

**DAC NETWORK ON ENVIRONMENT
AND DEVELOPMENT CO-OPERATION (ENVIRONET)**

**STRATEGIC
ENVIRONMENTAL ASSESSMENT
AND
ADAPTATION TO
CLIMATE CHANGE**

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Preface

This is one in a series of Advisory Notes that supplement the *OECD/DAC Good Practice Guidance on Strategic Environmental Assessment* (SEA) (OECD/DAC 2006). The Guidance provides a broad framework, steps and principles of SEA application across the full range of policies, plans and programmes (PPP) (summarised in Annex 1). However, a need was recognised for more detailed advice on:

- a) a range of key emerging issues that may need to be more explicitly incorporated within an SEA; or
- b) special or challenging circumstances in which SEA may be applied.

The Advisory Notes are not intended to provide exhaustive, in-depth guidance but rather supplementary advice and links to resources where more specialised information can be found.

Therefore, these Advisory Notes fall into one or more of the following categories.

1. Applying SEA in particular situations or circumstances that will require unique sensitivity and awareness (*e.g.* post conflict environments);
2. Providing further perspective, information and guidance on emerging issues that may need to be more adequately integrated into an SEA. (*e.g.* climate risk or ecosystem services);
3. Undertaking an SEA that focuses specifically on a key emerging issue or policy area that was not sufficiently addressed when the DAC SEA Guidance was prepared (*e.g.* biofuel development strategies, post-conflict reconstruction plans).

The target audience of the Advisory Notes are SEA practitioners (to help strengthen the quality of SEA) and specialists in the specific issues or circumstances under consideration (to introduce them to the added value of SEA to their work).

This Advisory Note is intended to (i) illustrate how SEA may provide a framework for integrating considerations of climate change risks and opportunities into strategic planning, and to (ii) guide planners, policy makers and sector specialists working in the preparation of PPPs and those already familiar with SEA in the inclusion of climate change considerations into PPPs.

STRATEGIC ENVIRONMENTAL ASSESSMENT AND ADAPTATION TO CLIMATE CHANGE

I. Introduction

As a result of the work of the Intergovernmental Panel on Climate Change (IPCC), there is widespread recognition that human activities are changing the global climate system, and that every part of the globe will be affected by the impacts of climate change. While climate change may generate economic opportunities in some parts of the world, the adverse impacts of climate change are projected to outweigh its benefits, particularly in developing countries. Climate change has the potential to exacerbate disaster risks, water stress, food insecurity, health risks, natural resource depletion, gender inequalities, social and economic marginalisation, conflict and migration. Climate change impacts are also expected to adversely affect transport networks and other infrastructure, and activities such as tourism. Sea-level rise and accelerated coastal erosion poses an existential threat to some populated areas as well as to critical infrastructure such as coastal oil rigs and power plants. Through these mechanisms, climate change can undermine or even reverse human development, posing serious challenges to the achievement of the Millennium Development Goals (MDGs). This is elaborated in the 2007/2008 Human Development Report, which focuses on climate change, and concludes that successful climate change adaptation, coupled with stringent mitigation, holds the key to human development prospects for the 21st century and beyond. Ultimately, adaptation is an exercise in damage limitation and deals with the symptoms of a problem that must be addressed through mitigation. However, failure to deal with the symptoms will lead to large-scale human development losses (UNDP 2007).¹ The [OECD Declaration on Integrating Climate Change Adaptation into Development Co-operation](#) (2006) and the *OECD Guidelines on Integrating Climate Change Adaptation into Development Co-operation* (in preparation) detail the importance of integrating climate change considerations into national development frameworks and international aid efforts.

The *OECD DAC Good Practice Guidance on Strategic Environmental Assessment* (SEA) highlights the need to address environmental risks and opportunities in the

¹¹ Throughout this Note, the term ‘climate change’ is used to describe any change or variation in climate, at any spatial scale, that deviates from what may be viewed loosely as historical norms to which existing social, economic, agricultural and other systems have more-or-less adapted. Climate change may manifest itself through changes in the frequency, severity and/or duration of transient climate hazards (i.e. individual extreme events such as storms, heavy rainfall, periods of below average rainfall, etc), or through longer term changes involving phenomena such as sea-level rise, progressive climatic desiccation, and climatically-driven changes in ecosystems, water resources etc. The extent to which elevated climate risk is associated with transient and/or long-term hazards will vary with location and over time.

development and appraisal of policies, plans and programmes (PPPs). SEA is being adopted in a growing number of countries and organizations. It also provides a framework for assessing and managing a broad range of environmental risks which may contribute to the integration (or “mainstreaming”) of climate change considerations into PPPs. The integration of climate change into strategic planning through the application of SEA should lead to better informed, evidence-based PPPs that are more sustainable in the context of a changing climate, and more capable of delivering progress on human development.

As evidence for and awareness of the risks associated with climate change and its impacts grows, PPPs often need to incorporate considerations of climate change. However, experience and empirical evidence on the inclusion of climate change adaptation considerations in PPPs through SEA is not yet well developed. This is in part attributable to the fact that awareness of the need for adapting to climate change is relatively recent. Moreover, the primary focus of SEAs so far has been to evaluate the impact of a PPP on the environment rather than the impact of environmental change on a PPP.

II. Focus of this Advisory Note

The focus of this Advisory Note is to show how SEA approaches can help mainstream **adaptation** to climate change into strategic planning, in order to reduce the hazards, risks and vulnerabilities posed by climate change to systems and populations (see Box 1). It aims to show how SEA can be used to assess how PPPs might mediate climate change risks, for example by facilitating or constraining adaptive choices and behaviour.

