus effort on lowering market barriers to adopting economic and effective technologies

There are tremendous opportunities - many of them low cost - for property investors to contribute to carbon mitigation through greater energy efficiency (EE) and renewable energy use in new and existing buildings. However, substantial market barriers prevent many owners and occupiers from adopting broadly economic and effective technologies. These include limited awareness of EE options, landlords unwilling to pay for EE measures that lower tenants' utility bills, tenants unwilling to expend capital on EE improvements that revert to the landlord on lease expiry, limited access to capital, the need for rapid paybacks, prohibitive permitting requirements, small EE project size coupled with disproportionately high transaction costs, and energy subsidies that discourage conservation.

Clearly, governments should promote demand for Energy Efficient Buildings (EEB) and green energy in their own estates, and promote compact cities. The public sector should also use its data gathering and research capabilities to collect evidence on the economic benefits of EEB for dissemination to investors, lenders, tenants and developers, and to encourage standardization in how banks and appraisers account for such benefits in project underwriting and valuation.

Furthermore, to make EE more demonstrably economic and lower market barriers, governments should (1) recognise the crucial role of buildings to a low carbon society, (2) standardise the information available on the energy use of buildings and the economics of mitigation, and (3) incentivise investments in EEB and compact cities. UNEP FI believes such action would give necessary scale to the voluntary practices of some 'responsible' property investors and occupiers, and stimulate more financial investments to reduce the carbon footprint of the property sector.

20 Lynn Price, Stephane de la Rue du Can, Jonathan Sinton, Ernst Worrell, Zhou Nan, Jayant Sathaye and Mark Levine, "Sectoral Trends in Global Energy Use and Greenhouse Gas Emissions", Ernest Orlando Lawrence Berkeley National Lab, 24 July 2006

Relevant policies are in place in a range of countries to help lower market barriers to building mitigation investments. They include fiscal measures such as direct subsidies, tax incentives and credit enhancements. These approaches should be strengthened and more widely adopted. The UNFCCC has yet to fully exploit the potential for low and no cost investments in low carbon buildings. As such, UNEP FI proposes a focused effort under the Convention to boost incentives and raise standards to accelerate low carbon investment in the property sector. This would involve standardising the information available on the energy use and emissions of buildings, requiring aggressive energy efficiency standards in building and land use codes, extending building labelling systems, and establishing a common set of carbon metrics.

Increase the impact of carbon finance on behaviour in the building sector

Carbon finance does not yet stimulate carbon savings through EEB. As such, UNEP FI believes there is a need to ensure that behaviour in the building sector is adequately impacted by the operation of any carbon pricing system put in place. Carbon pricing could potentially operate on a building per building basis or a company by company (owner and/or occupier) basis. Given that the building sector has the lowest average carbon abatement cost of any sector but upfront financing for effecting change is challenging,[21] the overall effectiveness of carbon markets would be enhanced by ensuring they impact behaviour in the built sector. Practical implementation difficulties should not deflect policy-makers from pursuing this objective.

Greater inclusion of buildings in carbon markets could also be achieved through the on-going process to reform and expand the CDM, to promote more investment in building sector abatement projects in developing countries. For example, about 25% of the CO_2 mitigation from fuel savings in buildings in non-OECD countries would probably not be cost-effective without the financial assistance that the CDM can provide.[22]

Establish appropriate public finance mechanisms to increase leverage of private capital towards EEB in developing countries

Over and above materially increasing the focus and effort to reduce emissions from the built environment in developed countries, governments should help financial institutions with practical experience in financing and promoting EEB to work directly with counterparts in developing countries (e.g. capacity building targeting local banking sectors) to stimulate private investments in building efficiency, and compact development.

More importantly, public finance could be used at the margins to stimulate low carbon buildings in developing countries to adapt existing building stock to be more energy efficient and to ensure that new stock is of a good environmental standard. UNEP FI proposes that this be structured as an interconnected suite of regionally-based property funds which would build on existing private sector experience with (a) green, sustainable property and (b) fundraising in an increasingly globalised property market. They would help entrepreneurs in developing countries gain experience in reducing the environmental impacts of existing buildings through refurbishment and intelligent asset management and help ensure that new stock built in support of economic development is resource (energy and water) efficient. In addition to earning returns from the income and appreciation produced by green, sustainable property investments, such funds could earn a proportion of the energy cost savings generated by improved resource efficiencies.

