Experiences from the Danish

"Climate and Development Action Programme"

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Introduction

The scientific community, and national and international policy makers increasingly recognize that climate variability and change is a major stress to key development objectives such as poverty alleviation, food and water provision, infrastructure, energy and health.

The Danish Minister for Development Cooperation, Ms. Ulla Tørnæs, on this background launched the Danish "Climate and Development Action Programme"[2] in August 2005. This was made in order to address climate change in the context of development. It is the aim to develop an approach for 'climate proofing' of Danish development cooperation as part of the Action Programme. The approach will be used as a practical tool in the Danish bilateral development cooperation for screening of linkages between national development programmes and climate change.

The necessity of integrating climate into development planning is underpinned by the increasing number of floods, droughts and storms. An example of the impacts of the extreme climate events has been seen after the floods in Mozambique in 2000, where about 12 percent of the land under cultivation was flooded, and about 2 million people (12 percent of population in Mozambique) experienced severe economic difficulties. 491,000 people were displaced or trapped in flood-isolated areas, and more than 650 people lost their lives. The high water levels caused standing and contaminated water, which exposed people to diarrhoeal diseases, cholera and malaria. About 70 percent of the affected people were living for less than USD 2 a day and they lost their homes, crops and livestock during the flood.

The Danish Action Programme is implemented in collaboration with the UNEP Risø Centre through Danish embassies in Danish partner countries. Pilot studies in Mozambique, Tanzania,

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[2] The Danish Climate and Development Action Programme can be found at http://amg.um.dk/en/menu/PoliciesAndStrategies/Climate+and+Development/

and Vietnam have been undertaken in the first year of the Action Programme implementation. The number of studies is planned to be extended to more Danish partner countries, including Bangladesh, Bolivia, and Nicaragua.

Approach

The Danish "Climate and Development Action Programme" follows a mainstreaming approach, which emphasizes sustainable development as a framework for climate change vulnerability and adaptation, rather than a strictly environmental perspective, which often is followed in international programmes. The perspective of the mainstreaming approach is supported by emerging literature that recognizes that climate change variability, extreme events and structural changes have major impacts on a wide range of economic, social, and human living conditions as well as on natural systems.

The strong relationship between climate change and development is also recognized by IPCC in its Third Assessment report[3]. The report states that "The impacts of climate change will fall disproportionally upon developing countries and the poor persons within all countries, and thereby exacerbate inequities in health status and access to adequate food, clean water, and other resources. Populations in developing countries are generally exposed to relatively high risks of adverse impacts from climate change. In addition, poverty and other factors create conditions of low adaptive capacity in most developing countries."

Recognizing the importance of the development-climate link, the mainstreaming approach assesses climate change in the context of general development goals. In practice this means that:

- Climate change is addressed as a development problem, and human welfare aspects and its various social and human dimensions are linked to environmental issues.
- The issue moves into the domain of central ministries such as planning and finance, and sectoral ministries such as agriculture, water, health, transport and energy.
- Future climate change and the impacts of current extremes and disasters are established.

A pragmatic approach that can be used to assess climate vulnerability and adaptation policies in a broader development context is to use a number of general development goals and indicators in the policy evaluation[4]. Some of the aspects that in this context can be addressed are:

- Economic development goals such as growth, investments, and employment.
- Total income generation and income distribution including geographical structure, and gender.
- Water access and affordability.
- Food access and affordability.

[3] Climate Change 2001. Synthesis Report. Intergovernmental Panel on Climate Change, page 12, Cambridge University Press

[4] See a more elaborate outline of the indicator approach in Halsnæs, K. and J. Verhagen, 2006. Development Based Climate Change Adaptation and Mitigation - Conceptual Issues and Lessons Learned in Studies in Developing Countries. Mitigation and Adaptation Journal, Forthcoming.

- Energy access and affordability.
- Health status and access to health services.
- Educational status and access to education.
- Governance and local participation in policy implementation.

Several of the aspects listed here are included in national development programmes, poverty reduction strategies, and in sectoral plans as well as in international development goals such as the Millennium Development Goals.

