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**REVISED PROGRAMMING STRATEGY
ON ADAPTATION TO CLIMATE CHANGE
FOR THE LEAST DEVELOPED COUNTRIES FUND (LDCF) AND
THE SPECIAL CLIMATE CHANGE FUND (SCCF)**

(PREPARED BY THE GEF SECRETARIAT)

EXECUTIVE SUMMARY

As operating entity of the Financial Mechanism of the UN Framework Convention on Climate Change (UNFCCC), the GEF has a unique mandate to assist the developing countries. With respect to adaptation, the role of the GEF has been recently enhanced by the following factors: the scientific and empirical evidence on the impacts of climate change has reached an unprecedented level of international consensus and awareness; developing country demand for adaptation funding has grown exponentially as well as the estimated costs of adaptation; and the UNFCCC has provided clear guidance to the GEF on adaptation, underlining its responsibility to assist developing countries to meet the goals of the Convention. In addition, the need for predictable and adequate funding for adaptation has been recognized as a key feature of a successful global climate regime under the Copenhagen Accord in December 2009.

The GEF financial commitments have in turn reflected this guidance. Following COP7, (i) the Council approved the first multilateral pilot program on adaptation under the climate change focal area, the *Strategic Priority on Adaptation (SPA)*; (ii) the UNFCCC created, and asked the GEF to manage, the *Least Developed Countries Fund (LDCF)* and the *Special Climate Change Fund (SCCF)*; and (iii) the GEF presently provides secretariat services on an interim basis to the *Adaptation Fund* of the Kyoto Protocol and its Board, after being invited to carry out this function at the 2007 Bali UNFCCC COP.

The LDCF and SCCF, whose priority is adaptation, are managed and administered independently from the GEF trust fund. This financing strategy proposes to channel all adaptation financing resources through these independent funds, taking advantage of their specifically designed, streamlined operational procedures. The mandate of the SCCF is broad enough to incorporate the category of projects that were so far financed under the Strategic Priority on Adaptation (SPA, Trust Fund).

The LDCF and the SCCF are currently the only operating funds whose mandate has been defined under the Climate Convention (UNFCCC). The rationale for establishing and maintaining these funds is based on the experience that development planning and financing needs to systematically incorporate climate change risks and adaptation measures to reduce vulnerability and increase adaptive capacity of vulnerable countries and communities. As highlighted at the 2009 Copenhagen UNFCCC COP, new and additional financing is needed to support a different approach to development – one that is climate-resilient – to be implemented.

Finally, based on Convention guidance, as reinforced at COP15, responsiveness to developing countries' needs – including predictability of resources – and a commitment to complementarity and maximization of climate change funds and resources, this strategy includes a request for a strong replenishment of the LDCF and the SCCF. To fund the SCCF and LDCF at the appropriate level, and to better align the GEF's resources planning and budgeting with that of the donors', it is proposed that these funds be replenished on either two renewable two-year cycles or a conventional four year cycle.

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I – THE ROLE OF THE GEF ON ADAPTATION TO CLIMATE CHANGE

Introduction

1. The recognition that the GEF has a role in financing adaptation to climate change goes back to the early guidance to the financial mechanism of the UNFCCC. According to the GEF Operational Strategy, approved by the Council in 1995, “*the strategic thrust of GEF-financed climate change activities is to support sustainable measures that minimize climate change damage by reducing the risk, or the adverse effects, of climate change. The GEF will finance agreed and eligible enabling, mitigation, and adaptation activities in eligible recipient countries.*” In particular, the Strategy defines “*adaptation activities as those that minimize the adverse affects of climate change.*” The strategy, consistent with Convention guidance, called for a staged process of GEF support: an initial stage to finance studies, assessments and capacity building, followed by an implementation stage to finance the implementation of adaptation measures. The latter was based on Articles 4.1. and 4.4. of the Convention, which identified the needs for financing specific adaptation measures, including insurance, to assist vulnerable developing countries to meet the costs of adaptation.

2. The parties to the UNFCCC subsequently established LDCF and SCCF, and asked the GEF to manage them. As a result, the GEF has increasingly focused its adaptation financing under the LDCF and SCCF portfolios.

Scientific Consensus on Climate Change Adaptation, Impacts and Vulnerability

3. In parallel with the evolution in Convention guidance, scientific understanding of climate impacts also dramatically increased awareness and concern for the need to respond to climate change. The publication of the Fourth Assessment Report of the IPCC in 2007 summarized the increasing scientific evidence of the observed increase in global average temperatures due to the increase in anthropogenic GHG concentrations since mid-20th century. In addition, the report emphasized the urgency of actions to avoid irreversible damage to human communities, development sectors and ecosystems based on the scientific consensus that, even if the international community commits to aggressively mitigate GHG emissions, climate change impacts will continue for many decades.

4. More scientific research is expected to further explore with increasing precision the impacts of climate change on earth systems and particularly what these impacts mean for human societies and economies. Changes in temperature, however small, affect an enormous set of biophysical processes, many of which are complexly interlinked and/or poorly understood. For example, early results of research on impacts of climate change on the oceans suggest that, for example, even a +2°C temperature change would likely be catastrophic for much marine life.

5. What is certain is that climate change is already having an adverse impact and that the most vulnerable countries and the poorest communities within developing countries will be the ones most adversely affected and least able to respond to the effects of climate change.

Adaptation Economics and the Gap between Supply and Demand

6. Several studies have recently made preliminary estimates of the costs of adaptation and agree on the following conclusions: climate change is ongoing and further significant impacts are now inevitable; the costs of adaptation are difficult to estimate, as they depend on many factors, including mitigation scenarios and the timing and manner in which adaptation measures are locally implemented; the costs will be high. For example the UNFCCC in its publication *Investment and Financial Flows to address Climate Change estimated additional investment and financial flows needed for adaptation in 2030* amount to several tens of billions of dollars.

7. Furthermore, at COP15, Parties cited the paper “*Support needed to fully implement national adaptation programs of action (NAPAs)*”,¹ prepared by the Least Developed Countries Expert Group (LEG), which indicated a need for financial resources for the full implementation of priorities identified in NAPAs of at least \$1.93 billion during their deliberations with respect to matters relating to least developed countries². These figures validate the developing countries’ request for a much more significant level as well as predictability of resources for adaptation under the Convention, its funds and its financial mechanism, particularly when combined with findings that the climate change is already affecting the lives of the poorest and most vulnerable already. The costs however of taking early action to address adaptation concerns are substantially less than the costs of addressing the potential damage caused by the changing climate.

Box 1. GEF Research on Adaptation Economics

To advance the understanding of climate risks and responses, the GEF has co-financed a study with McKinsey & Company to investigate the economics of climate adaptation (the ECA study), in partnership with UNEP, Swiss Re, and the Rockefeller Foundation. An analytical framework, developed specifically for this study, is being applied in developing and developed countries, through a diverse set of case studies. The framework identifies where and from which type of hazard a country is most at risk, together with the magnitude of the expected loss, and reveals what sets of adaptation measures should be considered, based on societal costs and benefits of implementing the measures. These, in turn, can readily become primary inputs in adaptation strategies developed by individual countries.

Some early findings are already generating important insights. In Mali, for instance, ECA focused on climate zone shift hazard (i.e., changes in average temperature and precipitation) to model crop and livestock loss valuations under two economic growth pathway set of assumptions. In the worst case climate change scenario, the value of five main crops could decrease by 18% and livestock by 7%. The work on the measures builds on Mali's NAPA. Measures can be classified into two main themes: (1) optimizing location and mix of activities; and (2) technical adaptation of the land use system. Implementation of a collection of measures within these themes will likely provide benefits larger than potential loss due to climate zone shift. Without considering additional revenue (e.g., cash crops), low-tech behavioral measures such as low tillage, zai (i.e., planting seeds in holes to force rainwater penetration), level curves and open wells appear most cost effective. The analysis suggests vaccines are the most cost effective way to address impacts on livestock.

¹http://unfccc.int/files/cooperation_support/least_developed_countries_portal/ldc_expert_group/application/pdf/ldc_support_needed_091209.pdf

² FCCC/SBI/2009/L.27, “Matters relating to the least developed countries. Draft conclusions proposed by the Chair.” – CP.15, Copenhagen Accord.

UNFCCC Guidance to the GEF on Adaptation

8. The GEF has received a significant amount of guidance on adaptation throughout the last 14 years from the UNFCCC (Annex I). Convention guidance on adaptation has dramatically evolved from the initial staged approach (COP1, COP4), particularly in Marrakech (COP7, 2001), when the GEF was requested to finance *pilot or demonstration projects to show how adaptation planning and assessment can be practically translated into projects that will provide real benefits*, and to manage the newly established climate change funds, the LDCF and the SCCF.

9. In response to increasing scientific concern and empirical evidence, recent Convention guidance to the GEF³ has increased its focus on adaptation (Annex II). This guidance addresses both the impacts of climate change on human life and development, as well as on vulnerable ecosystems, and begins responding to assessments showing the costs of adaptation to developing countries, estimated to amount to several tens of billions of dollars.

10. Following the establishment of the LDCF and SCCF under the UNFCCC at COP7 in 2001 and since the GEF was asked to manage them in its role as a financial mechanism the GEF is therefore currently managing and will continue to manage, under the UNFCCC, two independent funds whose priority is adaptation. This is in addition to its conventional operations under the GEF Trust Fund. In order to avoid duplication between the GEF and the new funds, it is proposed to channel all adaptation financing resources through the LDCF and the SCCF.

II – RATIONALE FOR A FINANCING STRATEGY FOR THE LDCF AND SCCF

11. The need for a significantly more robust replenishment of the LDCF and the SCCF, and the proposal to align the GEF replenishment process with that of the funds are based on three main pillars:

a. Responsiveness to Convention Guidance;

b. Responsiveness to developing country needs and consequent need for predictability of resources; and,

c. Scaling up the programmatic approach in the next phase of LDCF and SCCF.

In addition, the strategy incorporates the following key considerations:

d. Complementarity among different adaptation-related fund; and,

³ FCCC/SBI/2009/L.27, “Matters relating to the least developed countries. Draft conclusions proposed by the Chair.” – CP.15, Copenhagen Accord.

e. Responsiveness to Independent Evaluation of the LDCF by the Danish International Development Agency (DANIDA) and GEF Evaluation Office.

Responsiveness to Convention Guidance

12. The main pillars of the guidance to the GEF that has directed key financial and operational commitments to finance adaptation are as follows:

- i. At COP7 in 2001, the UNFCCC created and asked the GEF to manage two voluntary adaptation funds, the *Least Developed Countries Fund (LDCF)* and the *Special Climate Change Fund (SCCF)*;
- ii. In response to that guidance in 2003 the GEF Council approved the allocation of \$50 million under the climate change focal area for a pilot adaptation program, the *Strategic Priority on Adaptation (SPA)* during GEF-3/GEF-4 (the SPA pilot has now committed all its resources and is in the process of being evaluated);
- iii. At COP12, in Nairobi, the developing countries group pointed out the importance of a financial mechanism with greater balance between mitigation and adaptation activities. They questioned the adequacy of the GEF response to the adaptation needs of developing countries in accordance with guidance by the Conference of the Parties. This criticism has been recurrent during the most recent UNFCCC COPs. In response to the Convention and to developing country needs, the GEF Secretariat proposes to replenish the LDCF and SCCF, whose governance, structure and operational modalities are particularly appropriate for adaptation, as part of a comprehensive adaptation program in both financial and operational terms;
- iv. During COP15 Parties recognized the urgent need for financing concrete adaptation action to reduce the adverse impacts of climate change. It was agreed that “enhanced action and international cooperation on adaptation is urgently required to ensure the implementation of the Convention by enabling and supporting adaptation actions aimed at reducing vulnerability and building resilience in developing countries, especially in those that are particularly vulnerable, especially least developed countries, small island developing States and Africa;”⁴
- v. It was furthermore noted that “scaled up, new and additional, predictable funding as well as improved access shall be provided to developing countries, in accordance with the relevant provisions of the Convention, to enable and support enhance action on [...] adaptation [...]”⁵
- vi. In particular, in the thirty-first session of the Subsidiary Body for Implementation (SBI), under the matters relating to Article 4 of the Convention and the least developed countries, the GEF and its agencies were praised for “the steps taken to improve the processing of applications for funding of the implementation of NAPA projects under the Least Developed Countries Fund (LDCF) and for the constructive dialogue among the LDC Parties, the LEG, and the GEF and its agencies on the

⁴ FCCC/SBI/2009/L.27, “Matters relating to the least developed countries. Draft conclusions proposed by the Chair.” – CP.15, Copenhagen Accord.

