adaptation

# STOCKTAKING OF PROGRESS ON INTEGRATING ADAPTATION TO CLIMATE CHANGE INTO DEVELOPMENT CO-OPERATION ACTIVITIES

**Simone Gigli and Shardul Agrawala**

OECD

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## ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

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# Foreword

This paper contributes to the follow-up on the *Declaration on Integrating Climate Change Adaptation into Development Co-operation*, which was adopted by the Development and Environment Ministers of OECD Member countries in April 2006. It provides information on the progress achieved so far in integrating climate change adaptation into development activities of bilateral and multilateral development co-operation agencies and International Financial Institutions.

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# List of Acronyms

| | |
|---|---|
| ACP countries | Africa, Caribbean and Pacific countries |
| ADA | Austrian Development Agency |
| ADB | Asian Development Bank |
| AFD | Agence française de développement |
| AfDB | African Development Bank |
| AusAID | Australian Government's Overseas Aid Program |
| BMZ | German Federal Ministry for Economic Co-operation and Development |
| CaPP | German Climate Protection Programme for Developing Countries |
| CCAIRR | Climate Change Adaptation through Integrated Risk Reduction |
| CDB | Caribbean Development Bank |
| CIDA | Canadian International Development Agency |
| CLIMAP | Climate Change Adaptation Program for the Pacific |
| CRiSTAL | Community-based Risk Screening – Adaptation and Livelihoods |
| DAC | Development Assistance Committee of the OECD |
| Danida | Danish International Development Agency |
| DFID | UK Department for International Development |
| DGIS | Netherlands' Directorate-General of Development Cooperation |
| EC | European Commission |
| EMS | Environmental Management System |
| EU | European Union |
| FY | Financial Year |
| G8 | Group of Eight (Canada, France, Germany, Italy, Japan, Russia, United Kingdom, United States) |
| GAM | ADB Guidelines for Adaptation Mainstreaming |
| GCOS | Global Climate Observing System |
| GEF | Global Environmental Facility |
| GTZ | Gesellschaft für Technische Zusammenarbeit |
| IFI | International Financial Institution |
| IISD | International Institute for Sustainable Development |
| IUCN | The World Conservation Union |
| LDC | Least Developed Country |
| LEG | Least Developed Country Expert Group |
| NAPA | National Adaptation Programme of Action |
| NGO | Non-governmental organisation |

| | |
|---|---|
| Norad | Norwegian Agency for Development Cooperation |
| NZAID | New Zealand Agency for International Development |
| ODA | Official Development Assistance |
| PRSP | Poverty Reduction Strategy Paper |
| RIOCC | IberoAmerican Network for Climate Change Offices |
| SDC | Swiss Agency for Development and Cooperation |
| SEA | Strategic Environmental Assessment |
| Sida | Swedish International Development Cooperation Agency |
| ToR | Terms of Reference |
| UK | United Kingdom |
| UN | United Nations |
| UNDP | United Nations Development Programme |
| UNEP | United Nations Environment Programme |
| UNFCCC | United Nations Framework Convention on Climate Change |
| US | United States |
| USAID | United States Agency for International Development |
| USD | United States dollar |
| VARG | Vulnerability and Adaptation Resource Group |

# Executive Summary

The issue of climate change can seem remote, compared with such immediate problems as poverty, disease, and economic stagnation. Yet, climate change can directly affect the efficiency of resource investments and the eventual achievement of many development objectives. How development occurs also has implications for the vulnerability of societies to its impacts. Partner countries and donors have already initiated a number of activities to integrate adaptation within development activities, although more efforts are clearly needed to ensure systematic integration. To further advance this agenda, the Development and Environment Ministers of OECD Member countries adopted a *Declaration on Integrating Climate Change Adaptation into Development Co-operation* in April 2006.

This paper contributes to the follow-up on the *Declaration*, by providing information on the progress achieved so far in integrating climate change adaptation into development activities of bilateral and multilateral co-operation agencies and International Financial Institutions (IFIs). It draws upon an analysis of publicly available documents from these agencies and institutions, as well as the results of a survey conducted by the OECD Secretariat among climate change specialists in bilateral development co-operation agencies, multilateral agencies and IFIs. The objective of this paper is to provide an overview of composite trends on progress made, and to highlight innovative approaches as well as challenges faced by development co-operation agencies and IFIs in integrating adaptation to climate change within their activities.

## Donor agencies and International Financial Institutions have made considerable progress on *awareness raising on the risks posed by climate change*

Survey responses as well as a large number and variety of publicly available written material indicate that donor agencies and IFIs are quite advanced in raising awareness on the importance of integrating climate change into development activities. Training courses and seminars add to those efforts, even though most of them have a broader environment or climate change focus as opposed to specific measures highlighting the link between adaptation and development. In addition, websites, environmental helpdesks, internal knowledge networks and other initiatives serve to disseminate relevant knowledge and experiences on climate change and thus support the integration of adaptation into development. While almost all agencies undertake internal awareness-raising measures, a slightly lower percentage report such measures directed at external partners in developing countries. A number of agencies, however, seek to raise awareness among external collaborators through the inclusion of climate change (both mitigation and adaptation) in regular policy dialogues with partner country authorities, or the incorporation of adaptation issues in country programming.

## There is now also significant *high-level policy endorsement* within donor agencies and IFIs for the need to integrate adaptation into development co-operation activities

High-level policy endorsement for the need to integrate adaptation into development co-operation activities is an important criterion for monitoring progress in this area. A majority of the surveyed development co-operation agencies and IFIs report having such high-level policy endorsement – at the agency/national level and/or at the international/multi-agency level. In practice, such initiatives range from agreements with broader environmental and development objectives, to climate change initiatives comprising both mitigation and adaptation issues, to agreements specifically aiming at integrating climate change adaptation. The latter, however, are to date rather rare. National or agency-wide high-level policy

initiatives include White Papers on development co-operation, sustainable development strategies, and environment or climate change action programmes. On the international/multi-agency level, initiatives such as the *EU Action Plan*, the G8 *Gleneagles Plan of Action*, the OECD *Declaration* and the World Bank's *Clean Energy and Development Investment Framework* foster the integration of climate change into development activities.

### More efforts, however, are needed to assess the implications of *climate change on development co-operation activities*

While a certain level of awareness of the risks posed by climate change and high-level policy endorsement of the need to take such risks into consideration are clearly important, development agencies need more specific information for implementing effective climate risk management. This paper reviews progress made by donors in three key aspects related to the screening of development portfolios: (i) analysis of the exposure of development investments to climate risks; (ii) assessment of the degree of current attention to climate risks (and climate change) in development strategies, plans, and projects; and (iii) assessment of the specific implications of climate change on core development activities. Analyses aimed at quantifying the degree of exposure of development investments to climate risks indicate that a significant share of development investments might be in activities affected by climate risks. Despite this observation – according to studies by donor agencies and the OECD – the attention paid to climate change in development plans, strategies and projects is almost negligible. Some donors and IFIs have initiated studies and pilot projects to examine the actual implications of climate change on their activities. This process, however, has only just started and therefore little can yet be said about any follow-up actions, *i.e.*, to what extent the findings will lead to a change in development and donor practices.

### The development of *operational measures on integrating adaptation considerations within development activities* is still at an early stage, but some recent progress is nevertheless discernible

Concrete operational measures to integrate climate change in development programmes and projects include programmatic and/or project guidelines to take climate risks into account; response options to climate risks; strategic and/or operational entry points; climate risk assessment tools; and priority ranking of sectors, regions or activities that are climate-sensitive. In general, the work on developing operational measures is still at a very early stage. In some cases, such work is currently being commissioned, or is underway on a pilot basis. In other cases, instruments have been developed but not yet tested nor implemented for mandatory use by staff or partners in developing countries. A few agencies have made further progress in operationalising adaptation, although the approaches used are diverse and often ad-hoc. While some agencies address adaptation concerns within a broader environmental focus, other agencies operationalise adaptation as part of a comprehensive climate change strategy. More and more operational measures are now being developed that focus specifically on adaptation.

### The degree of *cross-fertilisation and collaboration* between agencies and institutions will need to be further enhanced to make the integration of adaptation into development activities more efficient and harmonised

Integrating climate change adaptation into development co-operation operations may be facilitated by using operational instruments developed by other agencies (*i.e.*, cross-fertilisation) such as risk-screening tools or adaptation guidelines, and through collaboration with other agencies and institutions (*e.g.*, engaging in joint analyses such as vulnerability assessments, projects on the ground, and multi-donor technical co-operation). Cross-fertilisation and collaboration can considerably reduce time and efforts

invested in the development of operational measures and contribute to greater donor harmonisation, as is called for by the *Paris Declaration on Aid Effectiveness*. Overall, while the number of collaborative efforts has increased in recent years and is still constantly rising, cross-fertilisation among donor agencies on the issue of integrating climate risks within their core activities is still at an early stage. Greater cohesion and cross-fertilisation across donor agencies and IFIs, less compartmentalisation within governments and donor agencies, and a greater leverage of climate specialists on operational decisions, among other issues, may help to overcome remaining barriers and foster a greater attention to climate risks in development operations.

# I Introduction

Climate change poses a serious challenge to social and economic development. Developing countries are particularly vulnerable because their economies are generally more dependent on climate-sensitive natural resources, and because they are less able to cope with the impacts of climate change. The effects of climate change may be especially critical to the achievement of development objectives related to the most vulnerable groups and communities. Thus, the projected impact of climate change on access to natural resources, heat-related mortality and spread of vector-borne diseases such as malaria, for example, has direct implications for the achievement of several of the Millennium Development Goals (Multi-Agency Report, 2003).

How development occurs, in turn, has implications for climate change and for the vulnerability of societies to its impacts. Adaptation to the impacts of climate variability and climate change therefore needs to be brought into the mainstream of economic policies, development projects, and international aid efforts (Klein, 2002; Agrawala, 2005). In a narrow engineering sense, for example, current and future climatic risks could be taken into account in the siting and design of bridges and other infrastructure. At a policy level, meanwhile, it could involve considering the implications of climate variability and change on a variety of development activities including poverty alleviation, sectoral development, and natural resource management.

Partner countries and donors have already initiated a number of activities in this direction, although more efforts are clearly needed to systematically integrate adaptation within development activities. To further advance this agenda, the Development and Environment Ministers of OECD Member countries adopted a *Declaration on Integrating Climate Change Adaptation into Development Co-operation* in April 2006 (OECD, 2006). In this *Declaration*, they invite the OECD, among other things, "[t]o promote meaningful co-ordination and sharing of good practices on integrating climate change in development co-operation, with the aim of developing guidance for integrating climate change adaptation in the context of development co-operation, in order to facilitate climate risk management and the sharing of tools and experiences".

This paper contributes to the follow-up on the *Declaration*, by providing information on the progress achieved so far in integrating climate change adaptation into development activities of bilateral and multilateral co-operation agencies and International Financial Institutions (IFIs).[1] This paper is not intended as a comprehensive catalogue of activities conducted by various agencies and IFIs, nor is the paper intended to make policy recommendations. Rather, the objective here is to provide an overview of composite trends on progress made, and to highlight innovative approaches as well as challenges faced by development co-operation agencies and IFIs in integrating adaptation to climate change within their activities.

## 1.1 Framework for analysis

The actions being undertaken by donor agencies and IFIs to integrate climate change adaptation in their activities are very diverse and have advanced to varying degrees. This analysis is organised around five key dimensions:

1. The level of effort on *awareness raising on the risks posed by climate change*, both internally within donor

[1] Development co-operation activities undertaken by bilateral and multilateral donors and International Financial Institutions are included in this report. For the purpose of brevity, however, all these entities are simply referred to as 'agencies' in the remainder of this paper.

agencies and IFIs and in consultations with partner countries.

2. The degree of *high-level policy endorsement* within donor agencies and IFIs for the need to integrate adaptation into development co-operation activities.

3. Progress on the *assessment of the implications of climate change on development co-operation activities*.

4. Progress on the development of *operational measures on integrating adaptation considerations within development activities.* This could include, for example, specific tools and instruments to screen for climate risks and to evaluate adaptation options, as well as practical guidance on how to integrate adaptation considerations within core activities; and

5. The degree of *cross-fertilisation and collaboration* between various agencies and institutions, including the sharing of experiences, joint projects, and harmonisation of approaches in this area.

To conduct this assessment, this paper draws upon an analysis of publicly available documents from donor agencies and IFIs, including strategy papers, policy guidance documents, awareness-raising material, and project reports. To complement this information, the OECD Secretariat sent out a questionnaire (see Annex 1) in mid 2006 to climate change specialists in 26 bilateral development co-operation agencies and 10 multilateral agencies and IFIs. The response rate amongst bilateral development agencies reached 77% while that in multilateral agencies and IFIs was 80%. It is important to note that the responses to the OECD survey do not necessarily reflect co-ordinated agency positions. Also, individual responses have not been identified in this paper and only composite trends have been reported. Table 1 provides an overview of the affiliation of survey respondents. An additional input to this analysis is the information related to adaptation activities reported in the "Survey of Agencies' Country Level Activities on Environment and Development" (OECD, 2007) by the OECD DAC Network on Environment and Development Co-operation (Environet) and the Poverty-Environment Partnership Network (PEP) (see Annex 2).

Table 1. **Overview of the affiliations of survey respondents**

| Country | Multilateral agency or institution |
|---|---|
| • Australia: *Australian Government's Overseas Aid Program (AusAID)*<br>• Austria: *Austrian Development Agency (ADA)*<br>• Canada: *Canadian International Development Agency (CIDA)*<br>• Czech Republic: *Ministry of Environment of the Czech Republic*<br>• Denmark: *Danish Ministry of Foreign Affairs, Danida*<br>• Finland: *Ministry of Foreign Affairs*<br>• France: *Agence française de développement (AFD)*<br>• Germany: *Gesellschaft für Technische Zusammenarbeit (GTZ)*<br>• Greece: *Ministry of Foreign Affairs, HELLENIC AID*<br>• Ireland: *Irish Aid*<br>• Japan: *Ministry of Foreign Affairs*<br>• Netherlands: *Ministry of Foreign Affairs, DGIS*<br>• NewZealand: *New Zealand Agency for International Development (NZAID)*<br>• Norway: *Norwegian Ministry of Foreign Affairs, Norad*<br>• Portugal: *Ministerió do Ambiente, do Ordenamento do Território e do Desenvolvimento Regional*<br>• Spain: *Ministerio de Medio Ambiente*<br>• Sweden: *Swedish International Development Cooperation Agency (Sida)*<br>• Switzerland: *Swiss Agency for Development and Cooperation (SDC)*<br>• United Kingdom: *UK Department for International Development (DFID)*<br>• United States: *US Agency for International Development (USAID)* | • European Commission: *DG for Development and Relations with ACP countries*<br>• African Development Bank<br>• Asian Development Bank<br>• Caribbean Development Bank<br>• European Investment Bank<br>• International Monetary Fund<br>• United Nations Development Program<br>• The World Bank: *Climate Change Team* |

# II An Overview of Progress in Donor Agencies and International Financial Institutions

## 2.1 Awareness raising on the risks posed by climate change

Any operational measures to integrate adaptation that can be developed and put in place by development co-operation agencies and IFIs would be predicated on a certain degree of awareness of climate change and the risks it poses to development co-operation. It is therefore of great importance that agencies conduct awareness-raising measures on the risks posed by climate change, both internally and as part of their interaction with partner countries.

The awareness-raising activities on climate change, however, vary considerably across donor agencies and IFIs in terms of emphasis, specificity, scope, and whether they are one time or recurrent. Almost all[2] survey respondents indicate that their agency has undertaken internal awareness-raising measures on climate change. A significant majority[3] of respondents also report on similar measures being undertaken by their agencies in partner countries. Internal awareness-raising initiatives generally rely on a combination of written material and training seminars, while policy dialogues are also used (in conjunction with written material and training courses) to raise awareness on climate risks in partner countries.

The written material being used for this purpose includes publications produced by the research community, the United Nations Framework Convention on Climate Change (UNFCCC) or the agency itself. They include brochures, flyers, posters, website contents, communication briefs, and e-mail distribution of news items on climate change. Some agencies disseminate information on broad environmental issues, such as global warming and sustainable development [*e.g.*, Greece's "Environmental Signals: A Report on Sustainability Indicators" (Greek National Center for the Environment and Sustainable Development, 2003), or Japan's "Kyoto Initiative" (Government of Japan, 1997)]. Several agencies and IFIs have also developed brochures, strategy and position papers outlining the links between their aid programmes and climate change.[4] The UK Department for International Development (DFID) has, for example, designed 13 key sheets, aimed at country offices, on the importance of climate change for poverty reduction and ways for approaching climate change in country programming (DFID, 2004). The German Gesellschaft für Technische Zusammenarbeit (GTZ) has produced a brochure entitled "Adaptation to Climate Change – Causes, Impacts, Responses" which seeks to raise awareness among agency employees and the broader public of the importance of integrating adaptation into development (GTZ, 2005a). The US Agency for International Development (USAID), meanwhile, has designed climate change "country profiles" (see Box 1) for specific recipient countries.

2 96%.

3 80%.

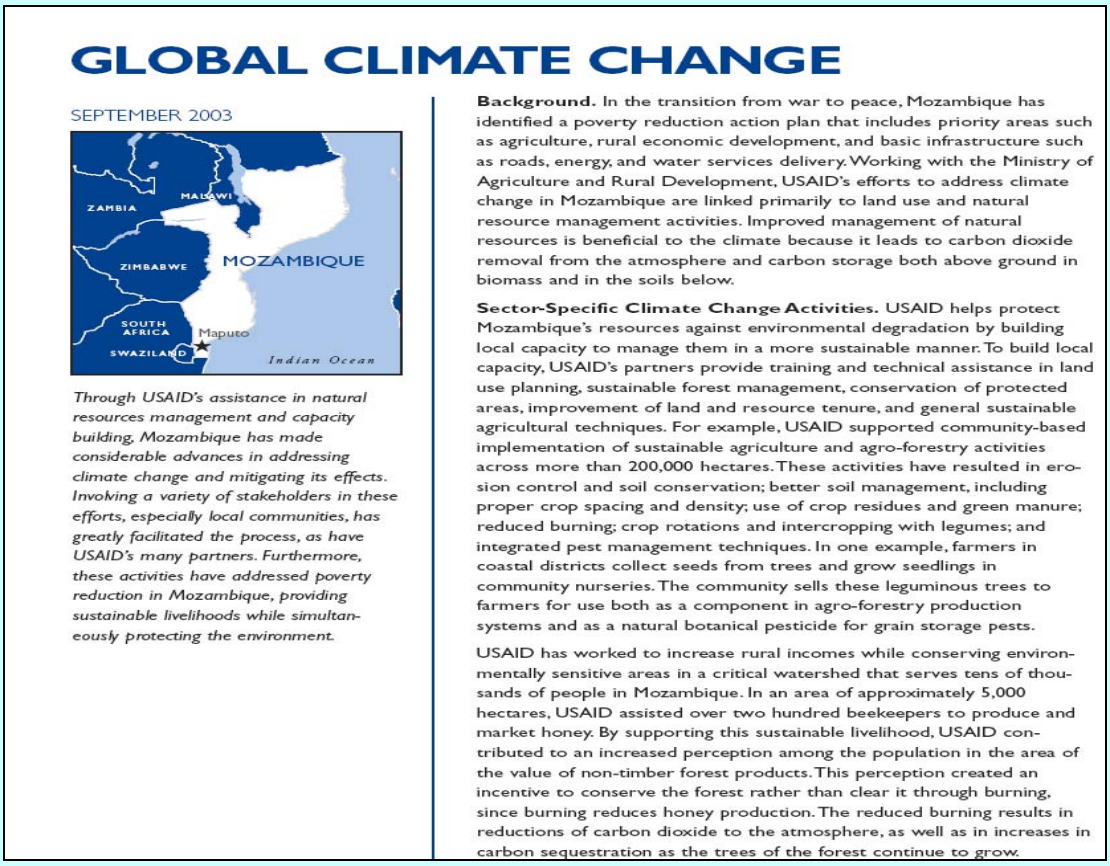
4 AusAID (Australia): "The Australian Overseas Aid Program and the Challenge of Global Warming" (Commonwealth of Australia, 2000); AFD (France): "L'AFD et les changements climatiques" (AFD, 2006); Sida (Sweden): "Sida's position: Climate Change and Development" (Sida, 2004a) and "An Introduction to Sida's Position on Climate Change and Development: A Favourable Climate for Development" (Sida, 2004b); SDC (Switzerland): "Addressing Climate Change through Development co-operation: An Orientation on Climate Change Issues in the field of Natural Resource Management, Livelihoods and Food Security" (SDC, 2005).

Box 1. **USAID climate change country profiles**

USAID has developed global climate change profiles for various partner countries and regions in Africa, Asia and Near East, Europe and Eurasia, as well as in Latin America and the Caribbean. They are often two-page information sheets and include:

- a map of the country/region,
- a brief summary of the project's main objectives and partners,
- background information on the geographic, demographic, economic and environmental factors, and
- information on sector-specific climate change activities and objectives in the respective country or region.