Overview of Country Experiences

The first implementation phase of the Danish Climate and Development Action Programme has as previously mentioned involved scoping missions to Vietnam, Tanzania, and Mozambique. The following sections provide a brief overview of the findings and the suggested further actions in these countries.

Vietnam

The Vietnam country study was initiated by a scoping mission to Hanoi in November 2005. This was arranged by the Danish embassy in Hanoi and included meetings with local institutions and experts, and review of ongoing projects. The aim of the mission was to identify national areas and actors related to climate change vulnerability and adaptation. Furthermore, linkages to socio-economic development, gaps and potential areas for tangible future activities that could be supported by the Danish Ministry of Foreign Affairs were assessed.

The local institutions provided information about linkages between development and climate change and current and future vulnerabilities and expressed a strong interest in future cooperation. They also supported the idea of linking climate change impacts and vulnerabilities to social and economic development dimensions and welcomed a coordinated effort that could bring different sectors, experts and government agencies together.

A general observation was that the Vietnamese capacity related to meteorological issues, weather monitoring and forecasts, and climate projections seems to be well developed. There was also ongoing work related to warning systems for extreme weather. Furthermore, substantial national capacity was available in relation to water resource systems, including flooding, and more regular water management systems in coastal areas as well as in larger river deltas.

The local capacity related to social and economic issues seemed to be more scarce. The few activities in these areas had predominantly been donor driven and it would require a special effort to establish strong local capacity in these areas. It also meant that socio-economic aspects and relationships between national development programmes, poverty alleviation, Millennium Development Goals aspects, and climate change vulnerability and adaptation have not yet been covered in climate change work in Vietnam.

The Vietnam pilot study identified and outlined a number of options for future activities that could support the integration of development and climate change vulnerability issues. These include:

- Short term adaptation options in agriculture (crops) based on seasonal climate forecasts and capacity building. The proposed activities include training, general capacity building, improved farming practices, human and social impact assessment, etc.
- Infrastructure vulnerability and planning options; e.g. related to railways and highways.
- Climate change impacts and household coping strategies: Linking technical and socio-economic information systems for crosscutting analysis and policy recommendations.
- Climate change and coastal zone erosion measures: consideration of conflicts between mangrove reforestation and traditional shrimp farming.
- Hydropower availability and conflicts with other water usages assessed in a sub-regional context (with a focus on small scale hydropower projects).

The meetings with climate change and development actors in Vietnam also revealed that there is a strong need for initiatives that can support information sharing, coordination across activities, and increased national awareness on climate change. Climate change adaptation activities are only beginning to emerge in Vietnam and represent an area that attracts considerable interest from both donors and local institutions.

In light of the Vietnam pilot study, the Danish Embassy in Hanoi has initiated a number of projects together with relevant partners in Vietnam, see Table 1 below. The hydropower and mangrove management projects are primarily implemented at provincial level, while capacity development for the climate focal point in Vietnam is a national initiative.

Table 1: Overview of initiated projects in Vietnam on the basis of the Danish Action Programme

Project title	**Project anchor**
Benefits of ensuring climate change adaptation on small and medium scale hydropower plants	Institute for Meteorology and Hydrology
Mangrove management information system to mitigate climate change effects	Ministry of Agriculture and Rural Development/Hanoi Agriculture University
Capacity development for the national climate change focal point in Vietnam	Ministry of Natural Resources and Environment

Tanzania

Tanzania was visited as the second country in the Danish Action Programme in January 2006. The specific terms of the visit included an assessment of the links between climate change vulnerability and development objectives in Tanzania, and assistance to the local government and other partners with national strategy development activities. These activities focused on the ongoing National Adaptation Programme of Action (NAPA) process and on scoping of planned national activities related to the preparation of the Second National Communication to the UNFCCC.

The visit to Tanzania included the participation in Tanzania's Second Scientific Conference on Environmental Sustainability and the Implications of Climate Change that brought together 75-100 participants, including researchers, government officials, civil society representatives, and a few international guests. Various aspects of climate change and its impacts on health, agriculture, water, forestry, energy and the natural environment were covered based on presentations of existing information, and discussions about future research needs. The conference confirmed that some basic climate change data is available, but more efforts are needed in order to link the climate change data with sectoral data and socio-economic impacts.

