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NATIONAL APPROACHES TO ADAPTATION

Some Lessons Learnt from recent OECD and UNFCCC Workshops

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FOREWORD

This document was prepared by the OECD and IEA Secretariats in March 2005 at the request of the Annex I Expert Group on the United Nations Framework Convention on Climate Change (UNFCCC). The Annex I Expert Group oversees development of analytical papers for the purpose of providing useful and timely input to the climate change negotiations. These papers may also be useful to national policy-makers and other decision-makers. In a collaborative effort, authors work with the Annex I Expert Group to develop these papers. However, the papers do not necessarily represent the views of the OECD or the IEA, nor are they intended to prejudge the views of countries participating in the Annex I Expert Group. Rather, they are Secretariat information papers intended to inform Member countries, as well as the UNFCCC audience.

The Annex I Parties or countries referred to in this document are those listed in Annex I of the UNFCCC (as amended at the 3rd Conference of the Parties in December 1997): Australia, Austria, Belarus, Belgium, Bulgaria, Canada, Croatia, Czech Republic, Denmark, the European Community, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Latvia, Liechtenstein, Lithuania, Luxembourg, Monaco, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Russian Federation, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, United Kingdom of Great Britain and Northern Ireland, and United States of America. Korea and Mexico, as OECD member countries, also participate in the Annex I Expert Group. Where this document refers to “countries” or “governments”, it is also intended to include “regional economic organisations”, if appropriate.

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TABLE OF CONTENTS

1. INTRODUCTION.....	5
2. NATIONAL PERSPECTIVES ON ADAPTATION	5
3. SOME LESSONS LEARNT ON COUNTRY APPROACHES TO ADAPTATION	6
4. CONCLUDING REMARKS	10
5. REFERENCES.....	11
6. ANNEX 1: OVERVIEW OF COUNTRY PRESENTATIONS AT OECD AND UNFCCC MEETINGS.....	13

1. Introduction

Adaptation to climate change is a challenge that all countries are currently facing. Most countries have already started to develop national or sectoral adaptation strategies. In parallel, an international process has also started to emerge to support these national adaptation efforts, whereby countries share their experiences with - and exchange views on - their national strategies.

At the end of last year, two international meetings took place around adaptation issues, which brought together Annex I and non-Annex I Parties: the OECD Global Forum on Sustainable Development: Development and Climate Change, on 11-12 November 2004; and the In-Session Workshop on adaptation, as part of the SBSTA meetings, on 8 December 2004. Another international workshop on adaptation practices and strategies took place in Wellington, New Zealand, on 11-13 October, which was limited to OECD countries.

This paper provides a brief summary of the national approaches presented at the OECD and UNFCCC workshops, as well as some preliminary insights on national adaptation strategies that emerge from these events¹. The intent is to facilitate further exchanges of views on adaptation, such as the one that took place within the Seminar of the Annex I Expert Group “Working Together to Respond to Climate Change,” on 21-22 March 2005.

2. National Perspectives on Adaptation

The OECD and UNFCCC workshops had somewhat different objectives. The OECD Global Forum brought together the climate and development communities. Its aim was to raise the awareness of the development community on climate risks and the need to adapt to them. It was also to identify synergies and conflicts between development and climate policy objectives. The In-Session Workshop was open to all participants to the climate negotiations and had a more specific objective of exploring the themes of: “applications of methods and tools to assess and prepare for adaptation; and linkages between adaptation and sustainable development”, within the wider objective to advance negotiations on this issue and assist countries in developing their adaptation strategy.

Although these two events had somewhat different objectives, a large part of the presentations (and discussions) was devoted to the sharing of national experiences related to adaptation. All in all, experiences from about 13 countries were presented at the two workshops, 8 from non-Annex I countries and 5 from Annex I countries². Participants did not always represent their government’s positions, so presentations did not necessarily reflect exactly or exhaustively what occurs in each country regarding adaptation. In fact, while a majority of presentations from Annex I countries were made by government representatives, the reverse was true for non-Annex I Parties.

While these presentations certainly did not reflect a comprehensive view of adaptation actions in different parts of the world, they did provide a useful picture of the *variety* of initiatives and actions related to adaptation that take place in different countries. In particular, presentations involved a mix of impact and vulnerability assessments, case studies, as well as local, sectoral or national adaptation strategies³.

¹ A Summary report of the Wellington workshop is available at <http://www.climatechange.govt.nz/about/international-workshop/index.html>

² See references as well as Annex 1.