The example below shows an excerpt from the USAID climate change country profile for Mozambique.



GLOBAL CLIMATE CHANGE

SEPTEMBER 2003



*Through USAID's assistance in natural resources management and capacity building, Mozambique has made considerable advances in addressing climate change and mitigating its effects. Involving a variety of stakeholders in these efforts, especially local communities, has greatly facilitated the process, as have USAID's many partners. Furthermore, these activities have addressed poverty reduction in Mozambique, providing sustainable livelihoods while simultaneously protecting the environment.*

**Background.** In the transition from war to peace, Mozambique has identified a poverty reduction action plan that includes priority areas such as agriculture, rural economic development, and basic infrastructure such as roads, energy, and water services delivery. Working with the Ministry of Agriculture and Rural Development, USAID's efforts to address climate change in Mozambique are linked primarily to land use and natural resource management activities. Improved management of natural resources is beneficial to the climate because it leads to carbon dioxide removal from the atmosphere and carbon storage both above ground in biomass and in the soils below.

**Sector-Specific Climate Change Activities.** USAID helps protect Mozambique's resources against environmental degradation by building local capacity to manage them in a more sustainable manner. To build local capacity, USAID's partners provide training and technical assistance in land use planning, sustainable forest management, conservation of protected areas, improvement of land and resource tenure, and general sustainable agricultural techniques. For example, USAID supported community-based implementation of sustainable agriculture and agro-forestry activities across more than 200,000 hectares. These activities have resulted in erosion control and soil conservation; better soil management, including proper crop spacing and density; use of crop residues and green manure; reduced burning; crop rotations and intercropping with legumes; and integrated pest management techniques. In one example, farmers in coastal districts collect seeds from trees and grow seedlings in community nurseries. The community sells these leguminous trees to farmers for use both as a component in agro-forestry production systems and as a natural botanical pesticide for grain storage pests.

USAID has worked to increase rural incomes while conserving environmentally sensitive areas in a critical watershed that serves tens of thousands of people in Mozambique. In an area of approximately 5,000 hectares, USAID assisted over two hundred beekeepers to produce and market honey. By supporting this sustainable livelihood, USAID contributed to an increased perception among the population in the area of the value of non-timber forest products. This perception created an incentive to conserve the forest rather than clear it through burning, since burning reduces honey production. The reduced burning results in reductions of carbon dioxide to the atmosphere, as well as in increases in carbon sequestration as the trees of the forest continue to grow.

Training courses and seminars are also widely used to raise awareness among agency staff. They often take the form of one-day training courses, technical sessions at professional retreats (*e.g.*, in DFID), or lunchtime seminars (*e.g.*, in the Canadian International Development Agency (CIDA), the European Commission (EC), and DFID). Specific training on the link between adaptation and development, however, seems to be rather rare with most of the courses having a broader environment or climate change focus. One example of a training effort specifically targeted at adaptation is the UNDP five-day adaptation certification course which is held at regular intervals for regional staff in all focal areas of the Global Environment Facility (GEF). As of mid-2007, more than 200 members of the UNDP Country Office environment staff have been trained in one-day climate change adaptation training workshops.

Besides written materials and training, a few agencies have mentioned other measures to raise awareness on climate change in the context of development co-operation. USAID, for example, points out that, as an integral part of their missions, staff members discuss the implications of climate change with USAID field-mission representatives based in the host country. In the Netherlands, experts from developing countries that have been chosen as "adaptation cases" pay visits to their colleagues in the development co-operation agency to explain why climate change is part of their core business. The EC has implemented an "Environmental Help Desk" with two full-time consultants providing assistance with integrating environmental issues, including climate change, to staff members.[5] Meanwhile, the UNDP is implementing an "Adaptation Learning Mechanism", a GEF-funded project aimed at accelerating learning from experience to increase the adaptive capacity of a wide range of stakeholders, such as development agencies, NGOs, governments and communities. UNDP also leverages on its internal "Environment and Energy Network" to disseminate relevant knowledge products and experiences on climate change and adaptation. The Swedish International Development Agency (Sida) sponsors the "Tiempo Climate Cyberlibrary", a website that contains numerous resources on climate and sustainable development, acts as an e-library and issues newsletters.[6] Likewise, Switzerland has supported the establishment of the "Knowledge Network on Vulnerability and Adaptation to Climate Change", a multilateral online initiative to support Second National Communications from Non-Annex I Parties to UNFCCC.[7] In addition to these initiatives, a number of bilateral and multilateral agencies have set up the "Vulnerability and Adaptation Resource Group" (VARG)[8], which disseminates existing knowledge and experience on integrating climate change adaptation into development cooperation.

CIDA is an example of a development co-operation agency that is employing a wide range of measures to raise awareness on climate change among agency staff. It holds "Brown Bag" lunches on climate change, training courses (such as the "Environmental Integration Training" with an integrated climate change module), has established a "Climate Change Working Group", and disseminates communications from the Climate Change Development Fund. Furthermore, the agency regularly briefs senior managers and programme analysts, and gives presentations to stakeholder groups, senior management, knowledge sharing networks and interdepartmental groups. A museum exhibit and a film featuring a selection of climate change and development projects are also among its awareness-raising measures.

Training courses and seminars are also used by some agencies to raise awareness among external partners, and it seems that regional development banks are most advanced in this area. The Asian Development Bank (ADB) and the Caribbean Development Bank (CDB) are, for example, conducting, in their respective regions, joint training courses for planning professionals on disaster risk reduction and climate change adaptation issues, as well as capacity building seminars for relevant developing country government agencies and other related stakeholders.

Finally, almost half of the surveyed respondents reported that their agencies include discussions on climate change (in most cases both mitigation and adaptation) in regular policy dialogues with partner country authorities. The relative emphasis on mitigation and/or adaptation in these dialogues depends upon several factors, including the level of interest of policy-makers in partner countries, as well as contextual issues. In general, mitigation issues tend to dominate in dialogues with middle income countries, while adaptation is a priority focus in the case of the most vulnerable partner countries such as the Least Developed Countries (LDCs). In addition, several agencies and IFIs [*e.g.*, USAID, the

5 www.environment-integration.org.

6 www.cru.uea.ac.uk/tiempo/; The portal is a co-production of the University of East Anglia, the Stockholm Environment Institute and the International Institute for Environment and Development.

7 http://ncsp.va-network.org.

8 ADB, AfDB, DFID, DGIS, EC, GTZ, OECD, UNDP, UNEP, and World Bank; www.climatevarg.org.

Netherlands' Directorate-General of Development Cooperation (DGIS), the New Zealand Agency for International Development (NZAID), ADB and UNDP] have indicated that awareness in partner countries is sometimes raised in the course of development co-operation projects and programmes, when adaptation issues are included in country programming. Agencies, for example, support partner countries in preparing National Adaptation Programmes of Action (NAPAs) that identify priority responses to most urgent and immediate adaptation needs.

## 2.2 High-level policy endorsement

There is an interdependent relationship between the degree of internal awareness amongst agency staff of the challenges posed by climate change and the level of policy endorsement at senior levels within the agency for the need to integrate adaptation into development activities. On the one hand, a certain level of internal awareness of the implications of climate change is often a prerequisite before the issue reaches the high-level policy agenda. On the other hand, high-level policy endorsement of the need to take climate risks into account can, in turn, further enhance the level of awareness across the agency and provide both the impetus and the enabling environment for operationalising adaptation activities. Therefore, high-level policy endorsement is an important criterion for monitoring progress in this area.

A majority[9] of the surveyed development co-operation agencies and IFIs report to having such high-level policy endorsement – at the agency/national level and/or at the international/multi-agency level. Such initiatives range from agreements with broader environmental and development objectives, to climate change initiatives comprising both mitigation and adaptation issues, to specific agreements aiming at integrating climate change adaptation.

### 2.2.1 National and agency-level initiatives

There are a number of high-level national policy initiatives with broad environmental objectives which acknowledge the linkages between the environment and development and poverty reduction. They call for a better integration of environmental considerations into development co-operation, for example, by promoting sustainable development. Climate change adaptation is explicitly or implicitly contained within these broader mandates. The "White Paper on the Australian Government's Overseas Aid Program", for instance, identifies climate change and adaptation as one of three priorities for future Australian environment-related development assistance, particularly in the Pacific (Commonwealth of Australia, 2006). The Irish government's "White Paper on Irish Aid" highlights environment as one of four priority issues that inform all aspects of Ireland's development co-operation (Government of Ireland, 2006). Its "Environment Policy for Sustainable Development" strives to "promote environmentally sustainable development that is consistent with the economic, social and environmental needs and priorities of people in developing countries and contributes to poverty reduction" (Irish Aid, forthcoming). Japan, meanwhile, has adopted its "Medium-term Policy on Official Development Assistance" in 2005 to address urgent global development issues (Government of Japan, 2005). This document outlines, among other issues, Japan's efforts in dealing with global environmental problems, including climate change, through suitable development activities (see Box 2). With the goal to advancing the adaptation agenda, the Japanese Ministry of Foreign Affairs has established an "Experts Committee on ODA for Climate Change Adaptation" in September 2006. This Committee developed recommendations for (i) building and enhancing adaptive capacity through development co-operation; (ii) enhancing collaboration among the international community with regard to adaptation activities in developing countries; and (iii) ways in which Japan can contribute to such efforts (see Annex 3). These "recommendations on international cooperation for adaptation to climate change in developing countries" have been adopted by the Japanese government.

9 85%.

Box 2. **Japan's medium-term policy on official development assistance**

In order to address development challenges such as the MDGs, the Japanese medium-term ODA policy identifies four priority areas for action: (i) poverty reduction, (ii) sustainable growth, (iii) addressing global environmental and other issues, and (iv) peace-building. Global environmental problems, including climate change, are thereby seen as "inextricably and comprehensively related to reducing poverty and achieving sustainable growth". The policy aims at ensuring coherent action on challenges such as climate change, environmental pollution and natural disasters by making use of ODA-based initiatives such as the Environmental Conservation Initiative for Sustainable Development (EcoISD), the Kyoto Initiative, and the Initiative for Disaster Reduction through ODA.

With regard to climate change, Japan gives high priority to (i) controlling and reducing greenhouse gases through the use of renewable energy sources and energy saving measures (including assistance regarding the use of the Kyoto Mechanisms), and (ii) adaptation to the adverse effects of climate change (including measures against meteorological disasters). Development co-operation will be provided based on the following approaches and specific actions:

- Capacity development of developing countries to address environmental problems (*e.g.*, supporting human resource development and assisting in accurate environmental monitoring, policy-making, institution-building and equipment-provision).
- Active integration of environmental elements into development plans and programmes.
- Using Japan's guiding role (*e.g.*, raising environmental awareness and encouraging efforts to address environmental problems in developing countries through policy dialogues, various forums, and other appropriate cooperation schemes).
- Co-operation based on broad and comprehensive frameworks (*e.g.*, solving regional and global environmental problems by implementing frameworks that effectively combine various methods of co-operation).
- Application of experience and scientific technology (*e.g.*, using Japanese experience, know-how and technology and co-operating with governments, organisations, research institutes and private companies outside Japan to overcome environmental problems)..

*Source:* Government of Japan (2005).

Other national initiatives with a broad environmental focus include CIDA's "Sustainable Development Strategy 2004-2006: Enabling Change" (CIDA, 2004) and the "Canadian Environmental Assessment Act" (Government of Canada, 1992); Austria's "Federal Act on Development Co-operation" (Austrian Foreign Ministry, 2002); the "Norwegian Action Plan for Environment in Development Cooperation" (Norwegian Ministry of Foreign Affairs, 2006); "A Strategic Vision for Portuguese Development Cooperation" (Portuguese Ministry of Foreign Affairs, 2006); "The European Consensus on Development" (European Commission, 2005a), and the "EU Strategy for Africa: Towards a Euro-African pact to accelerate Africa's development" (European Commission, 2005b).

There are fewer examples of high-level policy endorsement at the national or agency level which focus explicitly on the need to integrate responses to climate change into development activities. The NZAID Environment Policy's second focal area, for example, specifically identifies the integration of "pro-poor environment issues – particularly […] adaptation to climate change […] – into national development planning" as a priority for development assistance (NZAID, 2006). In its strategy paper "The Australian Overseas Aid Program and the Challenge of Global Warming", the Australian government has committed itself to pursue development co-operation activities "that also bring global environmental benefits" and identifies the links between its aid programme and climate change. The programme, among other things, actively supports efforts to

build and share knowledge relevant to adaptation issues (Commonwealth of Australia, 2000). The German Federal Ministry for Economic Co-operation and Development (BMZ) is launching a Climate Action Programme which dedicates one chapter to adaptation activities focusing on infrastructure, water management, agriculture and health. Specific actions under this programme include: (i) integrating disaster prevention and adaptation into all relevant activities of German development cooperation; (ii) launching a programme on adaptation in agriculture including financial support to a research programme; (iii) providing financial support to the Least Developed Countries Fund on Adaptation under the UNFCCC; and (iv) supporting the adaptation pillar of the World Bank's Clean Energy Investment Framework. Other examples include the "Danish Climate and Development Action Programme" (Danida, 2005); "Sida's position: Climate and Development" (Sida, 2004a), and the "UNDP Draft Strategic Plan 2008-2011" which promotes the integration of adaptation as one of four strategic objectives under the UNDP's country office operations (UNDP, forthcoming) (see Box 3).

Box 3. **Addressing adaptation under the UNDP's forthcoming Strategic Plan 2008-2011**

UNDP's adaptation strategy will be implemented in partnership with UNEP, as defined in the UNDP-UNEP Partnership on Climate Change, with the aim to promote development trajectories that anticipate and reduce the expected impacts of climate change. A key result area of this strategy is to promote climate change adaptation by mainstreaming climate change risk management into national development strategies.

- *Outcomes:* Developing countries mainstream climate change adaptation policies into national development plans based on improved understanding of the linkages between climate change and other development issues and gender-differentiated impacts.
- *Outcome indicators:* Number of target countries each year which have:
  - completed comprehensive national vulnerability and adaptation assessments through participatory processes;
  - implemented National Adaptation Plans based on recognised methodologies.
- *Outputs:* Programme to scale-up pilot climate change adaptation projects and provide greater technical support to country programmes. Programme to support countries in developing NAPAs. Approximately 23 LDCs to be targeted for 2008.

*Source:* UNDP (forthcoming).

To date, the United Kingdom has endorsed the greatest number of high-level policy initiatives. As a Member of the OECD and the EU, the UK adopted both the *OECD Declaration* as well as the *EU Action Plan*. Climate change was also made a priority during the UK's EU and G8 Presidencies in 2005, with the *Gleneagles Plan of Action: Climate Change, Clean Energy and Sustainable Development* (G8, 2005) being an important agreement coming out of the G8 Summit. The UK is also a key contributor to the World Bank's *Clean Energy and Development Investment Framework*. Furthermore, the DFID has collaborated with other agencies to prepare the document "Poverty and Climate Change: Reducing the Vulnerability of the Poor through Adaptation" (Multi-Agency Report, 2003), aiming at contributing to a global dialogue on how to integrate adaptation into poverty reduction efforts and follow-up actions. Finally, the recently published *White Paper on International Development* "Eliminating World Poverty – Making Governance Work for the Poor" (DFID, 2006) makes the challenge of finding adequate adaptation options for developing countries a high priority for the government's development goals over the next five years.

### 2.2.2 International and multi-agency initiatives

In addition to endorsement of the need to integrate climate change (adaptation) within development activities at the national and agency-level, there have also been high-level endorsements at the multilateral level. Key policy endorsements include: the European Union's strategy on "Climate Change in the Context of Development Co-operation" and its related "Action Plan 2004-2008" (Council of the European Union, 2004), the "Joint ACP-EU Declaration on Climate Change and Development" (African, Caribbean and Pacific Group of States and Council of the European Commission, 2006), the G8 "Gleneagles Plan of Action: Climate Change, Clean Energy and Sustainable Development" (G8, 2005) and subsequent proposal for a "Clean Energy and Development Investment Framework" (World Bank, 2006a), and the OECD "Declaration on Integrating Climate Change Adaptation into Development Co-operation" (OECD, 2006).

The *OECD Declaration on Integrating Climate Change Adaptation into Development Co-operation* endorsed in April 2006 has been most frequently mentioned by surveyed bilateral development agencies. It was adopted by Development and Environment Ministers of OECD Member countries on the occasion of a Ministerial Meeting in April 2006. In this Declaration, OECD Member countries acknowledge the importance of adaptation for developing countries and poor people due to their particular vulnerability to the adverse effects of climate change and weak adaptive capacity. Adaptation to climate change is not considered a "stand alone" agenda but "also needs to be integrated into development policy-making and planning" (OECD, 2006).

An earlier international initiative is the *EU Action Plan* ("Action Plan to accompany the EU Strategy on Climate Change in the Context of Development Cooperation") for the period 2004-2008. It has been adopted by the Council of the European Union in November 2004 and translates recommendations of the EU strategy into concrete actions, focusing on adaptation to climate change, capacity development, and research. The strategic objectives of this action plan include: (i) raising the policy profile of climate change and examining "synergies at the implementation level between various development related actions under the different multilateral environmental agreements and other international initiatives"; (ii) supporting adaptation to climate change, with one goal being to develop guidelines for integrating climate change into development programmes; (iii) supporting mitigation and low greenhouse gas development paths, including the elaboration of guidelines to facilitate the mainstreaming of low greenhouse gas development into country strategy papers and national indicative programmes; (iv) and developing capacity. The Council of the European Union agreed that "EU Member States and the Commission shall collectively implement the Action Plan in a co-ordinated and complementary manner and in line with their respective development co-operation programmes and priorities" (Council of the European Union, 2004).

Another important multi-agency high-level initiative with presumably far reaching implications on the donor community is the *Clean Energy and Development Investment Framework* (World Bank, 2006a). It is being developed by the World Bank in collaboration with other international financial institutions as a follow-up to the G8 Gleneagles Plan of Action on Climate Change, Clean Energy and Sustainable Development. Apart from dealing with clean energy needs for developing countries and climate change mitigation issues, it also contains an adaptation component addressing "the need for developing countries to adequately adapt to changes in climate and weather variability", particularly the scale of investment needs and the sources for financing of adaptation activities (see Box 4). The Board of the African Development Bank has informally discussed the Framework and is expected to approve it by June 2007. As a first step towards the implementation of the Investment Framework, the AfDB will develop an action plan by the end of 2007.

Box 4. **The Clean Energy and Development Investment Framework: key points regarding adaptation**

***Strategies to adapt to climate change***

- While adaptation activities are, to a large degree, site specific and depend upon each country's circumstances, actions can be better informed by global knowledge and research. Also, adaptation actions must be integrated into national and/or regional plans of development.
- Adaptation will require a mix of transfer of existing technology, new technologies, and the revision of planning standards and systems. People need to be accustomed to the use of the new technologies.
- South-South technology transfer can play a major role in adaptation. The knowledge shared must blend traditional knowledge with the most recent scientific discoveries. There is a need to develop stronger global systems of assessing and sharing knowledge about responses to climate variability.
- Many of the challenges to achieving greater adaptation to climate change are of an institutional nature. To reduce both vulnerabilities and costs of actions, current and future climate variability must be factored into the planning decisions of multiple ministries and mainstreamed into national planning and finance agendas.
- Technology transfer has a significant role to play in adaptation, but there is also an immediate need for knowledge sharing and collective learning of better systems to manage livelihoods in the face of a changing climate. Four elements, therefore, need to be addressed simultaneously: (i) development of information and tools to reduce uncertainty; (ii) improved disaster preparedness; (iii) implementation of existing, cost-effective technologies and infrastructure; and (iv) research and development of new technologies and planning systems.

***Scale of investment needs and sources of financing***

- All developing countries will need financial and technical assistance to adapt to climate change, especially LDCs. The overall annual costs to climate-proof development are likely to lie in the ÙSD 10 to 40 billion per year range of which about a third is associated with public finance.
- Initially, public finance is likely to be the main driver of adaptation. The development of an action plan is suggested that would seek to both prepare better standards and investment in potential high payoff research and development.
- Investment in development is dominated by private investment which is vulnerable to climate risks. It is therefore important to enhance the capacity of the private sector to deal with climate variability and change, particularly by providing adequate information that would help to effectively factor future climate risks into decision-making. New financial instruments are needed, such as grants and concessional finance for early movers in adaptation, new insurance instruments that focus on projected climates and discourage inappropriate practices, and GEF resources that will be used to maximise their catalytic value through critical knowledge development, sharing and piloting.
- The private re-insurance industry needs to work hand in hand with international financial institutions, for example, to: (i) find ways to combine public investment in risk-reducing infrastructure (*e.g.*, to reduce flood risk) with mechanisms to encourage catastrophic insurance through the private sector, and (ii) to develop agricultural risk instruments (for weather and price) which appear promising and should be expanded.
- Ultimately, new financing instruments similar to those for clean energy will need to be explored for adaptation as most developing countries will seek, and require, assistance to meet the additional costs imposed by the need to adapt to climate change. Many innovative ideas within the private sector will need to be initially facilitated through public funding; these include risk sharing and bundling of small projects to achieve economies of scale and access to international mechanisms such as re-insurance. New technologies could be enhanced by the existence of venture capital for technology adaptation.