⁵ Ibid.

- provision of enhanced support for the preparation and implementation of NAPAs, and encouraged those involved to continue this dialogue.”⁶;
- vii. In addition, the SBI, in the context of LDCF, further reinforced the need for additional financial resources for the full implementation of priorities identified in NAPAs as being at least \$1.93 billion, as concluded by the recent paper produced by the LEG⁷. The Draft Conclusions proposed by the Chair at COP15 in 2009, provide further guidance to the GEF, requesting it to continue providing enhanced support to developing countries in preparation and full implementation of the National Adaptation Programmes of Action (NAPAs) under the LDCF. *The complete text of the guidance is available in Annex II.*

Responsiveness to Developing Country Needs and Predictability of Resources

13. A major criticism the LDCF and SCCF have received, has been the lack of predictability of financial resources. Unlike the GEF, which is replenished every four years, the LDCF and SCCF receive voluntary contributions without a regular replenishment schedule. Countries and agencies that support their work need to know the available resources sufficiently far in advance to plan their programs and projects; this is an impossible exercise when resources are mobilized in relatively small amounts every six months. Moreover, the size of the funds is very small compared to the adaptation needs of vulnerable countries. The GEF is fully capable to manage a much higher volume of resources as it does under the trust fund. A more commensurable amount for adaptation would also allow the GEF to meet its commitment vis-à-vis the Convention. This argument is further explained below under “Financing Needs.”

14. In addition, though once project-based and narrowly focused, now the LDCF and SCCF are looking to expand their scale and scope through a programmatic approach. However this will be possible only if the volume of financing increases to at least \$1 billion. (See next section).

Scaling up the Programmatic Approach in the Next Phase of LDCF and SCCF

15. An important element of the proposed structure of future funding is that it would also allow a shift to a more programmatic approach to adaptation than what has previously been the donor practice for the two funds. Project funding under the LDCF and SCCF has, to date, largely been concentrated on pilot projects, where the primary purpose of the activities supported has been to demonstrate how adaptation can practically be addressed on the ground in individual sectors and across regions. Out of this pilot phase has evolved a significant amount of learning, as well as the initiation of a national process for addressing climate change adaptation in a number of developing countries. The natural continuation to this pilot phase, therefore, is to now start a process of national, regional, and global scaling up.

⁶ Ibid.

⁷ FCCC/SBI/2009/L.27, “Matters relating to the least developed countries. Draft conclusions proposed by the Chair.” – CP.15, Copenhagen Accord.

16. With this second phase of funding, the LDCF and SCCF will, therefore, shift towards implementing adaptation at the scale necessary to catalyze climate-resilient development in the vulnerable sectors, priority areas of intervention and regions. This phase will likely continue to include project like investments in adaptation activities directly on the ground, but will also, to a much larger degree than what is currently the case, include policy support aimed at helping countries to mainstream adaptation into policies and planning, creating the capacity necessary to absorb and utilize adaptation technology transfer, and supporting a process to achieve more climate resilient economies.

17. This second phase of scaling up and mainstreaming will require both higher levels of total financial resources and a much higher degree of predictability in resources available to be successful - and the request for a replenishment of at least \$500 million for each fund is linked to these needs.

Complementarity among Different Adaptation-Related Funds

18. The GEF finances adaptation activities through its distinct, yet complementary, trust funds: the LDCF, the SCCF, the GEF trust fund. Further, the GEF provides secretariat services to Adaptation Fund Board on an interim basis. It is important to clarify and increase understanding of the distinctions and complementarities between the GEF-managed adaptation funds and other funds that address adaptation:

19. As mentioned in the previous sections, the GEF mandate on adaptation can be at this stage fulfilled under the LDCF and SCCF, as the global benefits required by the trust fund can be generated through projects and programs that reduce vulnerability of ecosystems of global significance. These projects are both eligible under the SCCF, which has vulnerable ecosystems as a priority identified by the UNFCCC COP, and by the LDCF, as identified by the NAPAs.

20. The adaptation pilots financed under the GEF Trust Fund through the Strategic Priority on Adaptation illustrate the importance of programming adaptation measures in the other GEF focal areas like Biodiversity, International Waters, and Land Degradation. As part of the GEF 5 focus on integrated, cross focal area approaches in natural resources, opportunities would be sought where countries have interest to link climate change adaptation measures with other GEF interventions in natural resources to take advantage of cross-convention synergies, needed sector reforms, and programmatic approaches. Interventions related to food security, water resources, and coastal oceans are especially complex and would benefit from integrated approaches.

21. With respect to the Adaptation Fund, as all funds have adaptation as the top priority there may be a conceptual risk of overlap in scope. However, it is equally important to recognize that the LDCF was created to address all the specific needs of the LDCs under the Convention, besides adaptation and will likely remain the leading financial mechanism for the implementation of NAPAs. The SCCF has three additional financing avenues besides adaptation, which include technology transfer, followed by support for specific sectors and economic

diversification. There are many other elements that diversify these funds, make them all unique, and significantly distinguish their respective mandates and *modus operandi*.

22. First, there is a strong mandate from the Convention and its Protocol to keep these as distinct funds. Second, there are three aspects that make the Adaptation Fund unique. These are: its revenue regime; the composition of its governing body; and the “direct access” modality. On the other hand, the LDCF and SCCF are maintaining their established modality for project financing that shareholders and stakeholders are familiar with whereas the Adaptation Fund presents innovative features including an alternative approach to adaptation financing. Since the Adaptation Fund Board has only recently finalized the Operational Policies and Guidelines and related issues (fiduciary standards, etc), other criteria to differentiate among those funds may arise in the future, whereas the LDCF and SCCF funds will continue to operate in their conventional manner and with conventionally mobilized resources, with the option of including innovative elements as proposed in previous sections.

23. In addition to the funds that were established under the UNFCCC, other funds that address adaptation were created, such the Pilot program on Climate Resilience (PPCR) under the Climate Investment Funds managed by the World Bank and adaptation financing for Africa managed by UNDP, among others. These funds have characteristics that distinguish them from the LDCF and SCCF and make them fully complementary. For example, these funds maximize their financing efforts in targeted countries, while LDCF and SCCF have the mandate to finance all eligible countries under the Convention. There is an ongoing effort to take full advantage of the synergies among these funds and to reduce duplication. The Bank and UNDP funds have developed their programs consistent with the experience built through the implementation of projects under the LDCF and SCCF.

Responsiveness to Independent Evaluation (DANIDA and GEF Evaluation Office) of the LDCF

24. In 2008-2009, the Danish International Development Agency (DANIDA) carried out, together with the GEF Evaluation Office, a "Joint External Evaluation on the Operation of the Least Developed Countries Fund"⁸ in order to evaluate the results and lessons learned from the use of the LDCF in financing and promoting climate change adaptation in the LDCs and in order to provide recommendations regarding the future role of the LDCF and the implementation of National Adaptation Programmes of Action (NAPAs). The Evaluation included the following key recommendations:

- a. Dramatically increasing the resources of the LDCF in order to meet the needs of the LDCs and to fulfil the mandates of the Fund;
- b. Simplification of the procedures for accessing funds under the LDCF;

⁸ The evaluation was finalized in September 2009 and took into account the approved and submitted projects as of May 2009.

- c. Facilitating improved understanding for accessing funds; and,
- d. Addressing bottlenecks in relation to individual and institutional capacity in many LDCs.

25. **Increasing the Resources of LDCF.** There is universal agreement that the resources currently made available by the LDCF donors are insufficient both in terms of the scale needed to finance climate adaptation planning and implementation in LDCs and in terms of being reliable enough to allow for the programming of implementation needs across all LDCs. The evaluation's conclusion that this lacking in scale and reliability of LDCF resources have precluded more programmatic responses to the adaptation needs identified in the NAPAs. This issue was further discussed in paragraphs 13-17.

26. **Simplification of Procedures for Accessing Funds under the LDCF.** With respect to the project design, approval and implementation process involves many actors and all concerned should focus on removing these barriers.

27. Actual progress on accessing funds under the LDCF is evidenced by the fact that 11 projects (totaling \$41.8 million in LDCF grants) have completed project preparation and had their proposals CEO Endorsed since June 2009, of which are eleven new countries (Benin, Congo DR, Maldives, Mali, Rwanda, Tuvalu, and Zambia) to have completed the project preparation phase, submitted finalized project documents and received CEO endorsement or approval, and ready to access the LDCF funding.

28. Furthermore, under the latest GEF reforms that are being currently unrolled, further simplified procedures are being proposed, namely on the further-streamlined project cycle, and a programmatic approach, as well as limited options for direct access, among others. These will by default apply to both LDCF and SCCF unless the LDCF/SCCF Council decides otherwise in response to COP guidance.

29. **Facilitating improved understanding for accessing funds.** The improvements in the process reflected in the "Conclusion of the Chair" under the SBI at COP15, where the SBI expressed its appreciation to the GEF and its agencies for the steps taken to improve the processing of applications for funding of the implementation of NAPA projects under the Least Developed Countries Fund (LDCF) and for the constructive dialogue among the LDC Parties, the LEG and the GEF and its agencies on the provision of enhanced support for the preparation and implementation of NAPAs, there has been significant progress. Similar sentiments have been expressed at other forums, such as recently at the thirty-second SBI Meeting in May-June, 2010. The efforts to improve communications on LDCF procedures have resulted in the GEF preparing an LDCF Step-by-Step Guide in collaboration with the GEF agencies, the UNFCCC Secretariat and other partners in 2009.

30. An additional document titled "Accessing Financing under the Least Developed Countries Fund", recently issued to further improve communication by updating with the most current information the more recent developments, such as the latest discussions on the GEF

reforms, will be under LDCF/SCCF Council review at the Eighth LDCF/SCCF Council Meeting (and a similar product is also under preparation for the SCCF).

31. **Addressing bottlenecks in relation to individual and institutional capacity in many LDCs.** The GEF has assumed its role as one among many actors involved in the process of project design, approval, and implementation responsible for removing the barriers that may impede the LDCs ability to fully utilize LDCF resources as per the mandate of the Fund. The GEF has used the LDCF resources to finance 6 workshops on NAPA implementation intended to build LDC capacity to address climate change adaptation, particularly through the LDCF (although it could be argued that the NAPA workshops are helping build capacity for climate-resilient development planning, regardless of the source of funding.) Three workshops have already taken place starting in late 2009, and an additional three are expected to take place during the remainder of 2010.

III – FINANCING ADAPTATION ACTION: ADAPTATION PILOT AND CLIMATE CHANGE FUNDS

32. Through the Adaptation Pilot under the GEF Trust Fund, the LDCF and the SCCF, the GEF has financed concrete adaptation measures on the ground, gathered experience, and learned valuable lessons regarding actions to reduce vulnerability in core development sectors such as agriculture, water and health. More than 76 adaptation projects have been approved for funding (Work Program and CEO endorsed), including 23 under the SPA, 30 under the LDCF, and 23 under the SCCF. Yet, available resources – only \$223 million and \$148 million have been pledged so far respectively for the LDCF and the SCCF – remain very limited. SPA resources have all been committed, and there is currently a large unmet demand from the most vulnerable countries. Similarly, SCCF resources have nearly all been allocated, and mobilizing resources for pipeline projects is contingent upon an adequate SCCF replenishment in the near term.