21 McKinsey & Company, "Pathways to a Low-Carbon Economy - Version 2 of the Global Greenhouse Gas Abatement Cost Curve", 2009
22 Ürge-Vorsatz Diana and Novikova Alexandra, Central European University, "Opportunities and Costs of Carbon Dioxide Mitigation in the World's Domestic Sector", undated

Proposal 5

Enabling enhanced investment in low carbon buildings:

The UNFCCC has yet to fully exploit the potential for low and no cost investments in low carbon buildings. UNEP FI proposes a focused effort under the Convention to boost incentives and standards for accelerated low carbon investment in the property sector. Over and above crucial policy actions with global relevance such as improving and standardising information metrics on building emissions, making standards and building codes materially more demanding and extensive, and ensuring cities develop in compact form, UNEP FI believes there is room to establish an interconnected suite of regionally based property funds to support entrepreneurs gain experience in reducing the environmental impacts of existing and new stock. The on-going process to reform the CDM should also aim to promote more investment in CO2 abatement in the building sector.

Investing in forests – REDD and Reforestation / Afforestation

Tropical forests are giant reservoirs of carbon that must remain largely intact if we want to bring global warming under control.[23] However, as a consequence of deforestation, this carbon has been released as CO_2 to the atmosphere making up for 10-35% of global carbon emissions per year during the 1990s.[24]

UNEP FI supports the formal inclusion of activities related to reduced emissions from deforestation and forest degradation (REDD) into the future climate agreement. REDD projects or programs could be combined with national economic development and capacity building programs, enabling forested countries to financially gain from being stewards in the conservation of their ecosystems, biodiversity and carbon sinks. UNEP FI also believes that the private finance sector has a potentially pivotal role in making REDD a reality.[25]

Given the lack of REDD regulation under the current Kyoto Protocol, the private sector has, however, not been able to experiment in the REDD area as it has in other mitigation areas eligible for CDM / JI project activities and other mechanisms under the Convention. UNEP FI will, therefore, formulate a proposal of its own, integrating further developments in the international negotiations on REDD, at a later stage, in the White Paper version of this Green Paper.

In addition to a decision on REDD, a more effective integration of reforestation and afforestation activities into the international carbon markets will likely and increasingly become a pressing issue too. This will specifically require an approach that addresses the issue of non-permanence in an environmentally credible and financially practical manner: only if carbon credits generated by forestry projects are competitive and fully fungible with other credit categories, will the private sector more intensively engage in this area. Full fungibility of forestry credits will only be achieved if the issue of non-permanence of biomass-sequestered carbon is not addressed through the system of temporary carbon credits as under current CDM modalities. In the short term, credit buffer solutions – successfully applied in voluntary carbon markets for a number of years now – should be explored.

23 Intergovernmental Panel on Climate Change (2007), "Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the IPCC", Cambridge University Press, Cambridge

24 Moutinho, Paulo, "Tropical Forest, Deforestation and Climate Change: The Amazon Case". Instituto de Pesquisa Ambiental da Amazônia, Brazil;" & Eliash, "Climate change: financing global forests", Office of Climate Change, UK, published 14 October 2008. http://ww.number10.gov.uk/Page17171

25 Carbon Markets & Investors Association communication on "Reducing emissions from deforestation in developing countries: approaches to stimulate action", published 15 February 2009

3. Financing adaptation: investment and insurance

Climate change is taking effect in various forms, all of which need to be addressed by the right means of adaptation. In addition to (1) long-term gradual changes regarding, for example, temperature patterns and water availability, an increasing number of (2) extreme events (storms, droughts, flooding) have to be considered alongside increased (3) variations around "normal" weather patterns.

In previous work on the role of the finance sector in adaptation to climate change, UNEP FI concluded that "a key issue is that adaptation has to be integrated with development policy and disaster management. It is clear that damage from climatic disasters already threatens economic growth in many areas in various ways, and that these stresses will accelerate in coming decades. Even major public insurance schemes have faced technical insolvency, in France from subsidence claims, and in the US from flood claims following Hurricane Katrina."[26] Adaptation will require action and finance in both developed and developing economies, with a special emphasis on the most vulnerable regions who contribute very little to global warming including the group of small island developing states (SIDS).[27]

Climate proofing infrastructure investments

Infrastructure investments into transport networks such as rail- and motorways, water infrastructure, electricity networks and energy supply (fossil and renewable energy) are capital intensive and bring along significant fixed costs while being planned for several decades into the future. Operators who plan, construct, finance and insure infrastructure investments have to anticipate the need to adapt today's and tomorrow's infrastructure to changing environments.