***Next steps towards adaptation***

- Development of a systematic approach to screening of public investment for the impacts of climate change. […] Public portfolios need to be reviewed for their vulnerability to climate change […].
- Major effort to increase knowledge on the costs and benefits of specific actions for adaptation to existing capital stocks by undertaking a series of country and/or regional assessments in order to climate proof vulnerable countries and populations.

- Development and adoption of a new generation of planning tools and best practice standards and approaches for both natural and build capital that reflect the emerging conditions of climate uncertainty. This offers a tremendous opportunity for collaboration amongst international financial institutions, other international organisations and the private sector.
- The World Bank, will continue its collaboration with UN agencies, other international financial institutions and research organisations, to develop (i) knowledge, institutional capacity, and instruments to facilitate better preparedness for an increase in weather variability and extreme weather events, and (ii) a research programme to climate proof agriculture and water resources, especially in the more climate vulnerable parts of the world.

*Source*: World Bank (2006a).

In general, most high-level policy endorsements are still too recent at the time of writing, and follow-up activities to implement their objectives are still at an early stage. A number of respondents have pilot projects underway and aim at moving towards broader-scale implementation once the pilots have been completed and lessons drawn. Section 2.4, which deals with operational measures to integrate climate change (adaptation), will provide further insight on this. There are also currently few frameworks in place to systematically assess progress on the implementation of these high-level policy commitments, some of which require regular reporting. For example, in the case of the *Danish Climate and Development Action Programme*, annual progress reports are required that serve to monitor the progress made in implementing actions and achieving goals.

## 2.3 Assessment of climate change impacts on development activities

While a certain level of awareness of the risks posed by climate change and high-level policy endorsement of the need to take such risks into consideration are clearly important, development agencies need more specific information for implementing effective climate risk management. A full-fledged analysis is often needed to assess the implications of climate change on specific types of development co-operation activities, such as country, regional or sectoral strategies, or technical co-operation projects. This can also include more specific assessments of the share of development co-operation activities and investments that might be affected by climate change. Also relevant is an analysis of the degree to which current and future climate risks are being addressed as part of current practices. This could, for example, be assessed in terms of how much reference is actually made to climate change impacts and vulnerabilities in country assistance strategies, policy documents, project descriptions and other related documents.

To date, relatively few donors have carried out screenings of their development portfolios, among them the World Bank, GTZ, the Norwegian Agency for Development Cooperation (Norad), the Swiss Agency for Development and Cooperation (SDC), and DFID. The OECD, while not a donor itself, has assessed the exposure of official development assistance flows to climate risks in six developing countries. These screening efforts are reviewed by Klein *et al.* (2007) who compare the main goals, activities, scope and methods of the screenings, and describe key findings as well as recommendations for mainstreaming (see Annex 4 for an overview). Although falling under the umbrella term "portfolio screening", it becomes clear that the screening activities reviewed by Klein *et al.* have been very varied. They range from analyses of agency documents on whether they make reference to climate impacts, to assessments of the exposure of investments to climate risks, to examining the actual implications of climate change on development activities. Sorted by type of portfolio screening, Table 2 presents the extent to which the six portfolio screenings analysed by Klein *et al.* (2007) help address barriers to integrating adaptation into development assistance.

Table 2. **Types of portfolio screenings and key challenges for the mainstreaming of adaptation**

| Type of portfolio screening / Challenges | Review of policies and strategies [Norad] | Programme and project review [World Bank, GTZ, SDC, DFID, (OECD)] | Country case studies [OECD, (World Bank)] |
|---|---|---|---|
| Range of adaptation options considered | ++ | + | ++ |
| Link to political processes | + | + | +++ |
| Identification of synergies and conflicts/contradictions between poverty reduction and vulnerability reduction | ++ | + | +++ |
| Identification of new challenges due to climate change | + | + | + |
| Enabling proactive strategies | ++ | + | ++ |
| Attention to process of mainstreaming adaptation | + | + | + |
| Link to practical ODA activities | + | +++ | ++ |
| Awareness raising on climate-development links | ++ | +++ | ++ |

Note: +++ = high level of attention; + = low/negligible level of attention.

*Source:* adapted from Klein *et al. (*2007).

The remainder of this section reviews progress made by donors in three key aspects related to portfolio screening: (i) assessing the exposure of development investments to climate risks; (ii) assessing the degree of current attention to climate risks (and climate change) in development strategies, plans, and projects; and (iii) examining the specific implications of climate change on their core activities.

### *2.3.1 Exposure of development investments to climate risks*

To date there have been two major efforts to quantify the degree of exposure of development investments to climate risks – one by the World Bank which analysed its own investments, and the other by the OECD which examined investments by all donors in six developing countries. Both studies conclude that a significant share of development investments might be in activities affected by climate risks. When analysing the exposure of the World Bank's investment portfolio to climate risks in six countries, Burton and van Aalst (1999) found that a significant share of the portfolio (up to 62%) is potentially vulnerable to climate change (see Table 3). In a review of the vulnerability of the World Bank project portfolio (sampling projects from FY03 to FY06), it was estimated that 55% of the projects are sensitive to climate risks and roughly 25% are at significant risk (World Bank, 2006a).

Table 3. **Climate change concerns in World Bank country lending portfolios**

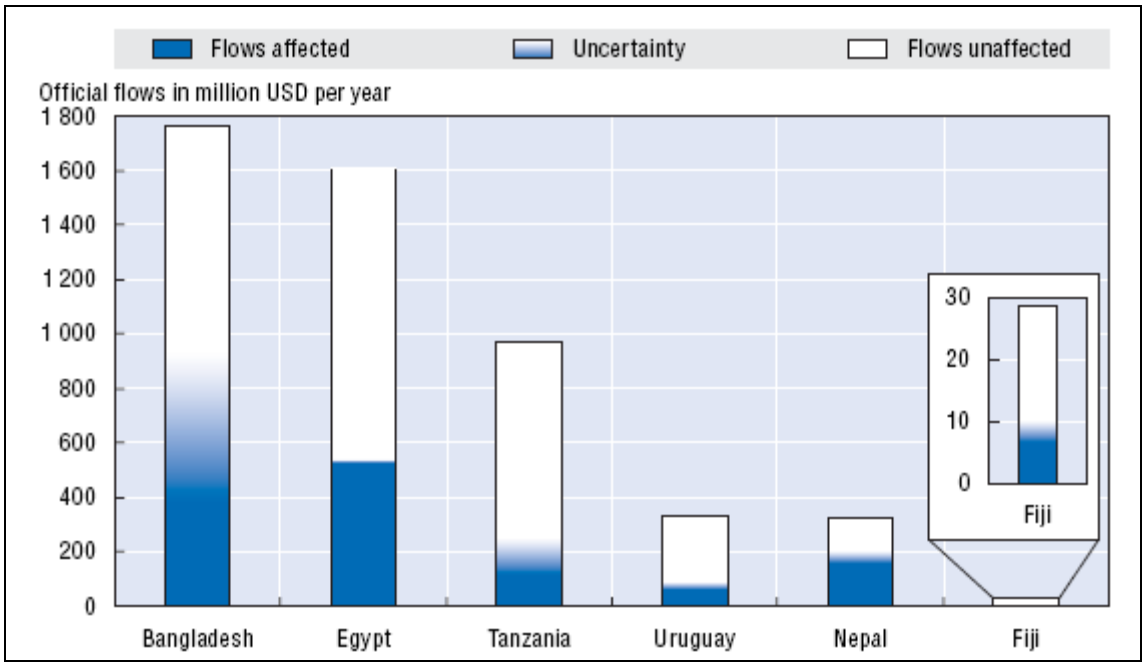
| | Bangladesh | Ecuador | Guyana | PNG | Pacific Islands | Zimbabwe |
|---|---|---|---|---|---|---|
| Number of projects in portfolio 1999 (1994) | 25 (33) | 17 (16) | 6 (8) | 6 (9) | 5 (11) | 10 (15) |
| Total value of projects in portfolio 1999 (1994) (ÙSD million) | 2,838 (2 772) | 672 (853) | 85 (200) | 106 (198) | 56 (101) | 512 (932) |
| Projects vulnerable to climate change 1999 (1994) (% by value) | 45% (39%) | 30% (20%) | 62% (22%) | 30% (31%) | 56% (60%) | 0% (26%) |
| Projects relevant to CC adaptation 1999 (1994) (% by value) | 53% (42%) | 42% (23%) | 62% (22%) | 30% (54%) | 56% (60%) | 17% (42%) |

Note: Portfolios of the six countries discussed in Burton and van Aalst (1999); data are given for fiscal year 1999 and, between brackets, for fiscal year 1994.

*Source:* Burton and van Aalst (1999).

An OECD analysis of official aid flows (ODA and Other Official Flows) across all donors into six developing countries indicates that a significant portion of this aid is directed at activities potentially affected by climate risks, including climate change (van Aalst and Agrawala, 2005). Estimates range from 12-26% of total national official flows in Tanzania to 50-65% in Nepal (see Figure 1). In monetary terms, aid flows at risk from climate change represent half a billion ÙSD of official aid flows in Bangladesh and Egypt, and about ÙSD 200 million in Tanzania and Nepal. In Fiji, while the absolute amount may be low, it constitutes roughly one-third of all aid flows. While there is a risk of oversimplification in any such classification, the analysis underscores the fact that taking climate risks into account is often important for development investments and projects.

Figure 1. **Annual official flows and share of activities potentially affected by climate change**




Note: Based on Creditor Reporting System; Official flows averaged over 1998-2000.

*Source:* OECD (2005).

### *2.3.2 Attention to climate risks in development activities*

The potential significance of climate change for core development activities, as illustrated above, highlights the need to address such risks as part of existing development strategies, plans, and projects. When it comes to the current attention to climate risks within the agencies, a general observation by Klein *et al.* (2007), based on the findings of the examined studies, is that "the awareness of and attention paid to climate change has often been negligible in development agencies", even in areas where climate change is clearly posing risks to the achievement of developing goals.

The OECD, in its cross-cutting analysis of development activities in six case study countries, found that even though some weather and climate considerations are routinely taken into account, not all climate risks are being incorporated in decision-making, even with regard to natural weather extremes. The results of an in-depth analysis of national development plans, poverty reduction strategy papers, sectoral strategies and project documents in climate-sensitive sectors shows that such documents generally pay little or no attention to climate change, and often pay only limited attention to current climate risk. However, even when climate change is mentioned, specific operational guidance on how to take it into account is generally lacking (van Aalst and Agrawala, 2005).

Studies by the World Bank indicate that climate change and the risks it poses to development are rarely addressed in its operations: for example, project design documents mention climate change in only about 2% of the projects (World Bank, 2006a). An earlier analysis of World Bank operations by Burton and van Aalst (1999) already came to the conclusion that climate change and variability are not sufficiently addressed at project and country levels. The in-depth examination of six projects showed that documents relating to the project initiation, preparation and appraisal phases rarely mention existing climate risks. A further country-level assessment in six countries found that the World Bank's Country Assistance

Strategy papers do not address climate change and variability at all and often overlook the risks of natural hazards under current climate conditions.

Assessments by bilateral donors generally come to the same conclusions: For example, in their report for Norad, Eriksen and Næss (2003) state that most documents refer to climate vulnerability only in general terms, mostly in connection with natural disasters. The German BMZ is currently examining all its country strategy papers with the goal of getting a benchmark for the extent to which climate change concerns have been integrated into official development strategies. In a 2001 analysis covering 136 German-funded ODA projects in Africa, however, Klein (2001) found that none of the project descriptions addressed the risks posed by climate change. Only very few of them made reference to climate- and weather-related stresses, such as floods and droughts, but did not systematically plan to prepare for such extremes. The situation, however, has changed considerably in the six years since this study was published. Specifically, during this period six pilot and two full-sized adaptation projects have since either been implemented or are in advanced stages of planning by GTZ. About 10% of CIDA development documents are estimated to make reference to climate change impacts and vulnerabilities. Those documents are supposedly made up mainly of policy documents for countries where climate risks are predominant (*e.g.*, Caribbean development states) and those that have other strong environmental linkages (*e.g.*, documents making reference to agriculture policies).

### 2.3.3 Identification of climate impacts on agency activities

Some donors and IFIs have also initiated studies to examine the actual implications of climate change on their activities. This process, however, has only just started and therefore little can yet be said about any follow-up actions, *i.e.*, to what extent the findings will lead to a change in development and donor practices.

Ongoing efforts to assess the implications of climate change on development assistance activities include the recent report "Climate Change and Poverty: Key Interactions and Critical Measures" commissioned by Norad. In this report, Eriksen *et al.* (2007) identify the linkages between poverty and climate change adaptation and the way in which these linkages can be addressed in development assistance. They explicitly address the question of what development co-operation agencies "should be doing differently from what they are already doing" and provide concrete examples for integrating climate change into ongoing Norwegian development projects (see Annex 5). Findings from this report are expected to influence future Norad policy documents and guidelines. An earlier paper by Eriksen and Næss (2003) lists examples of potential climate impacts on priority areas for Norwegian development activities (see Table 4).

Table 4. **Examples of potential impacts of climate change on priority areas for Norwegian development co-operation**

| Thematic area | Potential impacts of climate change |
|---|---|
| Poverty | • Damage and loss of poor people's livelihood assets (health, access to water, homes, infrastructure)<br>• Increased pressures on disaster management schemes (floods, droughts)<br>• Large funds tied up in climate-related policy responses, risk of long-term set-back to economic growth affecting the poor most severely<br>• Reduced crop yields, effects on regional and local food security<br>• Decreased hydropower potential |
| Environment, energy and natural resources management | • Ecosystem changes may reduce biodiversity and compound existing environmental degradation, in turn reducing adaptive capacity<br>• Natural resources depletion reduces adaptive capacity<br>• Negative effects as climate changes range outside of traditional coping strategies, which are also being marginalized by other policies<br>• Reduced water availability<br>• Increased risk of forest fires<br>• Increased soil erosion, mud- and landslides<br>• Increased damage to coastal ecosystems, coral reefs and mangroves |
| Health, HIV/Aids | • Increased health-related mortality and illness, increased prevalence of vector-borne diseases (malaria, dengue fever)<br>• Children and pregnant women particularly vulnerable<br>• Ill health effects due to declining availability of clean water<br>• Increased risk of malnutrition due to decreased food availability and quality<br>• Increased risks of deaths due to extreme climate events<br>• HIV/Aids increases vulnerability by affecting the most productive part of the population<br>• HIV/Aids reduces the transfer of knowledge on grassroots indicators and coping with climate events between the generations |
| Research and education | • Damage to infrastructure<br>• Loss of livelihood assets may reduce opportunities for education. Natural disasters reduce available time for education; displacement and migration reduce access to education opportunities<br>• Education improves the capacity to access and understand scientific climate information and to use it in a local context<br>• Important to build capacities to research climate impacts and adaptations in developing countries (scenarios, socio-economic analyses |
| Private sector development | • Access to markets, institutions and credit can reduce marginalization of poor and increase assets as buffers against climatic events and changes<br>• A more diverse income base, savings and credit as a buffer to deal with climate impacts<br>• Global and local market liberalization creates winners and losers; opportunities (increased market access for the poor may reduce vulnerability) as well as problems with "double exposure" (high vulnerability to both climate change and market impacts)<br>• Climate change impacts may reduce Foreign Direct Investments due to increased risk. Existence of risk/disaster management systems may help attract foreign investments |
| Governance, corruption, civil society, human rights | • Climate change will put increasing strains (and tie up more resources to) on early warning systems and emergency management structures<br>• Institutions shape perceptions of stakeholders, act as "filters" and affect the ability to take action (affect vulnerability and the design of responses)<br>• Need of accountability, openness, exchange of information, institutional learning processes (what do scenarios mean? etc.) |
| Gender | • Women and children are most vulnerable to climate impacts. More burden on women for upholding household food security may reinforce traditional gender roles, less options for education and alternative activities<br>• Impact on women has direct impact on household food security<br>• Climate change reduces available time for participating in decision-making and income generation activities<br>• Climate-related disasters have larger negative effects on female-headed households |

*Source:* adapted from Eriksen and Næss (2003).

Danida has concluded climate-related assessments in Vietnam, Tanzania and Mozambique and additional assessments on the implications of climate change are already planned in three to four additional developing countries. From this work, a menu of actions and pilot activities for follow-up will be derived. USAID has initiated pilot projects to assess the potential impacts of climate change on particular sectors or projects (*e.g.*, studies looking at coastal development in Honduras, water resources and infrastructure in South Africa, agriculture in Mali, and rural livelihoods in Thailand). These assessments helped develop a guidance manual for development planners which will be further outlined in section 2.4. The Swiss report "Addressing Climate Change through Development Co-operation: An Orientation on Climate Change Issues in the Field of National Resource Management, Livelihoods and Food Security" also looks at the implications of climate change (SDC, 2005). It provides the basis for (i) an orientation of development activities towards climate change, natural resource management, food security and livelihoods, and (ii) the formulation of a capacity building programme aimed, *inter alia*, at defining co-operation priorities with regard to climate strategies. NZAID, meanwhile, specifically targets the impact of climate change on its programmes under its "Cross-cutting Policies Implementation Plan", which includes an environment mainstreaming process. In this context, an in-house workshop is scheduled to determine how partner responses to climate change can best be supported, with adaptation as a key focal area in Small Island Developing States.

In addition, the Netherlands' DGIS and DFID are currently in the process of screening climate change impacts, with Bangladesh being a pilot country for both donors. Besides Bangladesh, DGIS has started to screen risks in Bolivia and the Nile Basin, while DFID is currently in the process of selecting another eight country programmes that are to be involved in climate risk assessments. France's Agence Française de Développement (AFD), Irish Aid and the AfDB indicate that they are planning to commence climate change impact assessments in the near future or provide financial support to programmes that would do so, for example, under the Global Climate Observing System (GCOS) Climate and Development in Africa project.

## 2.4 Operational measures for integrating adaptation

Concrete operational measures to integrate climate change in development programmes and projects include programmatic and/or project guidelines to take climate risks into account; response options to climate risks; strategic and/or operational entry points; climate risk assessment tools; and priority ranking of sectors, regions or activities that are climate-sensitive. Among these various instruments, the work on identification of strategic and/or operational entry points has been identified as a priority by respondents from a little over half[10] of the surveyed agencies and IFIs, followed by the development of programmatic and/or project guidelines to take climate risks into account. About a quarter of the survey respondents also report on work within their agencies to develop tools to assess climate risks and to identify adaptation responses.

In general, the work on developing operational measures is still at a very early stage. In some cases, such work is currently being commissioned, or is underway on a pilot basis. In other cases, instruments have been developed but not yet tested nor implemented for mandatory use by staff or partners in developing countries. A few agencies have made further progress in operationalising adaptation, although the approaches used are diverse and often ad-hoc.

### *2.4.1 Addressing adaptation within a broader environmental focus*

Some agencies and IFIs have embedded adaptation to climate change within broader environmental guidelines or screening procedures where climate change figures among other environmental goals, such as the conservation of biological diversity, the sound management of hazardous wastes, or the

[10] 57%.

protections of wetlands. The Australian Government's Overseas Aid Program (AusAID), for example, has produced an "Environmental Management Guide" to support the integration of environmental issues into development activities. It is "designed primarily as a resource for AusAID staff, contractors and NGOs, development partners and other parties involved in designing, appraising, implementing, monitoring, or otherwise managing Australian aid activities funded through AusAID" (Commonwealth of Australia, 2003; see Box 5). In the case of the Irish development co-operation agency, entry points for integrating environmental aspects into development have been identified in the "Environment Policy for Sustainable Development" (Irish Aid, forthcoming). These entry points include policy dialogues to raise the profile of the environment, general budget support that allows for addressing environmental concerns in development projects, partnerships with civil society organisations to enhance the environmental profile in all cross-cutting development issues, and support of development education to promote the concept of sustainable development. The Ministry of Environment of the Czech Republic has started to integrate its climate strategy into environmental projects and identified strategic entry points for adaptation. As a result, a project in Kyrgyzstan, for example, which originally aimed at monitoring alpine glacial lakes, has become a larger development co-operation project. It now also involves protecting the population from disastrous consequences of glacial lake outburst floods by (i) developing risk maps; (ii) implementing early-warning-systems; and (iii) providing professional trainings to the local population and government staff.