33. The experience and lessons learned through these programs and projects have been pivotal to help the GEF and its agencies better understand what adaptation means in practice, e.g., how adaptation can be integrated into development to make it climate-resilient, and how to estimate the costs of adaptation. Based on its broad experience at the operational, technical and policy levels, the GEF remains uniquely qualified to manage a larger amount of adaptation resources to respond to countries' adaptation needs. This strategy focuses on building on the pilot experience and scaling up through a robust replenishment of the funds.

41. Initial evaluations and reactions from both donors and client countries agree on the need to move from a project-based approach to a more programmatic, sectoral or national level, to maximize the impact of the LDCF/SCCF resources and fully mainstream adaptation into development. Another important lesson learned from the initial phase in managing the funds is that both the amount and predictability of resources are important. The funds have mainly suffered from the fact that countries and agencies were never able to predict and therefore program the amount of resources available. Taking these lessons into account, the recent

“Copenhagen Accord”⁹ has called for scaled up, additional, predictable and adequate funding to enable and support enhanced action on adaptation. This strategy is therefore based on this identified need for sufficient and predictable resources for adaptation.

Adaptation in Practice

42. One of the main accomplishments of the GEF adaptation program has been to test and demonstrate adaptation in practice. The literature is quite exhaustive with respect to defining and measuring different aspects and levels of vulnerabilities, but is less generous in providing examples and guidance on how to plan and implement adaptation actions. This is mostly because the effectiveness of adaptation measures must be tested on the ground and lessons must be learned by doing. In some areas, such as water resources and coastal management, cross-sectoral tools such as Integrated Water Resources Management (IWRM) and Integrated Coastal Management (ICM) show promise for sustaining protein from fisheries and introducing efficient irrigation for food crops.

43. The LDCF and the SCCF, together with the experience from the pilot projects financed under the SPA, are a relevant source of practical operational knowledge. They provided vulnerable countries and communities, as well as the GEF network of agencies who assisted them, initial resources to finance a pioneering adaptation portfolio. This experience has resulted in a much clearer sense of what adaptation means in practice, how to implement it, and how to estimate its costs. The strategy proposed in this document is consistent with these findings, as briefly summarized below.

Climate-Resilient Development

44. The LDCF and the SCCF have been operational for only a few years, however many relevant lessons have already been learned. The funds were established to support projects aimed at reducing vulnerability and increasing the adaptive capacity to climate change by financing the implementation of adaptation measures as part of efforts to foster *climate-resilient development and ecosystem resiliency*. The first lesson learned was how to put in practice the initial concrete actions on the ground, and to use the available knowledge about vulnerability as the basis for proactive, preventive adaptation actions. GEF agencies and vulnerable governments and communities collaborated together in defining how to protect human needs essential for continued development (e.g., water resources and drinking water supplies, food security, and health) when threatened by the adverse impacts of climate change. Adaptation was viewed and applied in the context of development and was not addressed in isolation.

45. To achieve the objective of climate-resilient development, climate change adaptation interventions (i.e., climate change risk-response measures) were integrated into national development policies, plans, programs, projects and actions. In the case of the LDCF, the

⁹ FCCC/SBI/2009/L.27, “Matters relating to the least developed countries. Draft conclusions proposed by the Chair.” – CP.15, Copenhagen Accord.

proposed approach for effective implementation of NAPAs was to integrate urgent and immediate adaptation measures into the development activities of each LDC, taking into account national circumstances and economic and social priorities.

46. For example, in Bhutan, where river valleys are prone to massive floods when Himalayan glaciers reach critical thresholds, an LDCF project has helped to finance adaptation measures to increase disaster risk management capacity in affected valleys (including the integration of climate change risks), and to implement artificial lowering of water level in glacial lakes and creating early warning systems. The integration of all these measures into existing development plans resulted in a decreased risk of expected significant destruction of agricultural areas, and prevention/ limitation of human and economic losses.

47. In Cambodia, an LDCF project addresses vulnerabilities shared by many countries around the world. As the country's agriculture sector is prone to both drought and floods, adaptation measures include: training of adaptation experts in agricultural extension teams; implementation of pilot projects in local communities; rainwater harvesting techniques; measures to decrease soil erosion and preserve genetic diversity in rice agriculture; changed design of reservoirs and irrigation channels to prevent risks from increased peak flows; and lessons learned disseminated to national and international levels. Both projects are being implemented by UNDP.

Additional Costs of Adaptation — the Basis for GEF Financing under the LDCF/SCCF

48. Addressing the adverse impacts of climate change imposes an additional cost on vulnerable countries in their effort to achieve their development goals. In the context of the funds, the term *additional costs* was adopted and defined to mean the costs imposed on vulnerable countries to meet their adaptation needs due to the adverse impacts of climate change¹⁰. Access to LDCF/SCCF resources is justified by identifying and meeting the costs of adaptation defined as *additional costs over business as usual*. Activities that would be implemented in the absence of climate change constitute a project *baseline*, (*or business-as-usual*) and the costs of achieving this development scenario are referred to as *baseline costs* or *business-as-usual financing*. The altered plan of action required to implement adaptation measures needed to reduce vulnerability, build adaptive capacity, and an overall increase of resilience to climate change, comprises the LDCF/SCCF financed *adaptation project or program*.

Estimating the Costs of Adaptation

49. It has frequently been difficult in practice to assess *ex-ante* the additional cost of adaptation, as the construction of detailed baseline and adaptation scenarios can be quite complex, time-consuming, and imprecise. Consequently, to simplify the estimate of the

¹⁰ In particular, for the purpose of UNFCCC Decision 3/CP.11 "Further guidance for the operation of the Least Developed Countries Fund," the term "additional costs" means the costs imposed on vulnerable countries to meet their immediate adaptation needs.

additional costs, vulnerable countries have successfully used the option of a sliding scale or proportional scale – proposed as a streamlining tool for the LDCF and the SCCF – which takes into account the size and nature of projects. If the project’s financing structure fits within the limits set by this scale, the project’s requested funding shall be considered an acceptable approximation of the project’s additional cost. More recently the use of the sliding scale has decreased, as new project proponents and GEF’s implementing agencies have started drawing upon previous experiences. As studies on the costs of adaptation are still ongoing, LDCF and SCCF project portfolios will retroactively provide hard data on the costs of adaptation after project completion to contribute to a more accurate and precise understanding of the costs of adaptation worldwide.

Innovative Features of LDCF and SCCF

50. Programming under the LDCF and SCCF has several innovative features, which have been tested on the ground with positive feedback from stakeholders. These include:

- ⇒ *The application of the Additional Cost principle:* As highlighted above, the concept of additional costs has been applied to determine the level of LDCF/SCCF funding. In both the LDCF and the SCCF, eligible adaptation funding is defined in the context of development, and is not based on generating global benefits as defined for conventional operations in GEF focal areas;
- ⇒ *Allowance for Full-cost Funding:* In those rare cases where no baseline of activities can be identified, the LDCF (this is a case for LDCF only) will pay the full-costs of the adaptation project, provided that it targets an urgent and immediate need as defined in the NAPA;
- ⇒ *Expedited Project Cycle:* All pipeline and project reviews and approvals have been undertaken on a rolling basis. Full projects, defined as projects requesting more than \$2m of LDCF funding have been approved by Council on a “no objection” basis. Only in cases where four Council members object to a project will it need to be submitted to a Council meeting for discussion (this has, however, to date never occurred). The SCCF follows the expedited GEF trust fund project cycle;
- ⇒ *Increased limit for CEO Approval (Mid-Sized Projects):* Under LDCF approval procedures, the CEO is authorized to approve projects of up to \$2m in size, notifying Council of such approval on a “no objection” basis. This represents a significant increase in CEO commitment authority, which has normally limited to \$1m for projects within the GEF Trust Fund. The SCCF follows the GEF trust fund project cycle, and anticipated changes to the GEF TF operational policies would authorize the CEO to approve projects of up to \$2m for SCCF as well.
- ⇒ *Ongoing dialog with recipient countries and LDCs in particular:* the GEF Secretariat is engaged in multiple activities to disseminate information on how to access LDCF and SCCF resources. In particular, is financing in collaboration with the UNFCCC

Secretariat, sub-regional workshops that are aimed at building local capacity to access financing for adaptation under these funds.

IV – ADAPTATION STRATEGY IN 2010–2013

Goal, Impact, Objectives, Outcomes, Scope and Activities

51. *Goal:* To support developing countries to increase resilience to climate change through both immediate and longer-term adaptation measures in development policies, plans, programs, projects and actions.

52. *Impact:* Reduce absolute losses due to climate change, including variability.

53. *Objectives:* The goal will be achieved through two equally important objectives. One is to reduce vulnerability to climate change of sectors, areas, countries, communities and ecosystems, and the other is to increase adaptive capacity.

54. *Outcomes:*

- a. Adaptation objectives and budget allocations incorporated in broader development frameworks
- b. Risk analysis and vulnerability assessment incorporated as part of development programs and project planning
- c. Adaptation practices developed and implemented to respond to climate change-induced stresses in development sectors and vulnerable ecosystems
- d. Climate change and variability -induced disaster planning mechanisms developed and applied
- e. Reduced absolute losses due to climate change, including variability
- f. Awareness raised and communities involved in disaster planning, preparedness and prevention
- g. Strengthened institutional adaptive capacity to implement adaptation measures
- h. Diversified and strengthened livelihoods
- i. Enhanced climate resilience of relevant development sectors and natural resources

55. *Scope:* The strategy is focused on a robust replenishment of the *Least Developed Countries Fund* and the *Special Climate Change Fund*. If properly financed, these two Climate Change funds currently have the possibility to meet a significant share of the demand for adaptation of some of the most vulnerable countries in the world.

Results-Based Framework for Adaptation to Climate Change

56. The Adaptation Strategy utilizes a *Result-Based Management Framework* (RBM) to be adopted at project/program design stage and applied to measure progress throughout implementation. The framework developed for the LDCF/SCCF draws upon the framework developed for the GEF Trust Fund but is tailored to the adaptation mandates of the two funds. The framework also relies on previous work carried out by UNDP (GEF/LDCF.SCCF.2/Inf.4), GEF's adaptation task force, and the GEF Evaluation Office (GEF/LDCF.SCCF.4/Inf.4). The GEF Trust Fund's RBM framework was built on the strategic programming for the GEF-4 focal area strategies and their associated indicators (GEF/C.31/10). Since the LDCF and SCCF are structured differently than the GEF Trust Fund and operate through the core sectors that link

adaptation and development instead of dealing with global environmental benefits and focal areas, the RBM framework presented here has been adjusted to reflect this difference. The results based management framework (RBM) for the LDCF/SCCF will incorporate monitoring and reporting at three levels: program (LDCF/SCCF adaptation programs); intervention areas (sectors/areas of intervention); and project level. Implementing an RBM system is part of a process intended to equip the Secretariat with the tools needed to assess how the LDCF and SCCF interventions contribute toward the funds' overall objectives.

57. The key components of the RBM framework will include both planning and reporting instruments. As funding mechanisms for adaptation and other specific needs of developing countries under the UNFCCC, the LDCF and SCCF take their mandate from the Climate Convention. The Conference of the Parties to the Convention (COP) provides guidance to the GEF, which manages these funds, to identify program priorities and operational modalities for financing within the broad scope of the mandate of each Fund. The second component of the RBM is reporting that is linked to implementation. Similar to the exercise conducted for the GEF Trust Fund's active portfolio, an *Annual Monitoring Review (AMR)* will be developed as the principle instrument for reporting on active LDCF and SCCF projects. Portfolio review guidelines will be developed to monitor, project implementation progress, progress towards achievement of increased resilience/reduced vulnerability/increased adaptive capacity to the adverse impacts of climate change, realization of co-financing¹¹, and actions taken to achieve sustainability and replicability.

58. The GEF Secretariat will work closely with the Agencies, Adaptation Task Force (ATF), and the Evaluation Office to apply the proposed RBM framework, including work on a more robust list of recommended adaptation indicators. An outline of the RBM results framework and a list of sample project level indicators by sector/area of intervention are provided. The RBM framework is described in some detail in Annex III.

