

Unclassified

ENV/WKP(2011)6

Organisation de Coopération et de Développement Économiques
Organisation for Economic Co-operation and Development

29-Jul-2011

English - Or. English

ENVIRONMENT DIRECTORATE

ENV/WKP(2011)6
Unclassified

ENVIRONMENT WORKING PAPER NO. 36

HARMONISING CLIMATE RISK MANAGEMENT: ADAPTATION SCREENING AND ASSESSMENT TOOLS FOR DEVELOPMENT CO-OPERATION

By Anne Hammill (1) and Thomas Tanner (2)

(1) International Institute for Sustainable Development (IISD)

(2) Institute of Development Studies (IDS)

JEL Classification: O19, O21, O22, O29, Q01, Q54.

Keywords: Climate risk screening, development co-operation, adaptation, development, mainstreaming.

All OECD Environment Working Papers are available at www.oecd.org/env/workingpapers

JT03305650

Document complet disponible sur OLIS dans son format d'origine
Complete document available on OLIS in its original format

English - Or. English

OECD ENVIRONMENT WORKING PAPERS

This series is designed to make available to a wider readership selected studies on environmental issues prepared for use within the OECD. Authorship is usually collective, but principal authors are named.

The papers are generally available only in their original language English or French with a summary in the other if available.

The opinions expressed in these papers are the sole responsibility of the author(s) and do not necessarily reflect those of the OECD or the governments of its member countries.

Comment on the series is welcome, and should be sent to either env.contact@oecd.org or the Environment Directorate, 2 rue André Pascal, 75775 PARIS CEDEX 16, France.

OECD Environment Working Papers are published on
www.oecd.org/env/workingpapers

Applications for permission to reproduce or translate all or part of this material should be made to:
OECD Publishing, rights@oecd.org or by fax +33 1 45 24 99 30.

Copyright OECD 2011

ABSTRACT

Development planners and project managers have used a wide variety of tools to manage a broad range of environmental risks, including those posed by climate variability, for a long time. Some of these tools have also now been modified to take into account the risks posed by climate change. At the same time, there has been a recent emphasis in developing more dedicated tools which have an explicit focus on screening for climate change risks and for facilitating adaptation.

The purpose of this paper is to analyse this latter set of tools targeted to screen climate change risks. The paper focuses on the need to consider the experiences of users as well as developers, and to investigate the extent to which tools are meeting user needs and if opportunities may exist for streamlining the tools landscape. This analysis is therefore an effort to contribute to the alignment and harmonisation priorities of the *Paris Declaration on Aid Effectiveness* of March 2005 and the follow-up *Accra Agenda for Action* of September 2008.

While a “one-size-fits-all” approach or methodology may not be appropriate, there may be opportunities to provide common guidance on specific topics, such as categorisation and risk management frameworks, and to clarify the diverse terminology. In an effort to improve the use of screening and assessment tools, the paper recommends that the development community increase partner country ownership of risk screening and assessment tools/processes, narrow the gap between process guidance tools and data and information provision tools, supply guidance for users in moving from analysis to action and collaborate to prepare harmonised guidelines. While this analysis is limited to tools which have an explicit focus on climate change and adaptation, future work should also consider existing risk analysis tools which are practically used in development planning and modified for applications to adaptation.

JEL Classification: O19, O21, O22, O29, Q01, Q54.

Keywords: Climate risk screening, development co-operation, adaptation, development, mainstreaming.

RÉSUMÉ

Les responsables de la planification du développement et les gestionnaires de projets utilisent depuis longtemps une batterie d'instruments très divers pour gérer un large éventail de risques environnementaux, dont fait partie la variabilité du climat. Certains de ces outils ont été modifiés dernièrement pour prendre en considération également les risques que présente le changement climatique. Parallèlement, des activités ont été consacrées récemment à la mise au point d'outils plus spécialisés, spécifiquement conçus pour mettre en évidence les risques qui tiennent au changement climatique et faciliter l'adaptation.

Le présent article a pour objet d'analyser ces derniers outils axés sur le dépistage des risques relevant du changement climatique. Il insiste sur la nécessité de prendre en considération les expériences des utilisateurs et des promoteurs, et de déterminer dans quelle mesure les outils répondent aux besoins des utilisateurs et s'il est possible de rationaliser l'arsenal existant. Il vise ainsi à apporter des éléments à la réalisation des objectifs d'alignement et d'harmonisation énoncés dans la *Déclaration de Paris sur l'efficacité de l'aide* de mars 2005 et le *Programme d'action d'Accra* de septembre 2008 qui lui a fait suite.

Il ne s'agit pas nécessairement de rechercher une approche ou une méthode universelle, mais il est peut-être envisageable de fournir des pistes communes sur des questions précises, comme les systèmes de classification et les cadres de gestion des risques, et de mettre de l'ordre dans la terminologie. Dans l'optique d'améliorer l'utilisation des instruments de dépistage et d'évaluation, l'article recommande que les acteurs du développement intensifient l'appropriation par les pays partenaires des outils et processus qui s'y rapportent, comblent le fossé entre outils d'orientation des processus et outils de fourniture de données et d'informations, et collaborent pour élaborer des lignes directrices harmonisées. La présente analyse est limitée aux outils spécifiquement axés sur le changement climatique et l'adaptation, mais les travaux futurs devraient s'intéresser également aux outils existants d'analyse des risques qui ont cours dans la planification du développement et qui sont modifiés pour être appliqués à l'adaptation.

Classification JEL : O19, O21, O22, O29, Q01, Q54.

Mots clés : dépistage du risque climatique, coopération pour le développement, adaptation, développement, intégration.

FOREWORD

This report on “Harmonising Climate Risk Management: Adaptation Screening and Assessment Tools for Development Co-operation” is an output of the OECD Task Team on Climate Change and Development Co-operation that is overseen jointly by the Working Party on Climate, Investment and Development of the Environment Policy Committee (EPOC) and the Network on Environment and Development Co-operation (ENVIRONET) of the Development Assistance Committee (DAC).

This report was authored by Anne Hammill (International Institute for Sustainable Development) and Thomas Tanner (Institute of Development Studies). The authors would like to thank members of the OECD Joint DAC-EPOC Task Team on Climate Change and Development Co-operation for their comments and feedback on an earlier draft of this paper; the interviewees for giving their time to relaying experiences, and Marius Keller and Julie Karami (International Institute for Sustainable Development) for assisting with the interview research.

The authors also gratefully acknowledge comments and feedback from Carmenza Robledo (Intercooperation) and the guidance and support of Shardul Agrawala and Elisa Lanzi of the OECD Secretariat. The research undertaken for this paper was funded by the OECD project on mainstreaming climate change into development co-operation, with the financial assistance of the European Union. In addition, part of this work also draws upon a parallel project funded by the Danish International Development Agency (DANIDA), ‘Validating and Sharing Tools for Adaptation’.

This document has been produced with the financial assistance of the European Union.

This paper is released as part of the OECD Environment Working Papers series [ENV/WKP(2011)6]. It can be downloaded on the OECD website: www.oecd.org/env/workingpapers.

This document does not necessarily represent the views of either the OECD or its member countries. It is published under the responsibility of the authors.

Further enquiries on ongoing work on Climate Change and Development Co-operation should be directed to Shardul Agrawala, OECD, Shardul.Agrawala@oecd.org; Tel +33 1 45 24 16 65 and Remy Paris, OECD Development Co-operation Directorate, Remy.Paris@oecd.org; Tel +33 1 45 24 17 46.

TABLE OF CONTENTS

ABSTRACT	3
RÉSUMÉ	4
FOREWORD	5
ACRONYMS.....	8
EXECUTIVE SUMMARY	10
1. Introduction and Rationale.....	12
2. Background	13
2.1 Methodology.....	13
2.2 Clarifying terminology.....	15
2.3 Typology of tools and conceptual model.....	17
2.4 Lessons from recent screening and assessment tool stock-taking exercises.....	22
3. Analysis of selected screening and assessment tools	23
3.1 Selection of tools to be reviewed	23
3.2 Initial comparison of the climate risk (pre-) screening and/or assessment tools	26
3.3 Tool development	32
3.4 Experiences in applying the tools: Lessons from users	35
4. Conclusions and recommendations	39
4.1 Continued support for training and facilitation needed	40
4.2 Minding the gap between information provision and process tools	40
4.3 Narrowing the gap between assessment and action	41
4.4 Harmonisation: Desirable or feasible?.....	41
4.5 Ownership: From agencies to partners in tool development and use.....	45
BIBLIOGRAPHY	47
ANNEX 1: INTERVIEW QUESTIONS FOR TOOL DEVELOPERS	50
ANNEX 2: INTERVIEW QUESTIONS FOR TOOL USERS	51
ANNEX 3: INTERVIEW LOG.....	52

List of Tables

Table 1.	Tool types by function and related climate risk management steps.....	17
Table 2.	Categories of climate risk management/adaptation tools.....	18
Table 3.	Linking CRM/Adaptation tools, processes and development decision-making	20
Table 4.	Key CRM/Adaptation process guidance tools developed by multi- and bi-lateral agencies	21
Table 5.	Key CRM/Adaptation process guidance tools developed by NGOs	22
Table 6.	The sample of tools analysed in this paper	25
Table 7.	Donor risk assessment processes compared against the CRM/adaptation process.....	30
Table 8.	NGO climate risk assessment processes	31
Table 9.	Range of tool users.....	37
Table 10.	Examples of generic guiding questions for CRM processes.....	44

List of Figures

Figure 1.	USAID's project cycle and the Vulnerability and Adaptation Approach (USAID 2007).....	26
Figure 2.	Christian Aid's adaptation framework	27

ACRONYMS

ADB	Asian Development Bank
BMZ	German Federal Ministry for Economic Cooperation and Development
CA	Christian Aid
CARE	Cooperative for Assistance and Relief Everywhere
CBA	Community-Based Adaptation
CEDRA	Climate change and Environmental Degradation Risk and Adaptation
CI-Grasp	Climate Impacts: Global and Regional Adaptation Support Platform
CRiSTAL	Community-based Risk Screening Tool – Adaptation and Livelihoods
CRM	Climate Risk Management
CVC	Vulnerability and Adaptive Capacity
CVCA	Climate Vulnerability and Capacity Analysis
DANIDA	Danish International Development Agency
DFID	UK Department for International Development
EC	European Commission
EIA	Environmental Impact Assessment
GCM	Global Climate Model
GTZ/GIZ	German Society for International Cooperation
HEKS	Swiss Interchurch Aid
IC	Intercooperation
IISD	International Institute for Sustainable Development
IUCN	International Union for Conservation of Nature
LR	Livelihood Resources
M&E	Monitoring and Evaluation
NAPAs	National Adaptation Programmes of Action
NGO	Non-Governmental Organisation
NORAD	North American Aerospace Defense Command
NWP	Nairobi Work Programme
OECD	Organisation for Economic Co-operation and Development
ORCHID	Opportunities and Risks from Climate Change and Disasters
PRA	Participatory Rural Appraisal
PRECIS	Providing Regional Climates for Impacts Studies
PVCA	Participatory Vulnerability and Capacity Assessment
SEI	Stockholm Environment Institute
SERVIR	Regional Visualization and Monitoring System
SIDA	Swedish International Development Cooperation Agency
SPR	Strategic Programme Review

UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNISDR	United Nations International Strategy for Disaster Reduction
UNFCCC	United Nations Framework Convention on Climate Change
USAID	United States Agency for International Development
WB	World Bank
WWF	World Wildlife Fund

EXECUTIVE SUMMARY

The need to tackle the risks posed by the impacts of climate change to poverty reduction goals has underpinned a burgeoning range of tools to integrate adaptation into development co-operation. Development planners and project managers have used a wide variety of tools to manage a broad range of environmental risks, including those posed by climate variability for a long time. Some of these tools have also now been modified to take into account the risks posed by climate change. At the same time, there has been a recent emphasis on developing more dedicated tools which have an explicit focus on screening for climate change risks and on facilitating adaptation. It is this set of more targeted tools that are the focus of the present report. The analysis and its findings should therefore be viewed within this specific context.

Stock-taking and workshops have considered similarities of these tools, focusing primarily on descriptions of the tool methodologies. However, with increasing experience in the development and implementation of these tools, the experiences of both users and developers should be considered to investigate the extent to which tools are meeting user needs and if opportunities exist for streamlining the tools landscape. This analysis is an effort to contribute to the alignment and harmonisation priorities of the *Paris Declaration on Aid Effectiveness* of March 2005 and the follow-up *Accra Agenda for Action* of September 2008. While a “one-size-fits-all” approach may not be appropriate, there may be opportunities to provide common guidance on specific topics and to clarify the diverse terminology.

Adaptation tools can assist users in raising awareness, identifying current and future vulnerability and climate risks, assessing and selecting adaptation options, and evaluating the success of adaptation. This paper categorises adaptation tools based on their principal functions: (i) **Type 1 – Process guidance tools**, which guide users through one or several steps of processes; (ii) **Type 2 – Data and information provision tools**, which generate or present information for use in other steps; and (iii) **Type 3 – Knowledge-sharing tools**, which allow users to share knowledge and experiences that will inform and refine adaptation. The analysis focuses on a sample of Type 1 tools, which include both *screening* and *assessment* tools. Screening is undertaken to establish relevance to climate change and justify further examination of climate risks, whereas assessment is a detailed examination of the nature of climate risk and of possible risk management strategies.

Climate risk screening tools are increasingly being incorporated into mandatory donor processes but remain voluntary in Non-Governmental Organisations (NGOs). The general difference in approach between donors and NGOs mirrors a dichotomy between a more top-down approach emphasising information about future climate as a basis for devising adaptation options and a bottom-up approach centred on strategies to cope with current climate variability. However, efforts are being made to develop hybrid approaches to adaptation, which draw from multiple climate data sources and try to reconcile different climate risk management approaches. This paper draws on interviews and documentary sources from a representative sample of tools and approaches from both donor agencies and international NGOs. It provides an analysis of practical experiences in order to stimulate dialogue on tools among the development community.

Screening processes are found to be similar in scope and focus across the agencies analysed. They provide significant potential for a common generic approach that considers the sensitivity of project activities to variations in climate, the geographic exposure, and the baseline adaptive capacity. Assessment processes demonstrate greater variety, but show consistency in their detailed examinations of climate

impacts and in their comparisons to existing levels of risk management. The identification, prioritisation, selection and implementation of risk management and/or adaptation options, as well as the encouragement of monitoring and evaluation, are also consistent across donors.

This analysis identifies several key issues and concerns amongst tool users and developers. Both groups noted the crucial role of training and facilitation in applying tools. Concerns were raised that without proper guidance the use of certain tools could contribute towards maladaptation, and that a general faddism of tools and changing priorities amongst donors may limit support for training. A usage gap has also been identified, with users of Type 1 tools preferring to refer to summary or synthesis documents rather than use outputs from Type 2 tools directly. Additionally, when Type 2 tool outputs are utilised, uncertainty regarding the quality and credibility of the analysis complicates their use. Tool users also report that one of the more taxing parts of the process is the shift from understanding risks to determining whether current responses are adequate and to developing new options for enhancing adaptation.