In addition to addressing the impacts of inevitable climate change through adaptation measures, climate change **mitigation** through reductions in emissions and/or enhancing sinks of greenhouse gases is critical. A thorough SEA that looks at the impact of a PPP on the environment should therefore consider greenhouse gas emissions and their consequences. Furthermore it is recognized that adaptation and mitigation are complementary aspects of climate change risk management, and that synergies between these activities exist. However, given the notable differences between adaptation and mitigation in terms of temporal and spatial scales of intervention, key stakeholders and decision processes,² mitigation of climate change, while critical, is not addressed in this Advisory Note.³

² See Klein *et al.* (2007) for detailed discussions.

³ For additional information on climate change mitigation, see the IPCC (2007).

Box 1. Hazards, vulnerability and risk

Chapter 18 of the Third Assessment Report (TAR) of the IPCC Working Group II defines vulnerability as the “degree to which a system is susceptible to injury, damage or harm (one part – the problematic or detrimental part – of sensitivity)” (Smit & Pilifosova, 2001, p.894). The IPCC’s Fourth Assessment Report (AR4) defines vulnerability as “a function of the character, magnitude and rate of climate change or variation to which a system is exposed, its *sensitivity*, and its adaptive capacity” (IPCC, 2007, p.883). These two definitions of vulnerability as (i) a *component of* sensitivity and (ii) a *function of* sensitivity, are fundamentally different, and have led to some confusion.

The approach to vulnerability that has been adopted widely by social scientists and field practitioners and is adopted in this Advisory Note views the *risk* posed to a system by climate change as a function of:

1. the *exposure* of that system to climate-related *hazards* (e.g. episodic hazards such as recurrent droughts, storms, inundation, or other climate-related extreme events; singular hazards such as glacial lake outburst; or continuous hazards such as steady decline in mean annual rainfall);
2. the underlying *vulnerability* of the exposed system, driven by socio-economic, environmental and other factors that affect the ability of the system to resist, absorb, cope with and respond to the impacts of the hazards in question;
3. *adaptive capacity*: the ability of the system to adapt to these changes by changing its properties and behaviour in a way that enables it to resist, absorb, cope with and respond to impacts associated with new or evolving hazards.

Source: See Brooks (2003) for a more detailed treatment of the relationship between risk, hazard and vulnerability⁴.

This Advisory Note aims to help development professionals working with SEA in the context of national and sectoral planning, to factor in climate change adaptation issues where warranted⁵. This is referred to in the forthcoming *OECD Guidelines on Integrating Climate Change Adaptation into Development Co-operation* as applying a “climate change adaptation lens” to the PPP in question (Box 2). At a national level, an SEA may help to identify elements of national PPPs that are sensitive to or at risk from climate change, or whose viability in the context of projected future climatic conditions is in question. At a sectoral level, climate change considerations within an SEA might be used to assess strategies for sectoral reform to identify which strategies are, and which are not, resilient under different climate change scenarios, or to identify where adaptation interventions will be required to enhance the resilience of the sector in the face of climate change. For example, in areas facing increasing water stress, the water requirements associated with different strategies for reform of the agricultural sector may determine which sectoral PPPs are most practical and sustainable in different climate change

⁵ The guidance can also be helpful for other policy analysts, planners and practitioners such as representatives of the consulting and private sectors and Non-Governmental Organizations.

scenarios. In the tourism sector, the viability of different strategies and associated PPPs for the expansion of coastal tourism might be assessed for different rates and magnitudes of sea-level rise.

This Advisory Note therefore aims to demonstrate how SEA and related approaches may facilitate the integration of climate change adaptation considerations into planning and decision-making. It is not a prescriptive blueprint and it does not assume that all SEAs should include climate change considerations. It is intended as a point of reference and targets PPPs that are likely to be influenced by and hence need to adapt to climate change or influence adaptive capacities in some way.

Box 2. Applying a ‘climate lens’ in strategy or PPP formulation

A climate adaptation lens is an analytical process/step/tool to examine a policy, plan or programme (PPP). The application of a climate adaptation lens at the national or sectoral level involves examining:

1. the extent to which the PPP under consideration could be vulnerable to risks arising from climate variability and change;
2. the extent to which climate change risks have been taken into consideration in the course of formulation of the PPP;
3. the extent to which the PPP could lead to increased vulnerability, leading to ‘maladaptation’ or, conversely, miss important opportunities arising from climate change; and
4. for pre- existing PPPs which are being revised, what amendments might be warranted in order to address climate risks and opportunities (sometimes referred to as ‘climate-proofing’).

A first quick application of the climate lens should enable a policymaker to decide whether a PPP is at risk from climate change. For a PPP that is not at risk, no further work needs to be done. However, for a PPP that is at risk, further work is required to identify the extent of the risk, assess climate change impacts and adaptation responses in more detail and identify possible recommendations and ‘downstream’ actions.

Source: OECD DAC (in prep).

The information and questions outlined below are relatively generic and are intended to be adapted to partner country circumstances, development agency mandates, the specificities of the targeted policies, plans and programmes, and the objectives of including climate change adaptation in the SEA (*e.g. raising awareness at high policy level or mainstreaming adaptation*).

More detailed information on the impacts of climate change on developing regions

预览已结束，完整报告链接和二维码如下：

https://www.yunbaogao.cn/report/index/report?reportId=5_13430