³ In addition to these national perspectives on adaptation, four presentations focused on research or on results of research that had a somewhat larger, international, scope: two presentations focused on the evolution of modelling

Impact and vulnerability assessments

As expected, all country presentations mentioned climate impact and/or vulnerability and adaptation assessments that have been –or will be- undertaken at domestic level. Although not all assessments fit clearly within one category, climate impact assessments tend to be quantitative and provide scenarios of future climate impacts for an entire country or region (“top-down” assessments), using global circulation models (GCM) or regional circulation models (RCM). Vulnerability (or risk) and adaptation assessments tend to be qualitative and place-based (“bottom-up” assessments), to insert climate change within a wider socio-economic context and to use participatory approaches (Klein, 2004). Regardless of these categories, such assessments also differed from country to country as to their level of detail.

Adaptation strategies

Most presentations included a discussion of adaptation per se (as opposed to impact or vulnerability assessments), but again in different ways. A few presentations simply listed possible adaptation measures. Two presentations (Kiribati and Egypt) explicitly presented a prioritisation exercise (or process) for selecting adaptation measures. Finally, about half of presentations discussed specific strategies for adaptation, which include efforts to mainstream adaptation in relevant policy areas, including through specific legal instruments.

Not surprisingly, implementation of these adaptation strategies appears most advanced in those countries where vulnerability to current climate variability and/or change is particularly being felt (e.g. heat wave occurrence in France, natural hazards in Small Island States, flooding in Switzerland). However, it is very difficult to assess from presentations the level of implementation or financial support of adaptation strategies, because this depends very much on country-specific circumstances.

Awareness raising, stakeholder involvement and capacity building

Four presentations particularly emphasised processes existing in their country to raise awareness of the need to adapt, to consult stakeholders in developing adaptation strategies and/or develop capacity for stakeholders to adapt to climate change.

3. Some Lessons Learnt on Country Approaches to Adaptation

Lessons learnt from these two workshops, some of which are based on the Chair's summaries⁴, are presented below.

Adaptation is a dynamic, multi-faceted process

Presentations at the two workshops, as well as the ensuing discussion, illustrated very different facets of adaptation, which need to be combined to allow adaptation to occur in practice. As pointed out in the presentation on the New Zealand agriculture sector, an adaptation strategy is a process with multiple facets, which combines the use of (top-down) impact assessments, (bottom-up) vulnerability (or risk) assessments, awareness raising, dialogue among stakeholders and capacity building, as well as the mainstreaming of adaptation at different decision levels -from the individual level to the highest level of government-.

research, one on the global impacts on climate change on agriculture, as well as one on the effects of climate change on indigenous communities.

⁴ See references

In addition, the dynamic that drives adaptation actions is likely to come both from the bottom up and the top down. Adaptation is likely to have an important bottom-up component, because it is in most cases sector- or location-specific. Firstly, impacts themselves often depend on local geographical features. Secondly, depending on the particular impacts, location of the impacts and on the sector or issue at stake (e.g. coastal zone, flood, or water resource management), the institutions and processes for dealing with these issues can be quite different. Indeed, while a few presentations presented a comprehensive national strategy, most focused on a particular sector or region. However, a top-down process may also be needed to provide a framework to -as well as to support- local adaptation actions.

The involvement of all decision levels, co-operation, dialogue, awareness-raising and capacity-building are key elements of an adaptation strategy

Decisions on adaptation are made at all levels: national and local governments, the research community, the private sector, local communities, individuals, and/or the international community. All decisions levels have a role to play. Obviously, the involvement of local stakeholders, the private sector, individuals, the research community are essential, but the active involvement of the different levels of government is also likely to be most important. The importance of the local governments was much emphasised in these workshops, but so was the need to involve the highest level of government. If adaptation is only left to low-ranked ministries, such as environmental ministries, strong action is unlikely.

Since so many decision levels are involved, cooperation and dialogue between different groups and levels of governments are also essential. Awareness raising and capacity building are also critical to the involvement of stakeholders, since most of them are not climate experts themselves.

As already mentioned, some presentations at the workshops illustrated these critical aspects of adaptation strategies. In Kiribati, a national consultation process forms the basis of the national adaptation strategy. In Canada, efforts to adapt to climate change in high latitude regions are meant to be led by local communities, with the support of the federal government. In New Zealand, the need to engage farmers at the local scale was strongly emphasised. In Nicaragua, a specific project from the Red Cross is based on awareness raising and on encouraging dialogue between climate experts and the disaster preparedness community.

The right types – and the right combination – of assessments are needed to move into adaptation actions

There is ongoing debate in the adaptation community about what types of assessments are needed before moving into more concrete adaptation actions. In some cases, there is a risk that too many assessments will delay appropriate action, while moving into action without sufficient assessments can lead to maladaptation. The two workshops give some indication of the different kinds of assessments that are needed in order to take action.

As adaptation assessments are most often issue- or location- specific, it was generally pointed out that a combination of complementary assessments is needed to undertake specific adaptation actions. Undertaken in isolation, top-down impact assessments may be disconnected from reality and fail to reach stakeholders, as there may be too much uncertainty as regards the local impacts of climate change. To some extent, impact assessments using regional circulation models (RCM) can bridge the gap and provide more detailed information about local conditions, but limitations still exist. Top-down assessments need to be combined with bottom-up assessments to provide sufficient information for local stakeholders to take appropriate action.