Dialogues suggest that, although the current diversity of approaches may be beneficial with the tools landscape becoming busier and more complex a certain level of harmonisation is desirable. Harmonisation may also become necessary as a consequence of changes towards procedural due diligence supported by legislation. The analysis also shows a mixed picture in terms of the engagement of development partners in screening and assessment processes. Greater efforts are needed to ensure that partner countries exercise effective leadership over their own national approaches to climate screening and assessment.

To address these identified concerns and to ensure the continued effectiveness of screening and assessment tools, this paper has formulated several recommendations for the development community:

- Continue support for training and facilitation, including both introductory training events for new users and follow-up events for existing users.
- Forge better links between users of process guidance tools and users of data and information provision tools. This will allow generators of climate information to gain a clearer idea of what users of process guidance tools want and allow process guidance tool users to become more informed consumers of climate information.
- Bolster guidance and support for helping users move from assessment to action through the development of common guidance or through enhanced stakeholder engagement.
- Work to harmonise aspects of risk screening and assessment processes through the development of (i) common and clear terminology, or a unifying reference source of such terms; (ii) a generic and common risk management framework which can still be tailored to agencies' and partners' contexts and needs; (iii) organisation and categorisation systems; (iv) a simple, navigable clearinghouse for tools which allows users to gain exposure to tools and identify relevant tools.
- Work with development partners to ensure ownership and integration of risk screening and assessment tools, and thereby have a greater impact on government decision making.

While this analysis is limited to recently developed dedicated screening and assessment tools for climate change risks, many of these recommendations also apply to a wider range of existing risk analysis tools used in development planning and engineering design. Some of these tools, which are widely used and well known to planners and designers, will be applicable as screening/guidance tools for adaptation with some modification. For future work, it is recommended to enlarge the analysis to consider all tools used by donors in development planning, and to compare results amongst tools to identify risks in the use of each tool and the robustness of results.

1. Introduction and Rationale

After being initially framed as a purely environmental issue, the link between poverty and climate change is now recognised as a central issue for social and economic development (Stern, 2006). There is increased acknowledgement among development co-operation agencies and their partners that climate change impacts may threaten the strategic aims of poverty reduction and the achievement of the Millennium Development Goals (MDGs) (AfDB *et al.*, 2003; UNDP, 2007; World Bank, 2010a). At the same time, taking actions to adapt to climate change may provide synergistic opportunities to enhance progress towards reducing poverty.

Increased awareness of the risks and opportunities related to climate change has underpinned a major drive for adaptation, and “there is now also significant high-level policy endorsement within donor agencies and International Finance Institutions for the need to integrate adaptation into development co-operation activities” (Gigli and Agrawala, 2007). This integration addresses the direct risks of climate hazard as well as specific programme investments and the risk of general under-performance of the investment due to climate change impacts (van Aalst, 2006). At the same time, without due consideration, poverty reduction investments alone may not necessarily lead to reductions in vulnerability to climate change, leading to potential ‘maladaptation’ that inadvertently increases vulnerability to climate change (Barnett and O’Neil, 2010).

Policy commitments to manage these risks through integration have stimulated a burgeoning variety of tools and learning resources than aim to improve awareness and decision-making associated with development co-operation in the context of climate variability and change. A number of preliminary attempts have been made to stock-take and compare the range of tools and approaches emerging in response to the diversity of different organisational and situational needs (Gigli and Agrawala, 2007; Klein *et al.*, 2007; Tanner and Guenther, 2007; Olhoff and Schaer, 2010; World Bank, 2010b). These earlier assessments of tools and approaches (Tanner and Guenther, 2007) suggested that:

- Cross-referencing and collaboration between tool developers was occurring;
- Duplication was limited across the available tools, because different tools were targeting particular niches;
- Approaches generally took climate change as an additional stressor to factor into development activities.

While a one-size-fits-all methodology may not be appropriate, there have also been attempts to harmonise approaches to integration through examining common entry-points (OECD, 2009) and calls for harmonisation of terminology and common analytical tools within diverse approaches (Olhoff and Schaer, 2010). However, most of these stock-taking exercises considered tools in their early stages of development and focused primarily on descriptions of the tools without considering the lessons emerging from their practical application. Even the more ‘mature’ or established tools were developed and piloted only in the last five years, and thus yield preliminary lessons. In some cases, these lessons are now being rolled into subsequent versions of the tools. Moreover, the wide range of tools being developed highlights the equally wide range of potential ‘users’, which raises the question of which ‘adaptation practitioners’ tool developers are targeting, and whether these tools are actually meeting their users’ needs. It must be emphasised at the outset that development planners and project managers have used a wide variety of tools to manage a broad range of environmental risks, including those posed by climate variability for a long time. Some of these tools have also now been modified to take into account the risks posed by climate change. At the same time, there has been a recent emphasis in developing more dedicated tools which have an explicit focus on screening for climate change risks and for facilitating adaptation. It is this set of more

targeted tools that are the focus of the present report. The analysis and its findings should therefore be viewed within this specific context.

While the recent proliferation of tools is indicative of the development community's growing awareness of and programmatic interest in climate change adaptation, there are concerns that it is also leaving practitioners confused and development agencies duplicating efforts. This paper seeks to clarify the use and choice of tools by i) describing and categorising the range of tools and approaches available to integrate climate change in development co-operation; ii) assessing the experiences of both users and developers to identify the perceived added-value in applying such tools; iii) identifying the challenges and gaps that may inform future tool development. The paper draws on the experiences of both bilateral/multilateral agencies and international Non-Governmental Organisations (NGOs), focusing on both a sample of tools that represents the breadth of approaches as well as some of the more 'mature' tools circulating in the development community. It ends with a series of preliminary recommendations for improving the development and use of risk screening and assessment tools, including options for their harmonisation.

2. Background

This section sets out the methodology that was used to conduct this analysis (Section 2.1), establishes definitions for key terms used in the discussion (Section 2.2) and establishes a typology of different categories of risk management and adaptation guidance tools (Section 2.3). Finally, it discusses results from recent screening and assessment tool stock-taking exercises (Section 2.4).

2.1 Methodology

Information for this paper was gathered through a series of semi-structured interviews and documentary analyses. The results are used to provide:

- A conceptual framework describing and categorizing the range of tools available to integrate climate change adaptation into development co-operation, including a specific focus on the subset of screening and assessment tools;
- A review of the range of screening and assessment tools being used and developed in major development agencies;
- A summary of the common lessons emerging from their development and application, drawing on the experiences of both tool developers and end users;
- Initial recommendations on the potential for harmonisation and cross-fertilisation of approaches, in such a way that tools are matching and adapting to user needs.

The research, drawing on recent stock-taking exercises, is framed by a background analysis of screening and assessment tools. However, the bulk of the paper goes beyond these stock-takes and through a more detailed examination of a representative sample of individual tools. While there are many tools and methods available that can assist in understanding and tackling impacts, vulnerability and adaptation (UNFCCC, 2008), this paper focuses on those tools that have been generated by development agencies in order to address adaptation in the context of their programmes and projects.

The sample of tools was selected to ensure that it represented a cross section of various types of tools, with particular references to different types of development agencies, different stages of the process

covered and different levels of maturity of the tools. The final sample includes nine screening and assessment tools. The detailed sample that was analysed provides sufficient breadth so as to generate common lessons and recommendations on the potential areas for harmonisation of climate risk screening and assessment.

Upon selecting the nine tools for this paper, publicly available documents were reviewed in relation to the development and application of the tools. Following this, 34 semi-structured interviews were conducted to understand the experiences of both developing and applying these nine tools (11 developer interviews, 23 user interviews). Seven additional interviews were conducted with developers and users of other tools that were mentioned in the 34 interviews to corroborate experiences and observations (see Annex 1 for the interview log). Tool developers were first contacted and interviewed to understand the motivation and process for developing the tool, as well as its intended users, application, and results. The impact of tool development on the agency or organisation's understanding and approach to climate change was also discussed, as well as any preliminary lessons that might be passed on to future tool developers (see Annex 2 for interview questions). These interviews provided a basis for understanding the overall aims of a tool.

Following this, a range of tool users were interviewed, identified largely by the developers, to discuss their experience with applying the tool (see Annex 3 for interview questions). Interviewees were asked about their professional profile (i.e. current job description), their training or background, and then their own reasons for and experiences with applying a particular tool. They were also asked to provide any feedback, such as suggested changes or improvements to a tool, to tool developers. Extensive notes were taken during the interviews, which were subsequently analysed for common themes. The following sections of this paper present the key themes from these interviews.

The fact that user interviewees were identified by developers does introduce a certain bias to the analysis, as developers may have been more inclined to nominate users who had positive experiences with tool application. Given the infancy of tool application, however, it would have been difficult to identify and randomly select interviewees, as the relatively small community of tool users is not organised and easily identifiable. Where they are organised, it is still largely around the institutions and activities associated with the organisations that developed a given tool. Moreover, this bias does not undermine the final analysis presented in the paper, as this analysis is not a critical review of the nine selected tools. Rather, it is meant to capture a range of user experiences with the aim of identifying outcomes, challenges, gaps, and recommendations for improving their applicability and uptake so that, ultimately, development practitioners are able to successfully integrate climate change adaptation into their policy and project processes.

Within the analytical section, the paper summarises the nine sample screening and assessment tools and compares their objectives, different framings of the adaptation process, their associated approaches or methodologies, and their actual and/or intended users, data and information requirements, and outputs. It then examines a number of cross-comparable issues and characteristics through a qualitative analysis of the documentary and interview data. The **tool development process** is compared summarizing both the challenges and co-benefits of the process, including where the demand or stimulus for a tool originated. The paper then looks at **tool users** and examines whether tools designed for use by specific audiences and actors within development organisations have reflected the reality of practice. Drawing from interviews with tool users, the paper analyses different incentives for tool use, the partnerships involved, particularly with regard to development partners in other organisations, partner governments and communities, and the results of the tool application. The interview responses were analysed and compared to determine whether the design and provision of tools had matched users' needs and expectations, allowing them to generate analyses that support efforts to integrate adaptation into development co-operation.

2.2 *Clarifying terminology*

As the integration of climate change adaptation into development co-operation has become more widespread, terminology has been used in multiple ways and different contexts. Not only do differing conceptual understandings of the integration process and its elements “introduce as many questions as they answer” (Olhoff and Schaer, 2010), but they have implications for the understanding and comparison of different risk screening and assessment tools in terms of what exactly they are screening for and assessing. The conceptual anchor for this analysis is of course **adaptation**, which is defined as “adjustments in human and natural systems, in response to actual or expected climate stimuli or their effects that moderate harm or exploit beneficial opportunities” (IPCC, 2001).

The **integration** or **mainstreaming** (terms used interchangeably in this paper) of adaptation into development is the specific process of interest, for reasons already discussed. The core idea with integration/mainstreaming is that climate change adaptation measures are implemented as “part of a broader suite of measures within existing development processes and decision cycles” (OECD, 2009). It can be distinguished from stand-alone adaptation, where new activities are formulated and implemented with the express goal of addressing vulnerability to climate change (McGray *et al.*, 2007).

Common to all mainstreaming analytical tools and approaches is ‘**risk**’, which for the purpose of this paper is to be understood as ‘**climate risk**’, where the hazards in question are climatic in origin and vulnerability is understood in terms of a system’s susceptibility to or ability to cope with climate variability and change (IPCC, 2007). Risk is a word and concept increasingly used to examine and communicate the impacts of climate variability and change on development investments. Yet it is understood in many, sometimes confusing, ways, ranging from the intuitive and general, where it describes the potential for harm, to technical and specific, where it is a calculated probability of an undesirable outcome. Here, ‘risk’ is used to refer to the probability of an outcome resulting from the interaction of a hazard or event with conditions of vulnerability, which is dependent on exposure, sensitivity and capacity of a system to respond (UNISDR, 2004; IPCC, 2007). Within this treatment of risk, probability is not determined through mathematical or statistical calculations *per se*, but more qualitatively through a combination of experience and evidence.

Integrating or mainstreaming adaptation is closely linked to concepts such as ‘applying a climate lens’ (OECD, 2009), ‘climate proofing’ (ADB, 2005; EC, 2008; GTZ, 2010), and ‘climate risk management’ (IRI, 2007; UNDP, 2002; World Bank, 2006). Some of these terms have been used interchangeably but in other cases have demonstrated different points of departure or emphasis. Overall, they represent analytical tools or approaches that support the mainstreaming process. ‘Applying a **climate lens**’ is described as an analytical tool for examining policies, strategies, regulations, plans or programmes to understand: i) the extent to which they are vulnerable to risks arising from climate variability and change; ii) the extent to which climate change risks have been taken into consideration in the formulation of these measures; iii) the extent to which they could increase vulnerability or miss opportunities arising from climate change; and iv) what amendments might be warranted for pre-existing measures to address climate risk and opportunities, sometimes referred to as ‘climate proofing’ (OECD, 2009). Based on this description, ‘**climate proofing**’ is understood as a process of retro-fitting development interventions to reduce risk and take advantage of opportunities. Other uses of the term emphasize its relevance to property and infrastructure investments in particular (EC, 2008). ‘Climate proofing’ is understood here generically as a process of reducing climate risks to “acceptable levels through long-lasting and environmentally sound, economically viable, and socially acceptable changes” (ADB, 2005) applicable to both existing and potential investments, and across multiple development sectors.

The emphasis on climate risk in this latter definition can conflate its meaning with that of **climate risk management (CRM)**, which generally refers to the systematic approach and practice of using climate

information in development decision-making so as to minimize potential harm or losses associated with climate variability and change (adapted from UNISDR, 2009 and Hellmuth *et al.*, 2007). This has been variously used to describe development actions that take climate information into account (McGray *et al.*, 2007), as well as an approach that maximises ‘no regrets’ strategies that are rational in development terms regardless of what the future climate will be (Hellmuth *et al.*, 2007).

Whereas the notions of ‘climate change adaptation’, ‘applying a climate lens’, and ‘climate proofing’ are driven by the desire to respond to *climate change* beyond the existing variability of the climate, climate risk management approaches consider historical, current, and future climate conditions across multiple timescales – i.e. seasonal, annual, decadal, etc. In fact, it emphasises the need to match different types of climate information with different planning horizons, focusing on current priorities while taking into account future changes, in order to make more robust development decisions. Because many developing countries are not able to deal with today’s climate conditions, let alone projected changes, the CRM approach to decision-making is gaining currency among development actors wanting to address climate change.

