

**Sharing Climate Adaptation Tools:
Improving decision-making for development
Geneva Workshop, 11-12 April 2007**

*Do not wait; the time will never be "just right."
Start where you stand, and work with whatever tools you may have at your
command, and better tools will be found as you go along.
Napoleon Hill*



In Geneva, 40 participants met for a two day workshop to discuss and share adaptation tools for international development.

A burgeoning variety of tools and processes are being developed to improve decision-making to reduce risks and avail opportunities associated with climate variability and change. Acknowledging that a much wider array of tools and approaches to adaptation exists, this workshop brought together a small handful of tools and approaches, focusing primarily on the specific context of development assistance:

- Shared different screening tools and processes to support adaptation to climate change;
- Discussed databases and other sources of climate information for screening tools;
- Identified options for extending, improving and linking different screening tools; and
- Highlighted some of the common problems and issues in developing and implementing adaptation tools.

The workshop combined presentations and discussions with practical demonstrations of tools. This process of sharing will be extended further following dissemination of this report into the wider community of practice around adaptation and development.

- Copies of the presentations can be found at www.linkingclimateadaptation.org.
- A brief summary of the tools presented is presented below.
- The workshop agenda and participant list are attached as an appendix.

The workshop was conceived in response to the growing numbers of adaptation tools being developed and piloted by development agencies and others to tackle climate-related risks, now and in the future. Evidence at the COP12 meeting in 2006 suggested that little formal coordination had been undertaken to date. The workshop therefore represented an initial effort to bring together contacts working on and interested in adaptation tools to compare notes, particularly in the context of developing common approaches related to G8, OECD and UNFCCC processes.

The workshop demonstrated that:

- **Cross-referencing and collaboration is occurring**, particularly amongst the research community
- Inefficient replication appeared to be limited, at least among the tools presented here; rather, **tools are targeting a particular niche** approach or user group.
- A **broadly common approach** is evident that integrates climate-related impacts as an additional stressor; adaptive responses should therefore build into existing decision-making structures, languages, and priorities.

Overall, there was a **willingness to share tools and approaches**, and consternation at tools that are not open-access for outside users. This is complicated by the iterative nature of approaches and pilot phases in most cases, and many tools are not yet ready for formal presentation as 'finished products'. A workshop environment for informal sharing and discussion is therefore an important part of the process of refining tools and approaches.

Tools presented at the workshop ranged from broad **information providers** on climate projections (eg PRECIS), disasters (eg UN-ISDR) and on vulnerability (eg CAIT, ILRI-*et al*), through to those targeting **project design** (eg CRiSTAL, UNDP, ADAPT, USAID Guidebook) others on creating spaces/platforms for decision support, others that took a screening approach to **evaluate portfolios and justify design changes** (eg DGIS, ORCHID).

Users ranged from vulnerable communities themselves, through to donor and partner-country policy-makers. The main area of existing overlap has been in screening exercises for development cooperation portfolios of development agencies, although these had often been tailored for the particular needs of an agency or partner country. There remains a considerable gap in existing tools in between those aimed at grassroots community level and senior officials. Champions at other levels need to be targeted users and beneficiaries, including traditional leaders at local level, through local government, and into the private sector, especially small and medium size enterprises.

The diversity of approaches is a positive factor. A strong driver for multiple, purpose-built approaches is the role that tool development and piloting can play in **raising awareness and stimulating discussion internally** over climate risks and their management. Any given tool may therefore become less used over time as practitioners begin to manage climate as one of a set of parameters influencing decision-making in ways that are suited to their own contexts.

The workshop fed into **ongoing international processes on adaptation and development**. In particular, it generated discussion in the context of requests to the World Bank under the G8 Gleneagles Plan of Action, and to the OECD under the joint Ministerial Declaration on climate change and development cooperation, to create generic guidance on screening development assistance in order to integrate climate change considerations. It is also relevant to activities under the UNFCCC Nairobi Work Programme on impacts, vulnerability and adaptation to climate change. This process will have an important role in linking approaches of development agencies with other actors, including those from developing countries and from the private sector.

Summary of Climate Adaptation Tools

1. Information generation, databases and platforms

Current information generation and database tools provide a wide variety of audiences with climate and vulnerability related information. For the most part, the information is open source and provides analysis across a wide variety of sectors and scales. These are not decision-making tools but rather provide donors, governments and NGOs with inputs that could be utilised for risk management and adaptation management processes. This category ranges from those databases which utilise Global Circulation Modelling (GCM) (eg. PRECIS) as well as general vulnerability and adaptation data (eg. NAPA Platform).

a). PRECIS - Providing Regional Climates for Impacts Studies - UK Met Office Hadley Centre

This tool provides climate impact assessments in developing country contexts which are freely available to numerous users. The tool uses GCM (GCM) to provide grid-scale averages of spatio-temporal hydro-climatic state variables as well as soil hydrology and thermodynamics, and some vegetation dynamic variables. The tool is applicable to multiple scales, sectors and levels of screening but is limited fine/point scale information.