Box 5. **Environmental Management Guide for Australia's Aid Program**

The Environmental Management Guide consists of two parts:

- *Part 1 – AusAID's Environmental Management System* describes the Environmental Management System (EMS); roles and responsibilities of AusAID staff, contractors, NGOs and other parties; actions to be taken during all steps of the EMS; and how the EMS relates to AusAID's activity cycle. The 5-step EMS, which includes "understanding policy and legal settings" (step 1), "environmental assessment and management planning" (step 2), "implementation" (step 3), "monitoring and evaluation" (step 4), and "executive review" (step 5), is designed to be used in conjunction with
- *Part 2 – Environmental Management Guidelines* which contains checklists, procedures and examples to help with integrating environmental issues in program and sectoral policy and with identifying, assessing and managing environmental impacts of all AusAID activities.

*Guideline 1* of the Environmental Management Guidelines identifies five key ways to achieve poverty reduction through environmental management: (1) ensure sound and equitable management of biodiversity and ecosystems; (2) ensure access to safe water and sanitation; (3) improve air quality and limit exposure to toxic chemicals; (4) mitigate the effects of natural disasters and reduce resource based conflict; and (5) mitigate the effects of climate change. The latter should be done, *inter alia*, by assessing vulnerability through the use of scenario planning, and developing appropriate adaptation strategies. *Guideline 2* calls for an effective support of the implementation of multilateral environmental agreements such as the UNFCCC, while *Guideline 3* aims at identifying possible environmental impacts of development activities with the help of four environmental marker questions. The required Environmental Impact Assessments outlined in *Guideline 4* are to assess the impact of a proposed activity against a checklist. A sample checklist is provided for infrastructure activities. *Guideline 5* identifies the key steps involved in developing an environmental management plan, and *Guideline 6* addresses important environment-development questions arising from projects carried out by NGOs under the assistance of AusAID.

*Source*: Commonwealth of Australia (2003).

Meanwhile, in order to facilitate the integration of adaptation to climate change into development planning processes, UNDP and CIDA have separately started to develop a Strategic Environmental Assessment (SEA) approach to climate change adaptation. While SEA is a broadly applied and well recognised approach, it has not sufficiently addressed climate change risks. Main elements of the UNDP approach, based on the four steps of the SEA, are presented in Annex 6.

### 2.4.2 Operationalising adaptation as part of a comprehensive climate strategy

Adaptation to climate change is one of the priority areas of the German Climate Protection Programme for Developing Countries (CaPP) initiated in 1993 (see Box 6). The programme aims at integrating issues related to climate change mitigation and adaptation into German development strategies and projects. It provides national and regional studies, trainings and workshops, conceptual and methodological studies on fundamental issues of climate protection in development countries, and policy studies on long-term climate protection.

Box 6. **Adaptation activities under the German Climate Protection Programme for Developing Countries (CaPP)**

CaPP helps developing countries to adapt efficiently and appropriately to changed climatic conditions. The objective is to enhance adaptive capacity and minimise vulnerability to climate impacts through the identification of response options, for example, in the fields of

- safeguarding natural resources;
- rural development;
- disaster mitigation;
- food security; and
- management of water catchment areas, water resources and coastal zones.

Building upon the results of analyses of adaptation measures in ongoing projects, guidelines for the integration of further measures into project planning and implementation, and results monitoring are developed.

Acting in close cooperation with the GTZ partner country authorities, CaPP undertakes country-specific and regionally focused measures to foster adaptation to climate change. A pilot project for sustainable rural development in India, for example, has identified the water, agriculture and forestry sectors as most vulnerable to the adverse impacts of climate change. Having the improvement of livelihoods and adaptive capacities of rural communities in drought-prone areas as an overall goal, project activities include (i) development and testing of technical adaptation solutions for integration into public watershed and forestry management programmes, (ii) development and implementation of financial instruments, *i.e.*, micro-insurance and weather derivatives for climate risk management, (iii) capacity building to strengthen the adaptive capacities of the communities, and (iv) process monitoring, documentation and dissemination of the developed models for large-scale implementation.

*Sources*: GTZ (2005b); GTZ (2006); www.gtz.de/en/themen/umwelt-infrastruktur/umweltpolitik/3958.htm.

A more recent example of attention to adaptation as part of a comprehensive climate strategy is the "Danish Climate and Development Action Programme" (Danida, 2005), which was launched in 2005 with the aim of developing an approach for "climate proofing" of Danish development co-operation. This approach is used as a practical tool for screening of development plans and programmes in various contexts and at various levels (Halsnaes and Troerup, 2006). It identifies entry points ("windows of opportunity") and initial screening points (see Table 5) for the integration of climate change in the context of:

- Multilateral development co-operation, thus addressing multilateral departments in the Ministry of Foreign Affairs and relevant Danish missions and embassies dealing with multilateral organisations and international non-governmental organisations (NGOs);

- Bilateral development co-operation, including country programmes (country strategies and annual consultations) and sector programmes (programme development and annual programme reviews), thus addressing Danish embassies in partner countries; as well as mixed credit projects, thus addressing the mixed credit unit in the Ministry of Foreign Affairs.

Danida's Climate Change Screening Note, designed for use by Danida field-mission representatives, contains key information relevant for high-level consultations, the preparation of country co-operation strategies, sector programmes and annual programme reviews (see Annex 7). As the "Danish Climate and Development Action Programme" (Danida, 2005) is structured along the lines of the "EU Action Plan to accompany the EU Strategy on Climate Change in the Context of Development Co-operation", it recommends specific actions on:

1. Raising the policy profile of climate change in multilateral and bilateral development co-operation to address adaptation to and mitigation of climate change;

2. Integrating adaptation to climate change in development cooperation programmes;

3. Integrating climate change mitigation in the context of development cooperation programmes; and

4. Developing capacity to address the challenge of climate change and take appropriate actions in development cooperation programmes and national programmes in partner countries (see Annex 8 for an overview of concrete actions).

### 2.4.3 Operational measures with a specific focus on adaptation

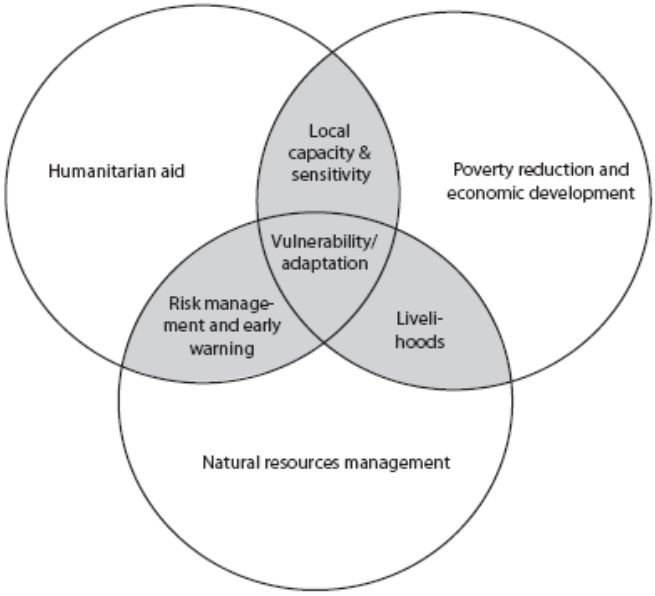
Norad has commissioned a paper outlining the links between climate change adaptation and the Norwegian development co-operation (Eriksen and Næss, 2003). This report identifies three strategic entry points for adaptation at the interfaces of the main areas of development co-operation: humanitarian aid, poverty reduction and economic development, and natural resources management (see Figure 2). Livelihoods, local capacity and sensitivity, and risk management and early warning are identified as the three general strategic entry points for adaptation in Norwegian development co-operation.

Table 5. **Danish Climate and Development Action Programme**

| Development co-operation | Entry points | Initial screening points |
|---|---|---|
| **Multilateral** | • Annual negotiations with UN organisations, international financial institutions, regional organisation, international NGOs, and other multilateral partners.<br>• International development conferences.<br>• Negotiations of Multilateral Environmental Agreements. | • For annual consultations, identify whether the organisation has a policy or action programme on climate change. Does the organization implement activities relevant for adaptation and mitigation? Are investment projects 'climate proofed'?<br>• Stress the importance of in-country ownership and aid coordination of projects related to climate change activities, *e.g.*, GEF funded projects. This requirement is stressed as being universal for aid cooperation. |
| **Bilateral**<br>***Country programmes*** | • Participation in PRSP preparation and other relevant national planning processes.<br>• Preparation of Country Strategies for development cooperation.<br>• High-level consultations on development cooperation. | • Determine country vulnerability and risks from climate change and extreme weather (*e.g.*, coastal areas, river deltas, fragile ecosystems, snow capped mountains, and dependency on agriculture, forestry, and fisheries).<br>• Has the country submitted a national communication to the UNFCCC? What are the main issues concerning vulnerability, adaptation and mitigation in the national communication?<br>• Has the country or is the country in the process of preparing a NAPA?<br>• Are climate change concerns included in the PRSP? If so, how are the concerns relevant for the Danida country assistance strategy?<br>• Has specific country studies been undertaken in relation to climate change and adaptation? |
| ***Sector programmes*** | • Sector planning and sector programme reviews.<br>• National sector working groups/sector policy development processes.<br>• Climate change considerations will be integrated within each main sector supported through the bilateral assistance. As sectors become fully integrated with national development frameworks, the integration of climate change issues will be coordinated through the national sector policy.<br>• Together with national partners and other development partners, Danida may support the conduct of general or sector specific vulnerability assessments depending on identified needs, *e.g.*, through strategic environmental assessments. | • Address climate change concerns in Terms of Reference (ToR) of relevant sector missions.<br>• Identify sector specific climate-friendly approaches and issues of vulnerability that may pose risks to the programme objective and outputs.<br>• Identify information relevant for climate change in national sector policies and strategies.<br>• Identify sector relevant information, if any, in national communications to UNFCCC.<br>• Use information prepared for country level climate change assessment (chapter 6). If this has not been prepared then use the national level check lists as well. |
| ***Mixed credit projects*** | • Climate change screening together with the mandatory environmental screening of proposed projects. | • Include climate change risk assessment in ToR for project appraisal/feasibility.<br>• Identify information relevant for climate change in national sector policies and strategies.<br>• Identify relevant information, if any, in national communications to UNFCCC. |

*Source:* Danida (2005).

Figure 2. **Interfaces between strategic areas of development co-operation representing the entry points for adaptation**




*Source:* Eriksen and Næss (2003).

Beyond the three general strategic entry points, a list of particular areas or measures is given that can serve as key entry points for adaptation measures (see Table 6).

Table 6. **Examples of entry points for climate change adaptation**

| Livelihoods | Local capacity and sensitivity | Risk management and early warning |
|---|---|---|
| • Economic opportunities for the poorest, including seasonal migration labour<br>• Climate considerations in economic and infrastructural development<br>• Access to, and viability of, communal resources and biodiversity (including forest products)<br>• Processing and marketing of local products<br>• Health and education<br>• The role of local knowledge in economic development<br>• Women's coping mechanisms, and the 'informal' based mechanisms | • Integration between 'traditional' and 'modern' agricultural and pastoral technologies and management systems<br>• Linkages between local 'informal' institutions and authorities<br>• Diversity of crops, agrobiodiversity<br>• Integration of adaptation into government department activities<br>• Land use planning and infrastructure planning<br>• Seed and input distribution, in particular local seed varieties and inputs<br>• Local research on crops, livestock and economic development that are adapted to the local climate | • Early warning systems<br>• Local disaster response strategies (national and local institutions)<br>• Natural resource management based protection (mangroves, water catchments)<br>• The space of local climate information as well as meteorological and climatological capacities of national institutions<br>• National adaptation plans and vulnerability assessments<br>• Coastal defences, urban drainage and water supply, hydroelectricity, flood defences |

*Source:* Eriksen and Næss (2003).

USAID has recently released "A Guidance Manual for Development Planning" that aims at ensuring effective integration of adaptation thus rendering development activities fully appropriate under both climate variability and change (USAID, 2006). It is aimed at staff and partners to consider the impacts of climate change, the nature of those impacts and appropriate adaptation or response options, and has undergone a test phase in four pilot countries. This guidance manual outlines a six-step approach (to be applied by project planners in planning and designing development projects). The following six steps are meant to be fully integrated into the typical project development and design process:

- *Step 1 (screening)*: USAID staff in developing country missions examine the project and assess whether it could be adversely affected by climate variability and change. If the result of this preliminary assessment is that the integrity, effectiveness or longevity of the project are compromised, stakeholders should be consulted and, with their agreement, the next steps should be addressed.

- *Step 2 (identify adaptations)* suggests that USAID staff, in collaboration with stakeholders and external experts, identify possible adaptation options, *i.e.*, alternative designs or management practices that are susceptible to reducing vulnerability to both climate variability and change.

- *Step 3 (conduct analysis)* aims at determining whether the adaptation options identified in the previous step actually contribute to reducing vulnerability. It thereby focuses on examining the effectiveness, costs and feasibility of implementing these options based on criteria such as (i) the capability of delivering services under the last 30 years of observed climate, the largest extreme event recorded, and under projected climate change; (ii) the costs of implementing alternative options; (iii) the consequences alternative options would have on other systems (*e.g.*, the environment or adjacent regions); and (iv) the feasibility of implementing alternative adaptation options taking into account legal, institutional, cultural and other barriers.

- *Step 4 (select course of action)*: In order to increase acceptance and facilitate implementation, all key stakeholders are to be made part of the decision-making process as to whether and what adaptation options are to be implemented. Stakeholders could be brought together, for example, by means of meetings or workshops where all options are clearly outlined along with their advantages and disadvantages resulting from previous analyses. Decision-making could then be based on techniques such as cost-benefit or multi-criteria analyses, or informal discussions guided, for instance, by an evaluation matrix that would also allow stakeholders to clearly see the results of their talks. Table 7 shows such a matrix for evaluating adaptation options, representing the outcomes of a stakeholder meeting in Polokwane, South Africa (held on 23 May 2006). It is intended to help organising information and enable stakeholders to consider all the pros and cons of adaptation options at one time.

Table 7. **Sample matrix for evaluating adaptation options in Polokwane, South Africa**

| Adaptation option | Effectiveness | Cost | Technical feasibility | Social and cultural feasibility | Speed |
|---|---|---|---|---|---|
| Recycling of urban water | Medium | High | High | Medium | High |
| Reallocation of dam yield | Medium | High | High | Medium | High |
| Water conservation and demand management existing | High | Low | High | High | High |
| Building of new dam | High | High | High | Medium | Low |
| Reuse of mining water | Low | High | High | High | Medium |
| Expansion of well fields | Low | Low | High | High | High |
| Rainwater harvesting | Low | Low | High | High | High |
| Level of service/future | High | Low | High | Low | Medium |
| Conjunctive use | Low | Low | High | High | Medium |

Note: Evaluation options were assessed based on their effectiveness in increasing supply or reducing demand; cost; technical, social and cultural feasibility; and speed of implementation. A high score is better than medium which is better than low; with this, however, not being the case for costs, where a low score is most preferable.

*Source:* adapted from USAID (2006).

- *Step 5 (develop implementation plan)* would follow once an agreement on the adaptation options to be implemented is achieved. An implementation plan would outline the next steps towards implementation, identify responsible staff and organisations, set the timeline for implementation, and identify resource needs related to the process. This step may also help in determining whether the identified adaptation options are still appropriate for implementation by USAID or whether they would be better followed up by other donors. Implementation as such would then consist in (i) redesigning the project in order to integrate climate variability and change; (ii) seeking the necessary approvals; (iii) developing the capacity needed to implement the project; and (iv) investing the necessary financial and other resources.

- *Step 6 (evaluate the adaptation):* Once the adaptation options have been implemented, the Guidance Manual envisages that activities are evaluated. Shortly after step 5 has been finalised, a first evaluation can look at whether the identified options have actually been put in place, what unexpected problems were arising in the implementation process, and whether costs were exceeding anticipated ones. A further evaluation of the effectiveness of measures can take place after a longer period of time. Such an evaluation should assess whether the project has delivered the intended benefits and whether it causes adverse outcomes that were not anticipated, *e.g.*, in form of negative environmental externalities. This last step can also contribute to reviewing the six-step approach itself, thus providing suggestions for improvements useful for future project planning and design.

In 2002, the Asian Development Bank has launched a regional technical assistance programme to support its "Climate Change Adaptation Program for the Pacific" (CLIMAP) in integrating adaptation to climate variability and change into development planning and management through risk reduction (ADB, 2002; Annex 9 outlines the ADB technical assistance framework detailing project design, performance indicators and targets, monitoring mechanisms, as well as assumptions and risks underlying the respective activities.) The technical assistance programme has been developed to ensure mainstreaming at two distinct levels: (i) at ADB level, where climate change is to be integrated into ADB strategy, programme and project operations; and (ii) at the country level. There, the "Climate Change Adaptation through Integrated Risk Reduction (CCAIRR)" framework and methodology – a risk-based approach designed to help integrate adaptation into national development planning, sector programmes and projects – has already been tested in two Pacific Island member countries, the Cook Islands and the Federated States of Micronesia (ADB, 2005). The assessment of risks arising from current climate variability and future climate change is made an integral part of development activities and has in the case study countries been demonstrated by "climate proofing" infrastructure and community development projects (see Box 7). To advance the integration of adaptation into ADB Pacific Department operations, Guidelines for Adaptation Mainstreaming (GAM) have been developed (ADB, 2003). They identify the key operational stages for integration, the tools to apply, key actions, and the expected outputs (see Annex 10).

Box 7. **ADB's climate risk profiles of case study countries**

Risk is formally defined as the combination of the consequence of an event and the likelihood (*i.e.*, probability) of that event. The likelihood components of climate-related risks in the Pacific Island case study countries are evaluated for both present day and future conditions while changes into the future reflect the influence of climate change. The risk events for which current and future likelihoods are evaluated are extreme rainfall events (both hourly and daily), drought, high sea levels, strong winds and extreme (high) air temperatures. Tropical cyclone frequencies over the past century are also examined. In addition, some climate-related human health and infrastructure risks are investigated.

For both the Cook Islands and the Federated States of Micronesia, climate risk profiles have been prepared. It was found that climate-related risks facing both the infrastructure projects and the communities are already substantial, but in all cases are projected to increase considerably as a result of increases in climate extremes and variability. It was also found that, if "climate proofing" is undertaken at the design stage of infrastructure projects, it is possible to avoid most of the damage costs attributable to climate change. Cost effectiveness can be further enhanced if environmental impact assessments and related procedures require that all development be "climate proofed". "Climate proofing" communities can also be cost-effective if planning and regulatory measures take into account both current and future climate-related risks.

*Source*: ADB (2005).

The development of climate change risk screening tools is currently underway in some donor agencies and IFIs. The Swiss Agency for Development and Cooperation (SDC, in collaboration with the International Institute for Sustainable Development (IISD), the World Conservation Union (IUCN), and the Stockholm Environment Institute) developed CRiSTAL, a participatory tool for "Community-based Risk Screening – Adaptation and Livelihoods". CRiSTAL is a software tool created to assist local communities, project planners and managers to assess climate risks in planned or ongoing development projects, and to improve decision-making processes. The overall goal is to maximise adaptation opportunities and minimise mal-adaptation based on a systematic understanding of climate change impacts on livelihoods. CRiSTAL thus particularly helps to (i) target aspects of a particular project that are directly related to current coping and adaptive capacity at the community scale; (ii) evaluate the

specific effect of project activities on this capacity, and (iii) determine changes that could be made to improve the project's effect. All field tests have been completed in 2006 (see Box 8) and the tool is now available for wider application.

Box 8. **Experiences from CRiSTAL field tests**

Apart from field projects in Central America, Tanzania and Bangladesh, CRiSTAL was tested in the Inner Delta of the Niger River in Mali which is the widest continental wetland in West Africa and constitutes an area of remarkable biological diversity. There, the tool identified drought, flooding and extreme heat as the main climate hazards in the project area. The impacts of these hazards are (i) crop damage, loss of trees and social conflicts caused by drought; (ii) surface water scarcity, reduced fish stocks and income loss due to flooding; (iii) sick or weak livestock; and (iv) reduced work and unemployment from extreme heat.

The test showed that the floodplain management project in Mali will have positive impacts on communities' ability to deal with climate change impacts and particularly on natural resources, physical capital, social capital and human resources. The test also allowed participants to identify gaps and accordingly revise four indicators of the project relating to the support needed for better adaptation strategies to climate change.