Understanding and analysing climate risk is central to climate risk management. The terms ‘**climate risk screening**’ and ‘**climate risk assessment**’ have both been used to describe the systematic evaluation of risks and risk management associated with climate variability and change to development activities (ADB, 2009; DANIDA, 2009; Tanner, 2008). This paper differentiates between the *screening* and *assessment* based on the steps of the climate risk management/adaptation approach. Climate risk screening (including light-touch pre-screening) is undertaken to establish relevancy and justify further examination of climate risks through a climate risk assessment.

This detailed examination involves three steps: i) looking at the nature of climate risk (risk assessment), ii) how it can be managed (risk analysis), and iii) devising a strategy for doing so (options evaluation). While the word ‘assessment’ refers to the first of the three steps, it is often used to cover all of them. Thus, screening and assessment comprise the analytical core of the CRM approach. In this paper climate risk screening tools cover the pre-screening or screening steps of the CRM approach, while climate risk assessment tools cover one or several steps of risk assessment, risk analysis, and options evaluation. Some tools can cover both screening and assessment. Table 1 below presents this understanding and highlights the key question being addressed at each step of the CRM approach.

Finally, the word ‘**tool**’, in its most generic sense, is anything used as a means of accomplishing a task or purpose. When used in the context of climate risk screening and assessment, this usually refers to a replicable, tangible device such as a computer program or document of some type (e.g. handbook, checklist). The UNFCCC’s Nairobi Work Programme on impacts, vulnerability and adaptation to climate change distinguishes between methods and tools. A method refers to a framework or approach for undertaking an analysis, where the emphasis is on process; a tool, on the other hand, is something that assists with a specific task in the process (UNFCCC, 2008).

This paper adopts a hybrid understanding, using ‘tool’ to refer to documents, computer programs and websites that help people undertake all or some part of a climate risk screening and/or assessment process. While these tools can present a method (i.e. a framework or approach) for undertaking a screening and/or assessment, the method is not in and of itself a tool – it is the accompanying guidance on how to apply the given method that renders it a tool.

Table 1. Tool types by function and related climate risk management steps

Adaptation Tool Function	Step of CRM Approach	Description	Key Question
Communication	Awareness raising and engagement	Communicating and engaging with development actors with climate change issues in relation to their role and context.	How does climate change link with our work?
Screening	Pre -screening	A systematic examination of a development activity to select or eliminate it from further analysis, or to make a diagnosis. It tends to be relatively quicker to conduct and is broader in scope. As a very light touch process it is commonly referred to as pre-screening.	Is more assessment needed?
	Risk Screening		
Assessment	Risk Assessment	A methodology to determine the nature and extent of risk by analyzing potential hazards (current and projected) and evaluating conditions of vulnerability that could pose a potential threat or harm to people, property, livelihoods and the environment on which they depend.	What is the problem?
	Risk Analysis	A process that considers management options to minimise negative impacts and take advantage of opportunities in light of the identified current and future risks.	What are the options?
	Options Evaluation	Evaluating both the adequacy of current risk management strategies and potential new activities to manage additional risk or to take advantage of opportunities.	What is the course of action?
Implementation	Implementation	Putting selected options into action either as part of a broader suite of development activities (integration) or as discrete climate risk management / adaptation initiatives.	How to undertake the course of action?
Monitoring and Evaluation (M&E)	Monitoring and Evaluation	Tracking and assessing implemented activities or initiatives to see if they are delivering intended benefits.	What was achieved?

2.3 *Typology of tools and conceptual model*

Given the wide range of tools available to assist with adaptation, there are multiple ways of characterising them to help users decide which tools might be appropriate to their needs. Some tools are developed for specific sectors, but given the cross-sectoral nature of adaptation, this paper defines categories of tools based on their principal functions in the CRM or adaptation process. Specifically, adaptation tools can support users in the CRM or adaptation process by:

- Guiding users through the implementation of one or several steps of the process:
 - **Type 1:** Process guidance tools
- Generating or presenting information that can be used as input(s) for implementing one or several of these steps:
 - **Type 2:** Data and information provision tools
- Allowing users to share knowledge and experiences that will inform, support, and refine the implementation of these steps or approaches:
 - **Type 3:** Knowledge-sharing tools

These three categories are summarized in Table 2 below, including examples of tools from the development community.

Table 2. Categories of climate risk management/adaptation tools

Type / characteristics	Notes	Examples from the development community
1. Process guidance tools		
<p>Tools that guide users through the identification, gathering, and analysis of relevant data and information to:</p> <ul style="list-style-type: none"> Identify climate risks to development activities (often using Type 2 tools) Assess and analyse climate risk management strategies Evaluate option to integrate climate risk management into development activities 	<p>These tools can guide users through the entire CRM/adaptation process (e.g. from awareness-raising to monitoring and evaluation), or just one or several steps in the process (e.g. assessing current and future climate risk). The majority are available as documents (e.g. booklets, reports), although some are available as computer programs.</p>	<ul style="list-style-type: none"> Adapting to Coastal Climate Change: A Guidebook for Development Planners www.crc.uri.edu/index.php?actid=366 BMZ Environment and Climate Assessment www.gtz.de/climate-check CEDRA: http://tilz.tearfund.org/Topics/EnvironmentaI+Sustainability/CEDRA.htm CRiSTAL: www.cristaltool.org ORCHID: www.ids.ac.uk/climatechange/orchid USAID Guidance Manual: http://www.usaid.gov/our_work/environment/climate/policies_prog/adaptation.html
2. Data and information provision tools		
<p>These tools generate or present data and information on:</p> <ul style="list-style-type: none"> Primary climate variables and projections (e.g. temperature, rainfall trends) Secondary climate impacts (e.g. flood maps, crop yields) Vulnerability and response options (e.g. poverty maps, example adaptation options) 	<p>These tools tend to depend on some computer capacity, and a growing number on Internet access. They tend to be databases, modelling programs, mapping and visualisation tools.</p>	<ul style="list-style-type: none"> CI-Grasp www.ci-grasp.org Climate Wizard: www.climatewizard.org Climate Change Explorer Tool: www.weadapt.org/wiki/The_Climate_Change_Explorer_Tool PRECIS: www.precis.metoffice.com SERVIR: www.servir.net World Bank CC Knowledge Portal: climate, impact and socio-economic data http://sdwebx.worldbank.org/climateportal/
3. Knowledge-sharing tools		
<p>Platforms and networks that offer adaptation practitioners a virtual space for information and experiences related to climate risk and adaptation. These spaces allow users to:</p> <ul style="list-style-type: none"> House or store information and knowledge Share it with other interested users Interact with other users to develop or advance ideas, approaches, tools, monitoring etc. 	<p>Typically knowledge platforms, they are increasingly reliant on Web 2.0 functionality and user-generated content. They can be important for <i>validation</i> of Type 1 and Type 2 tools, as these platforms can offer a space for user feedback and offer some sort of quality control mechanism. They also help to build a <i>community of practice</i> around climate change adaptation.</p>	<ul style="list-style-type: none"> Adaptation Learning Mechanism: www.adaptationlearning.net AfricaAdapt: www.africa-adapt.net Climate Adaptation Knowledge Exchange: www.cakex.org Climate One Stop: http://arcserver4.iagt.org/climate1stop/ ELDIS resource guide on Adaptation: www.eldis.org/go/topics/dossiers/climate-change-adaptation weADAPT platform: www.weadapt.org World Bank CC Knowledge Portal: http://sdwebx.worldbank.org/climateportal/

Despite these three distinct categories, different tool types can be linked. Type 2 tool outputs are often used as inputs into Type 1 tool applications. For example, maps depicting how crop productivity may change with increased temperatures could be important for assessing climate risk in a given country's agricultural sector. Similarly, Type 1 and Type 2 tools, as well as experiences with their application, may appear in Type 3 tools (i.e. knowledge-sharing platforms) for marketing, feedback and refinement.

The conceptual diagram illustrated in Table 3, below, links these different types of tools with development decision-making processes. The three tool types described in Table 2 are shown in columns 1-3 to the left of CRM/adaptation, which is presented in the fourth column. The fifth and sixth columns then link these to two sets of decision-making steps with which most tool users are familiar – those associated with the policy and project cycles – into which the CRM/adaptation process can be integrated (OECD, 2009).

The diagram shows how different components of tools relate to some or all parts of the CRM/adaptation process, and in turn to policy and project cycles. For example, Type 1 Process tools include communication and dialogue tools (e.g. guidelines for explaining the science of climate change, tips for organising dialogues or facilitating consultations), which are most commonly used in awareness-raising and engagement activities. Type 2 tools, which generate and present climate and vulnerability information, are most relevant to the (pre-) screening and risk assessment steps, and therefore the policy formulation and planning steps in the policy cycle, or the project identification, project appraisal and detailed design steps in the project cycle. Type 3 tools are relevant across the entire CRM/adaptation process, as well as all the policy and project cycles.

This paper primarily examines screening and assessment tools which fall under the Type 1 *Process Guidance Tools* category. As described in Table 1, screening tools can be used in pre-screening and screening exercises, which usually correspond to policy formulation as well as project identification and appraisal activities. Assessment tools can be used for risk assessment, risk analysis and options evaluations, which correspond to planning activities in the policy cycle, or to project appraisal and design activities in the project cycle.

Table 4 below describes the main screening and assessment tools that have been developed in recent years by bilateral and multilateral agencies, while Table 5 shows those developed by NGOs. Those that were included in the analysis in this paper are highlighted, while the rationale for selecting them is explained in the next section. The tables highlight which aspects of the climate risk management process are addressed by each tool. Very few tools are limited to only screening or assessment, with most capturing other elements of the process in order to contextualize the screening and assessment steps. The tables note the awareness-raising or communications function where it is explicit while acknowledging that this function is implicit in many of the tools. The assessment function is the most commonly addressed, but screening functions are less common in NGOs than in bilateral and multilateral agencies. Monitoring and evaluation (M&E) guidance remains poorly developed as part of these tools.

Table 3. Linking CRM/Adaptation tools, processes and development decision-making

Climate risk management / Adaptation Tools			Climate risk management / Adaptation Process		Development decision-making processes		
Type 3 Knowledge Sharing Tools	Type 2 Data & Information Tools	Type 1 Process Guidance Tools			Policy Cycle	Project Cycle	
Web-based platforms, offering access to: <ul style="list-style-type: none"> ▪ Relevant news (e.g. media stories, recent meetings) ▪ Scientific, policy, project documents (e.g. journal articles, case studies, reports) ▪ Personal observations and experiences (e.g. blogs, forums) ▪ Professional networks ▪ Type 1 process guidance tools ▪ Type 2 Data & information tools 	<ul style="list-style-type: none"> ▪ Climate information primers 	Comprehensive process guidance tools	Communication Tools	Awareness ↑ / Engagement	Policy formulation	Project identification	
	<ul style="list-style-type: none"> ▪ Primary climate info: <ul style="list-style-type: none"> - Current temp and rainfall data, maps - Projections (GCMs, downscaling tools) ▪ Secondary impact models, maps ▪ Vulnerability info <ul style="list-style-type: none"> - Poverty, livelihood, socio-econ data 		Screening Tools	Pre-Screening			
				Screening			
			Assessment Tools	Risk Assessment			Planning
				Risk Analysis	Detailed design		
					Options Evaluation		
				Implementation Tools	Implementation (integration / design)	Resource allocation	Implementation
				Monitoring & Evaluation Tools	Monitoring & Evaluation	Programming / Implementation	Monitoring & Evaluation

Table 4. Key CRM/Adaptation process guidance tools developed by multi- and bi-lateral agencies

Agency	Tool Name	Format	Type 1 tool function					
			Communication	Screening	Assessment	Implementation	M&E	
ADB	Draft Risk Screening Tool (2010 draft)	6-pg guidance document with ranking exercise		✓				
DANIDA	Climate Change Screening Note and Studies (2005)	Document with TORs for undertaking screening		✓				
DFID	ORCHID (Opportunities & Risks of Climate Change and Disasters) (circa 2006)	Country reports that showcase application of the methodology		✓	✓			
	Strategic Programme Review (SPR) (2010)	'How to' note, supported by short guidance notes. 4 elements	✓		✓			
EC	Guidelines on the Integration of Environment and Climate in Development Co-operation (2009)*	Guidance book identifying entry points in 3 EC aid delivery methods (procedural tools in annex)	✓			✓		
GTZ/ GIZ	Climate Check (circa 2009, now merged with BMZ's EIA procedures)	Documents and presentations on Climate Check process		✓	✓			
	Climate Proofing for Development (2010)	Guidance book on applying a given methodological approach		✓	✓			
NORAD	Assessment of Environmental and Social Sustainability and Climate Change Risk Management (2009)	4-page guidance document for screening and assessing NORAD projects		✓	✓			
OECD	Integrating Climate Change Adaptation into Development Co-operation (2009)*	Guidance book	✓			✓		
SIDA	Environment, Climate Change and Disaster Risk Screening (2010 prototype – initial draft for review)	Web-based tool	✓	✓				
UNDP	Adaptation Policy Framework (2003)	Guidance book supported by nine technical papers		✓	✓	✓		
	Toolkit for Designing Climate Change Adaptation Initiatives (2010)	Guidance book			✓	✓		
	Quality Standards for Integrating Climate Change Adaptation (being piloted)	Draft document				✓		
UNEP	Sourcebook: Integrating Adaptation to Climate Change into UNEP Programming (2008)	Reference book – mostly for communications / awareness raising	✓					
	Climate Change Adaptation and Mitigation in the Tourism Sector (2008)*	Guidance book	✓		✓			
USAID	Adapting to Climate Variability and Change: A Guidance Manual for Development Planning (2007)	Guidance book	✓	✓	✓			
	Adapting to Coastal Climate Change: A Guidebook for Development Planners (2009)	Guidance book	✓		✓	✓	✓	
World Bank	ADAPT (Assessment and Design for Adaptation to Climate Change: a Prototype Tool) (circa 2005 with continued updates)	Web-based tool		✓				
	Guidance Notes on Mainstreaming Adaptation to Climate Change in Agriculture and Natural Resources Management Projects (2009)	Online resource, 8 separate PDF brochures organised around a typical project cycle			✓		✓	

* Entry point and general guidance-based tools with less specific emphasis on screening and assessment.