More information: <http://precis.metoffice.com/>

b). Vulnerability mapping and impact assessment – ILRI, TERI, ACTS, CIAT

This tool utilises GCM outputs, agriculture systems and land use data, GIS and vulnerability data and aims to provide donors (and in the future governments and NGOs) with information on key characteristics in the agriculture sector at the national level. The tool identifies vulnerable populations ("hotspots"), and, in the second phase, assesses climate change impacts and costs and benefits of potential adaptation options. At present the tool is limited to Sub-Saharan Africa and omits other key non-agricultural impacts.

More information: <http://www.dfid.gov.uk/research/mapping-climate.pdf>

c). SERVIR Climate Change Mapping Tool - USAID, NASA, CATHALAC, IAGT

This web-based tool is intended to assist users of the USAID Climate Adaptation Guidance Manual to instantly access climate information needed to adaptation projects. The tool is an open platform which is applicable to multiple sectors and is available to various users. The current version focuses on Mesoamerica and is used by Central American disaster planners, TV weather reporters, cruise ship operators, and resource managers, and others.

More information: <http://www.servir.net/>

d). Statistical DownScaling Model (SDSM) – Environment Agency, UK

Although not presented at the workshop, this tool's applicability as a quantitative information provider is applicable to many of the approaches presented at the workshop. This computer-based information tool is open-source and is aimed at donors, governments and impact assessors. The tool provides daily, transient, climate risk information for impact assessment over the 1961-2100 time horizon and has been primarily used for water resource management, though is applicable to multiple sectors. After calibration of data, the tool provides rapid assessments to assist impacts and adaptation analysis.

More information: www.sdsm.org.uk

e). Climate Analysis Indicators Tool - WRI

A vulnerability and impacts component of CAIT forms part of this a much wider tool-kit of country-level data on climate change, particularly on greenhouse gas emissions. The database includes information on historical impacts, particularly from disaster events, as well as a range of human development indices. CAIT permits manipulation of this data on a country by country basis, including cross-referencing to mitigation-related data.

More information: <http://cait.wri.org/>

f). NAPA Platform - UNITAR

The National Adaptation Programme of Action (NAPA) platform is aimed at providing informational support to NAPA country teams, implementing agencies (UNDP, UNEP and World Bank), vulnerability and adaptation experts, and other partners providing NAPA technical assistance. It aims to facilitate the delivery of technical assistance to NAPA teams formulating their NAPA documents, particularly with regards to the synthesis of existing vulnerability and adaptation information, and the formulation of relevant adaptation projects profiles. It provides multi-sectoral information aimed at the programme and project level for Least Developed Countries within the NAPA process.

More information: www.napa-pana.org

g). Climate envelopes/adaptation risk screening platform (CIEAR) - SEI

This open platform is a work in progress, with the intention to include a collection of software tools (e.g., risk mapping, MCA), data bases (e.g., criteria, adaptation actions), guidance, examples/prototypes and communications. It is intended to support analysts who advise a range of final users in multiple sectors at multiple scales. The risk modules tend to focus on fairly immediate links between climate episodes and trends and impacts affecting environmental services, economic activities and livelihoods. The tool platform will be designed to clarify choices in decision making and not prescribe perfect solutions to specific risks. It has adopted a social learning and process approach to adaptation planning and decision making which incorporates project details, vulnerability data and stakeholder engagement.

More information: www.sei.se/oxford/

Other information generation/database tools:

Historical data and statistics on natural disaster occurrence and their impact since 1905 are available from the OFDA/CRED International Disasters Database (EM-DAT), maintained by the Centre for Research on the Epidemiology of Disasters (CRED). A wide range of historic climate data and near-term forecasting data are available through meteorological offices and through the WMO.

