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SUBSIDIARY BODY FOR SCIENTIFIC AND TECHNOLOGICAL ADVICE

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Item 3 of the provisional agenda

Nairobi work programme on impacts, vulnerability and adaptation to climate change

Efforts undertaken to monitor and evaluate the implementation of adaptation projects, policies and programmes and the costs and effectiveness of completed projects, policies and programmes, and views on lessons learned, good practices, gaps and needs

Submissions from Parties and relevant organizations

1. The Subsidiary Body for Scientific and Technological Advice (SBSTA), at its twenty-eighth session, invited Parties and relevant organizations to submit to the secretariat, by 18 September 2009, information on efforts undertaken to monitor and evaluate the implementation of adaptation projects, policies and programmes and the costs and effectiveness of completed projects, policies and programmes as well as views on lessons learned, good practices, gaps and needs (FCCC/SBSTA/2008/6, para. 63).
2. The SBSTA requested the secretariat to compile these submissions into a miscellaneous document to be made available by SBSTA 31.
3. The secretariat received one such submission from a Party on 23 September 2009. In accordance with the procedure for miscellaneous documents, this submission is attached and reproduced** in the language in which it was received and without formal editing.
4. The secretariat has also received one submission from a non-governmental organization. In line with established practice, this submission has been posted on the UNFCCC website at <<http://unfccc.int/3689.php>>.

* Exact dates within the sessional period are subject to confirmation.

** This submission has been electronically imported in order to make it available on electronic systems, including the World Wide Web. The secretariat has made every effort to ensure the correct reproduction of the text as submitted.

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SUBMISSION FROM SWEDEN ON BEHALF OF THE EUROPEAN COMMUNITY
AND ITS MEMBER STATES

**SUBMISSION BY SWEDEN ON BEHALF OF THE EUROPEAN COMMUNITY AND ITS
MEMBER STATES**

**This submission is supported by Albania, Croatia, the Former Yugoslav Republic of Macedonia,
Montenegro and Serbia**

Stockholm, September 23, 2009

**Subject: Nairobi Work Programme on impacts, vulnerability, and adaptation to climate
change: Information on efforts taken to monitor and evaluate the implementation of
projects, policies and programmes and the cost effectiveness of these**

Introduction

The SBSTA¹ invited Parties and relevant organisations to submit to the Secretariat, by 18 September 2009 under the adaptation planning and practices work area of the Nairobi work programme: **Information on efforts taken to monitor and evaluate the implementation of projects, policies and programmes and the cost effectiveness of these.**

The Swedish Presidency on behalf of the EU welcomes this opportunity to respond to this request.

General remarks

Monitoring and evaluation are key elements of adapting to climate change. Although a relatively new field, several member states in the EU are actively involved in developing legal, institutional and technical conditions to assist in evaluating the effectiveness of adaptation plans and practices at both national and local levels. Such an integrated approach provides opportunities for rapid learning, avoids unnecessary duplication of work, and enhances cost effectiveness not enjoyed by isolated projects. Monitoring and evaluation within such settings also provides the flexibility and robustness that adaptation planning requires to adjust to uncertainties, new insights and to take account of changing stakeholder attitudes to risk.

Some of the lessons learnt from member states experiences are:

- It is important not to lose sight of the context in which monitoring and evaluation occurs, and in particular to base-line and objectives.
- Design indicators that are context specific.
- Avoid setting up parallel climate change specific systems and use existing country systems for monitoring and evaluation and build on and strengthen these.
- Recognise the value of both national and community based approaches to monitoring and evaluation.
- Engage a wide range of stakeholders
- Partnership, coordination and collaboration strengthen monitoring and evaluation.
- Learning by doing applies to monitoring and evaluation.
- Invest in and strengthen the knowledge base and share good practice.

¹ FCCC/SBSTA/2008/6 paragraph 63.

The content of our submission under the socio-economic information work area of the Nairobi work programme (submitted on the 18th September 2009) on information on efforts undertaken to assess the costs and benefits of adaptation options, is also relevant to this submission.

Member States Experience and Approaches

Finland

Finland's National Strategy for Adaptation to Climate Change was completed in 2005. A Coordination Group for Adaptation to Climate Change was appointed to follow and promote the implementation of the strategy, with representatives of ministries, research institutes, research funding agencies and regional actors. The Coordination Group steered the evaluation² of the implementation of the Adaptation Strategy conducted in winter 2008–2009, which will be utilised in the future work of the Group.