Proposed Innovative Features of the LDCF and the SCCF

59. It is worth noting that the LDCF and SCCF follow the operational rules of the GEF Trust Fund except for when Convention guidance decides otherwise. For example, the GEF project cycle, fiduciary standards, voting modalities and other procedures fully apply to the SCCF. The LDCF has, per UNFCCC guidance request, a streamlined project cycle. Both funds do not apply the Resource Allocation Framework (recently denominated STAR, as the system has been developed for climate change mitigation) and apply the additional costs principle associated to adaptation benefits as opposed to the incremental costs and global benefits.

60. Based on this principle, all innovative proposals listed in GEF/R.5/20, *Draft Policy Recommendations for the Fifth Replenishment of the GEF Trust Fund*, if appropriate, may be utilized in managing the LDCF and SCCF, including: the expanded access for additional implementing agencies; the option to engage countries more directly with the GEF Secretariat and develop national plans on adaptation if predictable resources are available under these funds.

¹¹ Taking into consideration that co-financing for adaptation has a different connotation than in GEF.

61. *Specific Focus on Gender:* The profound effects of climate change on livelihoods are directly related to low resiliency and high vulnerability. In particular, climate change, including variability, can severely alter people's ability to manage natural resources, affecting livelihood and food security. These risks implicitly threaten jobs, homes, and access to basic resources, including food and water. Experience shows that interventions to strengthen livelihoods and food security from external shocks are more efficient and effective when gender differences are properly understood and addressed. As the LDCF and the SCCF have prioritized a broad range of sectors that support livelihoods, while focusing on the most vulnerable, it is crucial that project design and the Result-Based management functions adequately assess vulnerability, considering socioeconomic and gender issues.

62. As the processes and procedures for the LDCF and SCCF become more advanced, greater attention is being paid to gender and vulnerability analysis. Increasing attention is being given to the differences between men and women within at-risk populations. Implementing agencies will be encouraged to conduct gender analysis in order to understand women's and men's different activities and responsibilities, and their access to resources and decision-making. Vulnerability analyses will be required to take gender differences into account and will be an important input into project design. For example, these analyses will focus on the different ways that women and men vulnerable to climate change; and the strengths and skills of women and men that projects need to build on to increase adaptive capacity.

63. The project results frameworks for the LDCF and SCCF will include indicators that are disaggregated by gender as appropriate, in particular those related to outputs and outcomes related to adaptation assets created in support of individual or community livelihood strategies. Gender will be integrated as appropriate in all results frameworks and in updated operational guidance. The LDCF/SCCF funds will also benefit from the work underway by the GEF Secretariat to develop specific operational guidance for strengthening socio-economic and gender analysis and identifying appropriate indicators. The results of this work will become part of project design requirements and part of project review criteria.

64. Another important issue is the relative comparative advantage of the different GEF agencies for support of adaptation projects. This topic has been discussed by GEF stakeholders. Some of the agencies have proved to be leaders in adaptation activities, but others have yet to develop or implement any adaptation project or program, or have showed a lack of specific development and adaptation expertise. For this reasons, GEF partners, countries and other stakeholders have emphasized the need to *expand the network of agencies* so as to include a wider range of adaptation experience and capabilities. For example, agencies such as the International Red Cross, with direct expertise on disaster risk management and prevention, and the World Food Program, with a strong presence in the field managing food security and community-level services relevant to climate variability and change, have been identified as appropriate candidates for additional agencies to implement the LDCF and the SCCF.

Box 2. Example: World Food Program and Adaptation

Climate change adaptation and disaster risk reduction play a prominent role in WFP's Strategic Plan for 2008 to 2011. The WFP's *disaster risk reduction, preparedness and response* programs offer significant opportunities to enhance sustainable development. Guided by governments, who have the primary responsibility for consistent disaster prevention and mitigation policies, and working with other partners, WFP enhances national disaster risk reduction and adaptation frameworks with its experience and services, field presence, and programs to help communities reinforce their essential food and nutrition security systems and infrastructures – including voucher, cash and food-based safety nets.

In countries where WFP has a continuing presence, *vulnerability analysis and mapping* helps the organization, governments, and other stakeholders identify hungry poor populations, where they are located, and the nature and causes of their vulnerabilities. WFP's Food Security Analysis Service and its unique network of about 120 specialists posted around the world answer these fundamental questions through about 90 assessments every year.

As a further response to the impacts of climate variability, WFP activities such as targeted food-supported employment programs are being deployed to build flood defenses and small-scale irrigation systems, fix dunes to stop the encroachment of the desert onto agricultural land, plant trees to mitigate the impacts of floods and landslides, harvest water and to rehabilitate depleted land.

These activities help vulnerable communities adapt to the actual and expected impacts of climate change. In 2007 WFP food or cash-based employment programs targeted to food insecure communities amounted to USD 280 million, reaching over 13 million people. They contributed to the construction or rehabilitation of 1,579 ponds, 1,571 wells, 14,305 kilometers of irrigation systems, and 1,621 kilometers of dykes. 169,884 hectares of land were protected, cultivated or rehabilitated and made available for agricultural production, and 152,851 hectares of land were reforested throughout the world. With GEF support, these programs could be expanded and more effectively tailored to incorporate climate change adaptation needs.

Least Developed Countries Fund (LDCF)

65. *The Least Developed Countries Fund is aimed at addressing the special needs of the least developed countries (LDCs) under the Climate Convention; Adaptation has been identified as the most relevant issue; the fund must finance the adaptation needs of the LDCs that are most urgent and immediate.*

66. *Purpose under the Convention:* The Least Developed Countries Fund (LDCF) was established in response to guidance received from the Seventh Conference of Parties to the UNFCCC meeting in Marrakech in 2001. It is designed to support projects addressing the urgent and immediate adaptation needs of the Least Developed Countries (LDCs), focusing on reducing the vulnerability of those sectors and resources that are central to human and national development, such as water, agriculture and food security, health, disaster risk management and prevention, and infrastructure, as identified and prioritized in their National Adaptation Programmes of Action (NAPAs).

67. *Preparation for Programming:* Of the 48 eligible LDCs, 48 have already received support to prepare their NAPAs. The remaining four countries are in differing stages of preparing the proposals for NAPA support. GEF has already disbursed \$12m to support the NAPA preparation phase.

68. *Programming Priorities:* Following the preparation phase, the demand has exponentially grown for the implementation of NAPAs. Programming priorities indicated by the NAPAs are in the following sectors: *water resources; food security and agriculture; health; disaster preparedness; infrastructure; and natural resource management.* *Community-based adaptation* is also considered a cross-sectoral priority requiring urgent attention. Especially for LDC/SIDS, improved coastal management would be a priority.

The Special Challenge of Food Security and Water under the LDCF

69. The gap in funding for adaptation is rapidly growing in the closely related areas of water resources, coastal oceans, and food security. The rapid recent warming of the oceans influences continental rainfall patterns and ice melt. The result is that droughts and floods worsen, sea level rises, fisheries are impacted, coastal storm vulnerability is increased, and acidification from excessive carbon sequestration in the oceans dissolves coral reefs with pending catastrophic damage to coastal communities. Moreover, elevated heat, evaporation rates, and drought create greater demands for crop irrigation and more frequent famines through crop failure.

70. These linked impacts of climate change pose very complex adaptation challenges that are additional to the existing policy and management failures facing hydropower, water supply, irrigation, fisheries and water resources management, including the commonly ignored areas of groundwater and coastal management. Climate stress is only one of the multiple stresses on water and coastal ocean resources that need to be collectively addressed along with adaptation to a changing climate if drinking water supplies, protein from fisheries, food from irrigation, and electricity are to be sustained. Projections show billions of people will suffer from water and food shortages in the future resulting in deepening poverty, further political instability, and forced migration.

71. Based on NAPA priorities and on the project demand under the LDCF, the adaptation strategy under this fund is therefore expected to give high emphasis to water and food security. Some of the most direct impacts of climate change, including climate variability, will continue to be on agriculture and food systems. More frequent and intense climate-related events already have adverse impacts on food availability, accessibility, stability and utilization. Increasing temperatures and declining precipitation reduce yields, force transitions to lower valued commodities, and cause volatility in commodity prices. Farmers in food insecure regions, especially those that rely on local production to meet their food needs are particularly vulnerable to global climate variations and price fluctuations. Even small changes in temperature and humidity levels pose risks for food safety and human health, with humans, plants, livestock and fish facing exposure to new pests and diseases.

72. Climate change worsens the living conditions of farmers, fishers and forest-dependent people, many of whom are already food insecure. Climate induced disasters reduce livelihood assets and opportunities, increasing the number of people at risk of hunger in both rural and urban areas. More than 90 per cent of exposure to natural disasters is in the developing world and the poor are at greatest risk of losing assets and livelihoods. As they lack adequate insurance coverage food insecurity will continue to increase.

73. Sub-Saharan Africa is particularly vulnerable to reduced agricultural productivity, increased water insecurity and increased risks to human health with nutrition, health and education implications. For example, in Ethiopia and Kenya, two of the world's most drought-prone countries, children aged five or less are respectively 36 and 50 percent more likely to be malnourished if they were born during a drought. Rural people's ability to cope with climate change impacts depends on the existing cultural and policy context, as well as on socio-economic factors like gender and the distribution of household assets.

74. Sustainable food security practices and climate change adaptation and mitigation strategies can be supportive and reinforcing. Climate and weather risk management strategies (the emerging concept of "climate services" akin to more traditional weather services) also can support sustainable agriculture and fisheries practices.

75. In managing the LDCF, the GEF and its network of agencies have built relevant on-the-ground experience in financing adaptation action and learned lessons on activities that are particularly significant to reduce vulnerability and increase adaptive capacity of LDCs and other vulnerable countries.

LDCF Activities

76. Consistent with the priorities identified by the NAPAs, the LDCF finances the activities that are linked to the most urgent and immediate adaptation needs of the LDCs, or activities whose further delay could increase vulnerability, or lead to increased costs at a later stage. As climate change impacts all sectors of development, the adaptation activities that are financed under the LDCF are integrated, or "mainstreamed," into each LDC's development plan.

77. A few examples follow that show specific activities ready for or under implementation in response to priorities identified by the NAPAs under the LDCF.

78. *Water:* Improved rainwater harvesting facilities in each village; System of Rice Intensification prescriptions reduce vulnerability to changing precipitation amounts and patterns; Modifications to design of reservoirs and irrigation channels, and to management of these features and natural ponds to better manage climate change induced risks. *Building Capacities to Integrate Water Resources Planning in Agricultural Development (Cambodia, UNDP)*

79. In addition, drought management planning, floodplain management and early warning systems, more efficient water supply and irrigation technologies, and institutional reforms through IWRM can help sustain water and food supplies. In addition, ICM in coastal areas and

ecosystem-based approaches to fisheries can help reduce vulnerability to multiple disasters, including saltwater intrusion to drinking supplies while sustaining fish protein sources.

80. Moreover, integrated coastal zone management in coastal areas and ecosystem-based approaches to fisheries can help reduce vulnerability to multiple stresses, including saltwater intrusion to drinking supplies while sustaining fish protein sources.

81. *Food security/Agriculture*: Activities include: Crop diversification; Improved cropping sequences; Conservation tillage; More efficient water use in irrigation; community-based supplemental irrigation; Food storage; Creation of an enabling environment for Climate Risk Management; Policy development and implementation; Institutional coordination; and Generation of knowledge and awareness raising. Project example: *Climate Adaptation from Rural Livelihoods and Agriculture in Malawi (AfDB)*

82. *Disaster risk management*: Activities include: Increase disaster risk management capacity in affected valleys; Artificial lowering of water level in glacial lakes; Creation of an Early Warning System for glacial flashfloods – Project example: *Reduce CC-induced Risks and Vulnerabilities from Glacial Lake Outbursts in the Punakha-Wangdi and Chamkar Valleys in Bhutan (UNDP)*.

83. *Natural Resources Management (Bangladesh)* - Pilots implemented at community level including (i) forest management and mangrove/wetland restoration leading to natural coastal protection; (ii) innovative ways of securing potable water; (iii) promotion of alternative livelihoods; and, (iv) improving institutional and technical capacity, including Early Warning Systems.

