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THE ADAPTATION LANDSCAPE

By Dennis Tirpak (OECD) and Murray Ward (Global Climate Change Consultancy)

The ideas expressed in this paper are those of the authors and do not necessarily represent views of the OECD, the IEA, or their member countries, or the endorsement of any approach described herein.

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FOREWORD

This document was prepared by the OECD and IEA Secretariats in September and October 2005 in response to 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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Questions and comments should be sent to:

Dennis Tirpak
Head, Climate Change Programme
OECD Environment Directorate
ENV/GSP
Email: Dennis.Tirpak@oecd.org
Fax: +33 (0)1 44 30 61 84

OECD and IEA information papers for the Annex I Expert Group on the UNFCCC can be downloaded from:
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1. Introduction

Adaptation to the impacts of climate change is a crucial international climate change policy issue affecting all countries. This short ‘think piece’ describes adaptation in the context of current international discussions of climate change under the United Nations Framework Convention on Climate Change. It also broadens the discussion and addresses other societal groups. We call this the “the adaptation landscape”.

All countries may wish to consider the ideas contained herein as they reflect on adaptation measures, particularly the reasons for and types of actions that are most appropriate at the local, national or international level^{1 2}.

2. The ‘Adaptation Landscape’

Adaptation to climate change is defined in the Third Assessment Report of the Intergovernmental Panel on Climate Change as ‘an adjustment in natural or human systems in response to actual or expected climate stimuli or their effects, which moderates harm or exploits beneficial opportunities. Various types of adaptation can be distinguished, including anticipatory and reactive adaptation, private and public adaptation, and autonomous and planned adaptation.’

Adaptation is much more than just about ‘climate change. In the context within which most adaptation practitioners work, adaptation means increasing the resilience of communities and ecosystems against adverse climate. Generally practitioners don’t make distinctions with regard to anthropogenic or natural climate changes, and often take only partial regard to pressures that exist now or are likely to come to bear in future. Adaptation requires a holistic long-term perspective that considers not only the risks, opportunities and limitations posed by current and future climate conditions, such as changes in mean climate, patterns of variability, and extremes – including Monsoon rains, hurricane seasons, drought periods, and the frequency of El Niños - but also societal changes due, for example, to population growth, changes in demographics, movements between rural and urban populations, the availability of and access to technology and information, and evolving systems of governance.

This means that it is not practical to attempt to partition issues into separate climate change and climate variability boxes, although when it comes to action under the UNFCCC this distinction cannot easily be avoided. However, adaptation does require an assessment of the patterns and trends of changing means and extremes – of climate and sea level – as they affect individual regions, countries and communities.

It also means that existing institutions, such as those responsible for managing water supplies, protecting public health, responding to natural disasters, protecting coastal areas and conserving and managing forests and ecosystems should be in the forefront of designing and implementing adaptation measures. Where these institutions exist adaptation process can build on their knowledge and experience.

The purview of the UNFCCC therefore covers only part of the adaptation picture. But the work of its bodies can help inform, assess, facilitate and, as applicable, effect actions across the full landscape.

Adaptation is very ‘site’ and ‘sector’ specific. No two countries or sectors have the same circumstances, that is, climate, natural resources, infrastructure, technological state, economy, policy, governance, and

¹ The AIXG has initiated several papers that aim to address the policy frameworks affecting member countries, with an initial focus on water and the coastal zone. These papers will be available in 2006. The OECD has had an active programme of work on mainstreaming adaptation into international development activities for over three years. Between 2002-2005 case studies were conducted in six developing countries on opportunities and trade-offs in mainstreaming adaptation in development planning and assistance (OECD 2003a-d; OECD 2004a-b). Ongoing work (during 2005-06) is looking at adaptation across OECD countries at a meta-level, as well as through in-depth studies in two climate sensitive regions/sectors (OECD 2005).