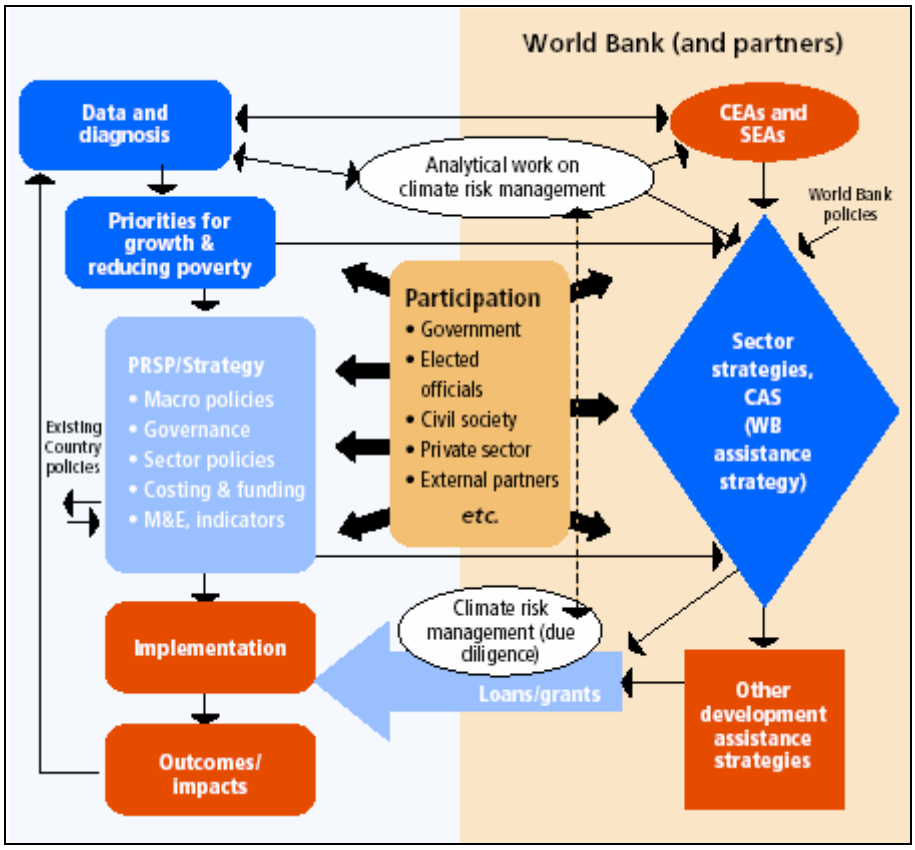
The lessons learned from field testing showed that:

- CRiSTAL helps raising awareness on climate change issues;
- provides an entry point for discussing observations of climate variability and the impacts of climate change;
- demonstrates the links between climate change, people's livelihoods and potential impacts of project activities on adaptive capacities; and
- improves people's participation in adaptation activities through participatory project analysis, adjustments, and use of the tool.

*Sources*: www.iucn.org/climate; www.sei.se.

In order to better address climate risks in Bank operations and make development investments more resilient to climate variability and change, the World Bank is striving to enhance its climate risk management by (i) doing further upstream analytical work, *e.g.*, to help define priorities; (ii) integrating climate risks into country dialogues; and (iii) integrating climate risks into projects (see Figure 3) (World Bank, 2006b).

Figure 3. **How climate risk management considerations feed into World Bank Group sectoral plans, country strategies, and operations**




*Source:* World Bank (2006b).

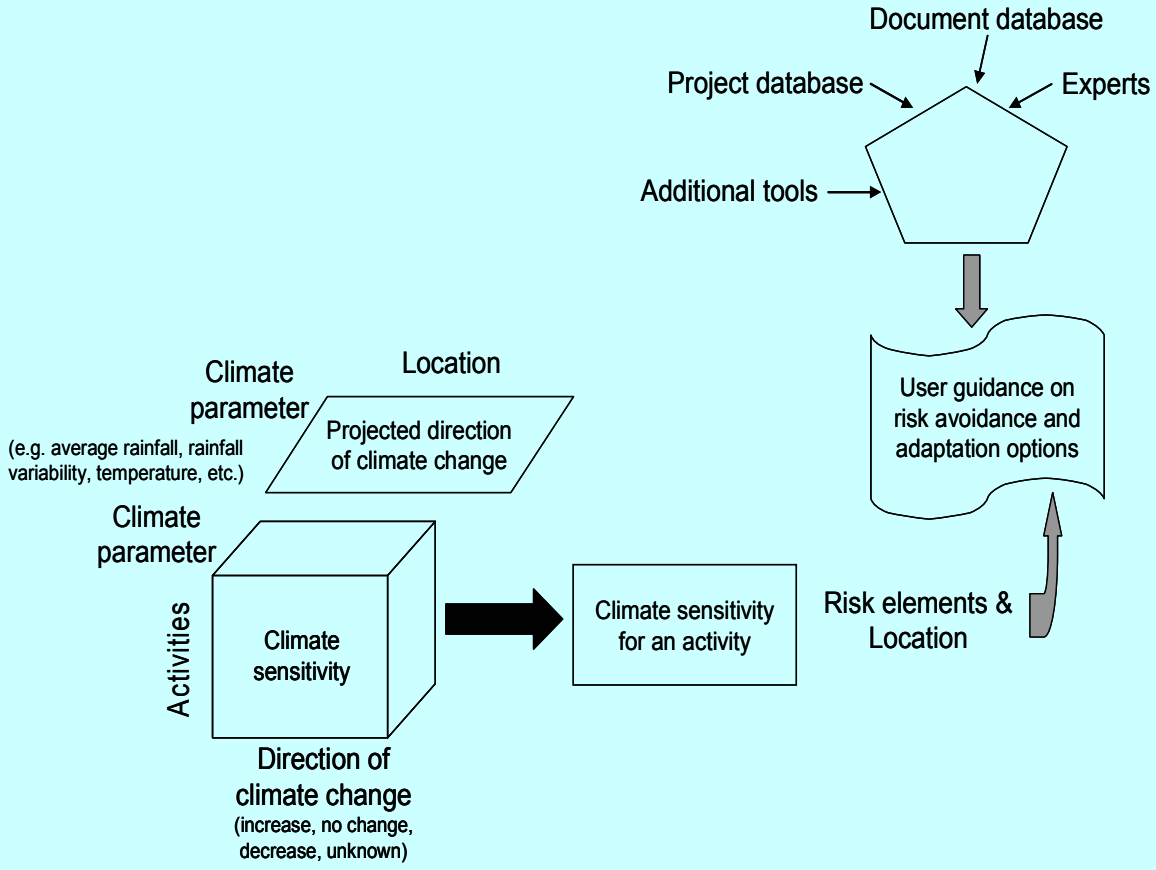
The integration of climate aspects into all World Bank project phases should be facilitated by the use of a risk screening tool that helps quickly assess whether a development project, investment, or activity might be at risk from climate variability or change. Initially, Burton and van Aalst (2004) proposed such a tool (derived from the model for environmental impact assessments) to allow for a routine climate risk classification at the beginning of the project cycle. Development of the tool has since progressed and ADAPT ("Assessment and Design for Adaptation to Climate Change – A Prototype Tool") has recently been designed for use by project developers and assessors from multi- and bilateral donor agencies and recipient countries, as well as NGOs (see Box 9). ADAPT is a web-based tool whose goals are to (i) raise the profile of adaptation to climate change in project planning, (ii) identify the level of risk in a project by a simple five-level classification, and (iii) guide project managers to options that minimise risks where necessary. While, in the short term, the tool can help identify investments in climate-sensitive regions and sectors, in the longer term it is expected to become a standard risk-screening tool for World Bank projects (World Bank, 2006b; Noble, 2005a and 2005b).

Box 9. **ADAPT: the World Bank climate risk screening tool**

ADAPT is specifically tailored to project managers' needs by providing user guidance on risk avoidance and potential adaptation options. It brings together the expanding database of information on climate variability and change. The tool is initially being designed and implemented in Excel but will later be converted to a web-based script.

Users are posed a series of questions about their projects and based on a simple description of the project and its location the tool then provides advice based on selected climate scenarios and current trends, as well as best expert assessments of relevant activities and sensitivities. The tool, for example, assesses whether projected climate changes might increase or reduce risks arising from climate and provides an explanation of those changes. A composite map representing climate change for each variable over the next 20 to 30 years will be prepared. Results of the assessment are summarised for the user as a series of warning flags (in red, yellow, orange, green, or blue) that identify areas of concern or opportunity. The tool also points project designers towards resources – relevant projects, technical literature, and experts – that may be helpful in moving toward the next step in due diligence.

**Framework for ADAPT – a screening and design tool:**




*Box 9 continued over page.*

*Box 9. continued.*

**Warning flags and levels of advice provided:**

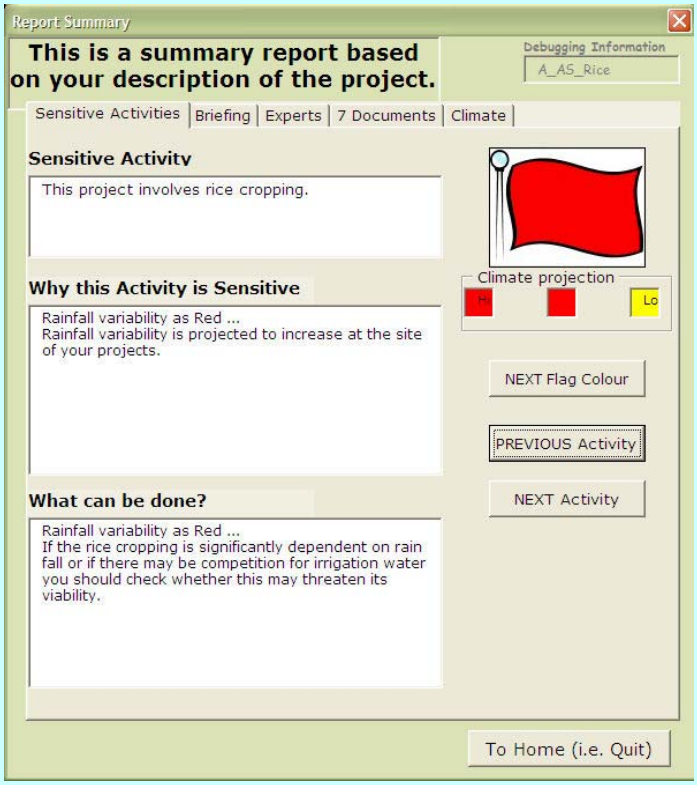
Red flag – adaptation issues are important and must be taken into account

Yellow flag – some concerns that should be checked

Orange flag – Not enough known to assess

Green flag – No adaptation issues foreseen

Blue flag – Positive action for adaptation

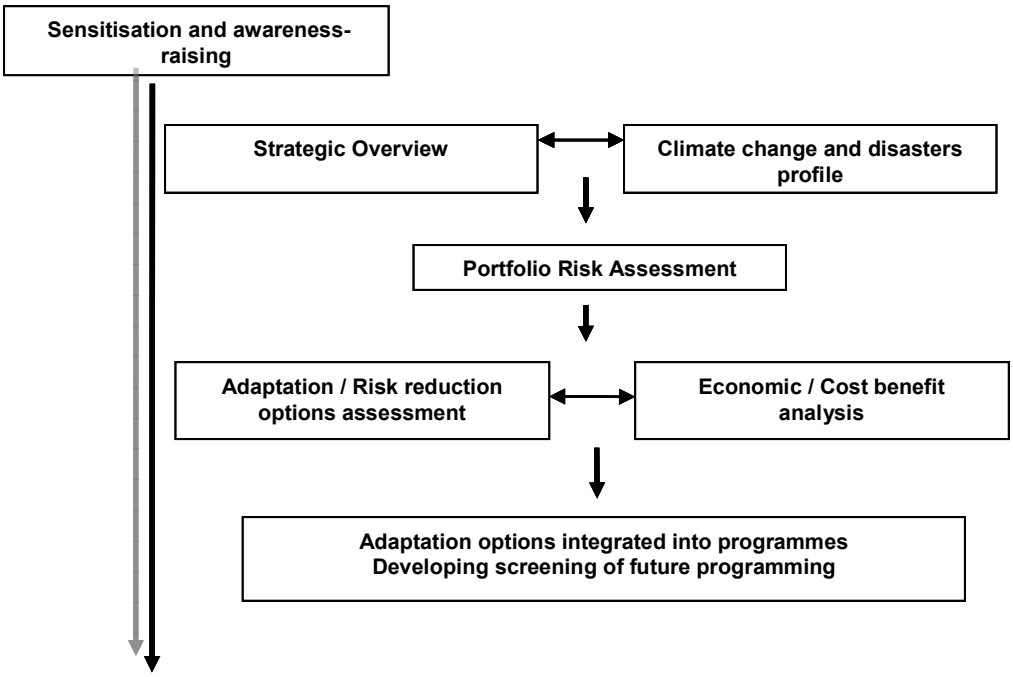



*Sources*: World Bank (2006b); Noble (2005a and 2005b).

DFID is also currently developing and piloting a climate risk management methodology aimed at reducing climate-related vulnerability by systematically "assessing and addressing adaptation" in development activities. It will feed into country assistance planning by assessing the implications of adaptation options for resource allocation by DFID country programmes. The study will quantitatively assess the costs and benefits of adaptation options and the business-as-usual option in relation to development investments most vulnerable to climate change. The ORCHID (Opportunities and Risks from Climate Change and Disasters) process is designed to raise awareness and interest of the importance of climate change adaptation among agency staff and partners, and to help them better determine the opportunities and risks of adaptive responses. Complex decision-making processes under uncertain information and data gaps may thus be facilitated. On a country basis, ORCHID helps screen ongoing and planned development projects and programmes, as well as national plans and strategies. Based on climate and hazard profiles, it identifies activities at high risk from climate change and those that present good opportunities for vulnerability and risk reduction. It scopes out adaptation options and makes recommendations on the basis of the project's impacts on vulnerability, cost-effectiveness and feasibility. Figure 4 illustrates the main elements of the ORCHID climate risk assessment. Bangladesh, being a pilot country for ORCHID (see Box 10), serves to further refine the methodology so that it can subsequently be applied in other country programmes as well (Tanner *et al.*, forthcoming; [11]).

[11] www.ids.ac.uk/ids/pvty/ClimateChange/pdfs/orchidfinal.pdf.

Figure 4. **Main elements of the ORCHID climate risk assessment**




*Source:* Tanner *et al.* (forthcoming).

Box 10. **Piloting ORCHID: Assessing climate risks in Bangladesh**

DFID is currently piloting the ORCHID process in Bangladesh, a country with significant levels of poverty which is already affected by multiple climate-related hazards culminating in frequent disaster events. However, climate change and its adverse impacts are little reflected in major national policies and programmes. Scientific inputs have generated estimates of how hazard burdens might be increased by climate change under given future scenarios.

The screening exercise prioritised ten of the programmes within the three areas of the DFID-B portfolio (human development, growth, and governance) for further follow-up, for which risks were estimated using scientific inputs and expert judgement. Options for risk reduction and adaptation were then assessed by combining these inputs with other factors affecting feasibility such as the existence of win-win outcomes independent of the amount of climate change, cost-effectiveness, policy coherence, and practical considerations.

As a result, a variety of options are being taken forward by DFID Bangladesh and its partners. These include:

- Structural measures such as improving the resilience of infrastructure;
- Non-structural measures such as incorporating climate change and disaster issues into education programmes; and
- Further research and data collection on impacts of climate-related hazards.

This process also highlighted linkages with Bangladesh's NAPA and entry points for activities under the Comprehensive Disaster Management Programme (CDMP).

*Source*: www.ids.ac.uk/ids/pvty/ClimateChange/pdfs/orchidfinal.pdf.

## 2.5 Cross-fertilisation and collaboration among agencies

Integrating climate change adaptation into development co-operation operations may be facilitated by using operational instruments developed by other agencies (*i.e.*, cross-fertilisation) such as risk-screening tools or adaptation guidelines, and through collaboration with other agencies and institutions (*e.g.*, engaging in joint analyses such as vulnerability assessments, projects on the ground, and multi-donor technical co-operation). Cross-fertilisation and collaboration can considerably reduce time and efforts invested in the development of operational measures and contribute to greater donor harmonisation, as is called for by the *Paris Declaration on Aid Effectiveness*.

In 2002, the climate specialists at ten bilateral and multilateral agencies collaborated to produce the Multi-Agency Report "Poverty and Climate Change: Reducing the Vulnerability of the Poor through Adaptation" (Multi-Agency Report, 2003), which has since served as a seminal awareness-raising document on the need to incorporate consideration of climate risks in core development activities. The multi-agency process also led to the establishment of the *Vulnerability and Adaptation Resources Group (VARG)*[12] in 2003, which meets every six months and serves as an informal forum for climate specialists within donor agencies to exchange information and occasionally commission joint studies. The aim of VARG is to facilitate the integration, assessment, synthesis, and dissemination of existing knowledge and experience. Representatives from several donor agencies are also participating in the activities of the *Least Developed Country Expert Group (LEG)*[13] which has been established as part of the Marrakech Accords agreed upon at the 8th Conference of the Parties to the UNFCCC. It is composed of experts from African, Asian and Small Island countries as well as Annex II Parties and provides advice to LDCs on the preparation and implementation of NAPAs. The Austrian Development Agency (ADA), Irish Aid, NZAID and CIDA have indicated their (financial) support to LEG.

Bilateral and multilateral donors are also engaged in collaboration and information sharing through the OECD. Since 2002, OECD donors have overseen work on integrating climate change adaptation in development co-operation. OECD Development and Environment Ministers endorsed a *Declaration* on this issue in 2006, and now donors are participating through an *OECD Task Team* on developing best practice guidance on integrating climate risks in development co-operation activities. Donors from EU member states, meanwhile, are collaborating on *European Water* and *Energy Initiatives*[14]. Though not immediately focusing on climate change adaptation, both the EU Water and Energy Initiatives nevertheless have strong links to adaptation. EU member states collaborate in the framework of these initiatives, focusing on reducing poverty by implementing sustainable water resource management and providing access to modern and affordable energy services in developing countries. Both initiatives are based on a demand-led multi-stakeholder approach involving governments, civil society, the private sector and other stakeholders. At the operational level, meanwhile, one key example of donor collaboration is the *Kiribati Adaptation Programme*. Australia, Japan, New Zealand, the World Bank, UNDP and the GEF collaborate under this programme to systematically assess climate-related problems and design cost-effective adaptation measures for the Pacific Island state Kiribati. They also continually seek to integrate awareness on climate risks into economic and operational planning. The five broad goals of the project's second phase (pilot implementation phase) are (i) policy, planning and information; (ii) reducing the vulnerability of the coastline including key public assets and ecosystems, (iii) developing and managing freshwater resources; (iv) providing technical assistance to build capacity at island and community level; and (v) ensuring efficient project management. The *IberoAmerican*

12 www.climatevarg.org.

13 www.unfccc.org.

14 www.euwi.net; http://ec.europa.eu/development/body/theme/energy/initiative/index_en.htm.

*Network of Climate Change Offices (RIOCC)*[15] is an example of North-South co-operation on climate change issues. It considers adaptation as an important work area and has adopted a conclusion to create an *IberoAmerican Programme for Climate Change Adaptation*. Its task would be, *inter alia*, to identify priorities, capacities and areas of focus for adaptation activities (UNFCCC, 2006).

There are also a number of emerging areas where donors are collaborating on aspects of adaptation or learning from pilot activities and tools developed by other agencies and institutions. AfDB, for example, is exploring possibilities of making use of ADB's and the World Bank's pilot work results and tools for integrating adaptation. Several donors and NGOs are also collaborating on sharing experiences and developing a shared database for climate risk screening. As described in section 2.4.3, SDC has been collaborating with IISD, IUCN, and the Stockholm Environment Institute to develop the risk assessment tool CRiSTAL.

Another emerging area of donor collaboration is through the *Global Climate Observing System (GCOS)*[16]. GCOS facilitates access of all potential users to observations and information needed to address climate-related issues. This includes observations required for monitoring the climate system, detecting and attributing climate change, assessing the impacts of climate variability and change, and supporting research towards improved understanding, modelling and prediction of the climate system. Under its Climate and Development in Africa project, GCOS assists African developing countries in building resilience to short-term climate variability by focusing on practical action linking seasonal weather forecasting with health and agricultural planning. GCOS will assess the incremental development value of investing in climate services for development as a way for making the case for mainstreaming these investments in budgetary allocation processes. DFID financially supports GCOS as a follow-up to their G8 commitment, and Irish Aid is considering support to the system in the near future.

There are also a small but growing number of bilateral initiatives. One such example is the *UK-Canadian collaborative research and capacity development programme on climate adaptation*: DFID's central research department, in collaboration with the Canadian International Development Research Centre, is initiating a £30 million collaborative research and capacity development programme on climate adaptation for 2006-2010, focusing on Africa. The research programme aims to improve the capacity of African countries to adapt to climate change by building and maintaining a body of skilled African researchers.

Considerable progress is being made in terms of information sharing and collaboration amongst climate specialists based at the headquarters of various agencies. There are also some examples of operational collaboration among donors, particularly in projects related to adaptation in Small Island states. More recently, efforts are getting underway amongst donors to collaborate on climate monitoring, development of risk screening tools, and to learn from pilot activities, guidelines, and tools developed by other donors. Overall, however, at the time of writing (early 2007), the cross-fertilisation among donor agencies on the issue of integrating climate risks within their core activities is still at an early stage.