The evaluation of the implementation of the Adaptation Strategy was conducted by a survey of whether and how the measures presented in the strategy have been launched in different sectors. According to the preliminary adaptation indicator developed in the context of this work, Finland, on average, is on step 2 in adaptation (on a scale from 1 to 5). This means that among the decision-makers there is at least some understanding of the impacts of climate change and the need for adaptation measures has been recognised. Some practical adaptation measures have also been identified and plans have been made or even launched for their implementation. The most advanced sector in the implementation of the Adaptation Strategy has been the water resources management, where adaptation to climate change is already well integrated into the decision-making. In the transport sector, community planning and agriculture and forestry the implementation of the Adaptation Strategy has also proceeded quite well, but in most sectors the work is in early stages.

The precondition for launching the adaptation measures is the recognition of the need for adaptation to climate change in different sectors, which in turn must be based on applied research on adaptation and communication of the results in a way that allows their utilisation in decision-making. The implementation of the Adaptation Strategy should be enhanced by increasing the resources allocated to adaptation research and awareness of climate issues in decision-making at all levels. The implementation of adaptation measures in practice also calls for more cooperation between sectors, especially at the regional level.

Germany

In Germany a lot of monitoring systems are already established for example in the environmental sectors, but only a few of them are aimed specifically on the observation of climate change and climate impacts. At the moment, especially the federal Länder, evaluate their environmental monitoring programmes to modify them for contribution to identify impacts of climate change in their regions. On the Federal level some activities are in progress to improve the knowledge base on impacts in the sectors of adaptation, for example in biodiversity, soil and human health.

To get information on the implementation of adaptation projects, policies and their effectiveness, the Federal Government in cooperation with the Federal States is developing a national set of adaptation indicators in accordance to the indicator system of the European Union. This indicator system will serve as a basis for an indicator based progress report of the German Adaptation Strategy beginning in 2011. It will cover the wide range of issues in the 14 sectors of the Strategy and highlights the cause-effect-relationships of climate change, impacts and adaptation measures. At first the indicators will be based on existing data. Step by step the Federal Government will improve the indicator set to a more comprehensive approach.

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<http://www.mmm.fi/attachments/ymparisto/sopeutuminen/5HB7CtsIo/Evaluation_of_Implementation_of_NAS_FINAL.pdf>.

Further information on efforts undertaken, costs and benefits of adaptation options and monitoring is collected by the Competence Centre on Climate Impacts and Adaptation (KomPass) at the German Federal Environment Agency (UBA). KomPass acts as a central office for coordination and implementation of the national strategy. Further reading (german): <http://www.anpassung.net/>

Italy

The Italian Ministry of the Environment, Land and Sea (*Ministero dell'Ambiente, Tutela del Territorio e del Mare*, MATTM) is responsible for undertaking adaptation measures of national scope and aims at mainstreaming adaptation into sectoral policies. At the present time, Italy has no national adaptation strategy and/or national adaptation plan to climate change. Some preparatory work has started recently in the context of the National Conference on Climate Change promoted by MATTM and held in Rome on 12-13 September 2007, focused predominantly on adaptation and intended at kick-starting the process of developing and implementing a national adaptation strategy. The Conference analyzed the existing countrywide vulnerabilities caused by climate change and the applicable adaptation options, and proposed concrete action on the basis of several focused workshops and conferences organized in collaboration with the National System of Environmental Agencies, under the guidance of the National Environment Protection and Technical Services Agency (*Agenzia per la Protezione dell'Ambiente e per i servizi Tecnici*, APAT) - now Institute for Environmental Protection and Research (*Istituto Superiore per la Protezione e la Ricerca Ambientale*, ISPRA). Despite the lack of a national strategy, adaptation in Italy is developed particularly in the fields of coastal protection, agriculture and the fight against desertification. Furthermore, some measures implemented within environment protection, natural hazards prevention, sustainable management of natural resources and health protection policies, can be beneficial also for adapting to climate change. These measures range from legal frameworks and monitoring, to surveillance of early impacts and early warning.

According to the 4th National Communication to UNFCCC, several studies on the implementation of adaptation measures have been carried out for the agricultural sector, focusing on management of seeding and harvesting methods and on allocation of water resources. The results indicate that even moderate adaptation policies may considerably reduce agricultural damage caused by climate change. Correct market signals are cited as being important in modifying human behaviour for implementing appropriate adaptation strategies. Furthermore, it is mentioned that the implementation of a health/health watch/warning system (HHWWS) established in 2003 for the prevention of health effects of heat waves involves the evaluation of the effectiveness of the system in preventing excess mortality. According to the conclusions of the Italian National Conference on Climate Change, to monitor progress and to conform policies to the pressing rate at which climate is changing, it is hoped that the Conference may be repeated at regular intervals, corresponding at any rate to the output of IPCC reports, and that it may include updating. A priority action of the MATTM for sustainable adaptation entails a wide research and knowledge work about major critical issues linked to the effects of climate change, and particularly the engagement in the preparation of a yearly report on the monitoring on climate change and its effects on the environment, on citizens' health, and on the economy.³