Table 5. Key CRM/Adaptation process guidance tools developed by NGOs

Agency	Tool Name	Format	Type 1 tool function				
			Communication	Screening	Assessment	Implementation	M&E
CARE	CVCA (Climate Vulnerability and Capacity Analysis) (2009)	Guidance book on an analytical framework, process and guiding questions with field tools in annex	✓		✓		
	Toolkit for Integrating Adaptation into Projects (2010)	Web-based tool with step-by-step guidance on integration process, organised around project cycle		✓	✓	✓	
	Toolkit for Community-based Adaptation (2010)	Web-based tool with step-by-step guidance on developing and implementing CBA projects			✓	✓	
Christian Aid	Integrating Climate Change Adaptation into Secure Livelihoods Toolkits (2010)	2 PDF documents on CA's approach to adaptation and developing a climate change analysis.	✓		✓		
IUCN, IISD, SEI, and IC	CRiSTAL (Community-based Risk Screening Tool – Adaptation and Livelihoods) (2006 with later updates)	Computer-based (downloadable) process, for identifying livelihood resources important for adaptation, to be included in projects			✓	✓	
Red Cross / Red Crescent	Climate Guide (2007)	Guidance book containing 6 thematic modules on how to address climate change broadly	✓		✓		
Tearfund	CEDRA (Climate change and Environmental Degradation Risk and Adaptation Assessment) (2009)	Guidance book on exercises for completing the CEDRA steps and report to adapt, stop, or start new development projects	✓		✓		
The Nature Conservancy	Conservation Action Planning Guidelines for Developing Strategies in the Face of Climate Change (2009)	PDF document for adapting conservation projects structured around the Conservation Action Planning methodology			✓		
UK Climate Impacts Programme	Adaptation Wizard (2010, Version 3.0)	Web-based (offline version available) walking users through 5 step interactive process for developing adaptation strategy			✓	✓	
WWF	Climate Witness Community Toolkit (2009)	Resource book of tools, exercises for documenting local climate impacts and devising adaptation measures			✓		

2.4 Lessons from recent screening and assessment tool stock-taking exercises

This paper builds upon previous stock-takes (see for example Tanner and Guenther, 2007; Gigli and Agrawala, 2007; Klein *et al.*, 2007; Olhoff and Schaer, 2010) by analysing selected screening and assessment tools in greater depth. It focuses on Type 1 screening and assessment tools and reviews the experiences of users and tool developers rather than relying solely on publicly available literature. Conclusions of these previous stock-taking exercises are a useful starting point, particularly that commissioned by UNDP in 2010 (Olhoff and Schaer, 2010), which noted that:

- Most tools targeted project and programme-level decision-making, while substantially less attention was paid to sector or national-level decision-making;
- Few of the tools incorporated any costing exercises, despite a growing interest in the field of costing adaptation;

- Although applied to pilot exercises and practical case studies, tools are difficult to access, compile and compare, owing to:
 - The use of different terminologies and the different types of analyses;
 - Different points of departure, where some tools focused on mainstreaming adaptation into projects while others focused on developing adaptation projects.
- The levels of assumed prior knowledge of tool users differed, particularly in regards to climate change. Some tools are ‘readily operational’, offering limited direction to users, while others offer step-by-step guidance to users, thereby requiring more time and resources to apply.

3. Analysis of selected screening and assessment tools

The examination of risk screening and assessment tools focuses on a selection of tools, representing a cross-section of the tools landscape. The analysis examines starting points in the creation of tools and explores tool development processes. Further, it considers experiences gained in the application of tools.

3.1 Selection of tools to be reviewed

A wide range of Type 1 process guidance tools are available to help development decision-makers and practitioners integrate climate risks and adaptation into their work. Because screening and assessment tools are continually being developed, revised and even retired, the analysis in this paper does not include all of the tools reviewed in the UNDP or Klein *et al.* (2007) reports; instead it focuses on nine tools that provide a representative sample from which to draw more general conclusions.

The starting point for this analysis is a small set of semi-structured interviews that were conducted in Havana, Cuba, in March 2009 on the margins of the UNFCCC Nairobi Work Programme (NWP) meeting on “Integrating practices, tools and systems for climate risk assessment and management and Disaster Risk Reduction (DRR) strategies into national policies and programmes.” Discussions with nine self-identified tool users indicated a wide range of professional responsibilities, capacities, and interests within the so-called ‘adaptation practitioner’ community, to which many CRM/adaptation tools are targeted. This highlighted the potential for mismatch between tool developers’ intentions and tool users’ needs, as well as the possibility that successfully applying the tool and feeding its results into policy and project decision-making processes would be largely shaped by the degree to which it accommodates people’s expectations, capacities, and priorities. Thus, the NWP interviews pointed to the need for a greater analysis of user needs and experiences.

Building on this initial observation, this paper examines the tool development and application experiences of nine climate risk (pre-) screening and/or assessment tools, five developed by donor agencies and four developed by international NGOs. The sample of tools analysed, which is summarised in Table 6, was selected to ensure that it represented a cross section of various types of tools, with particular references to:

- **Different types of development agencies:** donors (both bilateral and multilateral) and international NGOs;
- **Different stages of the process:** for screening only, for assessment/analysis/evaluation only; and tackling all aspects of climate risk management (this typology is described in Section 2.2);

- **Different levels of maturity of the tools:** piloting phase, reviewed and updated based on preliminary experiences, and extensively used.

The tools were also selected for analysis on the basis that they either provide a representative sample of some of the more 'mature' tools in the field with active users, or that they capture innovative aspects of the climate risk management process such as strategic decision-making. Most have been developed, piloted in multiple countries in multiple contexts, and rolled out through training programmes and development co-operation projects. Some are being reviewed and updated based on preliminary experiences (CEDRA, CRiSTAL). Two of the tools – DFID's Strategic Programme Review (SPR) and Christian Aid's Adaptation Toolkit – are newer to the field and are still in a pilot or rollout phase. The SPR was included in the analysis as it built on DFID's earlier experiences of piloting its screening and assessment tool ORCHID (Opportunities and Risk from Climate Change and Disasters), and represents a move to climate risk assessment across whole country offices and their business planning processes. The Christian Aid Adaptation Toolkit has received significant attention, particularly among development NGOs, even though it was still in draft form when this paper was written.

Table 6 compares the tools in terms of their stage in the mainstreaming process, target audience, procedural use, and key inputs and outputs. While most of the donor tools and approaches are increasingly a mandatory part of programme development and management procedure, those in NGOs remain voluntary. This reflects the move towards linking climate screening and assessment with existing environment assessment processes in place in most donor agencies (Agrawala *et al.*, 2010).

It should be noted that several of the agencies or organisations covered in this analysis have produced a range of climate screening and/or assessment tools. CARE, for example, has a Toolkit for Integrating Adaptation into Projects, in which the application of CVCA is encouraged. GTZ's Climate Proofing for Development tool emerged from BMZ's Climate Check tool (now integrated into its EIA process), which was targeted specifically at GTZ staff. Thus, the tools reviewed here are not representative of the full range of tools that have been developed by their respective agencies.

Table 6. The sample of tools analysed in this paper

	Name Agency	Tool	Target audience	Target scale	Procedural use	Key inputs	Key outputs
DONOR TOOLS	Draft Risk Screening Tool ADB	Screening	ADB Project Officers	Programme	Not mandatory, but elements now in Rapid Environmental Assessment tool - part of mandatory EIA process	Checklist of question for rapid assessment (20 to 30 minutes)	Recommendations for further analysis of detailed project designs and updated country partnership strategies
	Climate Change Screening Studies DANIDA	Assessment	Consultants to assist country programme staff	Project and programme	Originally a pilot, now mandatory supplement to environmental screening process	Terms of Reference for Consultant on climate analysis, national response context, project screening, mitigation opportunities, harmonisation and coordination	Process action plan outlining recommended funded activities
	Guidance Manual USAID	Screening and assessment	USAID programme design staff and contractors /NGOs	Project and programme	Voluntary, but strong policy and regulatory drivers, and dedicated finance	Guidance and six step approach, including initial screening for climate sensitive programmes	Vulnerability identified and adaptation options prioritised
	Climate Proofing for Development GTZ	Screening and assessment	GTZ field staff and local partners	Project and programme	Voluntary, but strong links to mandatory Environmental and Climate Assessment process	Guidance and steps include screening to identify for high risk programmes, detailed risk analysis, identification and prioritising of adaptation options	Identifies and prioritises adaptation options to integrate into planning documents
	Strategic Programme Review (SPR) DFID	Assessment (and communication)	Country office staff	Country programme portfolio	Pilots used to create mandatory guidelines for country programmes	Guidance materials for country office to tailor Terms of Reference that reflect country needs.	Identifies strategic priorities for integrating adaptation and mitigation into country operational plans
NGO TOOLS	CEDRA Tearfund	Assessment	Development field practitioner with senior management support	Programme	Not mandatory	Guidance and checklist for 6 steps to identify and prioritise hazards and adaptation options	Identifies risks and risk management of programme, including changes to portfolio of projects
	CVCA CARE	Assessment	Project managers, field staff, local partners and communities	Community projects	Not mandatory	Framework with supporting questions and exercises: participatory community level analysis combines local knowledge with climate science.	Assessment informs programming and provides evidence base for advocacy
	CRISTAL IISD, IUCN, SEI, IC	Assessment	Community-level project planners and managers	Community projects	Not mandatory	Two module analytical framework for linking local livelihoods and climate. MS Excel interface for entering information and compiling report. Typically 1-5 days.	Results serve as a basis for designing or adjusting projects for adaptation
	Adaptation Toolkit Christian Aid	Assessment	Country Programme and partner staff	Livelihood projects and strategy	Not mandatory	No set steps. Three toolkits for understanding livelihoods adaptation (PVCA), community climate analysis and strategy development	Analysis informs livelihood programming and cc strategy development

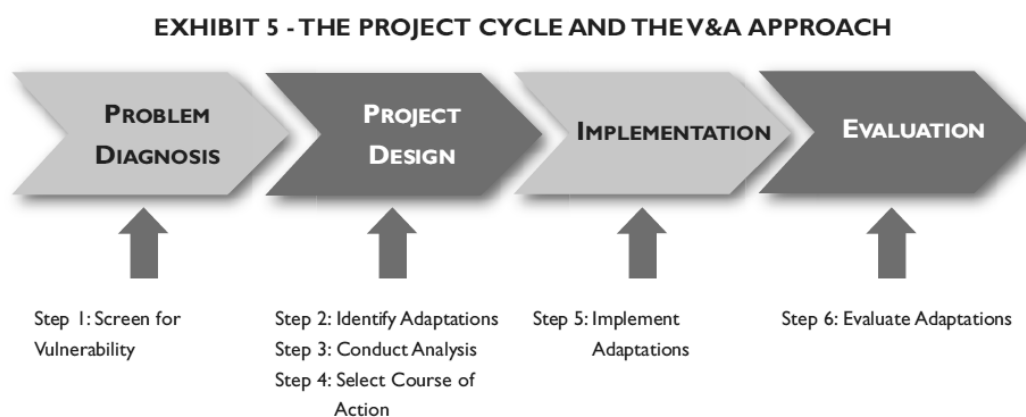
3.2 Initial comparison of the climate risk (pre-) screening and/or assessment tools

Concepts and approaches embedded in organisational mandates, goals, and programming

While the broad concepts of climate risk management and/or adaptation form the common conceptual context for tool development and implementation, there is significant variation in the specific framing of and operational approach to the issue in different development agencies. The way a given donor agency or NGO frames its tool is important for understanding who they see using the tool and for what purpose.

The agencies included in this analysis rationalize the application of a screening and/or assessment tool by embedding the problems and opportunities associated with climate change within its mandate, strategy or procedures. For example, USAID's Guidance Manual begins with a table highlighting the relevance of potential climate change impacts and adaptation responses to the agency's five 'Objective Areas' (i.e. Peace and Security, Governing Justly and Democratically, Investing in People, Economic Growth, and Humanitarian Assistance), and then goes on to describe how the CRM/adaptation process can be integrated into the project cycle (Figure 1). GTZ presents its Climate Proofing for Development Tool as an indication of its continuing support for OECD's policy guidance on the integration of adaptation into development co-operation (2009). DANIDA's screening note and studies are central to its objective of climate proofing Danish development co-operation under its Climate and Development Action Programme, launched in 2005. To influence more strategic programming issues, DFID has linked its Strategic Programme Reviews into the business planning process through development of operational plans at the country level.

Figure 1. USAID's project cycle and the Vulnerability and Adaptation Approach (USAID 2007)



The NGO tools included in this analysis similarly link the CRM/adaptation process with core programming priorities and processes, although the focus of analysis is largely at the local community level. Christian Aid depicts its adaptation work as a subset of their Secure Livelihoods work (Figure 2). CARE presents the CVCA methodology as based on its framework for Community-Based Adaptation (CBA), whereby the CVCA supports CARE staff in analysing the enabling factors (or lack thereof) for CBA. CEDRA is less agency-centric, highlighting instead its contribution to making development more robust and sustainable; the interlinkages between, and therefore the need to consider, both climate change and environmental degradation is emphasised upfront.

CRiSTAL is similarly less explicitly tied to organisational strategies or procedures, possibly reflecting the fact that it represents a collaborative effort between four different international development NGOs. It does, however, represent a tangible product of the broader Livelihoods and Climate Change project, which

sought to strengthen the role of ecosystem management and restoration activities in climate risk management/adaptation actions.

Figure 2. Christian Aid's adaptation framework

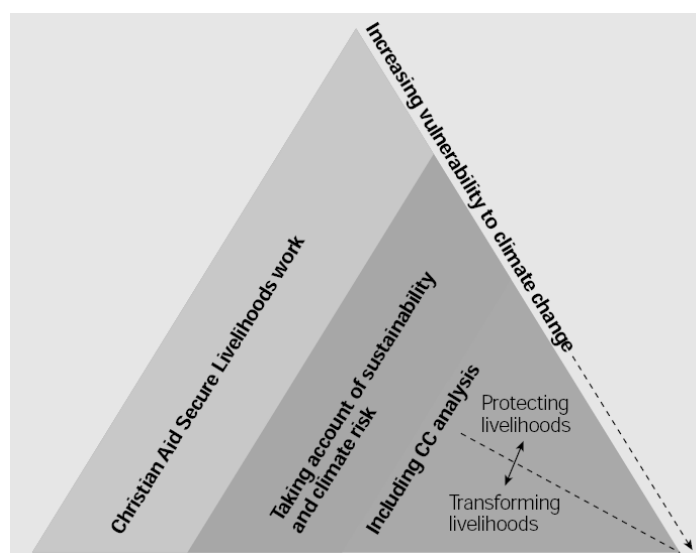


Table 6 indicates that most of the primary or intended users of the tools analysed in this paper are agency staff. The challenges and opportunities of CRM/climate change adaptation are framed in a way that the users would recognise the links to their job, both in terms of what issues they deal with (i.e. subject area) and how they do it (i.e. strategic planning, project management). Although affiliated with NGOs, both CEDRA and CRiSTAL are not explicitly linked to an agency-endorsed concept, strategy or process, a fact that implies that these tools were seeking a usership beyond the organisations' own staffs.

Starting point of analysis: climate or poverty/vulnerability?

All nine tools use a combination of different information inputs, but the general difference in approach between donors and NGOs mirrors a dichotomy in climate change adaptation analysis approaches that distinguishes:

- A more top-down, impacts-driven approach that takes information about future climate conditions to then identify and quantify impacts on different ecosystems and economic sectors. This is used as a basis for devising adaptation options; and
- A bottom-up, vulnerability-driven approach that is centred on people's existing vulnerability, strategies for coping with historical and current climate variability, and how both might be modified with climate change.