² A list of key references that have informed this effort is provided in Appendix 1.

community engagement such that they could or should respond to the same climate change effect in exactly the same way. Put simply their adaptive capacities are different.

At a basic level, this suggests that adaptation ‘solutions’ cannot be transferred easily from one ‘situation’ to another without a degree of local tailoring.

This doesn’t mean that every country, sector and community must act in isolation and ‘reinvent the wheel’. There will be certain aspects of good practice, for example, the use of analytical tools and knowledge of the mix of ‘top down’ support and ‘bottom-up’ engagement, that are highly transferable between ‘situations’. As adaptation practitioners in businesses and governments gain experience, a *toolkit of good practice* is likely to emerge which would enable them to pick and work with tools that best suit their circumstances. In this regard, some have suggested that adaptation lends itself to “south-south transfers” (of good practice) and perhaps “south-north transfer” given the experience of least developing countries (LDC) with elaborating National Adaptation Programmes of Action (NAPA).

Climate change ‘adaptation practitioners’ exist in many walks of life, but most wouldn’t recognise this label if it were applied to them. They are architects, engineers, planners, tradespersons, health professionals, agricultural advisors, regional development professionals, and relief workers. Anyone who is involved in helping people and situations cope with existing climate and climate variability, possibly among a broader set of development imperatives, is a potential adaptation practitioner. But so too are those dealing with changing markets, e.g. for agricultural products either because of changing natural resource or climate factors or perhaps changing realities for regional or international trade³.

To some, adaptation needs are urgent now and are already known, including some of the most vulnerable least developed countries that are well along in their NAPA processes. The majority of countries are just beginning to identify their priorities and build capacity. This means that **an effective international adaptation process must cater to wide and diverse needs.**

Adaptation is essentially a risk management challenge. When viewed in this context, that is, as not just an environmental problem, the importance of engaging many levels of government, including economic and financial professionals, becomes apparent. With respect to economics, it is not just at the ‘micro’ level. Climate change impacts can have debilitating effects on the macroeconomic settings of countries, especially vulnerable developing countries. There can also be upside opportunities for the businesses and sectors that may benefit from climate change.

Dealing with uncertainty is core to managing these risks. However, it is important to recognize that the real world without anthropogenic climate change is also full of short and long-term uncertainties. Practitioners have a wide variety of mechanisms to deal with this “normal” uncertainty, however one way to treat the uncertainties of climate change is to embed these in existing practices, rather than inventing and defining separate and new processes and approaches. It is important not to limit adaptation efforts by creating an expectation that uncertainty in long-term decision-making could diminish, if only the right tools, models and data are provided.

Adaptation requires a range of inputs and actions, some of which are more open to external assistance than others. If it is to be effective, adaptation requires an understanding of at least the following elements:

- information and tools, e.g., in the form of data on current climate conditions, projections of climate change at the regional level, and models (at different levels) to assess the impacts of projected climate changes on key sectors such as agriculture, ecosystems, and infrastructure,
- technology and practices to adapt to expected changes, and
- a policy framework that facilitates forward planning and risk assessment/management.

³ A good sense of these points can be gained through looking at the case studies presented at the IDS side event at SB22. See Linking climate adaptation: lessons for mainstreaming climate adaptation on Sat 21 May at http://regserver.unfccc.int/seors/reports/events_list.html