The Netherlands

Adaptation in the Netherlands deals with changes in socio-economic behaviour, new technologies, water management and spatial planning. The choices in relation to water management and spatial planning and development, such as investments in cities, infrastructure, water systems and nature have a long time span and are to a large extent irreversible. This requires solutions that offer flexibility and robustness and along with this the ability to monitor for effectiveness for the long term. Due to the uncertainties about impacts of climate change, the flexibility and robustness of adaptation planning and monitoring requires the ability to adjust to new insights and to be able to govern decisions between different stakeholders of

³ Further information on the National Climate Conference can be found at <http://www.apat.gov.it/site/it-IT/ContentsFolder/Eventi/2007/09/conferenza_cccn2007.html>.

government and society. The current approach towards monitoring of adaptation practices is building on learning by doing, by strengthening the knowledge base in pilots and linking up with policy development and institutional arrangements. In 2006 the Royal Netherlands Meteorological Institute (KNMI) published 4 climate change scenario's for the Netherlands. These scenario's proved to be very useful for adaptation policy, infrastructure planning. Recently (July 2009) KNMI published a supplement to these projections evaluating the 2006 scenario's using the latest scientific information and most recent observations. It was concluded that the observed changes up to now were within the range given by the 2006 scenario's. The observed warming of the Netherlands (about twice the global warming) is well represented by the two warmest scenario's that were published in 2006. In the supplement additional information is provided on precipitation extremes and precipitation in the coastal region. A new full set of scenario's is planned to be published in 2013, based on IPCC AR5 and additional regional climate models and observations. An extensive user consultation will provide the future user needs for the new scenario's.

In our current National Programme on Climate adaptation and Spatial Planning <http://www.maakruimtevoorklimaat.nl/english-Summary.html> the stakeholder engagement and working arrangements are organised between central government, regions, municipalities and water boards.

In the new installed high level Delta Commission (2007) which advised the Government on a programme for the future. Special attention was paid to the coastal defence, flood protection and special geographical areas. The advice also contained institutional aspects: climate change adaptation will need a special legal basis, new political-administrative arrangements and legally based continuous funding.

The knowledge base is strengthened through the Knowledge for Climate programme (<http://www.knowledgeforclimate.org/>) where the cooperation between the public sector, private sector and scientific institutions is arranged in 'hotspots', such as main national airport, the harbour of Rotterdam, the major rivers and the South-western Delta. This hotspot approach combines stakeholder involvement, and the development of demand-driven knowledge with a cross sectoral approach focus on key sectors in the Netherlands. Also providing for the sharing of experiences and lessons learned.

Spain

The Spanish Climate Change Adaptation Strategy (*Plan Nacional de Adaptación al Cambio Climático*, PNACC) uses several tools to ensure that the progress of actions implemented are monitored both by the Spanish national authorities and by other stakeholders.

A general coordination body, the Spanish Climate Change Office (*Oficina Española de Cambio Climático*, OECC), ensures coherence in all the working lines and sectoral projects that the PNACC covers. The OECC defines the working programmes that prioritise action. It also provides guidance on tools, data, and results and defines guidelines for measuring progress in several sectors. The PNACC scheme has permanent feedback from ongoing projects and activities under the work programmes to provide: new data and information to contribute to impacts and vulnerability evaluations by raising awareness of best practices as well as limitations, uncertainties and gaps of models, tools and data. This approach promotes cross-sectoral learning and a more coherent approach (e.g. through use of the same scenarios, projections) to avoid duplication of efforts/costs, as well as building strategic partnership with third parties to develop new projects.

Technical level coordination with regional governments (which have many management and regulatory powers and are developing their own adaptation strategies) is promoted through the Working Group on Impacts and Adaptation - a forum for the exchange of key information. The monitoring of projects and programmes is important for sharing the most relevant information to all the administrative levels, to facilitate coordinating of future policies.

Several means are under development to share the information on work done: interim reports on the implementation of the PNACC where the methods, progress and achievements of the projects carried out are publicly available; a national database collecting efforts from administrations and private entities; a repository of climate scenarios open to all potential users; and tools such as atlases or web-based tool to facilitate access to and use of the information available.