The bottom-up approach generally relies less on scientific inputs and modelling of uncertain projections of the future climate, although these are often included as a part of the process. Instead it emphasises understanding social inter-relationships with climate-related factors. The bottom-up approach tends to support shorter-term decision-making frameworks and is therefore potentially prone to longer-term maladaptation through its over-reliance on current or historical conditions. Thus, as described in Section 2.2, a hybrid approach – i.e. climate risk management – allows decision-makers to develop

strategies that address current vulnerabilities and development priorities while also trying to ensure their long-term sustainability through a basic understanding of future projections. In addition to different climate timescales, however, this hybrid approach should also build on a solid understanding of vulnerability, by identifying what makes societies more exposed, sensitive and unable to cope with climate hazards.

However, there is only limited consistency across the nine tools analysed for this paper regarding an operational approach to this hybrid approach of climate risk management. To some extent this reflects different user needs and contexts. The NGO tools generally incorporate more bottom-up perspectives, echoing the more field-based nature of much of their work. They are also more focused on existing climate variability, impacts, and vulnerabilities than on future projections, but at the same time combine scientific information with local experiences and evidence. Donor programmes are often at a much greater scale or in different sectors – ADB, for example, is more focused on large scale infrastructure investments than on other donors.

The conceptual starting point for all of the (pre-) screening tools/steps (ADB, USAID, GTZ) and the DANIDA assessment process is climate change impacts; that is understanding how climate parameters may change in a given area and its potential impacts. Among these, only the USAID Guidance Manual explicitly prompts users to consider historical and current climate conditions in the screening step by establishing a ‘rule of thumb’ that if a project is already sensitive to climate variability, it will likely remain so with climate change. The GTZ approach emphasises the need to improve understanding of climate information and its use, and provides parallel guidance on climate information (GTZ, 2010). However, among donor screening tools, there is no similar guidance on access and use of vulnerability information about exposure and sensitivity to climate shocks and stresses.

Analytical steps: Consistency for screening, significant variation for assessment

Each of the nine tools was broken down into its specific analytical steps to reveal similarities and differences in approaches and intended outputs. This was useful for understanding the desired knowledge, resources, and procedural relevance of each of the tools. Overall, the analytical steps are largely consistent for screening, but exhibit a range of approaches in assessment. The (pre-) screening process typically consists of users identifying:

- The geographic location and/or sector of a given development strategy;
- The different climate-related hazards (events and trends) that do or will affect this area;
- The (direct and indirect) impacts of these climate-related events and trends on the area and/or sector in question.

This is usually the extent of the (pre-) screening analysis, since the aim is primarily to establish relevance. In other words, reviewing the information above should help users answer the question ‘do I need to worry about climate change?’ Because it is a relatively rapid analysis, all of the screening tools (steps) use quick processes such as checklists (GTZ), scoring exercises (ADB), or ‘simple rules’ (USAID). Technically, USAID’s ‘screening’ step is a two-part analysis, where users are first asked to answer this question regarding relevance using two ‘simple rules’¹ and then are prompted to describe the impacts of climate change on a given development sector or activity, identifying both maladaptations and current or proposed adaptations in development activities. Thus, USAID’s self-labelled ‘screening’ approach goes

¹ USAID’s Guidance Manual provides ‘two rules of thumb’ when determining how climate variability or change could compromise the integrity, effectiveness, or longevity of a project, and therefore if risk management / adaptation measure are required: 1) If a project is sensitive to climate variability, it is likely to be sensitive to climate change, and 2) Long-term climate changes can introduce other risks to projects.

further in the CRM/adaptation process to incorporate elements of assessment. In reality, screening, as defined in this paper, takes place only during the first part of the USAID ‘screening’ step.

Whereas the screening processes are relatively similar in scope and focus, the assessment processes demonstrate greater variety. The donor assessment processes are presented in Table 7 below.

The CRM/adaptation process is presented along the left side of Table 7; different steps in the donor assessment processes are roughly aligned with relevant parts of the CRM/adaptation process. For example, the ‘Analysis’ step in the Climate Proofing for Development Tool is in-line with the risk assessment step in the CRM/adaptation process. The square brackets which appear beside parts 4 and 5 of DANIDA’s country screening process indicate that they do match up explicitly with the CRM/adaptation process as presented in this paper. DFID’s approach is distinct in that, while it follows this process, its focus is on the overall approach portfolio of country development co-operation. While tools commonly stress the need for awareness-raising and capacity building for tool use, the GTZ and DFID approaches are the only ones to highlight the organisational challenges of tools use as the primary entry point.

Table 7. Donor risk assessment processes compared against the CRM/adaptation process

	USAID Guidance Manual	GTZ Climate Proofing for Development	DANIDA Country Screening Process TORs	DFID Strategic Programme Review
Awareness-raising	<p>1. Screen for vulnerability <i>Screen for relevance, identify impacts, existing maladaptation and adaptation actions</i></p> <p>2. Identify adaptation options <i>Compile and finalise list of adaptations</i></p> <p>4. Conduct analysis <i>Define performance baseline, identify evaluation criteria</i></p> <p>5. Select course of action <i>Final selection of one or more adaptations</i></p> <p>6. Implement adaptations <i>Implementation plans</i></p> <p>7. Evaluate adaptations</p>	<p>1. Preparation <i>(including screening checklist)</i></p> <p>2. Analysis <i>Analyse biophysical and socio-economic effects of climate trends on exposure units</i></p> <p>3. Options for action <i>Identify adaptation options, selection criteria, evaluate options, and select</i></p> <p>4. Integration <i>Into selected options into planning documents and M&E processes</i></p>	<p>1. Climate change scenarios, impact, vulnerability and risks</p> <p>2. National response frameworks</p> <p>3. Climate change screening of Danida's assistance</p> <p>4. [Mitigation opportunities]</p> <p>5. [Donor harmonisation and coordination]</p> <p>6. Follow-up</p>	<p>1. Awareness raising and buy-in <i>Securing office wide engagement and senior leadership</i></p> <p>2. Conduct analysis <i>Office-led dialogue process. Inputs vary but can include: Climate science assessment, vulnerability analysis, economics of climate change, political economy analysis.</i></p> <p>3. Options Paper <i>Highlighting key areas for introducing climate smart programming</i></p> <p>4. Operational plans reflect climate change considerations across all sectors. <i>Including greening office footprint, raised skills for integrating climate change, proofing programme and looking at future investments</i></p>
Screening				
Assessment				
Analysis				
Evaluation				
Implementation				
M&E				

All four donor tools aim to provide agency staff and partners with guidance on how to assess what climate change means for development co-operation at the project or programme level, and what measures can be taken to reduce its negative impacts so that poverty reduction efforts are not thwarted. The process for doing so is generally the same across the four tools, as they are composed of steps where:

- Climate impacts are examined in greater detail (if this is not already done during the screening phase) and compared to existing levels of risk management;
- Risk management and/or adaptation options are identified, prioritized, selected and implemented;
- Monitoring and evaluation (M&E) of implemented options is encouraged.

None of the tools offer much guidance on the M&E component of the adaptation options. It is often recognised as an important part of the overall CRM/adaptation process, but the emphasis in the tools remains on assessment.

Table 8 below compares the four NGO assessment tools, which present very different approaches and aims. Here the CRM/adaptation process is not displayed alongside the tool assessment steps because the variation among the tools was too great to render such a presentation useful.

Table 8. NGO climate risk assessment processes

CEDRA (Tearfund)	CVCA (CARE)	CRISTAL (IUCN, IISD, SEI, IC)	Adaptation Toolkit (Christian Aid)
Six steps for prioritizing environmental hazards that pose a risk to projects and identifying and choosing options to address them:	Series of questions and accompanying tools to understand climate-related vulnerability and adaptive capacity (CVC) in communities.	Steps to identify livelihood resources (LR) exposed to climate hazards and/or important to coping, to be reinforced in projects:	Four basic stages to support adaptation to climate change in Christian Aid Secure Livelihoods programming:
1) Identify environmental hazards	1) Assess CVC at national level	1) Identify climate change impacts	1) Review available information on short-term weather and longer-term climate science
2) Prioritise hazards to address	2) Assess CVC at local government / community level	2) Identify current climate hazards, impacts, coping strategies	2) Compare with local or indigenous knowledge of communities most directly affected
3) Select adaptation options	3) Assess CVC at household/individual level	3) Identify most important LR in the community	3) Conduct participatory vulnerability and capacity assessment
4) Address unmanageable risks	<i>NB: Guiding questions fall into four categories, which comprise CARE's Community-Based Adaptation (CBA) Framework:</i> <ul style="list-style-type: none"> • <i>Climate-resilient livelihoods</i> • <i>Disaster risk reduction</i> • <i>Capacity development</i> • <i>Addressing underlying causes of vulnerability</i> 	4) Identify those LR most vulnerable to hazards & important to coping	4) Select the most appropriate option for integration <ul style="list-style-type: none"> - Adaptation planning - Climate proofing - Climate screening
5) Consider new projects and locations		5) Assess how project activities affect access to / availability of these key LR resources	5) Assess how project activities affect access to / availability of these key LR resources
6) Continual review		6) Adjust project activities to reinforce access to / availability of these key LR,	6) Adjust project activities to reinforce access to / availability of these key LR,

As with the donor assessment tools, the assessment processes presented in Table 8 are all broadly concerned with understanding how climate affects development activities. There are some important differences from the donor tools, however. First, the NGO tools are all concerned with **local (community) level** development priorities and activities, which is helpful for understanding the intended tool user (e.g. NGO staff responsible for managing community projects, even country programs, who have a deep understanding of local conditions.) Moreover, while climate change is the impetus for undertaking the assessment, the NGO tools emphasize **current climate hazards** or conditions, highlighting the importance of local realities where decisions are made on shorter timescales. Also, three of the four tools pay close attention to **people's vulnerability and coping capacity** in identifying adaptation options, again demonstrating the extent to which local development realities inform CRM/adaptation decisions

(CEDRA's approach is closer to donor agencies' impacts-driven analysis, although it is carried by grassroots organisations in close consultation with local stakeholders).

This common emphasis on local context aside, there are also some important differences among the NGO assessment processes themselves. Both the CVCA and Adaptation Toolkit focus on assessment and do not go further in the CRM/adaptation process of identifying risk management or adaptation options, although their assessment results would certainly inform such decisions. The CVCA emphasises understanding people's vulnerability and capacity, while the Adaptation Toolkit focuses on developing a sound climate analysis. CEDRA and CRiSTAL both prompt users to develop options for adapting projects, but their bases for doing so are different. CEDRA offers users an illustrative list of possible adaptation options based on sector and impact. CRiSTAL users are asked to devise options based on existing project activities, focusing on livelihood resources that are either negatively affected by climate hazards or are important to coping with them. Finally, only CEDRA really provides any detailed guidance on how to integrate the assessment process into decision-making processes (in this case, the project cycle).

3.3 *Tool development*

With this detailed analysis of the nine climate (pre-) screening and/or assessment tools, attention was turned towards their actual development. Interviews with tool developers revealed that the process of developing their respective tools was prompted by a range of signals yielding some important organisational lessons.

Motivation for tool development: The growing need to 'do something' on adaptation

All nine tools were developed in response to the recognition that climate change was a threat to the achievement of development goals (i.e. the Millennium Development Goals) and therefore needed to be addressed more systematically. In so doing, all of the agencies analysed in this paper wanted to avoid 'siloing' adaptation, where it would become a separate area of development practice. At the same time, some agencies recognised a disconnection between the work they were supporting on climate change (e.g. advocacy, international negotiations, the implementation of concrete adaptation and mitigation projects) and their own, in-house operations. Thus the twin objectives of **making development climate resilient** and **'walking the talk'** were strong motivations for developing screening and/or assessment tools.

All of the NGO tool developers who were interviewed mentioned demand from field staff and local partners in developing countries as being a strong motivation for developing a screening and/or assessment tool. These developers also tended to emphasize **social justice** issues in explaining their reasoning for developing their tools – i.e. many of the communities with which they were working were already dealing with climate risks and so climate change would probably make their livelihoods more difficult, despite the fact that they have done relatively little to contribute to the problem. It was therefore important to make sure that the NGO and its partners were doing everything possible to make sure development programming at this level was strengthening, rather than inadvertently undermining, communities' capacity to adapt to climate change. This emphasis is not surprising considering the NGOs interviewed for this paper have extensive community-level development portfolios.

For the donor agencies, the impetus for integrating climate risk was more driven by **top-down policy commitments** and **fiduciary risk management obligations** to ensure that spending is effective in reducing poverty. For example, policy declarations from the European Commission, the G8 and OECD in the mid-2000s formed early drivers for action (EC, 2004; G8, 2005; OECD, 2006). Individual donor commitments to integrate adaptation into development co-operation followed (for example, see ADB, 2009; DFID, 2006, 2009; World Bank, 2009). This was influenced by the realisation that donor portfolios may need to be structurally coherent with development in a changing climate (both in terms of direct risks

and under-performance, but also in matching medium term climate change implications with development plans and consideration of low carbon linkages and opportunities).

In addition, as climate change climbed the political agenda, both the NGOs and donor agencies were under increased public and internal pressure to demonstrate what additional actions they were taking. As such, screening and assessment tools enabled the organisations to both integrate adaptation into their existing work and to develop new activities under the label of climate change adaptation. This has led to some tension between the processes of mainstreaming or integrating climate change into development programmes and the development of specific climate change programming. These specific programmes have emerged either through relabeling and refocusing of existing programmes to stress their specific contributions to tackling climate change, or through funding of specific climate change interventions as a result of the screening process (issues raised in both Danida and DFID programming).

Tool development process: HQ-driven but collaborative

It took anywhere from six months to one year to develop a 'testable' version of a screening and/or assessment tool. In all cases, the process of tool development was driven by headquarters personnel with varying degrees of input from field offices and local partners. This input ranged from feedback on drafts, to actively participating in trial applications, to co-authoring sections of a 'final' (i.e. publicly released) guidance document. Collaboration was mostly across different teams or departments within a given agency or organisation (particularly between environment and disaster risk management teams), but was also between headquarters and field offices, as well as between different organisations (e.g. the four organisations responsible for developing CRiSTAL, or Christian Aid seeking inputs from the UK Meteorological Office).

The first version of the tool was often more elaborated than what was ultimately launched for public consumption. The simplification of a draft tool was usually in response to a growing understanding of potential tool users and their level of awareness on climate change, the time they had available to apply a tool, and their decision-making context. For example, the first version of the ADB tool consisted of 10 pages of questions, which was subsequently reduced to two pages of questions that could be answered in 30-60 minutes.