LDCF Financing Needs

84. *Current and projected financing needs*: A recent assessment of the financing needs to support the implementation of NAPAs carried out by the UNFCCC Secretariat estimates that the costs of adaptation range between \$800 million and \$1.7 billion. These estimates were reinforced during COP15, where the Parties recognized the conclusions of a paper prepared by the LEG, “Support needed to fully implement national adaptation programmes of action (NAPAs)”, and stressed the need for financial resources for the full implementation of priorities identified in 48 NAPAs as being at least \$1.93 billion¹². As the LDCF is the fund especially established under the Convention to pay these costs, the estimated financing need for the LDCF is consistent with the analysis of the UNFCCC. The activities to be financed will be consistent with the priorities identified by the NAPAs, through a programmatic approach that will build on project experience and maximize impact by reducing vulnerability and increasing the adaptive capacity of the most important and vulnerable development sectors.

85. A recently published analysis carried out by the UNFCCC Secretariat, “Investment and financial flows to address climate change: an update,” utilized the National Adaptation

¹² FCCC/SBI/2009/L.27, “Matters relating to the least developed countries. Draft conclusions proposed by the Chair.” – CP.15, Copenhagen Accord.

Programmes of Action (NAPAs) as a tool to estimate the costs of adaptation at project level, identified through bottom up assessments in the 38 NAPAs so far completed. In total, these countries have identified about 430 “urgent and immediate” adaptation projects, of which the cost of 385 has been evaluated. The estimated total cost of these projects is over \$800 million with an average project cost of approximately \$2 million (excluding a single \$700 million project). Table 1 illustrates the sectoral breakdown of NAPA projects.

Table 1. Projects identified in National Adaptation Programmes of Action, by sector

Sector	Total cost (USD)
Water resources	841,204,099
Agriculture/livestock/fisheries	357,840,182
Coastal management/marine ecosystems	150,823,182
Terrestrial ecosystems/biodiversity	132,574,526
Early warning and forecasting	89,531,263
Health	46,688,000
Energy	23,514,120
Education	21,729,734
Insurance	8,225,000
Tourism	1,850,000
Total	1,673,980,106

86. In addition, a recent evaluation of the LDCF carried out by DANIDA in cooperation with the Evaluation Office, assessed that *any replenishment of the LDCF for the longer term should be sufficient to support whole NAPA programmes, rather than individual project implementation.*

87. It is difficult to compare the estimates of adaptation projects in NAPAs with the global estimates of adaptation costs such as those given in the 2007 UNFCCC report for several reasons. First, the NAPAs are not intended to address medium to long-term adaptation, but to identify urgent and immediate adaptation needs. So far, fewer than 41 countries have completed NAPAs and it is questionable whether these can be extrapolated to the rest of the developing world. Second, the total investment needs per project may not represent annual investment needs but cumulative needs. And third, it can be difficult to determine the extent to which climate change is a primary cause or more a justification for investments.

88. Based on lessons learned from LDCF experience, there is a need to significantly increase the impact achieved at the project level and expand the scale and scope of the LDCF projects and programs on the ground at the sectoral and national levels. In order to achieve this objective, resources under the LDCF must significantly grow. The process initiated by the NAPAs and the analysis provided by the reports identifying the most urgent and immediate needs remain seminal steps to be scaled up and replicated at the sectoral and national level. The LDCF remains the

only mechanism created by and accountable to the Climate Convention with respect to the urgent and immediate needs of the LDCs, and this strategy highlights the responsibilities of donor countries to honor their commitments under the Convention.

89. In conclusion, despite the fact that estimating the financial needs for adaptation for the LDCs remains difficult, it is imperative that at least \$500 million be mobilized within the next 4 years to finance the urgent and immediate adaptation needs of the Least Developed Countries to implement the National Adaptation Programmes of Action as estimated by the UNFCCC. Projected financing scenarios for the LDCF and SCCF are described in some detail in Annex IV.

Special Climate Change Fund (SCCF)

90. *In the context of the GEF Adaptation Strategy, and on financing adaptation in general, the Special Climate Change Fund (SCCF) currently plays a pivotal role as it is the fund with a large potential to address the adaptation needs of vulnerable countries worldwide.*

91. *Unlike the LDCF, which is specifically dedicated to the urgent and immediate needs of the LDCs, the SCCF is open to all vulnerable developing countries. In addition, it may finance a wide range of concrete adaptation measures, which may include longer term time horizons. Projects have the option to focus on long-term planned response strategies, policies, and measures, rather than short-term activities.*

92. *Purpose under the Convention:* The Special Climate Change Fund (SCCF) was established in response to guidance received from the Seventh Conference of Parties to the UNFCCC meeting in Marrakech in 2001. It is designed to finance activities, programs and measures related to climate change that are complementary to those funded by GEF under the climate change focal area, in the areas of:

- (a) Adaptation to climate change;
- (b) Technology transfer;
- (c) Selected sectors including: Energy, transport, industry, agriculture, forestry and waste management; and
- (d) Economic diversification.

93. Among these four categories, adaptation has the top priority. This strategy brief note describes the essential features of the SCCF Adaptation program. The Scope of the Adaptation Strategy encompasses only the first financing window of the Special Climate Change Fund on Adaptation (a).

74. *Eligibility:* All developing countries that are parties to the United Nations Framework Convention on Climate Change (UNFCCC) are eligible to receive financial support for adaptation interventions to be integrated into development activities.

75. *Preparation for Programming:* The adaptation program under the SCCF does not allocate resources for enabling activities limited to assessing vulnerability to climate change and

identifying adaptation needs. Projects proposed under this fund are to be for implementation of adaptation activities under priority areas of intervention as identified by the Climate Convention.

76. *Programming Priorities:* Starting to implement adaptation activities promptly where sufficient information is available to warrant such activities, inter alia, in the areas of:

- ▶ Water resources management
- ▶ Land management
- ▶ Agriculture
- ▶ Health
- ▶ Infrastructure development
- ▶ Fragile ecosystems, including mountainous ecosystems
- ▶ Integrated coastal zone management.
- ▶ Improving the monitoring of diseases and vectors affected by climate change, and related forecasting and early-warning systems, and in this context improving disease control and prevention.
- ▶ Supporting capacity building, including institutional capacity, for preventive measures, planning, preparedness and management of disasters relating to climate change, including contingency planning, in particular for droughts and floods in areas prone to extreme weather events.

SCCF Activities

77. Eligible activities are directly related to the programming priorities listed above. Financing adaptation activities under the SCCF may include a wide range of options, including policy reform. Selected examples of concrete adaptation activities that are already under implementation under the existing adaptation SCCF program are:

78. *Health:* Cost-effective strategies and measures developed that reduce the long-term risk of climate change impacts on diseases such as malaria etc; Roll Back Malaria programme and other campaigns up-scaled to take into account climate change; Adjustments to existing health regulations to factor in climate change risks – project example: *Integrating climate change into the management of priority health risks in Ghana.-UNDP*

79. *Integrated coastal management:* Improved management of drainage system; Implementation of adaptation measures such as beach nourishing at particularly important sites; Construction of hydrological models; Institutional support for implementation of integrated coastal zone management and disaster management; (*Guyana, WB; Egypt, UNDP*); *In addition, ICM in coastal areas can help reduce vulnerability to multiple disasters, including saltwater intrusion to drinking supplies; and ecosystem-based approaches to fisheries that help sustain fisheries for protein sources.*

80. *Water Resources Management in response to Glacial Retreat:* Filling knowledge gaps on links between climate change, glacial retreat and socio-economic/ecological effects; Capacity

development and policy support for integrated water management and prioritization of limited water resources at national and community levels; Pilot measures and improved water management promoted in agriculture and hydroelectricity sectors; Innovative ways of meeting potable water needs. *Regional (Bolivia, Ecuador, Peru) WB.*

81. *Improved Water Resources Management in response to droughts, floods, and warming.* Real-time-data-sharing and hydrologic drought/flood prediction and warning systems; catchment protection; drought management planning; flood, floodplain, land use management measures; water use efficiency for water supplies and irrigation for food crops as part of IWRM strategies; groundwater protection and management for alternative supplies; sustainable fisheries management to adapt to lake warming; *Drought management in the Amazon River Basin and for flood and floodplain management in the Plata River Basin; Senegal River Basin; Lake Malawai/Nyassa/Niassa Basin.*

82. **Potential use of fiscal instruments.** Given the wide range of sectors and economic activities that need to be engaged, broader fiscal policies and economic measures may sometimes be appropriate in addition to the specific activities listed above. . While detailed analysis and careful design will be essential, numerous fiscal measures could be designed consistent with the economies and circumstances of vulnerable countries to make them more climate-resilient. Examples include: (i) tax-breaks for climate appropriate reconstruction after disasters, (ii) government supported insurance programs and policies for farmers, coastal and other vulnerable communities linked to climate appropriate investments and behaviors and (iii) technical assistance to help governments take climate change risks into account in their national economic planning, particularly for climate sensitive sectors with public ownership or control such as water and other infrastructure. There is considerable opportunity to incorporate risk management more generally in national economic planning decisions in the most vulnerable countries given the large impact of climate disasters, especially in smaller economies. There is an opportunity to integrate “climate services” akin to weather services as part of national economic planning systems.

83. The engagement of ministries of planning and economic development would be sought in order to influence development planning and investments. Should developing countries wish to engage in discussion of such strategies or related fiscal measures, the International Monetary Fund may be an ideal partner.

SCCF Financing Needs

84. *Current and projected financing needs:*

The major obstacle emphasized by our stakeholders, including the agencies and the client countries, is the uncertainty that currently exists with respect to how much money is available to develop adaptation projects under the SCCF. The SCCF is the only fund established under the Climate Convention whose resources are currently available under for all vulnerable developing countries (only LDC countries, by definition, are eligible for LDCF resources). The demand under the SCCF to date is about \$125 million per year, with much greater demand expected to come in the near future, while the fund totals \$110 million, of which only \$100 million is for adaptation. (More projects might be also proposed if more resources were available.) To meet the demand and ensure financing predictability, the GEF estimates the need for \$500 million for the SCCF adaptation window for a 4 year

replenishment cycle, to finance the necessary adaptation activities under the priority sectors listed above. Projected financing scenarios for the LDCF and SCCF are described in some detail in Annex IV.

85. The mandate of the SCCF is broad enough to incorporate the category of projects that were so far financed under the SPA (trust fund), for example those that address the vulnerability of ecosystems. An example of activities that were previously financed under the SPA portfolio (trust fund) and could be financed under the SCCF include addressing climate impacts on coral reefs, mangrove, forest and other vulnerable ecosystems, and, as in the example listed below, agro-biodiversity of global significance.

86. *Example of adaptation activities for agro biodiversity conservation:* Extension services are given the capacity to provide information and advice to farmers on agro biodiversity conservation and effective coping measures to climate risks; Farm-based adaptation practices are developed and implemented, including water harvesting regimes, soil conservation, flood protection terracing, stress-resistant local varieties; Improved access to seasonal forecasts for farmers; Agreements between farmers, farmer groups, provincial and district governments to govern the use of resources and agro-biodiversity developed in the pilot sites; a Seed Insurance Scheme is being piloted in selected communities to promote agro biodiversity and improve resilience of local farmers – project examples: *Sustaining agricultural biodiversity in the face of climate change (Tajikistan, UNDP)*; *similar project, Yemen (WB)*.

Box 3. The Special Challenge of Small Island States

Small island developing states (SIDS) will receive priority funding from the SCCF as SIDS have been consistently identified among those countries most vulnerable to the changing climate. In particular, the IPCC in its fourth assessment report noted that small islands have characteristics which make them especially vulnerable to the effects of climate change sea level rise and extreme events.

Climate change for many SIDS is an issue of survival. For SIDS the issues of sea level rise, coastal zone management, water management interventions and human health will need specific attention. Small islands states also have many critical and unique ecosystems which are highly vulnerable to the changing climate.