The energy sector, taken by itself, will require enormous investments of $26 trillion between 2008 and 2030, or close to $1 trillion per year for energy supply. Half of these investments will be needed in the electricity sector according to the International Energy Agency (IEA).[28] This energy infrastructure will be operational for several decades and therefore requires planners to render it "climate-proofed" based on the most recent scientific expertise.

Future infrastructure investments will have to incorporate up-to-date scientific projections of how precipitation, temperature and wind patterns might change, influencing the location and operations of infrastructure such as hydro power plants, motorways and bridges, nuclear and coal power plants as well as oil platforms or off-shore wind farms.

The finance sector will have to take these gradual, long term changes and the risk of sudden natural disasters into account when granting financing or insurance for such projects. This will go hand in hand with providing financial instruments which help clients to realistically anticipate, adapt and protect infrastructure against potential future threats. Financial institutions should share their expertise both in industrialised and emerging economies to raise awareness and make sure that a realistic long term approach towards adapting infrastructure is being taken. Also, insurance companies could supply climate-related risk projections to regional and national authorities in order to adapt infrastructure regulation and codes to future climatic requirements.

26 UNEP FI Climate Change Working Group – CEO Briefing "Adaptation and Vulnerability to Climate Change: The Role of the Finance Sector", November 2006 http://www.unepfi.org/fileadmin/documents/CEO_briefing_adaptation_vulnerability_2006.pdf

27 Input on the specific adaptation needs of small island developing states was provided by the UNEP FI Latin American Task Force (Barbados Sustainable Finance Task Force)

28 Keppler, Jan Horst, "Investing in the Energy Sector: An Issue of Governance", Notes de l'Ifri, February 2009

Adaptation financing has to address various types of adaptation needs which are not generally comparable such as:

- Official Development Assistance (ODA), foreign direct investments and other 'business as usual' investment flows need to be made "climate resilient";
- Existing infrastructure needs to be made "climate resilient";
- Beyond making conventional finance flows and existing infrastructure climate proofed, additional investments are needed in order to explicitly adapt to climate change (i.e. new dams, dikes, water treatment plants, etc.);
- Costs on community level (community based adaptation, capacity building by NGOs etc.); the need for adaptation efforts to be mainstreamed into poverty reduction strategies and other relevant government policies.

In analogy to providing the necessary level of absorptive capacity for mitigation action at the local level, adaptation capabilities in developing countries are subject to local know-how and expertise which is currently available to a very limited extent only.[29]

The public sector should try to:

- Improve the knowledge base on climatic hazards, and specifically ensure the availability of weather data to support the growth in weather derivatives, catastrophe bonds, insurance and other risk transfer products, especially in developing countries;
- Prepare for disasters on the basis that they will be greater than any seen to date. Specifically, work with the private sector to develop seamless, efficient risk transfer systems to deal with climatic disasters;
- Enable the private finance sector to operate more effectively in developing countries, by providing good governance and economic stability.

The finance sector should aim to:

- Develop and supply products and services for the new markets which will come with integrated adaptation, i.e. at micro-level in developing countries, and for ecosystem services. This might also entail the promotion of risk-based pricing to encourage customers to actively participate in managing own risks and take adaptation seriously;
- Work with policymakers to realise the transition to integrated adaptation;
- Ensure that contingency plans consider "worst case" disasters;
- Include the assessment of the climate adaptive capacity of clients as part of credit risk assessments, particularly in the context of fixed assets;
- In addition, the private sector will by default cover a part of adaptation costs in several sectors, specifically in sectors with assets owned by the private sector.

UNEP FI supports the development of an International Adaptation Fund whereby commercial finance institutions could add expertise and leverage publicly available funds through commercial contributions.