Bottom-up assessments can take different forms: risk or vulnerability assessments for a particular infrastructure project or a particular location, case studies on e.g. specific extreme events, like floods and

droughts, sectoral or regional studies. Other bottom-up studies, which may involve interviews with local farmers, for instance, as is the case in New Zealand, bring an understanding of what sustainability means for actors on the ground. These bottom-up assessments are also needed to determine which specific factors influencing adaptive capacity, such as money, people, technology, institutional capacity, are most important in the case of a particular adaptation issue.

More generally, “place-based” information, “traditional” knowledge or expertise from other fields (e.g. disaster management) needs to be combined with model-based, scientific studies. The Nicaragua project, for instance, aims at bringing together expertise from the climate and the disaster management communities. Integrating different kinds of knowledge and decision levels is likely to provide incentives for all stakeholders to move into concrete actions.

Adapting to current impacts of climate variability and/or change is an important need, but not the only one

Most examples of adaptation today relate to adaptation to current hazards, which stem from natural climate variability and/or climate change. Action is most likely to take place when it is undertaken in relation to urgent and pressing needs. Thus adaptation to such hazards is certainly a starting point for adaptation to future climate change. However, this may not be sufficient. Long term climate change trends may prove to generate impacts that are quite different from current climate variability. This issue is particularly important in the case of infrastructures. In both workshops, some presentations focused on the need to take into account long term climate change in the development of infrastructures, e.g. through environmental impact assessments. In India, for instance, the maintenance costs of the Konkan Railway in India is likely to increase with climate change.

Mainstreaming involves more than integration of adaptation in sectoral planning

Mainstreaming –or linking adaptation to sectoral policies and sustainable development- is a long-term process, which includes many different steps.

This process is likely to start with awareness raising and dialogue between climate experts and other policy communities. The OECD workshop, for instance, was an opportunity for a dialogue between climate and development experts. The UNFCCC workshop brought together different experts, including those of the disaster management community. At national level, awareness raising extends to the different policy processes that are relevant to adaptation, such as agriculture policy, land use management and natural resources management. It was noted that such dialogues have indeed started to take place at national or international levels.

Mainstreaming is also about integrating adaptation into sectoral and/or (sustainable) development plans. Presentations at the workshops have shown that this is also starting to occur in some countries. However, such integration may not necessarily lead to the implementation of concrete adaptation actions. This is similar to the challenges faced by mitigation policies. For example, in many countries, mainstreaming of energy efficiency programmes has been on the agenda of the World Bank and many corporate utilities for nearly two decades, with mixed success.

In order to take on the challenge of implementation, mainstreaming requires attention to the “three Is” - institutions, incentives and instruments-, as mentioned in the presentation on Kiribati:

- Institutions: as already suggested, all institutional levels need to be involved. This requires appropriate allocations of responsibilities –and leadership-, from the highest political levels to the local levels as well as mechanisms of cooperation between these different levels of authority.

- Incentives: appropriate incentives need to be put in place. Money should flow where it is needed, but, more generally, a "culture of prevention" needs to be put in place, where politicians have an incentive to move into long-term, preventive actions.
- Instruments: there are a variety of instruments that need to be put in place at the appropriate decision levels. Concrete projects are most likely undertaken at the local level, such as the "climate-proofing" of an infrastructure project, as is currently being undertaken in Micronesia. However, there is an important role for national or regional governments in providing guidance, financial support, assessment tools, as well as a framework for adaptation actions. This may include reforming specific sectoral policies or changing regulations, for instance, on environmental impact assessments, or land-use planning, so as to include consideration of climate change.

Finally, mainstreaming is about finding synergies between adaptation to climate change and more immediate concerns, such as poverty eradication, land-use management, or disaster preparedness. In some case, synergies are obvious, such as when climate change simply exacerbates current natural or social trends. However, finding synergies can also sometimes be perceived as a difficult exercise. Some development experts mentioned, for instance, that they were asked to mainstream many different issues in their development activities, such as the fight against AIDS, poverty eradication and enhancement of democracy. Finding synergies between many different issues can become quite complex indeed and result in a loss of focus. Even more so, there may also be conflicts between adaptation to climate change and other policy objectives. For example, adaptation to climate change may mean changing current economic development patterns such as those along the coastal areas of the United States. These changes may not always be politically acceptable.