V – CONCLUSION

87. In closing, based on Convention guidance, responsiveness to developing countries' needs, including predictability of resources, and a commitment to complementarity and maximization of GEF-managed funds and resources, this strategy includes a request for a strong replenishment of the *Least Developed Countries Fund* (LDCF) and the *Special Climate Change Fund* (SCCF). The financial needs estimated for adaptation under the LDCF and SCCF are of \$1 billion total, as illustrated in Table 2 below. To fund the SCCF and LDCF at the appropriate level, it is proposed that these funds be replenished on either two renewable two-year cycles or a conventional four year cycle.

Table 2. Estimated Financing Needs for the LDCF and the SCCF

Funds	Estimated Financial Needs (2010-2014)	Replenishment Proposal
LDCF	\$800 M - \$1.93 B <i>To finance urgent and immediate adaptation needs as identified by the NAPAs for NAPA implementation under the LDCF</i>	\$500 million
SCCF	\$150 M/per year -- Estimated costs based on worldwide demand to GEF through its Agencies -- Activities include adaptation and development as well as ecosystem resiliency	\$500 million
LDCF & SCCF	TOTAL	\$1 billion

Annex I

Compilation of UNFCCC Guidance

Decision 11/CP.1, *Initial guidance on policies, programme priorities and eligibility criteria to the operating entity or entities of the financial mechanism*, see <http://unfccc.int/resource/docs/cop1/07a01.pdf#page=34>

Decision 2/CP.4, *Additional guidance to the operating entity of the financial mechanism*, see <http://unfccc.int/resource/docs/cop4/16a01.pdf#page=5>

Decision 5/CP.6, *The Bonn Agreements on the implementation of the Buenos Aires Plan of Action*, see <http://unfccc.int/resource/docs/cop6secpart/05.pdf#page=36>

Decision 5/CP.7, *Implementation of Article 4, paragraphs 8 and 9, of the Convention (decision 3/CP.3 and Article 2, paragraph 3, and Article 3, paragraph 14, of the Kyoto Protocol)*, see http://unfccc.int/files/cooperation_and_support/ldc/application/pdf/13a01p32.pdf

Decision 6/CP.7, *Further guidance for the operation of the Least Developed Countries Fund*, see <http://unfccc.int/resource/docs/cop9/06a01.pdf#page=13>

Decision 7/CP.7, *Funding under the Convention*, see <http://unfccc.int/resource/docs/cop7/13a01.pdf#page=43>

Decision 27/CP.7, *Guidance to an entity entrusted with the operation of the financial mechanism of the Convention, for the operation of the least developed countries fund*, see <http://unfccc.int/resource/docs/cop7/13a04.pdf#page=6>

Decision 7/CP.8, *Initial guidance to an entity entrusted with the operation of the financial mechanism of the Convention, for the operation of the Special Climate Change Fund*, see <http://unfccc.int/resource/docs/cop8/07a01.pdf#page=17>

Decision 8/CP.8, *Guidance to an entity entrusted with the operation of the financial mechanism of the Convention, for the operation of the Least Developed Countries Fund*, see <http://unfccc.int/resource/docs/cop8/07a01.pdf#page=19>

Decision 4/CP.9, *Additional guidance to an operating entity of the financial mechanism*, see <http://unfccc.int/resource/docs/cop9/06a01.pdf#page=9>

Decision 5/CP.9, *Further guidance to an entity entrusted with the operation of the financial mechanism of the Convention, for the operation of the Special Climate Change Fund*, see <http://unfccc.int/resource/docs/cop9/06a01.pdf#page=11>

Decision 6/CP.9, *Further guidance for the operation of the Least Developed Countries Fund*, see <http://unfccc.int/resource/docs/cop9/06a01.pdf#page=13>

Decision 1/CP.10, *Buenos Aires programme of work on adaptation and response measures*, see <http://unfccc.int/resource/docs/cop10/10a01.pdf#page=2>

Decision 8/CP.10, *Additional guidance to an operating entity of the financial mechanism*, see <http://unfccc.int/resource/docs/cop10/10a01.pdf#page=19>

Decision 3/CP.11, *Further guidance for the operation of the Least Developed Countries Fund*, see <http://unfccc.int/resource/docs/2005/cop11/eng/05a01.pdf#page=10>

Decision 1/CP.12, *Further guidance to an entity entrusted with the operation of the financial mechanism of the Convention, for the operation of the Special Climate Change Fund*, see <http://unfccc.int/resource/docs/2006/cop12/eng/05a01.pdf#page=3>

Decision 2/CP.12, *Review of the financial mechanism*, see <http://unfccc.int/resource/docs/2006/cop12/eng/05a01.pdf#page=6>

Decision 3/CP.12, *Additional guidance to the Global Environment Facility*, see <http://unfccc.int/resource/docs/2006/cop12/eng/05a01.pdf#page=9>

Decision 7/CP.13, *Additional guidance to the Global Environment Facility*, see <http://unfccc.int/resource/docs/2007/cop13/eng/06a01.pdf#page=33>

Draft decision -/CP.14, *Further guidance for the operation of the Least Developed Countries Fund*, see http://unfccc.int/files/meetings/cop_14/application/pdf/cp_ldcf.pdf

Draft decision -/CP.14, *Additional guidance to the Global Environment Facility*, see http://unfccc.int/files/meetings/cop_14/application/pdf/cp_gef.pdf



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SUBSIDIARY BODY FOR IMPLEMENTATION

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Agenda item 6 (b)

Matters relating to Article 4, paragraphs 8 and 9, of the Convention
Matters relating to the least developed countries

Matters relating to the least developed countries

Draft conclusions proposed by the Chair

1. The Subsidiary Body for Implementation (SBI) took note of the oral report by the Chair of the Least Developed Countries Expert Group (LEG), and welcomed the report on the sixteenth meeting of the LEG, held in Bangkok, Thailand, from 24 to 26 September 2009.¹
2. The SBI thanked the Government of the United Republic of Tanzania for hosting the first training workshop on the implementation of national adaptation programmes of action (NAPAs) in Dar es Salaam from 19 to 23 October 2009, and expressed its gratitude to the Government of Ireland for providing financial resources to support the work of the LEG.
3. The SBI welcomed the submission by Parties of 43 NAPAs to the secretariat as at 8 December 2009. It noted the important role played by the LEG in assisting least developed country (LDC) Parties with the preparation of NAPAs, and invited the LEG to continue to assist the LDCs that have not yet completed their NAPAs to complete and submit these as soon as possible, in collaboration with the Global Environment Facility (GEF) and its agencies.
4. The SBI expressed its appreciation to the LEG for the progress it has made under its work programme for 2008–2010² and took note of the updated priority activities in the work programme. The SBI welcomed the publication of the *Step-by-Step Guide for Implementing National Adaptation Programmes of Action*,³ the training on NAPA implementation conducted through the workshop referred to in paragraph 2 above, and the advice given to LDC Parties.

¹ FCCC/SBI/2009/13.

² FCCC/SBI/2008/6, annex I.

³ UNFCCC, 2009. *Step-By-Step Guide for Implementing National Adaptation Programme of Action*. LDC Expert Group, the GEF and its agencies. Available at <http://unfccc.int/resource/docs/publications/lde_napa2009.pdf>.

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5. The SBI further expressed its appreciation to the GEF and its agencies for the steps taken to improve the processing of applications for funding of the implementation of NAPA projects under the Least Developed Countries Fund (LDCF) and for the constructive dialogue among the LDC Parties, the LEG and the GEF and its agencies on the provision of enhanced support for the preparation and implementation of NAPAs and encouraged those involved to continue this dialogue.
6. The SBI encouraged those LDC Parties that wish to submit updates to their NAPAs and revisions to the project lists and profiles contained in their NAPAs to do so using the guidelines contained in the report on the sixteenth meeting of the LEG.⁴
7. The SBI recognized the work of the LEG in producing the paper “Support needed to fully implement national adaptation programmes of action (NAPAs),”⁵ which indicated, inter alia, a need for financial resources for the full implementation of priorities identified in NAPAs of at least USD 1.93 billion. It invited Parties to consider the findings of this paper.
8. The SBI endorsed the draft terms of reference for the review of the experiences gained from implementing the LDC work programme, including experience gained in accessing funds from the LDCF.⁶ The review is scheduled to take place at the thirty-third session of the SBI. The SBI encouraged the LEG to collaborate with relevant organizations in collecting and analysing the information necessary for the review.
9. The SBI invited Parties to submit to the secretariat, by 30 August 2010, their views on possible elements for a future mandate of the LEG, including its renewal and expansion.
10. The SBI requested the secretariat to prepare a synthesis report on possible elements for a future mandate of the LEG, taking into account the submissions referred to in paragraph 9 above and inputs provided by the LEG at its eighteenth meeting, for consideration by the SBI at its thirty-third session, with a view to recommending a decision on a future mandate of the LEG for adoption by the Conference of the Parties at its sixteenth session.
11. The SBI requested the LEG to keep it informed of its efforts in implementing its work programme over the period 2008–2010.
12. The SBI invited Parties in a position to do so to continue to provide financial and other resources required for the implementation of the LEG work programme, including for the training workshops on NAPA implementation.
13. The SBI invited the GEF, in its capacity as the entity entrusted with the operation of the LDCF, to support, when sufficient voluntary funding has not been provided from bilateral sources, the organization, under the guidance of the LEG, of four regional workshops in 2010 to provide training and technical support to LDCs in order to advance the process of implementation of NAPAs.
14. The SBI, recognizing the urgent and immediate adaptation needs of the LDCs, encouraged Parties to continue to provide financial and other support for the timely implementation of priority activities identified in NAPAs, including through contributions to the LDCF.

⁴ FCCC/SBI/2009/13, annex I.

⁵ <http://unfccc.int/resource/docs/publications/09_idc_sn_napa.pdf>.

⁶ FCCC/SBI/2009/13, annex III.

Annex III
Result-Based Management Framework
Adaptation to Climate Change

Goal: Support developing countries to become climate resilient by promoting both immediate and longer-term adaptation measures in development policies, plans, programs, projects and actions

Impact: Reduced absolute economic losses at country level due to climate change, including variability

Indicator: Economic loss trend over a project period and beyond due to climate change, including variability

Objective	Expected Outcomes and Indicators	Core Outputs (and Indicators)
<p>Objective 1: Reduce vulnerability to the adverse impacts of climate change, including variability, at local, national, regional and global level</p>	<p>Outcome 1.1: Increased knowledge and understanding of climate variability and change-induced threats at country level and in targeted vulnerable areas</p> <p>Indicator 1.1.1 Relevant threat information disseminated to stakeholders on a timely basis</p> <p>Indicator 1.1.2 Vulnerability and risk perception index, broken down by sector</p>	<p>Output 1.1.1: Risk and vulnerability assessments conducted and updated</p> <p>Indicator 1.1.1.1 No. and type of projects that conduct and update risk and vulnerability assessments</p> <p>Indicator 1.1.1.2 No. and type of monitoring systems in place</p>
	<p>Outcome 1.2: Strengthened adaptive capacity to reduce risks to climate-induced economic losses</p> <p>Indicator 1.2.1 Targeted institutions with increased adaptive capacity to reduce risks of and response to climate variability</p> <p>Indicator 1.2.2 Capacity perception index</p> <p>Indicator 1.2.3 Reduced losses per extreme weather events</p>	<p>Output 1.2.1: Adaptive capacity of national and regional centers and networks strengthened to rapidly respond to extreme weather events</p> <p>Indicator 1.2.1.1 No. of staff trained on technical adaptation themes</p> <p>Output 1.2.1: Targeted population groups covered by adequate risk reduction systems</p> <p>Indicator 1.2.1.2 % of population covered by adequate risk reduction systems</p> <p>Indicator 1.2.1.3 Reduction in number of people affected by climate variability</p>