The role of insurance in adaptation

As early as 1991 the idea of developing insurance-related solutions to the effects of climate change was first introduced by the Alliance of Small Island States (AOSIS) which proposed the establishment of a fund financed by industrialised countries.[30] The private finance sector can support clients in adapting to changing environments by offering specific products, where

29 Müller, Benito, "International Adaptation Finance: The Need for an Innovative and Strategic Approach " Oxford Institute for Energy Studies, June 2008

30 Munich Re, article "Microinsurance: One possible option." Source: http://www.munichre.com/en/ts/geo_risks/climate_change_and_insurance/natural_hazards_the_increasing_importance_of_insurance_for_the_poorest_of_the_poor/natural_hazards_01.aspx

necessary in conjunction with public institutions. The different mechanisms can be structured along three scales, reflecting their focus:

- **Macro-scale:** As a consequence of increasing natural catastrophes the provision of natural catastrophe bonds, pool solutions and funds has quickly increased and should be further expanded in order to increase the private sector's ability to insure against specific natural hazards on a larger scale placing those risks on capital markets;
- **Meso-scale:** The market for weather derivatives and index insurance is developing quickly and expanding towards disaster relief for least developed countries as well as towards the private sector. The World Bank, for instance, has been covering Malawi against drought (with a maximum payout of $3 million) since June 2008; the World Food Program contracted a similar derivative with Ethiopia in 2006. Weather derivatives offer fast financial relief for disaster aid on national as well as micro level provided that the necessary data base in available. Weather derivatives can also support local industry and businesses who are exposed and strongly dependent on weather conditions such as the agricultural, tourism and construction industries;
- **Micro-scale:** Micro insurance and micro finance schemes offered to clients in developing countries should increasingly put their focus towards helping clients to "climate proof" their lives: options are insurance products against natural hazards threatening the client's main source of income or the provision of know-how and advice on how the impacts of climate change could affect both the client's particular situation as well as the assets he/she wishes to finance and insure. Above all in the medium term, the insurance industry has an intrinsic interest to spread the risks of natural hazards across geographies and types; with time this will strengthen the industry's ability to hedge accumulated risks within its portfolio covering clients in an increasing number of developing countries.

UNEP FI agrees that a risk-pooling and risk-transfer mechanism for adaptation "should be explored to complement existing humanitarian, emergency and reconstruction funding mechanisms in case of natural disasters".[31] Risk mitigation and risk management efforts should, however, always be applied in a stepped approach prior to risk transfer mechanisms.

In this regard, UNEP FI fully supports the UNFCCC work on an insurance fund for slow onset and indeterminate losses as well as the detailed proposal set out by the Munich Climate Insurance Initiative (MCII) on the potential role of insurance in adaptation. According to the MCII, the Bali Action Plan calls for the "consideration of risk sharing and transfer mechanisms, such as insurance to address loss and damage in developing countries particularly vulnerable to climate change. For the inclusion of insurance instruments in the post-2012 adaptation regime, the potential role of risk-pooling and risk-transfer systems must be firmly established."[32]

Reacting to this call, the MCII proposes that the role of insurance in adaptation could be realised via an insurance scheme with two pillars (prevention and insurance) as part of a multi-pillar adaptation fund.

Prevention pillar

The prevention pillar has reduction of human and economic losses as its top priority. The prevention pillar, which should be addressed with priority, calls for comprehensive risk assessments across vulnerable countries, and progress on cost-effective structural and non-structural measures to reduce risks. This pillar would not require developing countries to internalise the price of increased climate-related risk; however, it would be closely linked to the Insurance Pillar.

31 European Commission Communication "Towards a comprehensive climate change agreement in Copenhagen", 28 January 2009
32 Munich Climate Insurance Initiative (MCII), submission on Insurance Instruments for Adapting to Climate Risks. "A proposal for the Bali Action Plan1, Version 2.0", 30 September 2008. Source: http://www.climate-insurance.org/upload/pdf/MCII_submission_Poznan.pdf