15 The climate change offices of the 21 countries of the Ibero-American Nation Communities belong to RIOCC: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Equator, El Salvador, Spain, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Portugal, Dominican Republic, Uruguay and Venezuela.

16 www.wmo.ch/web/gcos/whatisgcos.htm.

# III Taking Stock and Looking Ahead

The past five years have witnessed a significant, even dramatic, increase in the degree of attention to the risks of climate change within the context of development co-operation activities. Traditionally the concern of one or two environment specialists within donor agencies and IFIs, adaptation to climate change is now being increasingly recognised (including in high-level policy documents) as key to good development practice. This level of interest within development co-operation agencies is partly in response to the growing significance of adaptation within the international climate change regime. Another impetus was provided by the Multi-Agency Report on Poverty and Climate Change (2003) that helped raise awareness amongst development practitioners about the significance of climate change on their core activities.

By now, most international donors recognise the linkages between climate change and development and the need to better integrate adaptation considerations within their core activities. A wide range of internal and external awareness-raising measures have been implemented, ranging from generic brochures on climate change, to more targeted documents outlining the specific implications of climate change on particular development priorities or on particular partner countries. Some agencies have also initiated more hands-on training courses, and in one case, even an adaptation certification course for their personnel.

There are also indications of greater cohesion and cross-fertilisation across donor agencies and IFIs. For example, key multilateral initiatives – including the EU Action Plan on Climate Change (2004), the G8 Gleneagles Summit (2005), the OECD Environment-Development Ministerial (2006), the World Bank's Clean Energy and Development Investment Framework (2006), and the G8 Heiligendamm Summit (2007) – have catalysed collaborative efforts among various donors to share experiences and develop common approaches and tools to integrate climate risks within development activities. Two areas where considerable progress is being made through collaboration and information exchange among donors are the development of tools to screen development investments for climate risks, and the identification of entry points to integrate climate considerations in development co-operation activities.

Much of the progress thus far, however, has been at the level of high-level policy declarations, or efforts initiated by climate specialists in the headquarters of certain donor agencies and IFIs. Actual implementation (via pilot projects) is still at an early stage, or absent altogether. Lack of awareness of climate change within the development community and limitations on resources for implementation are the most frequently cited reasons for difficulties with integrating climate change adaptation within development activity. These explanations may hold true in many situations, but there is also a more complex web of underlying barriers, including: the limited relevance of available climate information for the temporal and spatial scales at which development-related decisions are made; the uncertainties associated with climate change projections; compartmentalisation within governments and donor agencies, and the limited leverage of climate specialists on operational decisions; and the perceived or real trade-offs between incorporation of climate change and other priorities (Agrawala and van Aalst, 2005). Further, while the case has now been made as to why development co-operation activities should pay attention to climate risks, considerably less information is currently available in terms of precisely *how* development planners should change existing practices, and at what cost, to take climate change adaptation into account. Addressing these barriers and constraints in a comprehensive manner is therefore likely to do more to better integrate climate risks within a wide range of development activities than funding commitments alone. There is also a need to establish benchmarks to assess progress on adaptation – both at the policy and at the project level, and to regularly monitor progress against these benchmarks.

# Annex 1. OECD SECRETARIAT SURVEY

STOCKTAKING OF PROGRESS ON ADAPTATION TO CLIMATE CHANGE IN DEVELOPMENT CO-OPERATION ACTIVITIES

Questionnaire by the OECD Secretariat

*This survey is addressed to climate change (adaptation)/environment specialists in development co-operation agencies and multilateral financial institutions. Please direct it for response by appropriate colleagues within your government or agency.*

*Please note that we are not seeking an official agency response, but rather the professional judgment of the survey respondents. The survey will be used to report on composite trends. Individual responses will not be attributed without permission. We hope this will encourage more candid responses.*

*Background and Purpose*

Considerable efforts are currently being made by development co-operation agencies to take account of climate risks within a range of activities. However, many of these initiatives are too recent, or are otherwise not publicly available.

This questionnaire is intended to develop a more comprehensive picture of the state of progress on efforts taken by development co-operation agencies to take adaptation to climate variability and change into account. The results of this survey will contribute to a report by the OECD Secretariat.

*Notes on this questionnaire*

- You will need approximately 30 minutes to complete this questionnaire.
- We encourage you to elaborate on any of the issues raised in this questionnaire, as well as related issues which may not have been explicitly mentioned.
- We also encourage you to provide electronic or hardcopies of any relevant reports or other documents.
- You can respond to the questionnaire electronically (preferred); or by regular mail. Please send **electronic responses** to: env.cc@oecd.org
- **Responses by regular mail** can be sent to: Shardul Agrawala, OECD Environment Directorate, 2 Rue Andre Pascal, 75016 Paris, France. (Fax: +33-1-4524-7896).

CONTACT INFORMATION

Please indicate a contact person in your agency for any follow-up on this questionnaire:

Name:

Title/Affiliation:

Address:

Phone:

Fax:

E-mail:

**NOTE: If you fill the questionnaire <u>electronically</u>, please note the following:**
To check the boxes: double-click on the box, then choose "Checked" in the menu which opens up (under "Default value"), then click on "OK".

| **I. AWARENESS RAISING ON CLIMATE CHANGE VULNERABILITIES** | |
|---|---|
| *I.1 Within the agency*<br>What initiatives has your agency undertaken to raise awareness **internally** on climate change and the risks it poses to development co-operation?<br>☐ Written material (*e.g.* report, brochures/flyers). Please provide details, and if possible attach relevant documents:<br>☐ Training courses/seminars<br>☐ Other:<br>☐ None | *Follow-up*<br>Are your internal awareness raising measures:<br><br>☐ recurrent<br>☐ one-time measures? |
| *I.2 In partner countries*<br>What initiatives has your agency undertaken to raise awareness **in partner countries** on climate change and the risks it poses to development co-operation?<br>☐ Having climate change included in regular policy dialogues with authorities in partner countries, notably in the context of country programming. If yes, was the focus on:<br>☐ mitigation<br>☐ adaptation<br>☐ both?<br>☐ Written material (*e.g.* report, brochures/flyers). Please provide details, and if possible attach relevant documents:<br>☐ Training courses/seminars<br>☐ Other:<br>☐ None | *Follow-up*<br>Are your external awareness raising measures:<br><br>☐ recurrent<br>☐ one-time measures? |
| Please note any other details you may find relevant in this context (*e.g.* any awareness raising activities you may have planned in the near future; whether your particular institutional context may make certain awareness raising measures easier or more difficult; etc.): | |

| **II. HIGH-LEVEL POLICY ENDORSEMENT** | |
|---|---|
| *II.1 High-level policy endorsement*<br>Has there been **high-level policy endorsement** for the need of mainstreaming adaptation into development activities (*e.g.* cabinet level/ ministerial level/head of agency/board of governors endorsement)?<br>☐ yes; please provide details:<br>☐ no | *Follow-up*<br>Has your agency taken **steps to implement** actions as a follow-up to the high-level endorsement? Please provide details:<br>How has your agency **communicated** follow-up measures to staff, decentralised offices and partners? Please provide details:<br><br>Please explain if and how you are **monitoring** progress on the implementation of your activities: |
| Please note any other details you may find relevant in this context (*e.g.* intended measures; other ways in which your agency is trying to influence the broader policy process): | |

| **III. ASSESSMENT OF CLIMATE CHANGE IMPACTS ON ACTIVITIES** | |
|---|---|
| *III.1 Implications of climate change on agency activities*<br>Has your agency committed studies on the **implications** of climate change on your activities (*e.g.* country/regional/sectoral strategies, technical co-operation, projects,)?<br>☐ yes; please provide full citation:<br>☐ no | *Follow-up*<br>If yes, have such studies lead to some follow-up (*e.g.* a change in practices)? Please provide details: |
| Please note any other details you may find relevant in this context (*e.g.* if such assessments are planned in the near future): | |
| *III.2 Current attention to climate risks within the agency*<br>Has your agency analysed documents (such as country strategies, policy documents, project descriptions) on whether they make **reference** to climate change impacts and vulnerabilities?<br>☐ yes; please provide full citation:<br>☐ no<br>If yes, can you provide the percentage of documents that refer to climate change? % | *Follow-up*<br>Have the outcomes of this assessment had (or will they have) any influence on the drafting of documents or project designs? Please provide details: |
| Please note any other details you may find relevant in this context (*e.g.* planned analyses): | |
| *III.3 Exposure of investments to climate risks*<br>Has your agency assessed the proportion of its activities in sectors that are potentially affected by climate change? | *Follow-up*<br>Have such assessment had any influence on making your projects/investments more |

| | |
|---|---|
| ☐ yes; please provide full citation:<br>☐ no<br>If yes, please provide the percentage: % | climate resilient? Please provide details: |
| Please note any other details you may find relevant in this context (*e.g.* planned analyses/follow-up): | |

| **IV. OPERATIONAL MEASURES ON MAINSTREAMING ADAPTATION** | |
|---|---|
| *IV.1 Instruments for climate risk screening/mainstreaming adaptation*<br>Has your agency:<br>☐ developed programmatic and/or project **guidelines** to take climate risks into account?<br>☐ developed **tools** to assess climate risks?<br>☐ formulated **response options** to climate risks?<br>☐ identified potential (strategic and/or operational) **entry points**?<br>☐ conducted **priority ranking** of sectors, regions or activities that might be climate-sensitive?<br>☐ Other:<br>☐ None | *Follow-up*<br>**If yes**, at what stage are you in the implementation process?<br><br>Please provide details of where such instruments are/were tested:<br><br>**If no**, do you foresee developing guidelines for mainstreaming, risk-screening tools or other instruments in the near future? Please provide details: |
| Please provide details relevant in this context (*e.g.* What kind of guidelines, tools, etc. have you developed? Are your guidelines binding? How do you monitor the implementation of tools?): | |
| *IV.2 Focus of current adaptation activities*<br>Please provide details on the **focus** of your current activities related to adaptation (*e.g.* countries/regions you are primarily operating in; primary activities such as disaster risk management): | |
| *IV.3 Tracking adaptation*<br>Does your agency have **markers** for adaptation-related projects in your databases?<br>☐ yes<br>☐ no | |
| Please note any other details you may find relevant in this context (*e.g.* if you envisage developing such markers in the near future): | |

| **V. CROSS-FERTILISATION AND COLLABORATION** |
|---|
| *V.1 Instruments*<br>Has your agency used risk-screening tools, guidelines for mainstreaming adaptation, etc. that have been developed by **other agencies**?<br>☐ yes; please provide details (*e.g.* name of agency; kind of instruments you are using):<br>☐ no |
| Please note any other details you may find relevant in this context (*e.g.* planned measures): |
| *V.2 Collaborative projects*<br>Is your agency **collaborating** with other development co-operation agencies (*e.g.* engagement in joint analyses, projects on the ground, other activities such as multi-donor technical co-operation)?<br>☐ yes; please provide details (*e.g.* partners; main areas of collaboration):<br>☐ no |
| Please note any other details you may find relevant in this context (*e.g.* planned activities): |

| **VI. OUTLOOK FOR THE FUTURE** |
|---|
| *VI.1 Future priorities*<br>Where do you see your agency setting the **priorities** for action in the context of climate change adaptation and development in the future?<br>Please provide details: |
| *VI.2 Challenges*<br>Please indicate, on a scale of **1** (not important/relevant) to **5** (very important), the key constraints faced in mainstreaming adaptation to climate change within activities of your agency:<br>▪ lack of adequate human and financial resources:<br>▪ segmentation and other institutional barriers (please explain):<br>▪ limited leverage by climate specialists over projects and operational guidance:<br>▪ lack of political will:<br>▪ other constraints (please explain): |

| **VII. OTHER RELEVANT INFORMATION** |
|---|
| Please feel free to include or attach any information or perspective that you feel might be relevant within the context of the survey: |

# Annex 2. DAC SURVEY RESULTS

**Overview of ongoing adaptation-related activities by members of the OECD/DAC Network on Environment and Development (Environet) and Poverty-Environment Partnership Network (PEP)**

| AFRICA AND THE MIDDLE EAST | | | | |
|---|---|---|---|---|
| **a) Title, partner country (-ies) and description of activity** | **b) Lead donor(s)** | **c) Other donor(s) involved** | **d) In-country partner(s)** (governments, CSOs, NGOs, Universities etc) | **e) Initiation/ completion date, and documentation if available** |
| ***Analytical work*** | | | | |
| **REGIONAL**: Support for IIED's work on adaptation to climate change | IIED | IIED framework donors | Civil society, government, academics. | Started 05 – continuing until at least 2008. |
| **GHANA, MALI, MOZAMBIQUE, SENEGAL, TANZANIA, YEMEN**: Climate Change Studies Assistance Programme | The Netherlands | | | 2003 - 2007 |
| **MEDITERRANEAN**: Adaptation Strategies | BMZ/GTZ | | Government of Tunisia | Working Paper |
| **TUNISIA**: Climate Change Adaptation Strategy | BMZ/GTZ | | Min of Agriculture and of Environment, National focal points for FCCC, CBD and CCD; several NGOs, national university, national meteorological institute, research organisations | April 2005 – January 2007, preliminary reports already available, final report January 2007 |
| **ZAMBIA**: Climate Change and Development, Pilot | Finland | IUCN | MTENR | 2007 |
| ***Capacity development/Institutional strengthening*** | | | | |
| **REGIONAL**: Strengthening capacity of decision makers to address climate change<br>UNITAR | EC | Ireland (Tara Shine tarashine@eircom.net) Danida, Switzerland | Governments, academic institutions | 2003 – 2008. Documentation available. |
| **BENIN**: (Northern): Watershed management for climate change adaptation (drought-resistant plant cultures, increasing water containment capacity for rice, …) | BMZ/GTZ | | Local commune, Min of Environment, NGOs | 2005-2007 |
| **ERITREA**: Expedited Funding for the Preparation of a National Adaptation Program of Action (NAPA). Country-wide programme that encompasses adaptation activities that address the adverse effects of CC, including extreme events. The goal is to provide a framework to guide the coordination and implementation of adaptation initiatives in the country, through a participatory approach and building synergies with | UNDP GEF | | Ministry of Land, Water and Environment | 2003-2006 |

| AFRICA AND THE MIDDLE EAST | | | | |
|---|---|---|---|---|
| **a) Title, partner country (-ies) and description of activity** | **b) Lead donor(s)** | **c) Other donor(s) involved** | **d) In-country partner(s)** (governments, CSOs, NGOs, Universities etc) | **e) Initiation/ completion date, and documentation if available** |
| other relevant environmental and related programmes, and at the same time develop a specific priority programme of action for adaptation to climate change. Adaptation and vulnerability assessments of 5 major sectors that are negatively impacted by CC. | | | | |
| **GUINEA BISSAU**: Formulation of the National Adaptation Action Plan (NAPA) to meet urgent and immediate needs and concerns. The action program is a dynamic and flexible framework to guide priority activities for adaptation to CC, based on strict criteria and through a participatory and synergy approach involving all stakeholders and other national programs. | UNDP GEF | | | Ongoing since 2004 |
| **MALI**: Formulation of the National Adaptation Program of Action (NAPA); Provide a framework to guide adaptation initiatives through a participatory approach. Build synergies with other relevant programmes and develop a programme of action for adaptation. Objective: develop a programme of immediate project-based adaptation activities that address the effects of climate change. | UNDP GEF | | | Ongoing since 2003 |
| **MALAWI**: National Adaptation Plan of Action. Develop a NAPA document consistent with Decision 28/CP.7 to serve as simplified and direct channels of communication for information relating to the urgent and immediate adaptation needs of the LDCs. | UNDP GEF | | | 2003-2006 |
| **MOZAMBIQUE**: Early Warning System Development, School Curricula Development | BMZ/GTZ | | Government of Mozambique, Sofala Province | 2004-2006 |
| **NIGER**: National Adaptation Programme of Action. Enhance understanding climate change and how to adapt to its harmful effects. Objective: address the needs to adapt to the adverse impacts of CC. Part of this exercise also involved a national climate change self-assessment in 2004 that reviewed current gaps in mitigating activities that exacerbate climate change. | UNDP GEF | | | Ongoing since 2005 |
| **SUDAN**: National Adaptation Programme of Action. Promote development paths that improve adaptive capacity to future CC & to its growth in GHG emissions through integration of CC concerns into policies, strategies and plans. The process | UNDP GEF | | Government of Sudan. Implemented by the Higher Council for Environment and Natural | Ongoing since 2002 |

| AFRICA AND THE MIDDLE EAST | | | | |
|---|---|---|---|---|
| **a) Title, partner country (-ies) and description of activity** | **b) Lead donor(s)** | **c) Other donor(s) involved** | **d) In-country partner(s)** (governments, CSOs, NGOs, Universities etc) | **e) Initiation/ completion date, and documentation if available** |
| consists of Scoping of activities; Consultation; and Prioritization of activities. | | | Resources (HCENR) under the administration and backstopping of UNDP. | |
| **SWAZILAND**: Preparation of the National Adaptation Programme of Action (NAPA) | UNDP GEF | | | Ongoing since 2003 |
| **TUNISIA**: Adaptation Strategy Development and Implementation in | BMZ/GTZ | | Government of Tunisia | 2005-2008 |
| **YEMEN**: National Adaptation Programme of Action. Consultative Assessment Study for NAPA development completed. Reports drafted on: Climate change impact and adaptation on the Marine/Costal Section; agricultural crops; Water resources. Reports sent to Stockholm Environment Institute. National Evaluation Criteria drafted and presented to the stakeholders.<br>3 regional stakeholders workshop held Promotion materials on climate change and NAPA developed. | UNDP GEF | | | Ongoing since 2002 |
| ***Policy development*** | | | | |
| **EGYPT**: Lake Nassar. Develop a planning support system to analyse management scenarios for Nile inflows and releases; develop scenarios for floods and droughts, due to climate change, taking into account Nile water management as an integral part of its water policy | Netherlands Embassy Cairo | | | |
| **TUNISIA**: work on mainstreaming climate change into implementation of the CCD | BMZ/GTZ | | Min of Agriculture, Min of Environment, IRA, NGOs | April 2006 – 2008 |
| ***Other activities*** | | | | |
| Support to the Least Developed Countries Expert Group of the UNFCCC | Irish Aid | Other A1 Parties to the UNFCCC | National UNFCCC focal Points - Ministry of Environment/meteorology institutes | From 2004 |
| **COMIFAC** (**Central African Forest Partnership – Cameroon, DR Congo, Rep Congo, Chad, CAR, Sao Tome & Principe, Equatorial Guinea, Burundi, Rwanda**): Integration of climate change adaptation into the binding "convergence-frame" guiding the partnership | BMZ/GTZ | 33 international partners of the Congobasin partnership | | Status report ready; COMIFACs current programme runs until 2010. BMZ/GTZ support is scheduled until 2008 in the first phase. |

| ASIA AND PACIFIC | | | | |
|---|---|---|---|---|
| **a) Title, partner country (-ies) and description of activity** | **b) Lead donor(s)** | **c) Other donor(s) involved** | **d) In-country partner(s)** (governments, CSOs, NGOs, Universities etc) | **e) Initiation/ completion date, and documentation if available** |
| ***Analytical work*** | | | | |
| **REGIONAL**: Study on vulnerability of mega cities in Asia and Adaptation Strategies for International Cooperation | JBIC, WB, ADB | | | 2007 - ? |
| **BANGLADESH, BHUTAN, MONGOLIA, VIETNAM**: Climate Change Studies Assistance Programme | The Netherlands | | | 2003 – 2007 |
| **BANGLADESH**, Policy Brief on Climate change and implications for Bangladesh (5 pages) | Sida | | | March 15, 2006 www.handels.gu.se/seahelpdesk/ |
| **MALDIVES**: Plan of Action for Adaptation to Climate Change.<br>Countrywide program that encompasses adaptation activities that address adverse effects of CC, including extreme events. The goal is the provision of a framework to guide adaptation initiatives, through a participatory approach and building synergies with other environmental and related programs + Specific priority program of action for adaptation to climate change. | UNDP GEF | | | Ongoing since 2003 |
| **PHILIPPINES**: The Study on Comprehensive Flood Mitigation for Cavite Low in the Republic of Philippines | JICA | | | 2007 – 2009 |
| ***Capacity development/Institutional strengthening*** | | | | |
| **BANGLADESH:** The goal is to build the capabilities of low-income households and community-based structures and networks to be able to respond to the negative impacts of global climate changes in a sustainable manner. As a result of the project, participating households and the institutions in the NGO sector that serve them will be better prepared to address the problems associated with extreme weather events such as salinity, flooding, drought, and potential rising sea levels induced by global warming. | CIDA | | CARE Bangladesh | 2001 – 2005 |
| **BHUTAN**: Building Resilence to Climate Change. Bhutan's efforts to identify needs and priorities for capacity building with respect to the global environment taking into account the three Rio Conventions and associated thematic areas of biodiversity, climate change and desertification are being supported by UNDP to develop a combination of an environmental action plan, climate change adaptation programme, and national capacity self assessment | UNDP GEF | | Government of Bhutan | 1996-2006 |