Countries are different, but they can share knowledge, technologies and tools on adaptation

Countries differ widely in terms of size, geographical conditions, institutional structure and culture. This has broad implications with regard to their approaches of adaptation. Presentations and discussion at both workshops reflected these national circumstances. Some countries tend to design comprehensive national, regional or sectoral strategies to adaptation, while others prefer to provide support to stakeholders to undertake adaptation. Indeed, mainstreaming is a very different process in a country where most decisions are decentralised or left to the market, as compared to a country which relies more heavily on regulations and economic development plans. So, in many ways, national experiences with adaptation are not comparable.

With a closer look, it is, however, possible to find similarities between countries. For instance, some countries, either as neighbours or separated by thousands of kilometres, may share very similar geographical characteristics. Some indigenous communities may also be found across different countries. Finally, some countries may find a particular interest in tools, methodologies, guidelines, processes for impacts or vulnerability assessments, or stakeholder consultations, information products, as well as technological solutions, which have been developed by other countries.

This has particular implications for international cooperation and technology transfer. There is a clear need to exchange information on –and provide access to– such tools, guidelines, methodologies, processes, information products or technologies that can be valid across countries. This alone is not sufficient, however. In parallel, local research, data collection and capacity needs to be enhanced.

4. Concluding Remarks

A multi-faceted, yet coherent, picture of national efforts to adapt to climate change has started to emerge from exchanges of experiences on domestic adaptation strategies that have recently taken place at international fora, such as the OECD Global Forum on Sustainable Development: Development and Climate Change in November 2004, and the In-Session SBSTA workshop in December 2004:

- Adaptation is a process with multiple components, such as impact and vulnerability assessments, awareness-raising, capacity building, stakeholder participation and mainstreaming.
- Within these elements, awareness-raising and participation are seen as particularly important, as well as cooperation between different decision levels.
- As far as assessments are concerned, particular emphasis is placed on an appropriate combination of top-down and bottom-up assessments, which are issue- and/or location-specific.
- The role of adaptation assessments is to come up with priorities for adaptation. In this context, adapting to current impacts of climate variability and/or change is a priority, but attention also needs to focus on future impacts, in particular as regards infrastructure, which has a long lifetime.
- As far as mainstreaming is concerned, the most critical challenge is the implementation of adaptation strategies, which requires the right institutions, the right incentives, as well as the right instruments.

These exchanges of experiences have also provided lessons for international cooperation: there is a clear need to exchange information on – and provide access to – adaptation-related tools, guidelines, methodologies, processes, information products or technologies that can be valid across countries. In parallel, local research, data collection and capacity needs to be enhanced.

Finally, several aspects of national adaptation strategies have received less attention at both workshops, and may provide interesting topics for future reflection:

- Monitoring and review of adaptation actions is likely to become in the longer term a more important element of adaptation strategies at national or regional/local level, as implementation of these actions becomes more of a reality.
- National adaptation research is an important element of adaptation strategies. There may be useful national experiences on how to develop a research agenda, which can fill knowledge gaps and be policy-oriented.
- A closer look may be warranted on how sectoral policies, such as agriculture, urban or land-use planning, natural resources management, may be altered in practice to take into account adaptation to climate change. The International Workshop on adaptation practices and strategies in developed countries, which took place on 11-13 October 2004 in Wellington; New Zealand, went further in that direction, but was limited to OECD countries.
- National frameworks for adaptation may differ from country to country. It might be useful to compare them. In particular, some countries may try to define national objectives and goals as regards adaptation, even in a quantitative form. This may help better define the level of risks that countries find acceptable as regards climate change.
- As noted in the Chair's Summary of the OECD Forum, there is a clear need to place climate change considerations within a broader economic risk management framework. There may be useful exchanges of experiences on the economic valuation of climate change impacts (and in particular on their transboundary effects), but also of the potential impact of macroeconomic and structural adjustment policies on the ability of a country to adapt to climate change.

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Chair’s Summaries, presentations and background papers available at:

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6. Annex 1: Overview of Country Presentations at OECD and UNFCCC meetings

Country	Speaker	Sector	Area	Impact assessment	Vulnerability assessment	Adaptation measures			awareness raising-stakeholder involvement
						List of measures	Priority setting	Strategic planning	
Nepal	Gov	Water	Mountains	x		x			
France	NGO	Water	River basin		x	x			
Peru	NGO	Water	Mountains	x	x				
Switzerland	Gov	Water	Mountains	x				x	
India	NGO	All	Country	x					
India	NGO	Infrastructures	Region	x	x				
Nicaragua	NGO	All	Region		x				x
US	Gov	Coastal zones	Country		x				
France	Gov	Health	Country	x	x			x	
Egypt	NGO	Coastal zones	Region	x	x	x			
Bangladesh	NGO	Coastal zones	Country	x				x	
New Zealand	Gov	Agriculture	Country	x	x	x		x	
Micronesia	Gov	Infrastructures-All	Region-Country	x	x			x	
Kiribati	NGO	Coastal zones-all	Country		x		x	x	x
Canada	Gov	All	Region	x	x			x	x