Insurance pillar

The insurance pillar features two tiers. The first tier is a Climate Insurance Pool that would absorb a pre-defined proportion of high-level risks related to disaster losses in vulnerable developing countries. Such a climate insurance pool could be set up temporarily until the private sector has reached a certain level of maturity. Further, the pool could operate globally and should be linked closely to the UNFCCC framework. The second tier, a Climate Insurance Assistance Facility, would provide technical support and other forms of assistance to enable public-private insurance systems that provide cover for the middle layers of risk in these countries. This two-tiered insurance pillar would meet the principles set out by the UNFCCC for financing and disbursing adaptation funds, provide assistance to the most vulnerable, and include private market participation. Qualification for participation in the insurance pillar might include progress on a credible climate risk management strategy. The first tier of the insurance pillar would provide premium-free insurance cover in receiving countries for losses caused by extreme weather events with a (negotiated) predetermined severity and return period. This insurance entity, further referred to as the Climate Insurance Pool (CIP), will be financed by annual contributions from the (proposed) multi-lateral adaptation fund, which itself may be financed by Annex 1 countries. As part of the insurance pillar, the CIP would supplement other adaptation activities with insurance indemnity payments via an insurance scheme (risk carrier) that can best address the severe volatility of expected fiscal cash outlays.

A second tier of the proposed insurance pillar would provide support for the middle layer of risk not covered by the CIP with the goal to promote the establishment of public/private safety nets for unpredictable climate-related shocks. This tier would assist in the development of insurance-related instruments that are, firstly, affordable for the poor and, secondly, coupled with actions and incentives for pro-active risk reduction and adaptation measures. This second tier in the form of a Climate Insurance Assistance Facility would also offer capacity building and financial support to nascent micro-, meso- and macro scale disaster insurance systems. [33]

Regarding the implementation of adaptation mechanisms, local integrated risk assessments are required, which generate data and information in a format that is suitable to prioritise local adaptation needs and to develop comprehensive adaptation solutions. These solutions have to include and combine risk prevention (i.e. capacity building, building codes, regional zoning and planning), risk reduction (i.e. technical, infrastructure projects) and financial risk transfer measures (i.e. insurance solutions, capital solutions). An adaptation financing architecture at UN level should make sure that suitable risk assessments can be funded and prevention, reduction and transfer solutions can be implemented jointly.

UNEP FI welcomes a more detailed discussion with the Parties on how the proposed insurance pillars for adaptation can be included into current negotiations and how a broad participation by the private insurance sector in implementing this proposal could be secured.

Proposal 6

Expanding the application of insurance mechanisms for adaptation:

UNEP FI supports the development of an International Adaptation Fund whereby commercial finance institutions could add expertise and leverage publicly available funds through commercial contributions. UNEP FI also proposes to expand the application of risk pooling and risk transfer mechanisms such as natural catastrophe bonds, weather derivatives and climate proofed micro-products to increase the adaptability of clients in exposed locations. UNEP FI supports the proposal set out by the Munich Climate Insurance Initiative on the role of insurance in adaptation which foresees the creation of two insurance pillars under a multilateral adaptation fund, one for prevention and risk assessment in vulnerable regions, the other offering insurance cover for extreme weather events and support for new disaster insurance systems.

33 Munich Climate Insurance Initiative (MCII), submission on Insurance Instruments for Adapting to Climate Risks. "A proposal for the Bali Action Plan1, Version 2.0", 30 September 2008. Source: http://www.climate-insurance.org/upload/pdf/MCII_submission_Poznan.pdf

List of abbreviations

ADB	Asian Development Bank
AOSIS	Alliance of Small Island States
BAU	Business as Usual
CCwg	Climate Change working group of UNEP FI
CDM	Clean Development Mechanism
CIP	Climate Insurance Pool
CMIA	Carbon Markets & Investors Association
DFIs	Development Finance Institutions
DTIE	UNEP Division of Technology, Industry and Economics
EE	Energy Efficiency
EEB	Energy Efficient Buildings
ETS	Emissions Trading Scheme
GHG	Greenhouse Gases
IEA	International Energy Agency
IETA	International Emissions Trading Association
IIGCC	Institutional Investors Group on Climate Change
INCR	Investor Network on Climate Risk
IPCC	Intergovernmental Panel on Climate Change
LDC	Least Developed Country
MCII	Munich Climate Insurance Initiative
NAMAs	Nationally Appropriate Mitigation Actions
ODA	Official Development Assistance
OECD	Organisation for Economic Co-operation and Development
PoA	Program of Activities under the CDM
UNFCCC	United Nations Framework Convention on Climate Change
REDD	Reduced Emissions from Deforestation and Forest Degradation
SIDS	Small Island Developing States
SWF	Sovereign Wealth Fund
WRI	World Resources Institute
WTO	World Trade Organization

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