In order to assist in the development and finalization of Tanzania's NAPA and to scope more in depth analysis of sectoral adaptation options, the visit included dialogues with national government agencies and experts about how climate change and development issues could be linked. It included meetings with the national climate change focal point in the Division of Environment and with the intergovernmental NAPA Task Force. The Task Force included representatives from Ministry of Agriculture and Food Security, Ministry of Water and Livestock Development, the Environmental Protection Management Services and Centre for Energy, Environment, Science and Technology. The discussions considered how various climate change vulnerability aspects can be assessed in relation to specific issues in the agricultural, water and health sectors as well as in relation to more general national development goals. It was in this context considered how specific indicators and analytical approaches can be used to assist in the development of a list of NAPA priorities and project profiles.

The Danish Embassy in Dar es Salaam on this background has decided to support climate change activities linked with the NAPA process in Tanzania. The objectives of the project are: 1) General awareness rising on climate change and potential responses, 2) Analysis of climate change trends and its impacts, and support to the prioritization of actions in NAPA. The idea is, in this way, to add value to the analytical work on specific NAPA issues, and to link climate data and sectoral information.

Mozambique

The third pilot study was initiated by a scoping mission to Mozambique in June 2006. The objective of the mission was to identify key areas and actors related to climate change vulnerability and adaptation, and the linkages to socio-economic development. Gaps and potential areas for tangible future activities, which could be supported by the Danish Ministry of Foreign Affairs, were also assessed.

The pilot study reviewed existing studies and available reports, and included visits to local government institutions, university partners, and NGO's.

It was the impression from the visits that there is a lack of coordination between many of the ongoing national activities that are linked to climate change. This implies that there currently is very little information available in Mozambique about the specific national climate change impacts in different parts of the country and at different points in time. Some of the institutions, that were visited, nonetheless, seemed to have demonstrated a high capacity in the climate related areas, which they have worked on, including Government institutions, the University and various international organisations and NGO's.

Another observation was that very few studies include economics or other social science aspects. There are, nonetheless, some relevant data available about these issues as for example household expenditure surveys and general development and planning activities that would be highly relevant to link to climate change impacts and vulnerabilities.

In the outcome of the mission, it was suggested that the Mozambique component of the Danish Action Programme could focus on awareness raising about national and local impacts of climate change, capacity building related to climate data and forecasting, interdisciplinary master and PhD training, and case study analysis at provincial level, where climate information, socioeconomic impacts and policy implementation are considered in an integrated way.

The Danish Embassy in Maputo has on this background decided to consider potential projects implementation in these areas in more detail.

Conclusions

From the pilot phase of the Danish Climate and Development Action Programme initial experience has been gained on how a mainstreaming approach can be applied in practice. The scoping missions to Vietnam, Tanzania, and Mozambique concluded that there are very strong links between current development activities in the countries and climate change. The countries are already today suffering from extreme events and natural disasters, which need to be considered in relation to current development projects. This conclusion was shared with national government agencies, experts and other stakeholders, and there was a strong interest in participating in further cooperation with Denmark in order to upscale activities in these areas.

However, it was also recognised that the countries today are not in a process of coordinating the various development planning activities, sectoral programmes and climate change issues. Climate change vulnerabilities and adaptation options have primarily been considered by the national UNFCCC focal points that are closely connected to the ministries of environment in the countries. There has been very little cross cutting work going on between various national experts and government agencies that are related to the key vulnerable sector. There is therefore a strong need to facilitate awareness raising and capacity building activities in the countries that involve a broad set of national actors and experts. It is recommended that these activities both include general university training programmes, in depth studies, and activities that support policy implementation such as national dialogues, and interactions between local and national government authorities.

Finally, it is also a general conclusion from the countries that there is a need for collaboration between national and international experts in order to establish stronger capacity in some areas including climate projections and socio-economic assessments. In relation to climate forecasting the establishment of better national information about specific sub regional impacts of climate change needs to be supported. This includes short term variabilities, extreme events, and longer term changes. In relation to socio-economic aspects, there is a need to build stronger capacity in relation to economic analysis and to the integration of broader social aspects in climate change studies such as income distribution, education, health, and various governance issues.