While tool development processes are broadly similar, the different rationales for tool development have implications for any attempts at harmonisation (see Section 4.4). Interviews suggest that most tool developers had been aware of other screening and/or assessment tools that were developed by counterparts in other agencies, but did not feel they met the particular needs of their own agency or decision-making context. NGO tools tended to draw from or build on familiar tools, such as participatory vulnerability and capacity assessments (PVCA) and other participatory rural appraisal (PRA) tools. In contrast, donor tools tended to reflect risk management procedures in place for social and environmental impact assessment. Attempts at harmonisation therefore need to focus on identifying where stages of the process, objectives and contexts are similar. This research suggests that common guidance could distinguish between field-focused exercises, the design and implementation of larger programmes, and strategic risk management exercises. Similarly, harmonisation could focus on initial screening and subsequent stages of the broader assessment processes.

Tool development impact: organisational change

In all cases, developing the risk screening and/or assessment tool was both a symptom and enabler of some organisational change. Specifically, the process of developing the tool became a means for awareness-raising and capacity-strengthening on climate change issues. Interviewees noted that internal discussions, as well as workshops to introduce, pilot and receive feedback on the tools, all contributed to

demystifying the issue of climate change. Several donors noted that their tool's greatest contribution was in fundamentally changing the mindsets of staff and partners, and in some cases policies, around project design and implementation. DFID's SPR process is explicitly geared to the process of generating the awareness and capacity among country programme staff to make climate risk management part of ongoing business planning.

Intended tool users: Internal agency staff and beyond

Product development, in its most generic sense, usually involves market research to understand the profile and needs of an intended consumer, as well as competing products that are already available. In development co-operation agencies, market research is usually synonymous with consultations and 'needs assessments', particularly in partner countries and communities, where gaps between current and desired conditions and resources are identified. In 2007, UNDP conducted a climate change adaptation knowledge needs survey to better understand priority adaptation interests, sectoral themes, and desired knowledge products, services and formats. The majority of respondents were from UN agencies or governments and they revealed that their top three interests were to be in developing adaptation policies and plans, integrating adaptation into national policies, and establishing adaptation assessments or policy frameworks. While UNDP intended to use the results of this survey to further develop their online Adaptation Learning Mechanism platform (a Type 3, knowledge-sharing tool), the results generally spoke of a growing demand for support in the form of process tools (Type 2 tools), as well as a strong desire for best-practice and lessons-learned products.

Even with this documented demand for mainstreaming support in the form of screening and assessment tools, the survey did not tell tool developers much about their users (nor did it intend to). Demand and rationale are not enough for the successful development and application of a tool. Ideally a tool developer would have a clear idea of the professional profile, background or training, current responsibilities, and resources available to tool users. All tool developers interviewed for this research characterized their imagined user, either in terms of their technical expertise or professional responsibilities or both. Two of the nine tool developers specified that the user was a 'non-climate specialist', while three others said their tools were for 'non-environmental specialists', recognizing that the climate change issue was usually confined to environment departments and teams that the developers thus needed to reach out to other users. The rest of the tool developers simply noted that their users were 'subject matter specialists', which could include climate change, disaster management and environmental issues. Overall, it seems that the intended users for screening and assessment tools were development professionals familiar with the general programming/implementation cycle, but not necessarily informed about climate change.

In terms of responsibilities, all tools were targeted at individuals who are responsible for project and programme design. The donor tools tended to cast a wide net in terms of user roles. While ADB's screening tool is clearly for project officers within the agency, USAID, GTZ, DANIDA and DFID all stated that the tool was also for external consultants, who are typically hired to undertake certain programming development tasks, rather than the agency's own programme staff. This may reduce ownership of the process in a country in terms of its replication and continued use, and may also reduce co-benefits in terms of raising awareness and stimulating debate. The issue of expert users, both inside and outside agencies, may influence debate on whether compulsory use of screening and assessment tools would improve integration by raising awareness and spreading expertise across agency staff. NGO tool developers were, by contrast, narrower in characterizing the professional roles of their users. They saw their primary users as being organisation staff, followed by counterparts in partner agencies within developing countries. The latter is partly a function of NGOs often working through partner agencies (e.g. national and local NGOs, churches) rather than always having a country field office.

While for some donors partner involvement is principally through dialogue at workshops, the GTZ and USAID tool developers actively extended their tool activities to include promoting their use by implementing partners – whether they be partner governments (especially in the case of GTZ), contractors or NGOs. Evidence from GTZ’s programme in Mali and from interviews undertaken with developing country government representatives of the Nairobi Work Programme suggests that significant capacity building and support programmes are necessary to enable tool use. They also demonstrate the need for greater understanding of the political economy of the decision making contexts in which tools are used in order to work within and create positive incentive and organisational structures. The government partners who were surveyed were already facing capacity constraints in responding to international reporting and planning initiatives such as the UNFCCC National Communication process and preparation of National Adaptation Programmes of Action (NAPAs). NGO tool developers similarly emphasized that training was a necessity, but too often a luxury, in learning the screening or assessment process.

Intended tool application: During the programming cycle

The project and programming cycle offers the operational starting point for most of these tools, namely when they are developing a new project/programme, or designing a new phase of an existing project or programme. While several of the tools recommend using the assessment tools over the course of a given project or programme, possibly as part of a monitoring process, even the tool developers acknowledge that it is difficult to respond to the results of a climate risk assessment and to implement mid-course adjustments. Using these assessment tools only for a final evaluation is similarly difficult and unlikely.

Intended data and information input requirements

The challenge experienced by tool users in relating climate change and vulnerability data to the decision-making context is highlighted in the next section. Interviews and tool products suggested that tool developers largely framed this issue in terms of providing guidance on where users could access data, in which formats and at what scales. However, there was far less guidance and preparation in two crucial elements of tool use, namely data gaps and dealing with uncertainty. The former arises because the relationships between changes to primary climate variables (such as temperature or rainfall) and impact (such as flooding or crop productivity) are usually poorly developed for developing country contexts. Crucially, this data gap extends to the relationship between adaptation measures and the level of impact avoided.

Second, tool developers rarely provide guidance on how to interpret climate and vulnerability data with regards to different scales and characterising uncertainty. A basic concern from many tools is the dependence on one set of climate projections or models for decision-making, although there is now greater evidence of data from ensembles of multiple models being provided by data and information portals. One notable exception is GTZ, who have produced a practitioner’s manual to walk users through the challenges of accessing, interpreting and communicating climate change information.

3.4 Experiences in applying the tools: Lessons from users

Upon acquiring a detailed understanding of the nine tools, including why, how and for what specific reason they were developed, the 36 user interviews were analysed to see if tool user experiences matched tool developer intentions/designs.

User profile

The nine tools were intended for use by non-climate, often non-environmental, specialists working in the agency, or with a partner government or NGO, responsible for project or programme development. Just over half of the users interviewed for this paper had backgrounds in environment and natural resources management, with a few already familiar with the basics of climate change, whereas others were subject matter specialists in other relevant fields such as disaster risk reduction. All of the users had been introduced to their respective tools through a meeting or formal training workshop and almost all were actively using at least one of the nine examined tools at the time of the interview.

Categorisation of users based on motivation for uptake

The impetus for tool application typically came from headquarters, even if tool users had been involved in tool development. While the meetings and workshops were successful in generating their interest and enthusiasm for applying the tool, and in many cases providing them with some training on how to do so, most users noted that actual tool application required financial support and incentives. This has taken several forms:

- Scaled-up training-of-trainers events, where the intention is to train enough people and identify regional or local champions so that a critical mass of expertise is available to support tool application when and where it is needed (particularly for the NGO tools);
- Writing tool use into job descriptions and Terms of Reference;
- Special funds that support the application of and implementation of recommendations from the tools, albeit usually on a relatively modest scale;
- Funded projects that have listed tool piloting/application as a project activity complete with an associated budget line;
- Strong linkages of tools with strategic budget allocation processes (e.g. DFID).

In the future, the integration of these climate risk screening and assessment procedures into mandatory policies and assessments, such as environmental screenings or impact assessments, may increase the incentives for tool application.

These experiences imply a range of tool users, from purely voluntary users to those complying with mandatory agency policies (See Table 9).

Table 9. Range of tool users

Voluntary	Users who have not participated in a formal training but may be aware of a process guide tool through their own professional networks, Internet, reference documents. Use the tool(s) on an ad-hoc, as-needed basis. These users are difficult to identify on their own; often they must identify themselves by contacting relevant networks to ask questions or share experiences. As such, they were not interviewed for this analysis.
Trained and ready	Users who have received training in the tool and are ready and willing to apply it as needed. They may simply go and apply it in their own organisations, agencies without further prompting or much support. They may also seek out funding opportunities to apply the tool. Example includes users who applied for support from Christian Aid's special innovation fund in Africa to use their Adaptation Toolkit. Also difficult to identify and follow, unless they report back their experiences.
Applying as part of project	Users who apply the tool as part of a project; tool elaboration and application are a discrete component of a given project or programme and have associated budget lines. Examples include the application of USAID's Guidance manual as part of the "From the Glaciers to the Coast" project in Northern Peru; application of CRiSTAL as part of IUCN's "Climate Change and Development" project.
Applying as part of a job description	Users (staff or consultants) who are hired to, among other things, apply the tool in designing and managing development strategies. Examples with CARE's CVCA in East Africa, ADB's Draft Risk Screening Tool in Nepal, consultants hired to run tools in DANIDA and DFID, and some in-country posts in DFID.
Mandatory	Users who apply the tool because it is part of mandatory agency policy. For example, climate risk screening is part of environmental screening policies, which is taking place in Germany, the European Commission, and in the pipeline in Sweden and UK development co-operation.

Managing data and information inputs: Tackling the climate science

Both the climate (pre-) screening and assessment tools require some data and information about climate variability and change, as well as vulnerability and/or capacity information, at different (often national and sub-national) scales. Identifying, accessing or gathering, and ultimately understanding this information, especially climate-related information was cited as one of the biggest challenges in applying the different tools. Three general approaches to dealing with climate information were identified:

- i. **Outsource the climate analysis:** Hire consultants or technical experts to prepare a relevant climate analysis that will summarize historical climate, observed trends, and future projections.

Examples: Many of the donor tools take this approach, with climate experts hired to undertake downscaling of global circulation models or impact analysis for a certain sector. The application of GTZ's Climate Proofing for Development tool in Vietnam included a phase of activity where experts from a local university were hired to produce maps depicting regions that might be most affected by different climate change impacts, as well as summaries of how different crops may respond to changes in temperature and rainfall. One user mentioned taking this approach in applying CRiSTAL in Zambia, although the analysis was ultimately not used.

- ii. **Use pre-fabricated or tailored information products that accompany a given tool:** Draw from the rudimentary, ready-made climate analyses that accompany a tool; this way, users are not expected to seek out and query climate information on their own.

Examples: Both ADB's Draft Risk Screening Tool and CEDRA provide tables and useful summaries in Annexes to help users understand the key climate trends, projections, and associated impacts for their project area (ADB) or sector (CEDRA).

- iii. **Do some research, but emphasise local observations and perceptions rather than climate science:** Seek out some climate information, either through document research (usually UNFCCC National Communications and NAPAs), online research, or discussions with technical experts and meteorology departments. Then try to extract some general conclusions (e.g. dry seasons are lasting longer, rainfall is expected to decrease) to inform the rest of the screening/assessment/analysis process. Compare and validate this through local consultations focusing on community observations and experiences with climate risk, getting a grounded account of how climate affects a given area/sector, how people are affected and why, as well as what they do to deal with the impacts.

Examples: USAID's Guidance Manual is accompanied by a CD-Rom that contains a number of source documents for climate information and impact analysis, although the onus is still on the user to draw the relevant conclusions (which is why it is not included in the previous category, where the climate analysis is effectively done for the user). Users of CRiSTAL and CVCA in particular mentioned consulting secondary sources, including IPCC reports and UNDP's Climate Change Country Profiles to acquire some sense of what climate change may mean for their area/sector; this information was subsequently compared with the results of community consultations and workshop discussions.

Tool users therefore either minimized their use of climate science by outsourcing climate analysis, used pre-fabricated products that accompanied specific tools, or relied more heavily on local observations and experiences. Those who were actively seeking climate information tended to rely on national reports and consultation with meteorology departments. This implies that such tool users are not necessarily aware of or using the data and information provision tools described in Section 2.3. Moreover, while intended users of these nine tools are not expected to be climate experts, divorcing them too much from the science may create or exacerbate gaps in the CRM/adaptation process. Christian Aid's Adaptation Toolkit – its module on 'developing a climate analysis' in particular – seeks to address this by trying to help staff and partners become informed users or consumers of climate information. It provides them with a summary of what types of climate information are relevant to a project or programme, where they can be accessed, how they might be interpreted and by whom, and how they can be cross-checked with community observations or knowledge, which is gathered through the use of more familiar participatory tools.

Reported gaps and limitations of risk (pre-) screening and assessment tools

The inability of screening and assessment tools to **address multiple stressors** was mentioned a number of times by users for both donor and NGO tools. While some tool frameworks have a broader focus (e.g. ADB's Draft Risk Screening Tool also considers geophysical hazards, CEDRA includes environmental degradation), they do not consider the interaction of multiple stresses or hazards and what they could mean for risk management options. GTZ's Climate Proofing for Development tool and CRiSTAL were both mentioned as potentially too climate-centric, not considering other environmental, political or socio-economic risk factors. While CARE's CVCA emphasizes the need to look at factors that contribute to climate vulnerability (e.g. 'drivers of vulnerability') and how they affect local vulnerability and adaptive capacity, some users noted that its emphasis on livelihoods may miss other environmental or political factors.

While many users reported that the use of the tools had helped them to make changes to interventions, there appears to be a key gap in understanding the processes of **moving from assessment to implementation**. In some cases tool users (including CVCA, CRiSTAL, and GTZ) reported that the tools

did not provide guidance on translating assessment into designing adaptation options or changes to interventions. Donor tools like USAID's Guidance Manual, GTZ's Climate Proofing for Development, and CEDRA provide some instruction on how to identify adaptation options, evaluate them according to selected criteria, and select those that will be integrated/implemented. CRiSTAL's approach of identifying adaptation options based on adjusting ongoing or planned development activities was said to be limiting, as it did not allow users to consider the full range of options available to them. The CVCA and the Adaptation Toolkit briefly acknowledge the subsequent steps in the CRM/adaptation process of identifying and evaluating options, as well as integrating them into existing or new project designs, but they, like ADB's risk screening tool, were never intended to offer detailed guidance. This expressed frustration or observed gap in the risk screening and assessment tools would therefore indicate that most of the interviewed users preferred a process guidance tool covering the overall CRM/adaptation process, as opposed to one that covered only a discrete step or subset of steps in the process.

Few of the users interviewed for this research cited time as a major constraint. Tool developers had mentioned this as an assumption when developing the screening and/or assessment process, as there was a general recognition that staff/practitioners must typically manage a large workload. There are several interpretations of this finding, however: either users did not feel that the tool application process was unreasonably time-consuming, or the required time commitments were outweighed by the benefits of tool application.