Objective	Expected Outcomes and Indicators	Core Outputs (and Indicators)
	<p>Outcome 1.3: Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level</p>	<p>Output 1.3.1: Targeted population groups participating in adaptation and risk reduction awareness activities</p>
	<p>Indicator 1.3.1 % of targeted population aware of predicted adverse impacts of climate change and appropriate responses</p> <p>Indicator 1.3.2 % of population affirming ownership of adaptation processes</p>	<p>Indicator 1.3.1.1 No. and type of adaptation actions or strategies introduced at local level</p> <p>Indicator 1.3.1.2 No. and type of risk reduction actions or strategies introduced at local level</p>
<p>Objective 2: Increase adaptive capacity to respond to the impacts of climate change, including variability, at local, national, regional and global level</p>	<p>Outcome 2.1: Mainstreamed adaptation in broader development frameworks at country level and in targeted vulnerable areas</p> <p>Indicator 2.1.1 Adaptation actions implemented according to NAPAs (in case of LDCs) and other development frameworks as planned</p> <p>Indicator 2.1.2 % of development frameworks and sectoral strategies that reach adaptation targets, including budget allocation targets</p>	<p>Output 2.1.1: Adaptation measures and necessary budget allocations included in relevant frameworks</p> <p>Indicator 2.1.1.1 No. and type of development frameworks that include adaptation measures (UNDAF, PRSP, etc.)</p> <p>Indicator 2.1.1.2 No. and type of development frameworks and sectoral strategies that include specific budgets for adaptation actions</p> <p>Indicator 2.1.1.3 No. and type of policy and regulatory reforms that take account of economic losses due to climate change, including variability</p>
	<p>Outcome 2.2: Increased adaptive capacity within relevant development sectors and natural resources</p> <p>Indicator 2.2.1 Development sectors' services (health and social services) responsive to needs from changing and variable climate</p> <p>Indicator 2.2.2 Physical infrastructure maintained under climate change and variability-induced stress</p> <p>Indicator 2.2.3 Ecosystem services and natural assets maintained under climate change and variability-induced stress</p>	<p>Output 2.2.1: Vulnerable physical, natural and social assets strengthened in response to climate change impacts, including variability</p> <p>Indicator 2.2.1.1 No. and type of health or social infrastructure developed or modified to respond to new conditions resulting from climate variability and change</p> <p>Indicator 2.2.1.2 No. and type of physical assets strengthened or constructed to withstand conditions resulting from climate variability and change</p> <p>Indicator 2.2.1.3 No. and type of natural resource assets created, maintained or improved to withstand conditions resulting from climate variability and change</p>

Objective	Expected Outcomes and Indicators	Core Outputs (and Indicators)
	<p>Outcome 2.3: Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas</p> <p>Indicator 2.3.1 Households and communities have more secure access to livelihood assets</p> <p>Indicator 2.3.2 % of targeted population with sustained climate-resilient livelihoods</p>	<p>Output 2.3.1: Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability</p> <p>Indicator 2.3.1.1 No. and type of adaptation assets (physical as well as in terms of knowledge) created in support of individual or community livelihood strategies</p> <p>Indicator 2.3.1.2 No. of households with more secure access to livelihood assets</p> <p>Indicator 2.3.1.3 No. and type of climate-resilient income sources for communities and individuals</p>
Objective 3: Promote transfer and adoption of adaptation technology	<p>Outcome 3.1: Enhanced enabling environment to support adaptation-related technology transfer</p> <p>Indicator 3.1.1 Policy environment and regulatory framework for adaptation-related technology transfer established or strengthened</p> <p>Indicator 3.1.2 Strengthened capacity to transfer appropriate adaptation technologies</p>	<p>Output 3.1.1: Skills increased for relevant individuals in transfer of adaptation technologies</p> <p>Indicator 3.1.1.1 No. and type of relevant policies and frameworks developed or strengthened</p> <p>Indicator 3.1.1.2 No. and type of institutions/individuals trained in adaptation-related technologies</p>
	<p>Outcome 3.2: Successful demonstration, deployment, and transfer of relevant adaptation technology in targeted areas</p> <p>Indicator 3.2.1 Uptake rates on adaptation-related technology adoption</p> <p>Indicator 3.2.2 % of population adopting transferred adaptation technologies by technology type</p> <p>Indicator 3.2.3 Adopted adaptation technologies strengthen coping mechanisms</p>	<p>Output 3.2.1: Relevant adaptation technology transferred to targeted groups</p> <p>Indicator 3.2.1.1 No. of adaptation technologies by technology type transferred to targeted groups</p> <p>Indicator 3.2.1.2 No. of adaptation technologies by technology type transferred from targeted areas</p>

Annex IV

Least Developed Countries Fund (LDCF) and Special Climate Change Fund (SCCF) projected scenario

Background

1. This section is focused on what a replenishment scenario of \$500 million for each of the two climate change funds for adaptation would produce in terms of areas of activities (or sectors) over the period 2010-2013. Based on COP guidance, observed trends in the existing LDCF and SCCF portfolios, as well as indications for future priorities by developing country Parties, as formulated in National Adaptation Programmes of Action (NAPAs) in case of the LDCF and through the demand of vulnerable developing countries in case of the SCCF, this section outlines how new resources could quickly manifest into concrete activities in some of the most vulnerable sectors and regions affected by the impacts of climate change.

Methodology

2. The approach taken in this analysis follows three main principles: 1) Funding through the LDCF and SCCF must always be consistent with UNFCCC decisions and guidance; 2) When prioritizing between eligible activities (as they are established by the UNFCCC), the specific needs of eligible Parties should be the primary determinant; 3) The special needs of the most vulnerable Parties (e.g. Small Island Development States, Least Developed Countries etc.) must be reasonably reflected in the framework. Based on the above approach, the current portfolio of approved projects under both the LDCF and SCCF was analyzed in terms of their regional and sectoral scope.

3. Using the sectoral categories established in relevant UNFCCC decisions and the programming documents for the LDCF and SCCF, each project was broken down into a number of 'fractions' based on the degree to which the project responds to each sectoral category. E.g. a project in the LDCF primarily dealing with adaptation measures in the agricultural sector, but also involving elements of water management, risk management and community level adaptation, has been broken into the following fractions based on a best estimate from the available project documentation: *Agriculture and Food Security* = 50%, *Water Resources Management* = 20%, *Risk Management* = 15%, *Community Level Adaptation* = 15%. This way, all approved projects have been broken down into fractions, which in turn were multiplied with the total grant given, and summed for each sector under both Funds (LDCF/SCCF). The resulting analysis gave an approximate indication of the sectoral distribution in the current portfolio.

4. The specific sectoral categories and indication of how they were interpreted in this analysis can be found in Box 1 below. It must be stressed that the process of assigning specific sectoral fractions to each project may be ambiguous in practice as sectors are highly intertwined and cannot always be separated in a meaningful way. It was, however, deemed to be a better approach than simply assigning one category to each project (e.g. agriculture/food security in the above example), as this would skew conclusions more significantly. Best estimates and 'common sense' have been used throughout this exercise.

Box 1: Sectoral categories and some main interpretations used in the project analysis:**LDCF (sector break-down based on analysis of NAPAs)**

- **Water Resources Management:** improving efficiency of water use, providing new sources of water (e.g. rain water collection), improved management of crops and animals to reduce water needs for agriculture (everything relating directly to water use, including agricultural water use).
- **Agriculture/Food Security:** Drought resistant crops, crop diversification, climate resilient crop and soil management methods, food banks (everything relating directly to crops or animals (i.e. not water) – however the practical separation between the two is often difficult).
- **Health:** disease monitoring systems, reducing climate change vulnerability of health and health care systems.
- **Disaster Preparedness/Risk Management:** early warning systems, meteorological capacity building and making timely information available to key stakeholders, vulnerability assessments, ‘soft’ coastal protection measures, Integrated Coastal Zone Management, updating zoning policies.
- **Infrastructure:** roads, bridges, ‘hard’ coastal protection measures (e.g. sea walls), irrigation systems etc.
- **Natural Resource Management:** fisheries, forestry, soil erosion, grassland management (i.e. for animal grazing), ecosystems, etc. (i.e. natural resource management that is not agriculture or water)
- **Community Level Adaptation:** Project components that have some degree of community level intervention (e.g. pilot activities at the community level) have been rated with 1/6 in this category by default. Other projects with a more clear community focus have been rated with higher values.

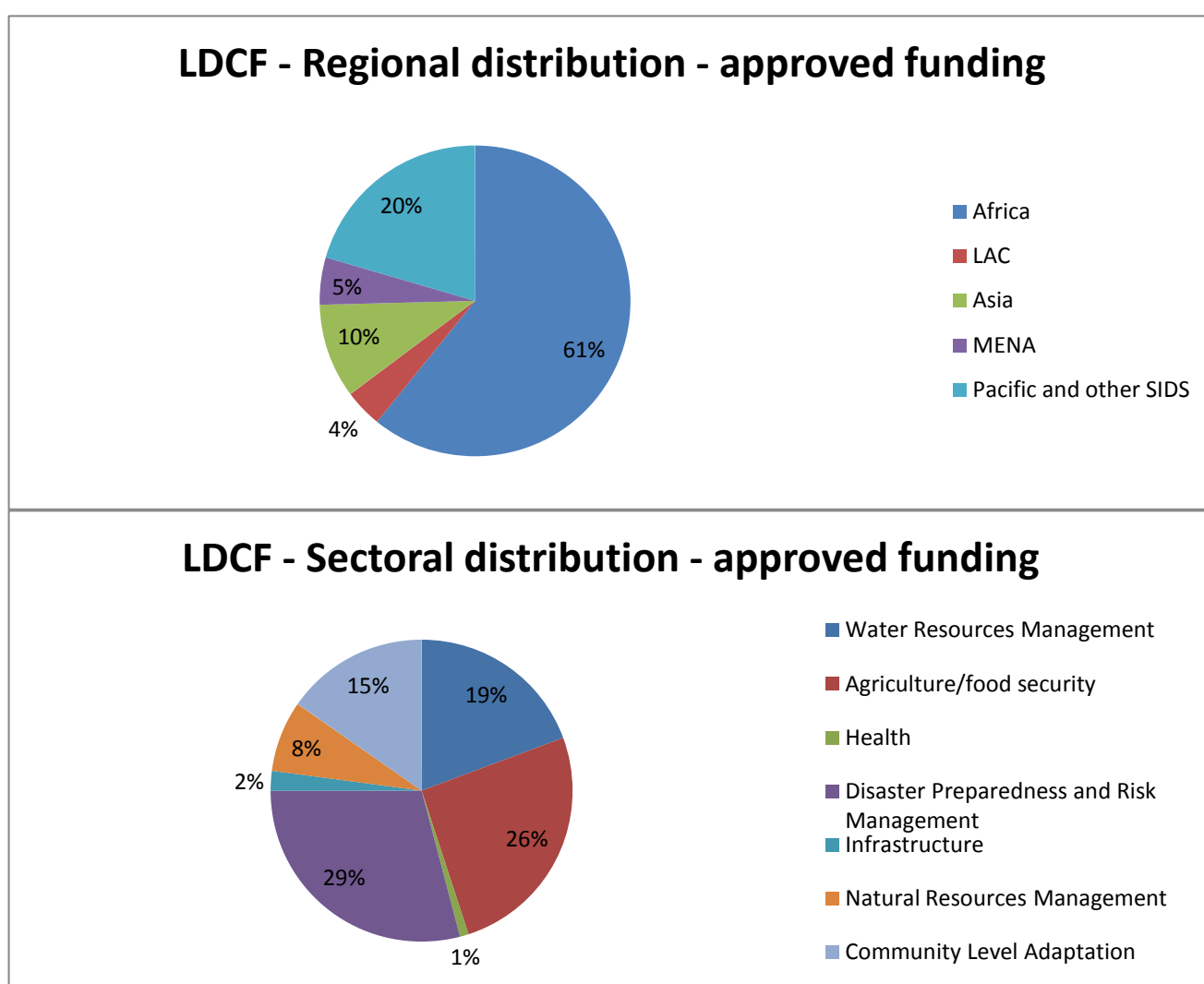
SCCF (Sector break-down taken from original COP7 decision)

- **Water Resources Management:** improving efficiency of water use, providing new sources of water (e.g. rain water collection), improved management of crops and animals to reduce water needs for agriculture (everything relating directly to water use, including agricultural water use)
- **Agriculture/Land Management:** Drought resistant crops, crop diversification, climate resilient management methods, food banks (everything relating directly to crops or animals (i.e. not water) – however the practical separation between the two is often difficult)
- **Integrated Coastal Zone Management:** ‘soft’ coastal protection measures (e.g. beach nourishment, sand fixation, creating buffer vegetation buffer zones), climate change resilient management of coastal natural resources, updating coastal zoning policies, ‘hard’ coastal protection measures (e.g. sea walls).
- **Infrastructure Development:** roads, bridges, tourism infrastructure, irrigation systems etc.
- **Fragile Ecosystems:** Glacier fed fresh water systems, coastal ecosystems (e.g. mangroves, coral reefs etc.) threatened by sea level rise, all activities previously funded through the SPA in the sectors of Biodiversity, Land Degradation, and International Waters.
- **Health:** disease monitoring systems, reducing climate change vulnerability of health and health care systems.
- **Disaster Risk Management:** early warning systems, meteorological capacity building and making timely information available to key stakeholders, vulnerability assessments.
- **Cross Cutting Issues:** Either projects where the exact sectoral focus is currently unclear (e.g. more programmatic approaches that has not yet defined a sectoral focus), or cross cutting projects that does not fit any of the above categories (e.g. broader capacity building activities not focused on one particular sector)

Results

6. The sectoral analysis revealed that in both the LDCF and SCCF, agriculture and water management have by far been the most important project components funded to date. This is hardly surprising given the crucial importance of the two sectors in most developing countries, and that these sectors are often especially vulnerable to the impacts of climate change and variability. All of the UNFCCC-defined sectors have been targeted in the current portfolio, but some sectors have so far received less attention than others. This is most notably the case with health and infrastructure in the LDCF. Key results are summarized in figures 1 and 2 below.