| ASIA AND PACIFIC | | | | |
|---|---|---|---|---|
| **a) Title, partner country (-ies) and description of activity** | **b) Lead donor(s)** | **c) Other donor(s) involved** | **d) In-country partner(s)** (governments, CSOs, NGOs, Universities etc) | **e) Initiation/ completion date, and documentation if available** |
| **BHUTAN, CHINA, NEPAL, PAKISTAN**: ICIMOD Sustainable Rangeland Management Program; capacity building and support to regional organisations | Austria/ADA | IFAD, GEF, IDRC a.o. | ICIMOD | 2007 - 2009 |
| **INDIA**: Climate Adaptation Programme incl. Risk Analysis, Integration into National Investment Planning and Insurance Market, Infrastructure Support | BMZ/GTZ | World Bank, DFiD | Gov. Of India, Ministry of Environment | 2007- 2012 |
| **INDONESIA**: The 16th Asia-Pacific seminar on climate change in Jakarta to discuss useful policies and measures to integrate climate change issue into development planning in the region. | Office of International Strategies on Climate Change, Climate Change Policy Division, Ministry of the Environment, Japan. | Australian Greenhouse Office. Ministry of Environment, Indonesia. | Government Officer and researchers from 21 countries in the Asia-Pacific region, International Organizations, Non-Governmental Organizations, Academia, Business Communities and etc. | 5-8, September 2006(four days). |
| **VIETNAM**: Improvement of the capacity of district officials and commune and village leaders to incorporate adaptation strategies into local development plans, such as land-use and construction of buildings; and increase of the awareness among national officials responsible for disaster mitigation planning of needs and concerns at the local level and the viable options for community-based anticipatory adaptation strategies. | CIDA | | People's Committee of Thua Thien Hue, Districts of Quang Dien and Phu Vang | 2002 - 2005 |
| ***Policy development*** | | | | |
| **REGIONAL, SOUTH PACIFIC:** Improvement of climate change adaptation strategies through strengthening national capacities to enable the identification of adaptation options, evaluation of those options and the development of sector policies in terms of adaptation measures to climate change. | CIDA | | South Pacific Regional Environment Programme (SPREP) | |
| ***Other activities*** | | | | |
| **VIETNAM**: Red Cross preparedness for Disasters related to Climate Change | The Netherlands www.climatecentre.org | | Red Cross, local government | 2003 - 2005 |

| LATIN AMERICA AND CARIBBEAN | | | | |
|---|---|---|---|---|
| **a) Title, partner country (-ies) and description of activity** | **b) Lead donor(s)** | **c) Other donor(s) involved** | **d) In-country partner(s)** (governments, CSOs, NGOs, Universities etc) | **e) Initiation/ completion date, and documentation if available** |
| ***Analytical work*** | | | | |
| **BOLIVIA, COLOMBIA, GUATEMALA, SURINAME**: Climate Change Studies Assistance Programme | The Netherlands | | | 2003 – 2007 www.nccsap.net |
| ***Capacity development/Institutional strengthening*** | | | | |
| **BOLIVIA:** National Programme on Climate Change | RNE | UNDP | Ministry of Planning, Vice Ministry of Territorial Planning and Environment | 2004 – 2009 |
| **NICARAGUA**: Adaptation to Climate Change through disaster risk management in two regions | BMZ/GTZ, | | Government of Nicaragua, North Atlantic region, several Municipalities | 2004 – 2006 |
| ***Policy development*** | | | | |
| **SURINAME**: NCCAP | DGIS (the Netherlands) | UNDP | Ministry of Environment | Completion: 2007 |
| ***Other activities*** | | | | |
| **NICARAGUA**: Red Cross preparedness for Disasters related to Climate | The Netherlands | | Red Cross, local government | 2003 – 2005 www.climatecentre.org |

*Source*: OECD (2007).

# Annex 3. RECOMMENDATIONS FROM THE "EXPERTS COMMITTEE ON ODA FOR CLIMATE CHANGE ADAPTATION" ESTABLISHED BY THE GOVERNMENT OF JAPAN

*Recommendations for building adaptive capacity in developing countries through international assistance:*

- Assistance should be participatory, based on the attributes of a region and its residents, and enhance resilience at the level of individuals, especially the socially disadvantaged, and communities adversely affected by climate change.

- Adaptation measures should be integrated into comprehensive development strategies at national and regional levels based on a long-term, cross-sectoral perspective to cope with the compound impacts of climate change. Adaptation policies should also aim at producing benefits in multiple areas at the project level.

- International cooperation in observation, forecasting, impact assessment and other aspects of climate change (in particular, participatory frameworks of cooperation to strengthen the capacity of experts in developing countries) should be pursued to enable developing countries to ascertain and forecast the regional and domestic impacts of climate change and to perceive the risk of climate change.

- Steps should be taken towards the aggregation and sharing of information on adaptation relevant technologies and knowledge.

- Guidelines for mainstreaming adaptation considerations in development assistance projects should be formed. Support should also be provided to build the capacity required for responsible parties in developing countries to mainstream adaptation strategies when drafting and implementing national development plans.

- Training and public education programs should be put in place to raise awareness of climate-change risks among the public.

- Those areas and tasks that are especially urgent, such as water resources, food supplies (agriculture), healthcare, disaster prevention, infrastructure and ecosystems, should be selected on a regional basis, in accord with the regional nature of impacts, vulnerability and adaptation. The selection of priority regions must take into account not only the magnitude of climate change, but the magnitude of impact risk are also based on regional population density and other factors.

*Recommendation for international collaboration on supporting adaptation in developing countries:*

- It is important to form a common understanding of adaptation strategies among each party responsible for development and for climate change policy worldwide. Developing countries, donor countries, international organizations and like parties should share their expertise in fields relevant to adaptation and investigate cross-sectoral approach. Aid coordination in line with the respective comparative advantages of donors, coordination with

NGOs and other community-level actors, and trans-national regional cooperation should also be positively promoted.

*Recommendation for an effective contribution by Japan:*

- Exploiting its experience and expertise based on its past performance in development assistance in fields with relevance to adaptation, Japan should play a leading role in promoting the coordination in the international community with respect to adaptation. To this end, Japan should identify good practices conducive to adaptation from its past aid experience, make intellectual contributions to the international momentum in adaptation to climate change, and exploit outstanding Japanese experience, policies and technologies within the context of international aid coordination. Furthermore, Japan should contribute to stimulating interest in adaptation within the development agencies of developing countries, for example by prioritizing projects that take account of adaptation in future Japanese development aid.

*Source:* Government of Japan (2007).

# Annex 4: OVERVIEW OF PUBLICLY AVAILABLE PORTFOLIO-SCREENING EFFORTS TO DATE

| Agency | Main goals | Activities | Scope | Main methods | Key findings | Recommendations on mainstreaming |
|---|---|---|---|---|---|---|
| World Bank (Burton and Van Aalst 1999; 2004a,b) | Examine what climate change would mean to World Bank operations | • Countries and projects selected to illustrate wide range of situations<br>• Projects assessed for whether and how they discussed climate risks<br>• Countries assessed for range of climate risk criteria, sensitivity of portfolio and climate change coverage in CAS | Policies and programmes, in-depth review of six projects and six countries | Document review | • Little or no attention to climate change at project level, even where climate risks are obvious today<br>• Climate seen as a risk to project implementation, not long-term sustainable development<br>• No mention of climate change in CAS | • Knowledge base for climate risk management and a routine screening tool for projects |
| GTZ (Klein 2001; Kasparek 2003) | • Identify current consideration of climate change, opportunities for integration in future projects and awareness raising<br>• Identify relevant sectors and priority measures for adaptation | • Projects selected on basis of potential for no-regrets and secondary benefits<br>• 136 projects reviewed for whether or not they considered climate change<br>• In-depth review of 5 projects; documents and interviews staff<br>• Questionnaire to 330 ongoing projects | • Project portfolio on natural resource management in Africa<br>• Ongoing projects in climate-relevant sectors worldwide | • Document review<br>• Interview with staff<br>• Questionnaire survey to project staff | • No explicit consideration of climate change in 136 projects, also in areas with high current climate risks<br>• Climate change not seen as important issue by project staff<br>• Increasing interest in information on and support for adaptation and mainstreaming | • Integrate indicators to evaluate climate adaptation in current routines for project design, identifying options that give immediate benefits and increase future flexibility<br>• Analyse the adaptive effects of current projects<br>• Develop guidance to consider climate change in the development of projects |
| Norad (Eriksen and Næss 2003) | Assess current level of climate change consideration, identify links between climate and development and | • Review of policy documents for development co-operation, overall and within key priority | Development policies and strategy documents, | Document review | • Negligible references to climate change.<br>• Where mentioned, climate change | • Detailed review of tools currently in use for project development and approval in order to identify ways to achieve synergies between |

| Agency | Main goals | Activities | Scope | Main methods | Key findings | Recommendations on mainstreaming |
|---|---|---|---|---|---|---|
| | recommend future strategies | sectors | | | framed as a mitigation issue<br>• Many potential entry points | climate adaptation and poverty reduction |
| OECD (Agrawala *et al.* 2003a-d; 2004a,b) | Explore synergies and trade-offs of "mainstreaming" climate change responses into development assistance, projects and plans | • Recent climate trends and climate change scenarios assessed to establish adaptation priorities<br>• Donor portfolios analysed for proportion affected by climate risks<br>• Donor strategies and projects assessed for attention to climate change<br>• In-depth analysis of key resources potentially affected by climate change | Policies, programmes and projects, in-depth review of six countries | Document review | • Climate risks and climate change largely missing in donor project documents.<br>• Where climate change mentioned, mainly in relation to mitigation<br>• In Bangladesh, significant attention to climate change amongst sectoral planners, but little mention in higher-level policy documents or CAS | • Adaptation should be part of core development activities rather than separately funded<br>• Differentiated adaptation strategy with a focus on improving climate change considerations in the implementation process<br>• Adaptation needs to move beyond current variability<br>• Need for policy coherence and for operational tools |
| SDC (Robledo *et al.* 2006) | Assessment of potential effects of projects and programmes on vulnerability and adaptation | • Assessment of understanding and preparedness at the national level; impacts and vulnerability at the local level and main barriers to implement mitigation or adaptation measures | 14 projects and programmes in 9 countries in Latin America, Asia, Africa and Eastern Europe | Document review | • Action needed on (i) institutional development for adaptation, (ii) the role of technology transfer in adaptation, and (iii) capacity building for affected groups<br>• Need to improve climate forecasting at the local level | • Consider adaptation as a key element in development co-operation and differentiate recommendations into three levels: (i) thematic, (ii) methodological, and (iii) concerning implementation of adaptation measures |

| Agency | Main goals | Activities | Scope | Main methods | Key findings | Recommendations on mainstreaming |
|---|---|---|---|---|---|---|
| DFID (DFID, 2004; Tanner *et al*. 2007) | Management of climate risks and opportunities for bilateral aid portfolio | • DFID aid portfolio in Bangladesh assessed for current and future climate risks<br>• Review of DFID country strategy in Bangladesh - Adaptation and risk options integrated into screened projects | Initial country study for DFID Bangladesh aid projects | • Document review<br>• Options assessment with project staff<br>• Climate impacts assessment<br>• Costbenefit analysis | • Awareness is low but rising<br>• Many areas of portfolio already contribute to reduced vulnerability<br>• Climate change considerations are crucial for infrastructure development<br>• Need improved vulnerability assessment at local level | • Climate risks need management as routine part of donor project cycle<br>• Need for donors coherence on international dimensions<br>• Greater interaction and synergies between disasters and adaptation communities |

*Source:* Klein *et al.* (2007).

# Annex 5: ADAPTATION MEASURES EXEMPLIFIED IN ONGOING NORWEGIAN PROJECTS

In order to illustrate concrete ways in which development cooperation can integrate adaptation measures, Eriksen *et al.* (2007) exemplify the three types of adaptation measures (risk reduction, strengthening adaptive capacity, and reducing vulnerability) in ongoing Norwegian development projects. All selected projects (from nine different DAC sectors, in bold below) were ongoing in 2004, with a theme relevant to climate change adaptation. The project selection was carried out in order to exemplify the type of measures to consider in similar projects; it does not represent an evaluation of these projects or assessment of whether the projects could incorporate these measures in its cycle, for which a detailed examination of project documents would have been necessary.

| Project | Potential climate risk measures | Potential adaptive capacity measures | Potential measures addressing causes of vulnerability |
|---|---|---|---|
| **1) Health policy and administrative management**<br><br>Malawi Health programme of work: Support to development of the health sector in Malawi through a Sector Wide Approach (SWAp)<br><br>The SWAp Program of Work includes human resources, pharmaceutical and medical supplies, essential basic equipment, and infrastructure development as important components | Facilitate the use of mosquito nets among poor people in new malarial zones or areas with increasing malaria | Strengthening alternative, climate adapted, sources of income that could be sourced to pay for medical treatment<br><br>Supporting traditional curative measures | Strengthening social and physical infrastructure to enhance access by poor people of properly equipped and functioning health facilities and early diagnosis of malaria |
| **2) STD control including HIV/AIDS**<br><br>National Aids Control Programme, Tanzania: Financial support for implementation of the National Aids Control Programme Medium Term Plan III<br><br>The objectives are to:<br>• prevent transmission of HIV/AIDS/STDs<br>• protect and support vulnerable groups<br>• mitigate the socio-economic impacts of HIV/AIDS | Food aid and support programmes to prevent poor people having to resort to prostitution as source of income during drought and other climate related emergencies | HIV treatment programmes to reduce the morbidity, loss of income, labour and medical expenses that undermine household coping strategies to drought and other climatic events | Enhance local livelihoods and employment opportunities adapted to a variable and changing climate to reduce splitting of households due to seasonal rural-urban migration and the spread of HIV/AIDS<br><br>Strengthen social networks and local knowledge that are threatened as a consequence of disease |
| **3) Agricultural policy and administrative management**<br><br>Cooperation with the Drylands Coordination<br>Group Africa (Mali, Sudan, Ethiopia and Eritrea)<br><br>DCG aims to contribute to improved food security of | Build seed banks to mitigate the loss of local seed varieties | Increase knowledge about mulching and other organic techniques<br><br>Improve market channels for higher value organic products as well as niche drought crops, | Strengthen the status of local knowledge about the management of dryland resources<br><br>Address institutional systems and relations creating inequality in land distribution<br>Invest in smallholder |

| Project | Potential climate risk measures | Potential adaptive capacity measures | Potential measures addressing causes of vulnerability |
|---|---|---|---|
| vulnerable households and sustainable natural resource management in the drylands in Africa | | such as millet and dryland bioenergy crops | agriculture, creating parallel insurance mechanisms, technical extension and credit opportunities as those available to the commercial agricultural sector |
| **4) Transport and storage**<br><br>Support to the rehabilitation of the Pinga Road in North Kivu, Democratic Republic of Congo | Incorporate new quality standards related to climate change, in particular concerning passability of road during floods | Ensure a route and side- roads that connect to important rural markets<br><br>Create local employment opportunities through local hiring in all activities, with considerations for seasons and household labour shortages<br><br>Include space for bicycles/ carts/pedestrians in design | Support HIV/AIDS awareness among villages along the road<br><br>Explore road design and management that may enhance local security<br><br>Promote mobility and reduce remoteness |
| **5) Energy policy and administrative planning**<br><br>National Hydropower Masterplan II, Vietnam: Continuation of SRV-1083, National Hydromasterplan Study, Stage 1<br><br>Objective: To provide Government of Vietnam with alternative power system development strategies to meet the long-term power demand | Take potential increases in floods and droughts into account | Parallel investments in solar and other alternative sources of energy available to poor households, in ways that are enabling alternative income generating activities | Ensure power is made available to adjacent as well as distant rural populations and to poor as well as wealthier households<br><br>Strengthen the power of adjacent communities in decision-making in the development of dams, with a focus on avoiding negative impacts on areas or resources that are important in local coping strategies with climate stress, such as forest areas or drought stream-flow |

| Project | Potential climate risk measures | Potential adaptive capacity measures | Potential measures addressing causes of vulnerability |
|---|---|---|---|
| **6) Water resources policy and administrative management**<br><br>Water Resources Action Plan, Zambia<br><br>Strengthen and prepare for implementation of national policies and develop international/national/provincial/local strategies for water resources management, building upon recent initiatives, such as the National Water Policy, National Water Resources Master Plan | Take variability and longer-term changes in runoff into account<br><br>Include measures to ensure provision of safe water during droughts and floods | Promote diverse water sources, extending provision in distant and drought-prone areas | Ensure equitable water rights and strengthen systems for management of common resources, especially during seasonal or drought-induced scarcity<br><br>Counteract privatisation of water and local monopolisation of water sources and access |
| **7) Environment policy and administrative management**<br><br>Mara River Basin Management<br><br>Facilitate participatory and sustainable integrated river basin management for conversation, sustainable and equitable use of freshwater resources in the Mara River Basin, shared by Kenya and Tanzania | Assess potential damage by flooding and drought and mitigating measures<br><br>Control any increase in invasive alien species | Ensure system of access to drought resources by local populations, both to forest, fish and water resources | Enhance local empowerment in management of river basin<br><br>Promote conservation and planting of indigenous species adapted to climate variability<br><br>Provide technological assistance and credit to local initiatives processing and adding value to fish or forest products |
| **8) Business services**<br><br>Enterprise Uganda<br><br>The aim of the project is to build institutional capacity for, as well as to support, the promotion of entrepreneurship development through the establishment of Enterprise Uganda and by working directly with small and medium enterprises (SMEs) | Ensure secure alternatives for power sources, such as during drought-induced power shortages | Reduce entry barriers to business opportunities, in urban and rural areas<br><br>Institute programmes to enhance the skills of poor and their entry into business networks of the non-poor | Reduce restrictions on informal businesses<br><br>Create business opportunities that are suited to seasonal variations and climate variability<br><br>Minimise social and economic exclusion from business opportunities (*e.g.* due to gender or ethnicity) |
| **9) Industrial development**<br><br>Growing Sustainable Business for Poverty Reduction in Tanzania<br><br>The agreement seeks to contribute to poverty reduction and sustainable development by promoting and facilitating sustainable business and investments by the private sector through a process of multi-stakeholder engagement | Strategies to ensure continued operation during power shortages and alternative sources of energy | Create employment opportunities suited to seasonal migrant labour | Promote employment contracts that are favourable to seasonal workers |

*Source:* Eriksen *et al.* (2007).

# Annex 6: MAIN ELEMENTS OF THE UNDP'S SEA APPROACH TO CLIMATE CHANGE ADAPTATION

*1.) Establish the context:*

- Establish the goals, objectives and timescale of the assessment, and prioritize key systems sensitive to climate change.
- Identify key environmental problems, including those caused by climate variability and climate change.
- Take stock of existing environmental and development objectives of the country, including those related to climate change and adaptation (*e.g.* objectives stated in national development strategies, MDGs).
- Identify stakeholders, including groups particularly vulnerable to climate change and develop a plan for their involvement.
- Review and synthesize available information on climate change risks that will need to be addressed in the policy, plan or programme (*e.g.* National Communications, National Adaptation Programmes of Action).
- Prepare the work plan/ToR for the assessment utilizing information gathered during previous stages.
- Develop and communicate a capacity-building plan focusing on the SEA process, climate change and adaptation issues, tools for assessing a climate change adaptation problem, etc.
- Agree on documents required to summarize and communicate the SEA approach to Adaptation process and results.

*2.) Implement the approach:*

- Identify criteria and indicators that will be applied for assessment, monitoring and evaluation. Include indicators for monitoring and assessing effects of climate change, vulnerability to climate change, and effectiveness of implemented adaptation measures.
- Identify methods for assessing future vulnerability and adaptation needs, for characterizing future (climate-related) risks, for assessing future socio-economic conditions and capacity to adapt, and for characterizing uncertainties related to climate change.
- Establish the policy, plan or programme baseline, including current climate risks and impacts, current vulnerability of the system, current capacity and institutional arrangements, programmes and policies.
- Analyse future risks to the proposal by considering the range of potential risks to the long-term viability of the proposed policy, plan or programme, including climate change.
- Assess the environmental and human development impacts of the policy, plan or programme over appropriate time scales.
- Identify options to minimize risks and negative impacts and maximize positive benefits to the policy, plan or programme for the environment and human development.

- Prepare a synthesis document that summarizes the process carried out and presents key conclusions/recommendations for delivering desired sustainable development benefits under anticipated climate change.
- Consult the public and solicit comments on the process and the conclusions included in the document. Make sure that knowledgeable people on climate change risks and adaptation are involved in consultation process.
- Define specific measures of quality assurance of the SEA approach to Adaptation process to ensure the credibility of the assessment in the eyes of all stakeholders.