Reported results of tool application

Despite these challenges and limitations with tool use, all users agreed that there were significant benefits associated with applying the various tools. The **design of more climate-resilient development strategies** was cited as the most useful result of tool application, and this was at both the project and programming or strategic levels. **Awareness-raising** was cited as another important result of tool application. Users noted that the tool training workshops were critical in raising their awareness of climate change issues and their links to development. Subsequent application of the tool with partners and communities reinforced and expanded their understanding of the issue, while simultaneously raising awareness among new constituents. This links closely to the third most often cited benefit of applying the risk screening and assessment tools – **capacity building**.

4. Conclusions and recommendations

This paper examines climate risk screening and assessment tools in development agencies focusing on growing user experiences, tool proliferation and the potential for harmonisation. It distinguishes between *screening* (and lighter-touch pre-screening), a rapid exercise to determine if further examination of climate risks is needed, and *assessment*, which combines understanding the nature of climate risk (risk assessment), how it can be managed (risk analysis), and devising a strategy for such management (options evaluation).

Screening processes are found to be relatively similar in scope and focus and provide significant potential for a common generic approach that involves consideration of the sensitivity of the project activities to variations in climate (such as through sectoral classification), its geographic exposure, and the baseline adaptive capacity (through proxies such as good governance). Assessment processes demonstrate greater variety across the agencies analysed. However, there is consistency among the donor assessment processes in the detailed examination of climate impacts, where not already done during the screening phase, as well as the comparison to existing levels of risk management. The identification, prioritisation, selection and implementation of risk management and/or adaptation options as well as the encouragement of monitoring and evaluation are also consistent across donors.

In an effort to increase user uptake and satisfaction with screening and assessment tools, while also minimising confusion, duplication and the overall transaction costs of using such tools, the paper identifies a number of recommendations for development community. These recommendations, described in more detail in the remaining of the section, include the need to improve training and facilitation, to narrow the gap between assessment and action, and to harmonise certain aspects of the risk screening and assessment process.

While this analysis is limited to recently developed dedicated tools that have an explicit focus on screening and assessment of climate change risks for facilitating adaptation, many of these recommendations also apply to a wider range of existing risk analysis tools which are practically used in development planning and engineering design. Some of these tools, which are widely used and well known to planners and designers, will be applicable as screening/guidance tools for adaptation with some modification. For future work, it would be recommended to enlarge the analysis to consider all tools used by donors in development planning. Further work should also be done in comparing results amongst tools in order to identify risks in the use of each tool as well as the level of robustness of the results.

4.1 *Continued support for training and facilitation needed*

All tool developers and users noted the crucial role of training and facilitation in applying screening and assessment tools. Tool developers mentioned the growing demand for training events, while tool users noted that it was critical to their experience in tool application. Indeed, Olhoff and Schaer's stock-take even noted that, without proper direction, some tool applications may inadvertently contribute to maladaptation (2010). The general faddism of development tools, however, can make it difficult to secure support for such training; the longer a tool has been available in the public domain, the harder it becomes to leverage new training resources. Donors may move on to support other priorities or there may be a perception that after a certain amount of training and tool refinement, a critical mass of people who are well-versed in tool application should make it easier for new users to pick up and apply it themselves.

Training events can range from half day workshops among office staff to become familiarized with the rationale and process for using a tool, to a week-long programme involving introductory discussions on climate change and hands-on tool application exercises. Because the tools reviewed in this paper were all process tools that depended on some level of stakeholder engagement, these training events should include exercise on facilitation. While facilitation skills are exercises that may be familiar to many development field practitioners, particularly to those working in NGOs who have years of experience with PRA tools, it is useful to address some of the particularities of discussing climate-related issues. This is addressed in some tools (e.g. CVCA, and the Red Cross/Red Crescent Climate Guide, which was not included in this detailed analysis), but it is not always a topic of focus in tool training workshops.

Continued support for training and facilitation should not only be in the way of more events that introduce new constituencies to the tools, it should also consist of follow-up training for existing users, which could offer refreshers, updates and facilitate exchange of user-experiences.

4.2 *Minding the gap between information provision and process tools*

The conceptual framework for this analysis presented three general categories of tools: 1) Process guidance tools; 2) Data and information provision tools; and 3) Knowledge-sharing tools. These categories are based on the functions of different tools vis-à-vis the climate risk management process. In an ideal situation, users of process guidance (Type 1) tools would use the outputs generated by the data and information provision (Type 2) tools, of which there are also a growing number being developed. This analysis found, however, that Type I users were rarely consulting the outputs of Type 2 tools. Some users mentioned trying to access or use such tools, but commonly the input tended to be taken from summary

documents such as National Communications, NAPAs, or UNDPs Climate Change Country Profiles. This suggests that the users for each category of tool are very different in their profiles, capacities and needs, and therefore better links need to be forged between them. Generators of climate information need a clearer idea of what process tool users want or need; similarly, process tool users need to become more informed consumers of climate information.

This is not a new issue and it has occupied adaptation decision-makers for some time (Reilly *et al.* 2001; Challinor 2008). What is striking, however, is that while increasing numbers of Type 2 tools are being developed and targeted at non-climate experts and development decision-makers, the users interviewed for this research were, for the most part, not using them. They preferred simple, readable synthesis documents (even if they were out of date), which can be powerful in summarizing and presenting climate information, over computer-based visualization tools. But these more sophisticated climate information tools are targeted to the needs and capacities of consultants and technical experts that are hired when, for example, process tool users decide to outsource a climate analysis. Even then, the experience can be fraught with uncertainty - i.e. trusting the quality and credibility of the analysis. More dialogue and research into the intended users of Type 2 tools and the preferences of Type 1 tool users could be undertaken to understand the gap between information and process.

4.3 *Narrowing the gap between assessment and action*

The paper highlights the point that different tools on different data sources, look variously to existing climate variability or future climate change projections as a main data source, and stress different indicators of vulnerability. Despite this, most tools users report being able to come to some sort of agreed assessment of climate risks to development co-operation activities. However, many users reported that one of the more taxing parts of the process was the shift from understanding these risks to determining whether current responses were adequate and the development of new options for enhancing adaptation.

This important step in the tools guidance is usually comprised of building on existing coping strategies and drawing on ideas of adaptation options developed elsewhere. This may constrain the development of adaptation options that are more specific to the risks identified or options that are new and innovative. There is a need for greater coherence on these processes and how they should be guided. One approach may be for tool developers to pool their experiences in this area to create agreed upon common guidance. Another option may be to ensure that stakeholder engagement consistent with the scale of the tools application is enhanced at this stage in the process. Enabling diverse voices to feed into the climate risk management process may both enhance ownership and promote development of more appropriate and effective adaptation options.

4.4 *Harmonisation: Desirable or feasible?*

Harmonisation, which refers to coordination among development agencies to improve the efficiency of aid delivery through simplified procedures and knowledge-sharing, is one of the key pillars of the *Paris Declaration on Aid Effectiveness* of March 2005 and the follow-up *Accra Agenda for Action* of September 2008. As this paper and previous stock-takes demonstrate, there are a wide range of available climate risk screening and assessment tools meeting the needs of an even wider range of users. It is therefore instructive to stimulate discussion around the potential for harmonisation, its desirability and potential feasibility.

Dialogue between tool developers in the past has suggested that a diversity of approaches may be beneficial (Tanner and Guenther, 2007). The interviews undertaken for this paper with users and developers of selected tools reinforce the importance of developing processes tailored to the specific needs and contexts of different agencies and their partners. There is evidence that tools have borrowed on one

another's approaches, with significant openness in the sharing of tools and methods between agencies even in the early stages of development – itself an example of harmonisation.

By developing individually-tailored tools, agencies themselves become familiar with the screening and assessment processes through a form of 'learn by doing', while also stimulating a broader debate on climate risk management and its relevance to individual agencies' work. This hypothesis is supported by the reported co-benefits of tool development and use of raising awareness, fostering intra-agency collaboration, and spurring organisational change processes. The process of collaborative tool development and use in particular contexts may also support partnership building and alignment with partner countries' national development strategies, institutions and procedures. Such alignment constitutes another pillar of the *Paris Declaration*.

At the same time, there have been general calls for harmonisation of approach, terminology and tool components (G8, 2005; Gigli and Agrawala, 2007; OECD, 2006, 2009; GTZ, 2009; Olhoff and Schaer, 2010). Coupled with the benefits described above, tool development and use seem to have become part of agency moves to enhance the visibility of their efforts on climate change. As a result, more tools are likely to be developed, existing ones will be rolled out and refined, and the tools landscape will become busier and more complex to navigate. The rationale for some level of harmonisation is therefore understandable. Simplifying the procedures of risk screening and assessment could take place through the channels outlined below.

a) Using common and clear terminology

As noted at the beginning of the paper, part of the confusion in identifying and applying appropriate tools for mainstreaming adaptation lies in differing definitions for and uses of words such as 'risk' and 'screening'. For example, does 'climate risk' refer to the potential for loss (expressed as a statistical probability) or the losses themselves (e.g. death, loss of livelihoods), or some combination of the two? The answer to this influences the kind of information and expertise required to conduct an analysis, as well as determine the kind of outputs generated and how they can be used to inform development decision-making. Other questions that may arise in looking at the array of tools currently available include: does 'screening' refer to the preliminary diagnosis of whether one needs to worry about climate risk (as defined in this paper and used by ADB), or does it refer to the entire range of analytical steps – from pre-screening, to options evaluation (as suggested by DANIDA)? How is 'climate proofing' different from 'climate risk management', both of which are terms that are used in the names of different tools?

It is unlikely that agencies will be able to develop a universally-agreed upon terminology, as some agencies have already subscribed to particular definitions or invested in approaches (e.g. 'Climate Proofing for Development'). However, this does not preclude the need for some unifying reference source that captures these different terms and approaches, defines them clearly, explains similarities and differences (as subtle as they may be), and explains what this means for a given tool. This way, a prospective user will understand how ADB's Draft Risk Screening Tool is different from the risk screening process in CRiSTAL.

b) Developing a generic and common risk management framework

Harmonisation may also become more of a necessity for development agencies in the future as climate risks move towards the realm of procedural due diligence supported by legislation such as that currently supporting Environmental Impact Assessment (Agrawala *et al*, 2010). The initial step to harmonisation in this respect may be to develop a common approach for the initial screening of development activities, with greater flexibility around the wider assessment process. This paper demonstrates that climate tools could be broken down into common constituent parts and related to

development decision-making processes (see Table 3), suggesting that a common skeleton screening and assessment process may be possible. For example, agencies can agree on the key questions/steps for (pre-) screenings. As noted above, the common elements for (pre-) screening in the tools reviewed for this paper were to identify:

- The **geographic location** and/or sector of a given development strategy to determine if it is located in or dependent on, climate-sensitive areas or resources;
- The **different climate-related hazards** (events and trends) that do or will affect this area to identify the specific climate stressors relevant to the development strategy;
- The **(direct and indirect) impacts** of these climate-related events and trends on the area and/or sector in question so as to determine the extent to which climate is already a development factor and how this will change in the future.

If development agencies can agree that addressing these three points is enough to determine whether a development strategy needs to incorporate a more detailed climate risk assessment, then with further refinement, they could form the basis of a framework for (pre-) screening. The same could be done for risk assessment, risk analysis and options evaluation, where each is accompanied by generic guiding questions. An example is illustrated in Table 10.

Table 10. Examples of generic guiding questions for CRM processes

Element of CRM Process	Example of generic guiding questions:
<p>Risk Assessment “Determine the nature and extent of risk by analyzing potential hazards and evaluating existing conditions of vulnerability that could pose a potential threat or harm to people, property, livelihoods and the environment on which they depend” (UNISDR 2004).</p>	<p>Related to hazards:</p> <ul style="list-style-type: none"> • What climate hazards currently affect the area? • Have there been any observed changes in climate over the last 30 years? • What changes in climate are anticipated with an increase in global temperatures? <p>Related to vulnerability:</p> <ul style="list-style-type: none"> • What is the development / poverty profile? • How will the change over the next 10-20 years? • What are the current and potential future outcomes of interactions between hazards and vulnerability, given the answers to above?
<p>Risk Analysis Identify management options to minimise negative impacts and take advantage of opportunities in light of the identified current and future risks</p>	<ul style="list-style-type: none"> • What measures can be taken to minimize negative impacts? • What measures can be taken to maximize opportunities?
<p>Options Evaluation Evaluate both the adequacy of current risk management strategies and potential new activities to manage additional risk or take advantage of opportunities.</p>	<ul style="list-style-type: none"> • What measures should be implemented based on key selection criteria, for example: <ul style="list-style-type: none"> • Cost • Effectiveness • Feasibility (socio-cultural, technical) • Alignment with national development priorities

Ideally, these guiding questions would be accompanied by recommended tools (Types 1, 2 and 3) that would help users in answering a particular question. While all tools should be associated with some sort of a user review, the data and information (Type 2) tools in particular should meet some agreed upon minimum standard.

Overall, the key will be to make these frameworks/questions/data and information requirements generic enough so that they allow agencies and partners to tailor them to their own context and needs. The risk screening framework can also be tailored, but still rendered generic enough to be widely applicable, to different types of official development assistance (ODA) interventions such as common guidance for infrastructure projects, budget or sector support interventions, etc.

c) Devising useful tool (sub-) categories for different development decision-makers

In order to assist tool users (and even developers) in understanding what is relevant and available to their particular decision-making context, they must be organized and presented in a simple, accessible and intuitive manner. The categories and sub-categories of tools presented in this paper were developed as a starting point to help users understand the different ways in which tools can contribute to the adaptation and climate risk management processes – i.e. provide data and information that is used in the processes (Type 2), guide users through the different steps in the processes (Type 1), or provide a mechanism for sharing knowledge generated through the processes (Type 3).

Within each of these categories are sub-categories that in Table 3 generally correspond to development decision-making processes such as the project cycle and assessing adaptation options. But this is only one approach to organizing and categorizing the wide range of tools available. They can also be categorised according to sector (e.g. water, agriculture and health), scale of application (e.g. community-level vs. national level) and format (e.g. computer-based vs. hardcopy document-based). Ideally, the tools would be presented in such a way (i.e. available in an online, searchable database) that multiple categorisations could be applied.

d) Having at least one simple, navigable, clearinghouse for tools

Linked to the previous point on categorizing tools, tools should also be made more readily available to existing and potential users. As it stands now, users typically pick-up a particular tool because of a directive from more senior levels of management or recommendations from peers. Offering a type of online clearinghouse for adaptation and climate risk management tools would allow users to gain rapid exposure to the range of different tools that exist and thus allow users to better identify which tool or combination of tools match their needs.

While various web-based knowledge-sharing platforms have web pages or databases that house tools, none of them are comprehensive. Moreover, these tools' web pages or databases are usually secondary to the purpose of the main website, which may be focused on advancing a particular issue (e.g. building a network of adaptation researchers), or promoting a specific project or agency. As a result, these secondary tool compilations can get lost or subsumed, leading them to be easily overlooked and underutilized. A dedicated website would therefore be more effective, although this does not mean that other websites could not house tools. This is provided that tools are presented using a clear and consistent terminology and categorisation (see above). But having a main clearinghouse for adaptation tools, which displays and explains agreed-upon definitions, approaches, and categories would effectively operationalise the harmonisation of adaptation and climate risk management tools.