Figure 1: Summarized results for the analysis of the LDCF portfolio



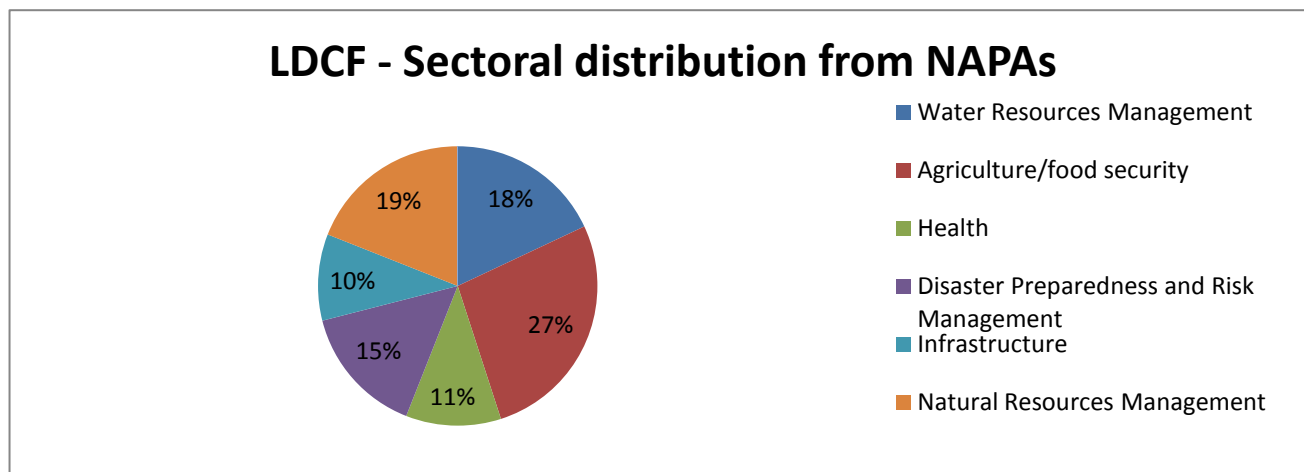
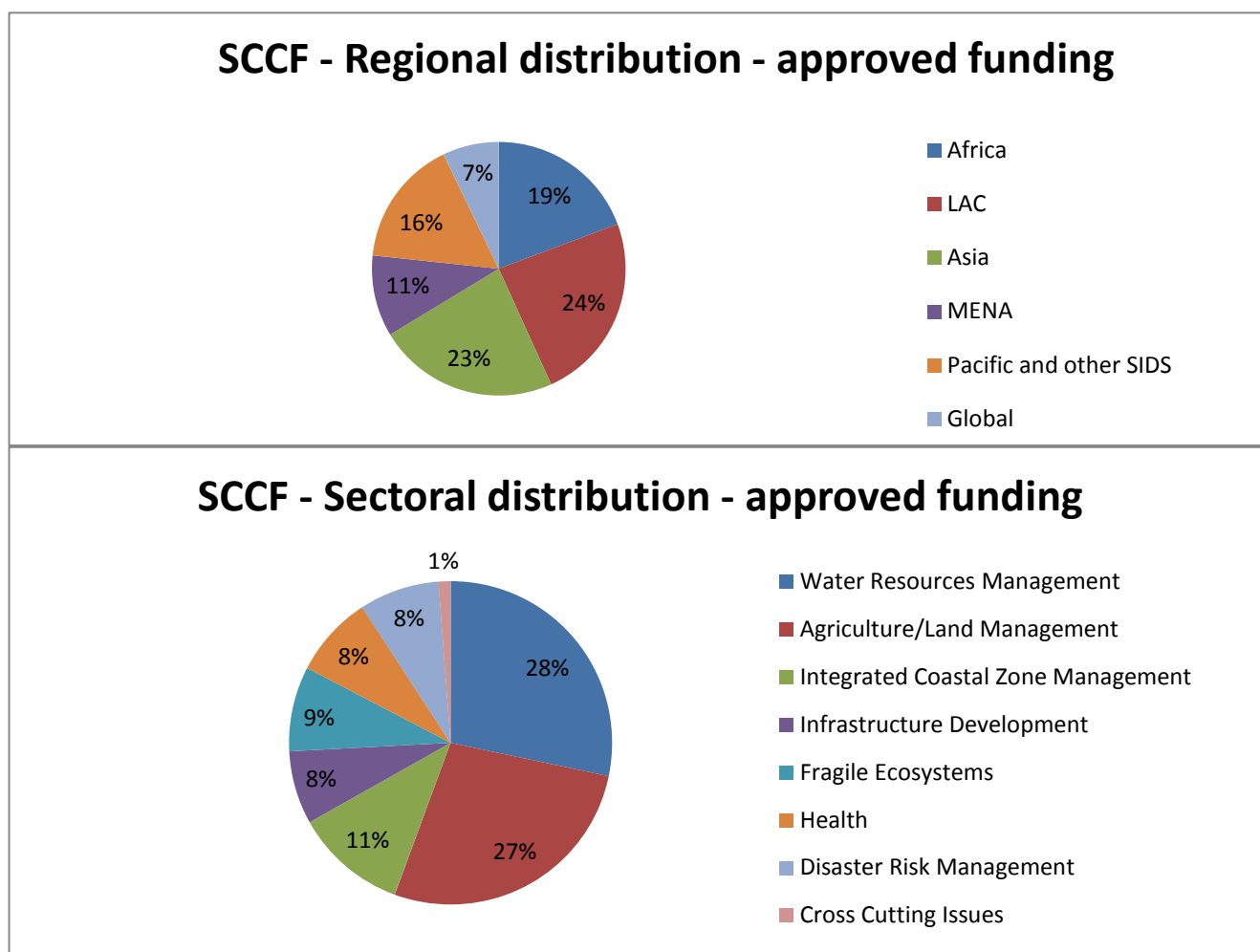
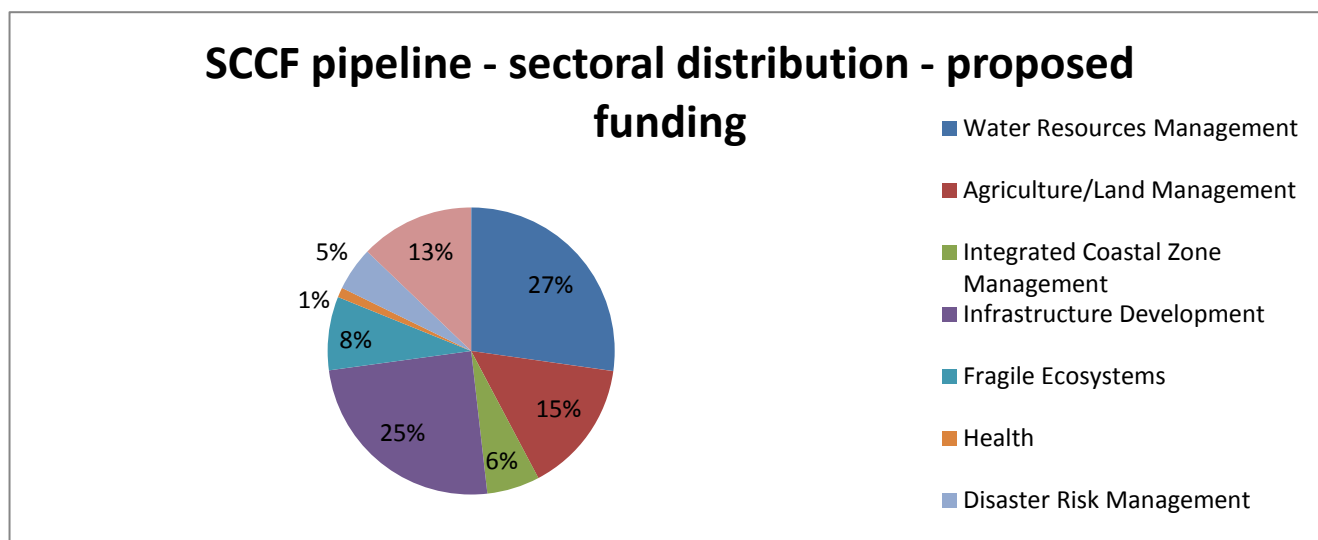


Figure 2: Summarized results for the analysis of the SCCF portfolio and pipeline





Projected needs for the LDCF and SCCF

7. Using the above analysis as a guideline, the sectoral distribution of needs in the LDCF and SCCF respectively - with a replenishment of \$500 million - was estimated as shown in figure 4. Trends in needs are based on the difference between the existing portfolio and indications from NAPAs for the LDCF and the existing pipeline of SCCF projects as indicated from the GEF Agencies.

8. For example, health appears to have a downward tendency in the analysis (from 8% to 1% of the total demand), whereas infrastructure has an upward tendency (from 8% to 25% of the total demand) in the SCCF – this in turn results in a slightly adjusted proposed budget for the sectors compared to the existing portfolio (5% for health and 10% for infrastructure).

9. In general, however, the existing distribution has been given comparatively more weight, as there are still major uncertainties in terms of the precise nature of future demand, especially in the case of the SCCF. Also, the core sectors water management and agriculture have been kept at an unchanged or slightly strengthened proportion of the total under both Funds to reflect that these sectors are likely to continue to play a leading role in the total demand, in particular in Small Islands Developing States (SIDs) and Least Developed Countries (LDCs).

Figure 4: Projected sectoral distribution of funding with a replenishment of \$500 million for both the LDCF and SCCF

LDCF				SCCF		
Agriculture/Food security	\$150,000,000	30%		Water Resources Management	\$150,000,000	30%
Water Resources Management	\$100,000,000	20%		Agriculture/Land Management	\$125,000,000	25%
Disaster Preparedness and Risk Management	\$75,000,000	15%		Infrastructure Development	\$50,000,000	10%
Community Level Adaptation	\$75,000,000	15%		Fragile Ecosystems	\$50,000,000	10%
Natural Resources Management	\$50,000,000	10%		Integrated Coastal Zone Management	\$50,000,000	10%
Health	\$25,000,000	5%		Health	\$25,000,000	5%
Infrastructure	\$25,000,000	5%		Disaster Risk Management	\$25,000,000	5%
				Cross Cutting Issues	\$25,000,000	5%
Total	\$500,000,000	100%		Total	\$500,000,000	100%