*3.) Inform and influence decision-making:*

- Ensure that the SEA approach to Adaptation conclusions and inputs are integrated into the policy, plan or programme under consideration and into core national development policies, plans and programmes.

*4.) Monitor and evaluate:*

- Monitor to what extent conclusions/recommendations for delivering desired sustainable development benefits under anticipated climate change, as identified during the process, are being met and monitor the effectiveness of proposed measure, including adaptation.
- Conduct formal evaluation of monitoring results as part of the revision and renewal of the policy, plan or programme.

# Annex 7: DANIDA CLIMATE CHANGE SCREENING NOTE

## Part A: General Country Information[17]

⇨ Country: _____

**Vulnerability and Adaptation:**

⇨ What are the country's key vulnerability and risks related to climate change?[18]

⇨ Is a national adaptation plan or strategy prepared or under preparation?[19] ☐ Yes ☒ No

⇨ What are the elements of the country's adaptation strategies? (in NAPA, National Communication or similar policy document)

**Mitigation opportunities:**

⇨ What are the identified options for mitigation in the National Communication or other relevant policy document?

⇨ Has the country a strategy on CDM projects and are CDM projects prepared? ☐ Yes ☒ No

⇨ Options for mitigation support and CDM?

**Ongoing climate change support and demand for additional support:**

⇨ What support for climate change adaptation or mitigation is ongoing? E.g. from GEF or other donors?

⇨ Demand for support to assess vulnerability and risks of climate change and options for mitigation and adaptation ('climate proofing')?

⇨ Relevant climate change issues in relation to Danish programme support? Issues for country dialogue?

**Climate Change Convention:**[20]

⇨ National communication on climate change available on the UNFCCC webpage: ☐ Yes ☒ No

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17 This note includes key information relevant for high level consultations, preparation of country cooperation strategies, sector programmes and annual programme reviews. The note is prepared the Representation.

18 Information may be found in the country's National Communication to the UN Climate Convention (UNFCCC)

19 Least Developed Countries are expected to prepare so-called National Adaptation Programme of Action (NAPA)

20 All Danida partner countries are parties to the Climate Change Convention (UNFCCC) and most are parties to the Kyoto Protocol (except Nepal, Zambia and Burkina Faso).

## Part B: Sector Programme 'Climate Proofing'[21]

⇨ Country: _____

⇨ Sector Programme: _____

**Climate Change Policy profile:**

⇨ What is the status of national climate change concerns in the sector? _____

⇨ Opportunities to further address climate change concerns in sector policies, strategies and implementation? _____

**Adaptation to climate change:**

⇨ Identified climate change impacts (actual and potential) in the sector? _____

⇨ Identified adaptation options in the sector? _____

⇨ Scope for 'climate proofing' and targeted adaptation support within the sector? _____

**Mitigation of climate change:**

⇨ Options for support to low-carbon development paths (energy efficiency, renewable energy, technology choice)? _____

⇨ Options for protecting and enhancing carbon sinks (indirectly) in land-use and forestry? _____

⇨ Options for CDM projects in the sector? _____

**Capacity development:**

⇨ Identified sector needs for additional support to address climate change? _____

**Implementation:**

⇨ Further action to ensure 'climate proofing'? _____

*Source:* www.danidanetworks.um.dk.

[21] Part B is prepared for each sector programme as a supplement to the Environmental Screening Process, if the programme/components are likely to be affected by possible climate change. The note is annexed to the Environmental Screening Note. Part A is also prepared and it is identical for all sector programmes in a given country.

# Annex 8: ACTIONS TO BE TAKEN UNDER THE DANISH CLIMATE AND DEVELOPMENT ACTION PROGRAMME

| Actions | Multilateral Development Co-operation | Bilateral Development Co-operation | | |
|---|---|---|---|---|
| | | Country Programmes | Sector Programmes | Mixed Credit Projects |
| **Raising the policy profile of climate** | Request information on policy or action plans on 'climate proofing' of development programmes/projects, e.g. investment projects.<br><br>Interaction with international NGOs and research communities for information sharing and coordination. | Raise relevant climate change considerations at high level and technical consultation meetings.<br><br>Share information/documents to highlight importance of climate change in PRSP.<br><br>Introduce climate change screening tools and other assessment tools.<br><br>Bring climate change risks to the attention of cooperation partners, including planning and finance ministries in partner countries.<br><br>Encourage participation of partner country's environment ministry in high-level consultations. | Share information/documents to highlight importance of climate change with relevant sector ministry.<br><br>Support development of climate change screening tools and other climate change assessment tools for the sector. | Climate change issues to be highlighted, when relevant, during consultations with host country and project developer. |
| **Adaptation to climate change** | Identify relevant multilateral partners (UNDP, UNEP, GEF, World Bank etc.) and scope for cooperation on adaptation to climate change in areas such as policy dialogue, implementation strategies, and financing. | Identify and consult government cooperation partners (sector ministry, environment ministry, NAPA preparation team, meteorological unit, etc.).<br><br>Assess country specific vulnerability and risks of climate change.<br><br>Ensure climate proofing of Danish assistance and promote climate proofing of other national programmes. | Include climate change concerns in ToR of sector planning and review missions.<br><br>Screening (climate-proofing) of sector programmes for adaptation to climate change. Include the climate change screening together with the mandatory environmental screening.<br><br>Assess the Danish sector programme support in context of national adaptation policies and | Include climate change and extreme weather as part of the assessment of the appraisal and feasibility of infrastructure investments ('climate proofing'). |

| Actions | Multilateral Development Co-operation | Bilateral Development Co-operation | | |
|---|---|---|---|---|
| | | Country Programmes | Sector Programmes | Mixed Credit Projects |
| | | | identify scope for support. | |
| **Mitigation of climate change** | Identify relevant multilateral partners (UNDP, UNEP, GEF, World Bank etc.) and scope for cooperation on mitigation of climate change in areas such as policy dialogue, implementation strategies and financing. | Pursue relevant opportunities for 'low-carbon development path', e.g. options for energy efficiency and renewable energy initiatives across sectors, if relevant, within the country programme.<br><br>Pursue 'passive' mitigation options, e.g. sinks in forestry, rehabilitation of community forests, emission reductions in the energy sector, thereby combining poverty focused programmes with reduced GHG emissions. | Include climate change concerns in ToR of sector planning and review missions.<br><br>In sector programme support, identify options for mitigation of climate change, i.e. reduced emission of GHG in line with the development objective of poverty reduction (e.g. renewable energy or carbon sequestration through afforestation and reforestation).<br><br>In selected CDM priority countries, identify scope for CDM projects and, if relevant, options for Danish purchase of CDM credits. | Promote investment in mitigation projects, e.g. renewable energy, transport projects, and landfill gas extraction.<br><br>Consider CDM potential of projects, as part of project feasibility. |
| **Capacity development in developing countries** | Ensure that national level implementation of climate change projects are supported by adequate national capacity development and ownership. | Encourage/support national climate change capacity needs assessments.<br><br>Consider support for national climate change screening and stocktaking of relevant climate related national plans and strategies, including support for preparation of National Communications and NAPAs and their integration in PRSPs (ref. para. 4.3).<br><br>Consider scope for support to climate change negotiator(s) and national cross-sector integration of climate change. | Include elements of relevant capacity development in relation to climate change related activities.<br><br>Involvement of counterparts in project development and assessment. | Climate change issues to be highlighted during discussions with host country.<br><br>Involvement of counterparts in project development and assessment. |

*Source:* Danida (2005).

# Annex 9: ADB TECHNICAL ASSISTANCE FRAMEWORK

| Design Summary | | Performance Indicators/Targets | Monitoring Mechanisms | Assumptions and Risks |
|---|---|---|---|---|
| **Goal** | Mainstream adaptation through risk reduction that will enhance sustainable development programs and activities in PDMCs and in ADB operations. | • ADB endorses mainstreaming adaptation in ADB country and project level operations. | • ADB reports<br>UNFCCC reports<br>Regional reports | Assumption<br>ADB takes a no-regrets approach to project development and implementation.<br><br>Risk<br>Slow acceptance on adopting new processes in ADB operations and PDMC development planning |
| | | • At least two PDMCs mainstream adaptation in national development planning and decision making for sustainable development. | • Statements by PDMCs leaders<br>Government reports<br>Newspapers and other media | Assumption<br>Political support continues.<br>Support by regional and national stakeholders<br>Continued political and social stability<br><br>Risk<br>Political instability changes focus of mainstreaming efforts.<br>Disasters or severe environmental problems may impede progress of mainstreaming. |
| **Purpose** | Develop and implement programs and projects that will mainstream adaptation through risk reduction in<br><br>(i) ADB country and project level operations; and<br><br>(ii) PDMCs, building upon recently completed and ongoing programs. | • Development of methods, tools and guidelines on mainstreaming adaptation through risk reduction<br>• Training of PARD staff<br>• ADB use of adaptation through risk reduction<br><br>• Capacities of two PDMCs enhanced<br>• Linkages and synergies among related initiatives developed | • Endorsement by PARD and approval by ADB<br><br>• Approved use of climate country team with strengthening<br>• Coordination with other related efforts | • Delays in TA implementation and TA outputs through divisional consultative process<br><br>• Improved coordination on climate in and out of government<br>• Project outputs and timelines achieved<br>• Delays in TA implementation |

| Design Summary | | Performance Indicators/Targets | Monitoring Mechanisms | Assumptions and Risks |
|---|---|---|---|---|
| | | | | and support from key ministries |
| **Outputs** | • An inception report outlining overall approach and method for TA, and PDMC involvement | • Inception report comprising reviews and recommended PDMC involvement completed by end of the 2nd month | • Completed inception report including review results to PARD/REACH | • Adequate consultation, and competent selections<br>• Endorsement by PARD on inception report |
| | • Midterm and final reports outlining<br>(i) approach and results on mainstreaming adaptation through risk reduction in ADB/PARD country and project level operations<br>(ii) approach and results on mainstreaming adaptation through risk reduction in PDMCs development planning and decision making | • Inputs and recommendations for CSP/CSPUs and enhanced PPTAs<br>• Draft guidelines and manual of instruction on mainstreaming developed<br>• Two development strategy/plan/programs enhanced<br>• Two non-ADB-funded investment projects assessed | • Completed revised CSPs, CSPUs, and PPTAs Inception report<br>Midterm report<br>Final report<br>• Completed strategy/plan/programs<br>Completed project outlines<br>Inception report<br>Mid-term report<br>Final report | • Adequate consultation and division input<br>• Acceptance by PARD<br>• Optimal timing for CSP/CSPUs and PPTAs<br>• Adequate consultation and inputs by stakeholders<br>• Acceptance by decision makers<br>• Improved coordination among ministries and public/private sectors |
| **Activities** | **Inception Phase**<br>(i) Analytical review of completed, and ongoing programs and methodologies on adaptation to determine progress achieved and lessons learned, and to identify gaps | • Review completed. Selection of methodology for undertaking TA detailed | • Inception report outlining review and recommended approach and method | • Ensure applicability, relevance, and effectiveness, and meeting needs of ADB and PDMCs |
| | (ii) Identify which parts of the adaptation process the review covers, and highlight the gaps and areas where mainstreaming can be undertaken. | • Adaptation elements reviewed, gaps and ADB opportunities highlighted | • Review report and inception report | • An approach that encompasses short-term and long-term changes in climate |
| | (iii) Select and detail the mainstreaming approach for TA use. | • Mainstreaming options selected | • Review report and inception report | • Framework and process selected is coherent, holistic, and pragmatic |
| | (iv) Identify, recommend, and agree on TA participation by at least two PDMCs. | • Criteria developed and selection process undertaken | • Inception report | • Criteria may be too stringent<br>• Good political will<br>• Involvement of finance and |

| Design Summary | | Performance Indicators/Targets | Monitoring Mechanisms | Assumptions and Risks |
|---|---|---|---|---|
| | | | | planning ministries and line agencies |
| | **Implementation Phase**<br>**<u>ADB Level</u>**<br>(i) Show how adaptation through risk reduction can best be used by ADB. | • Detailed outline of key elements | • Inception and special report on key elements of adaptation through risk reduction | • Framework/process may require capacities and strengthening beyond the TA exercise. |
| | (ii) Inputs into the CSPU process | • Recommendations for revising CSPUs completed | • Midterm report | • Timing may be a constraint |
| | (iii) Identify ADB investment exposure to CCV. | • Investment exposure highlighted in a matrix framework | • Matrix developed for PARD | • Investments may be too costly but urgently required. |
| | (iv) Identify PPTAs for adaptation through risk reduction enhancement. | • Process for enhancing PPTAs identified and worked on | • Enhanced PPTAs considered by ADB | • PPTAs approved for further support by ADB |
| | (v) Sensitize and train PARD staff in use of adaptation through risk reduction approach and elements. | • Two awareness and training seminars held | • PARD officers understanding and use of adaptation through risk reduction raised | • ADB country and project level operations enhanced |
| | (vi) Draft ADB guidelines and staff instructions on incorporating adaptation through risk reduction in CSP/CSPU/PPTA processes. | • Draft guidelines and procedures developed and circulated for input in ADB | • Guidelines and procedures revised as appropriate, and presented for approval in ADB | • Guidelines adopted and used to enhance country and project level operations |
| | **<u>Country Level</u>**<br>(i) Undertake adaptation assessment using key elements and tools based upon the review results. | • Adaptation assessment completed with country data, and key elements addressed | • Assessment report completed including adaptation and mainstreaming options and economic evaluations | • Analysis of results may require further work on assessment. |
| | (ii) Prepare a development planning incorporating document adaptation through risk reduction. | • Draft prepared and circulated to PDMCs for input | • Draft revised and approved by cabinet for implementation | • Adaptation through risk reduction may be too costly for project implementation |
| | (iii) Assess a non-ADB-funded project by incorporating adaptation through risk reduction as a part of the feasibility process. | • Draft assessment prepared and circulated to PDMC for input | • Draft assessment revised and presented to stakeholders and cabinet for approval | • Stakeholders may not want their project costs to rise significantly |

| Design Summary | | Performance Indicators/Targets | Monitoring Mechanisms | Assumptions and Risks |
|---|---|---|---|---|
| | (iv) Sensitize and train national experts on adaptation through risk reduction.<br><br>(v) Draft guidelines and procedures for mainstreaming adaptation through risk reduction.<br>(vi) Hold a national meeting to present the results of the mainstreaming activities. | • Two national awareness and training workshops held<br><br>• Draft guidelines and procedures developed and circulated to PDMCs for input<br>• All country level results prepared as input<br>• Workshop to highlight successes, gaps, constraints, and lessons | • National experts enabled to undertake adaptation through risk reduction in development planning and sector planning<br>• Guidelines and procedures revised and presented for approval in cabinet<br>• National experts present guidelines and associated studies and documents | • National experts understand adaptation through risk reduction process and use with all development projects<br>• Guidelines and procedures instituted as a part of the development process<br>• Cabinet cannot agree on guidelines without significant effort from external agencies to fund additionality |
| **Inputs** | • $800,000<br><br>• Adaptation mainstreaming specialist<br>• Climate risk and vulnerability specialist<br>• Economist<br>• Island coastal specialist<br>• Adaptation research assistant<br>• One in-country local climate change specialist in each PDMC | • Canada (CCFCC)<br><br>• 9 months<br><br>• 8 months<br><br>• 5 months<br>• 5 months<br>• 15 months<br>• 6 months for each expert | • Approval by Canada, and PDMCs<br>• Consultants progress reports<br>Inception report<br>Midterm report<br>Final report<br>TA review missions | • Timely disbursements, and PDMC support<br>• Competent consultants with demonstrated ability hired |

Note: ADB = Asian Development Bank; CCFCC = Canadian Cooperation Fund on Climate Change; CSP = country strategy and program; CSPU = country strategy and program update; PARD = Pacific Department; PDMCs = Pacific developing member countries; PPTA = project preparatory technical assistance; TA = technical assistance.

*Source:* ADB (2002).

# Annex 10: ADB GUIDELINES FOR ADAPTATION MAINSTREAMING

**A step-by-step outline of the process**

| ADB Business Process | Key Stage | Key Adaptation Mainstreaming Tool | Key Action | Key Output | Responsible Party and Duration to Complete | Remarks |
|---|---|---|---|---|---|---|
| **I. Country Strategy and Program (CSP)** | | **CSP Climate Profile (CSP-CP)** | | | | |
| CSP | 1. Pre-CSP analyses and assessments<br>2. Update of pre CSP analyses and assessments | Updating of sectors and thematic roadmaps | Additional country climate information and data will assist in climate profile development | Climate profile narrative outlining the country's climate sensitivity; Identification of projects from TA pipeline and possible associated climate risks | Climate specialist 10 days for CSP<br>7 days for CSPU | Planning and Reference Guide available outlining a listing of vulnerable thematic areas, sectors and project categories, as well as range of general adaptation measures |
| CSP Update (CSPU) | | Climate profile undertaken based on indicators, analyses, and sensitivity tables found in the CSP and other information | Updated climate profile (as above) | | | |
| | 3. Internal consultation | | Discuss the climate profile as a narrative and form key paragraphs/statements on climate sensitivity | After consultations ready for insertion into CSPU sections II and III | Desk officers, director, climate specialist | As part of the existing process climate profile narrative and key paragraphs discussed and text developed |
| | 4. Draft CSPU | | CSPU drafted with insertions | CSPU updated with climate sensitive paragraph insertions on climate risk, and preliminary climate risks assigned to projects in the TA pipeline | Desk officers, director, and climate change specialist | |
| | 5. Country Programming Mission (CPM) | | CPM undertaken with draft CSPU and draft Climate Profile for discussion | | Desk officers, director, Pacific developing member country (PDMC) | The PDMC should see the draft Climate Profile and make comment or input during CPM |

| ADB Business Process | Key Stage | Key Adaptation Mainstreaming Tool | Key Action | Key Output | Responsible Party and Duration to Complete | Remarks |
|---|---|---|---|---|---|---|
| **II. PPTA/Loan Processing** | | **Project Adaptation Brief (PAB)** | | | | |
| | 1. Project identification | | PAB begins when project concepts are developed | Draft PAB started | Sector officer and climate specialist | Initial concepts from CSPU TA pipeline/Climate Profile can be used |
| | 2. Project design | | Within PAB, climate risks identified and assessed; project risk level categorized<br><br>Some adaptation options for the project outlined.<br>Recommended assessment level detailed for TA implementation | Risk category highlighted<br><br>Draft PAB completed with draft TORs for assessment and evaluation included | Sector officer, desk officer, director, climate specialist<br><br>1 week | Climate risk level in the PAB: High CCV risk or low CCV risk |
| | 3. TA paper<br><br>4. TA review and approval<br><br>5. Consultants selection<br><br>6. Final TA report (feasibility study) | Adaptation TORs finalised as part of PPTA preparation | Draft TORs from PAB finalised for climate expert/activities based on CCV risk category<br><br>Undertaking Project Adaptation Assessment (PAA)[22]<br>Preparation of PAA Report[23] | TOR is part of PPTA preparation<br><br>PPA undertaken<br><br>Results after analyses inputted to<br><br>Draft PAA Report<br><br>PAA Report finalised and synergised with EMP and is part of final TA report | Sector officer, TA consultants, climate specialist<br><br>Time taken dependent upon level of PAA | PAA undertaken as part of existing PPTA feasibilities and arrangements |
| | 7. RRP and revised RRP | Adaptation covenant | | RRP incorporating key recommendations of the PAA Report<br><br>RRP with adaptation covenants | | |

22 Project Adaptation Assessments are analyses of present and future climate risks to the project and environment according to future scenario from a known baseline and the response measures to address these climate risks.

23 Will include (i) summary of assessed risks, (ii) prioritization and cost-benefit analyses of adaptation options; (iii) selected adaptation option; (iv) institutional arrangements; (v) organizational requirements; (vi) identification of supporting policies in the Pacific Developing Member Countries (PDMCs); and, (viii) monitoring and evaluation mechanisms.

| ADB Business Process | Key Stage | Key Adaptation Mainstreaming Tool | Key Action | Key Output | Responsible Party and Duration to Complete | Remarks |
|---|---|---|---|---|---|---|
| Loan processing | 8. Final RRP<br>9. Loan negotiation | | | | | |
| Loan implementation and supervision | 10. Loan inception<br>11. Mid-term review | Safeguard compliance[24] | Review of PAA Report<br>Recommended implementation in the context of the adaptation covenant | Revisions to loan/project incorporating adaptation | | |
| Project completion and post-evaluation | 12. Project completion report<br><br>13. Post-evaluation report | | Review of actual adaptation strategy effectiveness | Framework evaluation process developed | | A framework for evaluation of effectiveness of adaptation process and measures required<br><br>Will be inputted into post-evaluation report |

*Source:* ADB (2003).

[24] Initially, compliance for adaptation mainstreaming may prove to be difficult. Unlike the EIA system, the adaptation mainstreaming has no compliance framework. This should be emphasized as a current gap in ADB policy area.

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