The PNACC has just adopted its second work programme. After a first work programme in which key activities (e.g. coordinating a national system for climate scenarios) and priority horizontal sectoral evaluation projects (water resources, coastal areas, biodiversity) were carried out, the 2nd is a much more ambitious programme. It will make use of the results of the 1st Programme to extend the evaluation of impacts and vulnerability to new key sectors such as agriculture or tourism. Additionally, it plans to mainstream adaptation into the most cost effective way, e.g. mainstreaming into legislation, by identifying the key entry points for adaptation in regulations, thus ensuring the consideration of climate change impacts and uncertainty at early stages of the policy process. Some progress already been achieved in the Water or Forestry policy, and the National Plan to Fight Desertification. A general national system of indicators for monitoring the effects of climate change and the results of adaptation will be developed under the 2nd Work Programme. Within the national RD&D Plan, a board has been established with the participation of all the beneficiary projects dealing with climate scenarios and adaptation, for information sharing, mutual reporting and guidance, in order to ensure coherent and comparable results, as well as adequate use of the complex data and tools that each party produce.

United Kingdom

The environment ministry, the Department of Environment, Food and Rural Affairs (Defra), co-ordinates the cross-government Adapting to Climate Change Programme in England, which drives action forward in England. The Programme's evidence team also holds a research budget that covers the United Kingdom, including the Devolved Administrations (Wales, Scotland and Northern Ireland). Over recent months, there have been several developments that will support the work of the Programme, taking account of lessons learned, good practice and needs.

First, new Projections showing how the climate of the UK will change over this century were launched on 18 June 2009, as part of a concerted programme of action in response to climate change being pursued across Government. The Projections form a significant element of the evidence base which is needed to take the right decision at the right time, based on an analysis of the risks involved.

The Projections cover:

- probabilistic projections for temperature, precipitation, air pressure, cloud and humidity and other variables by region and 25km grid squares and for monthly, seasonal and annual values.
- results for the three different emissions scenarios – high (SRES A1FI), medium (SRES A1B) and low (SRES B1).
- information for seven overlapping 30-year time slices, starting with 2010-2039 and going up to 2070-2099.

Further information, including training to help organisations learn to use the Projections, can be found at www.defra.gov.uk/adaptation. As part of the development of the UK Climate Projections, all of the publications were reviewed by a team of over thirty contributing organisations. An international peer review to check whether the methodology was fit for purpose was also carried out in January 2009. Since the launch, the Adapting to Climate Change Programme, UK Climate Impacts Programme and Met Office have been working together to request feedback on the Projections from the scientific and user communities, which will be collated and used in further developments for the project.

At the launch of the new Projections, the Government also announced that all central Government departments would produce adaptation plans by spring 2010. Departmental Adaptation Plans will drive adaptation work across Government and demonstrate practical actions being taken by each department to safeguard strategic policy objectives against climate-related risks; build organisational capacity to identify and respond to adaptation challenges over the longer term; and implement adaptation measures through planned investment in built estates and assets. These plans will complement work being undertaken at other levels (sectoral, regional and local), and show how central Government is providing leadership for adaptation work across the UK.

The Government is currently consulting on how to use the Adaptation Reporting Power. This power was taken under the Climate Change Act 2008 and requires specified bodies to report on the risks that climate change poses to their operations and their adaptation plans. The introduction of the reporting power will help with adaptation directly, through directing organisations to report, and indirectly, through raising awareness, building capacity in organisations, and making examples of good practice publically available.

The Chair and six members of the Adaptation Sub-Committee to the Committee on Climate Change have been selected. This Committee will provide advice and scrutiny of the Government's Adaptation Programme and National Climate Change Risk Assessment. As soon as possible after the first National Risk Assessment has been completed as required under the Climate Change Act, the Programme will become statutory, expected in 2012. The Adaptation Sub-Committee will have an important role to play in scrutinising the Programme.

Work also continues on nationally inspired but community-led initiatives to assist in the integration of adaptation planning and action at the regional and local level. This includes local authority targets and other community based initiatives such as local authority partnerships involving private and public bodies working at the community level to identify best practices and address adaptation needs. Tools to support this are available on the UK Climate Impacts Programme website: <http://www.ukcip.org.uk/>

In recognition of the important role that local authorities should be taking, Government introduced an adapting to climate change indicator in to the Local Government Performance Framework. The indicator allows authorities and partners to monitor and evaluate progress in adapting to climate change over four levels. The levels range from identifying the priority areas for adaptation through to developing and maintaining an adaptation action plan. The first year of self-assessment of progress against various levels of preparedness on adaptation has just been completed, and the results are being analysed and will inform further future work. Developing short and long-term indicators of the progress and effectiveness of the overall Adapting to Climate Change programme is ongoing work. Any basket of performance measures would need to cover levels of awareness as well as adaptive capacity in the public, private and third sectors.