The two main obstacles to establishing such an online clearinghouse are: 1) identifying the appropriate host, as it would have to be an agency that is recognized and trusted by a wide range of development decision-makers and not associated with a specific agenda or approach on adaptation or climate risk management, and 2) accommodating users in developing countries who have limited access to the Internet (if at all), and would require a resource that takes up little bandwidth without compromising functionality and ease of navigation. Ideally, the web-resource could be translated into a useful hardcopy resource for wider distribution in local developing country settings.

4.5 Ownership: From agencies to partners in tool development and use

The analysis presented here shows a mixed picture in terms of engagement of development partners in screening and assessment processes. While efforts are usually made to ensure consistency with national climate change plans and priorities, if the principle of ownership enshrined in the *Paris Declaration* is to be upheld, then greater efforts need to be made to ensure that partner countries exercise effective leadership over their own national approaches to climate screening and assessment.

Initial tool development has tended to be largely in house, with piloting and field testing periods providing an opportunity for feedback. For donors, tools have largely been anchored in the agency's own procedures rather than the processes. This constrains the adaptation impact of tools because they only tackle the narrow field of development co-operation programmes themselves rather than engaging at scales that would include national or sub-national development planning and programming. This was noted by interviewees as an emerging priority in light of the growing proportion of development co-operation being transferred through direct and sector budget support processes. The result is that tools within development

agencies alone are not able to identify climate risks and adaptation because the planning and programming occurs chiefly in partner governments.

This paper therefore suggests that, in order to leverage greater impact from screening and assessment tools, agencies need to work with development partners to integrate these tools within their own systems and procedures. A first step towards this process may involve closer collaboration and harmonisation between different agencies, particularly at the country level, to create a collaborative dialogue with development partners on their own approaches to climate risk management.

BIBLIOGRAPHY

- ADB (Asian Development Bank) (2005) *Climate Proofing: A Risk-based Approach to Adaptation*. Asian Development Bank, Manila.
- ADB (2009) *Understanding and Responding to Climate Change in Asia*. Asian Development Bank, Manila.
- AfDB (African Development Bank) *et al.* (2003) *Poverty and Climate Change: Reducing the Vulnerability of the Poor through Adaptation*. Washington DC, World Bank
- Agrawala, S., Kramer, A. M. Prudent-Richard, G. and Sainsbury, M. (2010) *Incorporating climate change impacts and adaptation in Environmental Impact Assessments: Opportunities and Challenges*. OECD Environmental Working Paper No. 24, OECD Publishing, Paris.
- Barnett, J., and O'Neill, S. (2010) 'Maladaptation'. *Editorial – Global Environmental Change* 20: pp211–213.
- Challinor, A. (2008) 'Towards a Science of Adaptation that Prioritises the Poor'. *IDS Bulletin* 39(4): pp81–86.
- Christian Aid (2010) *Integrating Climate Change Adaptation into Secure Livelihoods*. Available at: www.adaptationlearning.net/guidance-tools/integrating-climate-change-adaptation-secure-livelihoods-0
- Danida (2009) *Bangladesh Climate Screening Report*. Available at: www.bangladesh-climate.org/dox/DRAFT_CC_Screening%20Report_19MAR2009.pdf
- DFID (Department for International Development) (2006) *Eliminating World Poverty: Making Governance Work for the Poor*. White Paper on International Development. HMSO, London.
- DFID (2009) *Eliminating World Poverty: Building our Common Future*. White Paper on International Development. HMSO, London.
- EC (European Commission) (2004) *EU Strategy on Climate Change in the Context of Development Co-operation: Action Plan 2004-2008*. Directorate General Environment, European Commission, Brussels.
- EC (2007) *Adapting to climate change in Europe – options for EU action*. European Commission Green paper, COM(2007)354, Brussels.
- GTZ (Gesellschaft für Technische Zusammenarbeit) (2009) *International Workshop on Mainstreaming Adaptation to Climate Change Guidance and Tools*. GTZ House Berlin, Potsdam Square May 28th - 30th, 2009. Available at www.gtz.de/de/dokumente/en-climatemainstreaming-adaptation-workshop-report.pdf
- GTZ (2010) *Climate Change Information for Effective Adaptation: A Practitioner's Manual*. Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ), Eschborn.
- G8 (2005) *Gleneagles Plan of Action – Climate Change, Clean Energy and Sustainable Development*. www.defra.gov.uk/environment/climatechange/internat/pdf/gleneagles-planofaction.pdf

- Gigli, S. & Agrawala, S. 2007: Stocktaking of progress on integrating adaptation to climate change into development co-operation activities. OECD, Paris.
<http://www.oecd.org/dataoecd/11/18/39575695.pdf>
- Hellmuth, M.E., Moorhead, A., Thomson, M.C., and Williams, J. (eds) 2007. Climate Risk Management in Africa: Learning from Practice. International Research Institute for Climate and Society (IRI), Columbia University, New York, USA.
- IPCC (Intergovernmental Panel on Climate Change) (2007) Climate Change 2007: Synthesis Report. An Assessment of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge. Available at: www.ipcc.ch
- Klein, R.J.T., Eriksen, S.E.H, Naess, L.O., Hammill, A., Tanner, T.M., Robledo, C. & O'Brien, K.L. 2007. Portfolio screening to support the mainstreaming of adaptation to climate change into development assistance. *Climatic Change*, 84:23-44
- McGray, H., Hammill, A. and Bradley, R. (2007) *Weathering the Storm. Options for Framing Adaptation and Development*. World Resources Institute, Washington D.C.
- OECD (2006) Declaration on Integrating Climate Change Adaptation into Development Co-operation Adopted by Development and Environment Ministers of OECD Member Countries. 4 April 2006. Organisation for Economic Co-operation and Development, Paris.
- OECD (2009) Policy Guidance on Integrating Climate Change Adaptation into Development Co-operation. Organisation for Economic Co-operation and Development, Paris.
- Olhoff, A. and Schaer, C. (2010). Screening Tools and Guidelines to Support the Mainstreaming of Climate Change Adaptation into Development Assistance – A Stocktaking Report. UNDP, New York.
- Stern, N. (2006) *The Economics of Climate Change: The Stern Review*. Oxford University Press, Oxford.
- Tanner, TM (2008) 'Climate risk screening of development portfolios and programmes'. *IDS Bulletin* 39(4): pp87-95.
- Tanner, T.M. and Guenther, B. (2007) *Sharing Climate Adaptation Tools: Improving Decision-making for Development*. Report of Geneva Workshop, 11-12 April 2007. IISD, IDS and World Bank. Institute of Development Studies, Brighton, UK
www.iisd.org/pdf/2007/sharing_climate_adaptation_tools.pdf
- UNDP (United Nations Development Programme) (2003) *A Climate Risk Management Approach to Disaster Reduction and Adaptation to Climate Change*. UNDP Expert Group Meeting on Integrating Disaster Reduction with Adaptation to Climate Change. Havana, June 19-21, 2002. United Nations Development Programme, New York.
- UNFCCC (United Nations Framework Convention on Climate Change) (2008) *Nairobi Work Programme Compendium on methods and tools to evaluate impacts of, and vulnerability and adaptation to, climate change*. UNFCCC Secretariat, Bonn.
- UNISDR (United Nations International Strategy for Disaster Reduction) (2004) *Living with Risk: A Global Review of Disaster Reduction Initiatives*. United Nations International Strategy for Disaster Reduction, Geneva.
- Van den Berg, R. and Feinstein, O. (eds.) (2009) *Evaluating Climate Change and Development*. World Bank Series on Development Volume 8. Transaction Publishers, New Brunswick.
- Wilby, R.L., Troni, J., Biot, Y., Tedd, L., Hewitson, B.C., Smith, D.G. and Sutton, R.T. (2008) 'A review of climate risk information for adaptation and development planning'. *International Journal of Climatology* 29: pp1193-1215.

World Bank (2008) Development and Climate Change: A Strategic Framework for the World Bank Group. World Bank, Washington D.C.

World Bank (2010a) World Development Report 2010: Development in a Changing Climate. World Bank, Washington D.C.

World Bank (2010b) Mainstreaming Adaptation to Climate Change in Agriculture and Natural Resources Management Projects: Guidance Notes. Climate Change Team, Environment Department, World Bank, Washington D.C.

ANNEX 1: INTERVIEW QUESTIONS FOR TOOL DEVELOPERS

1. Process of developing the tool
 - Where did the idea come from? (i.e. why did your organisation develop a tool?)
 - Who developed the tool?
 - What was the process for developing the tool? How long did it take? What kinds of resources were required?
 - Did you look at other tools in developing yours? If so, which one(s)?
 - Current status (e.g. testing/piloting, application, revision)?
 - Where has it been used, and to what extent?
2. Tool user
 - Who did you have in mind when it was developed?
 - What (minimum) capacities and resources do your users need?
3. Tool steps, components
 - What are the objectives of using the tool? (i.e. what is the problem you are trying to address?)
 - What is the entry point in the development co-operation cycle?
 - What are the human inputs required for using the tool?
 - What type of technical information and knowledge is needed?
 - Role of climate science?
 - Role of vulnerability analysis?
 - How is uncertainty around future climate addressed?
 - Are issues such as gender and local knowledge addressed?
 - What are the outputs?
4. What has (or will) this tool done for your organisation
 - Organisational awareness rising?
 - Corporate policy changes?
5. Lessons in its application
 - What were some of the most important enabling factors in the development of the tool?
 - Some of the biggest obstacles and challenges?
 - How do you think you, your organisation, and your partners have benefited most from developing the tool?
 - In terms of the use of the tool itself, what do you think are its greatest strengths/ assets?
 - What do you think are its greatest limitations?
 - Advice for future tool developers?

ANNEX 2: INTERVIEW QUESTIONS FOR TOOL USERS

1. Professional profile
 - What are your title, job description and responsibilities?
 - How long have you been in this job?
 - What is your background / training (development studies, engineer, biologist, etc.)?

2. Decision-making context
 - Does your work involve mainly:
 - Strategic decision-making (where to work, on what issues, with whom)
 - Programme development
 - Project design
 - Project implementation
 - Partnership management
 - Capacity development
 - M&E
 - Communications
 - To whom do you answer?

3. Using the tool
 - What prompted you to pick up the tool? (personal interest, part of project, directions from the top, etc.)
 - Did you have a choice of tools to use? If so, what were the others and why did you settle on this one – i.e. what were the distinct advantages?
 - When have you used the tool? How many times have you used the tool?
 - What was the specific purpose for which you have used this tool?
 - What was the process for using the tool, including an example?
 - What were the outputs associated with using the tool?

4. Impressions
 - What do you think of the process involved in using the tool – strengths, challenges, limitations?
 - In terms of outcomes – strengths, limitations?
 - What purpose(s) does it serve (in ranking order? Or on a scale from 0 to 5?)
 - Awareness-raising (within the organisation, partners, communities)
 - Strategic programme design / direction
 - Project design (in terms of priority sectors, beneficiaries, concrete activities, human/technical/financial resource needs)
 - Partnership-building
 - How would you change or elaborate the tool/process?

ANNEX 3: INTERVIEW LOG

	Tool	User or Developer	Country	Date of Interview
1	Adaptation tools in general	User	Sudan	March 2009
2	Adaptation tools in general	User	Egypt	March 2009
3	Adaptation tools in general	User	Cambodia	March 2009
4	Adaptation tools in general	User	Cuba	March 2009
5	Adaptation tools in general	User	East Timor	March 2009
6	Adaptation tools in general	User	Sri Lanka	March 2009
7	Adaptation tools in general	User	Lesotho	March 2009
8	Adaptation tools in general	User	Tanzania	March 2009
9	Adaptation tools in general	User	Kenya	March 2009
10	Climate Check (GTZ)	Developer	Germany	August 2010
11	Climate Proofing for Development (GTZ)	User	Laos	August 2010
12	Climate Proofing for Development (GTZ)	User	Vietnam	August 2010
13	Climate Proofing for Development (GTZ)	User	Mali	September 2010
14	Guidance Manual (USAID)	Developer	USA	August 2010
15	Guidance Manual (USAID)	Developer	USA	August 2010
16	Guidance Manual (USAID)	User	USA	September 2010
17	Guidance Manual (USAID)	User	Peru	September 2010
18	Draft Risk Screening Tool (ADB)	Developer	Philippines	July 2010
19	Draft Risk Screening Tool (ADB)	User	Nepal	September 2010
20	Climate Change Data Portal (WB)	Developer	USA	September 2010
21	Climate Change Data Portal (WB)	User	Cyprus	September 2010
22	Climate Change Data Portal (WB)	User	India	September 2010
23	Screening Note (DANIDA)	Developer	Denmark	August 2010
24	Screening Note (DANIDA)	User	Nepal	August 2010
25	Screening Note (DANIDA)	User	Mozambique	September 2010
26	Screening Note (DANIDA)	User	Mozambique	September 2010
27	Strategic Programme Review (SPR) (DFID)	Developer	UK	August 2010
28	Strategic Programme Review (SPR) (DFID)	Developer	UK	September 2010
29	Strategic Programme Review (SPR) (DFID)	User	Ethiopia	September 2010
30	Strategic Programme Review (SPR) (DFID)	User	Kenya	September 2010
31	Strategic Programme Review (SPR) (DFID)	User	Tanzania	September 2010
32	Strategic Programme Review (SPR) (DFID)	User	UK	September 2010
33	CRiSTAL (IUCN, IISD, SEI, IC)	Developer	Switzerland	September 2010
34	CRiSTAL (IUCN, IISD, SEI, IC)	User	Kenya	August 2010
35	CRiSTAL (IUCN, IISD, SEI, IC)	User	Guatemala	August 2010
36	CRiSTAL (IUCN, IISD, SEI, IC)	User	Zambia	September 2010
37	CRiSTAL derivative (HEKS)	Dev / User	Switzerland	August 2010
38	CRiSTAL derivative (HEKS)	Dev / User	Switzerland	August 2010
39	CEDRA (Tearfund)	Developer	UK	July 2010
40	CEDRA (Tearfund)	User	Bangladesh	August 2010
41	CEDRA (Tearfund)	User	Nepal	August 2010
42	CEDRA (Tearfund)	User	Uganda	August 2010
43	CVCA (CARE)	Developer	Australia	August 2010
44	CVCA (CARE)	User	Kenya	August 2010
45	CVCA (CARE)	User	Mozambique	September 2010
46	CVCA (CARE)	User	Vietnam	September 2010
47	CVCA (CARE)	User	UK	September 2010
48	V2R Manual (Practical Action)	Developer	UK	August 2010
49	V2R Manual (Practical Action)	Developer	UK	August 2010
50	Adaptation Toolkit (Christian Aid)	Developer	UK	August 2010