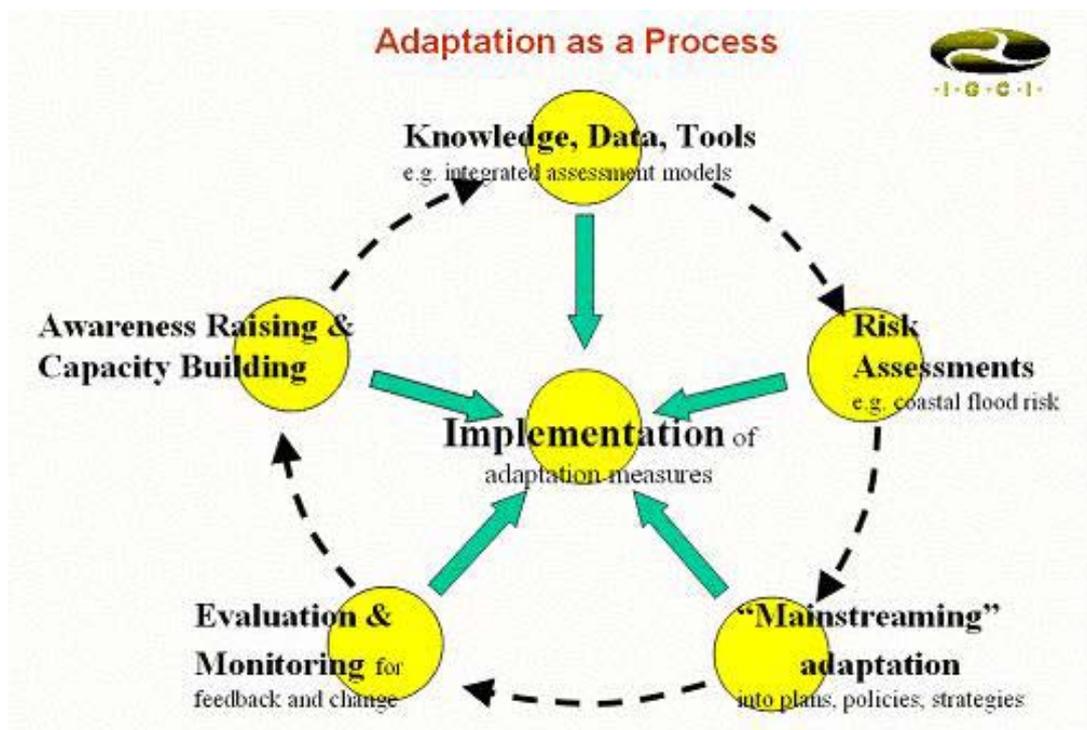
While the first two points to some extent are open to external assistance, the later point is very closely linked to overall governance structures within countries and even to regions within countries. Without proper governance structure, the provision of assistance is unlikely to be efficient or effective. Moreover, countries are generally reluctant to accept external influence on domestic governance structures. The international climate change policy process needs to find ways to define meaningful areas for international cooperation that considers all three of the above areas, while recognizing the limitations of the third area.

Effective mainstreaming of adaptation will depend to a large extent on the domestic policies and the international ‘enabling framework’ in which adaptation occurs, and the degree to which this framework fosters strategic planning and flexible response measures.

Adaptation should be seen as a continuous process. Implementation of adaptation measures involves (i) provision of knowledge, data and tools; (ii) risk and vulnerability assessments; (iii) integrating adaptation into plans, policies and strategies; (iv) evaluation and monitoring; and (v) awareness raising and capacity building. There are links among all of these elements and to existing adaptation institutions and processes. This ‘continuum’ is depicted in the following figure.

The extent of adaptation necessary worldwide depends to some extent on the degree of worldwide mitigation. However, in many circumstances there are limits to how much adaptation is feasible, and there are time lags between emissions, resulting climate change, observation of relevant impacts, and the most efficient timing of adaptation actions (and expenditures) to minimise the adverse effects of impacts. Moreover, the distribution of the impacts of climate change is very uneven. There are strong economic and equity reasons why it is not appropriate to ‘broadly average’ effects and adaptive capacities in a global adaptation/mitigation trade-off exercise. Adaptation and mitigation are complementary, not alternative strategies.

Figure 1. The Adaptation Continuum ⁴



⁴ Courtesy "Warrick, R.A., 2000: Strategies for vulnerability and adaptation assessment in the context of national communications. Asia-Pacific J for Env. and Dev. 7 (1), p. 43-51."

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