2. Computer-based decision tools

Computer-based decision tools are primarily intended to assist donors to identify climate related risks and adaptation options based on project/programme inputs. These tools typically include social vulnerability information and assist donors in establishing priorities as well as include economic analysis as part of the decision-making process. These tools are designed to incorporate various forms of data as well as inputs from various stakeholders. Whereas CRiSTAL is aimed at project-level decision-making, the SEI platform will be applicable across scales. The advantage of these models is that they allow programme staff to easily navigate the platform and are thus more hands on, relying less on “expert advice”.

a). CRiSTAL – IISD, IUCN, SEI, Intercooperation

This project-based tool is aimed at numerous users and is currently being piloted for Nicaragua, Mali, Tanzania and Sri Lanka in sectors such as agriculture, water resource management, infrastructure, and natural resource management. The tool requires detailed project inputs and vulnerability data. The tool delivers vulnerability and livelihood profiles as well as details for project modification. A parallel tool is being planned which aims to focus on the project portfolio side which would be intended to help programme managers integrate adaptation concerns into their over project portfolio at the strategic planning level.

More information: www.iisd.org/security/es/resilience/climate_phase2.asp

b). ADAPT - World Bank

This computer-based tool is multi-sectoral and currently being tested in South Asia, soon expanding to a focus on Sub-Saharan Africa. The tool undertakes a sensitivity analysis for specific projects and flags activities that are sensitive to climate change as well as gives

advice on adaptation activities. The tool utilises project location and activity information which are screened through a project activity sensitivity matrix based on GCM data. The tool does not utilise specific vulnerability data or adaptation at the sectoral. ADAPT is not explicitly a decision-making tool and does not address sensitivities at the programme level.

More information: www.worldbank.org/climatechange

c). Adaptation Wizard – UK Climate Impacts Programme (UKCIP)

The Adaptation Wizard is a web-based tool that is designed to take help users gain a basic understanding of climate change as well as integrate climate risks into their decision-making. It is a high-level, generic tool that is valuable to newcomers to the climate change issue, as well as those who are preparing to adapt. The tool is specifically aimed at the UK context. It is more a decision-support than decision-making tool, and plays a valuable awareness-raising and educational role. The tool does walk users through an economic analysis of adaptation options and scenarios.

More information: <http://www.ukcip.org.uk/resources/tools/adapt.asp>

d). Country Database – UNDP-GEF

The country database aims to help UNDP offices to develop adaptation proposals and improve staff awareness on climate risks for other project design. It compiles a common set of information for each UNDP partner country, drawn from National Communications, NAPAs and other scientific studies, together with UNDP country programme information, on an easy to operate webpage format.

More information: Database restricted to users of UNDP intranet.

3. Adaptation/risk management processes

Adaptation/risk management processes include those tools which have been developed by specific international aid agencies intended to screen projects/programmes and/or develop policy priorities. As a result, they are tailored toward the specific decision-making processes of the donor organisation. Similar to computer-based decision tools, they rely on detailed programme/project inputs though they also facilitate greater stakeholder information. Typically these processes rely on expert advice from their respective climate change departments or outside consultants. They tend to rely more heavily on qualitative inputs while also incorporating climate science information. Some tools incorporate economic analyses where the information is available or where applicable. On the whole, these processes take longer than computer-based decision tools but are more thorough in their analysis, providing tailored recommendations for disaster risk reduction and adaptation.

a). Climate quick scans - DGIS, The Netherlands

This paper/process based tool is aimed at donors (particularly DGIS) applicable to multiple sectors. This “quick and dirty” process draws on expert advice to screen programmes/projects in order to establish adaptation priorities and raise awareness about climate risks with partner countries. The project draws on various inputs including project/programme details, stakeholder engagement and varying levels of vulnerability data.

More information: www.nlcap.net

b). Preparedness for Climate Change - Red Cross/Red Crescent

This paper/process based tool is aimed at primarily at local Red Cross/Crescent societies in order to assess key climate change related risks facing vulnerable people in the country and programmes of the national society. The tools draws on RC project details, national staff and the use of RC vulnerability data in order to set priorities for follow-up, including modifications to existing programmes, and to strengthen local capacity in addressing climate-related risks. The tool is primarily aimed at disaster management, health and the water & sanitation sectors.

More information: www.climatecentre.org

c). Climate Change Adaptation Guidance Manual - USAID

The Guidance Manual is aimed at USAID country missions to assist in the mainstreaming of climate change adaptation in all projects. At present the manual is being tested in Honduras, South Africa, Mali and Thailand in sectors such as agriculture, coastal development and flooding, water infrastructure, and fisheries and livelihoods. Future projects may cover protected lands management, integrated river basin management, and health. The manual leads project designers through a series of steps to help them understand whether their project may be vulnerable to climate variability or change. The manual encourages stakeholder engagement and provides guidance on where to find more information and assistance in gathering data (i.e. USAID Climate Change Team).

More information:

d). Opportunities and Risks of Climate Change and Disasters (ORCHID) - IDS

This process-based tool is designed to be a light touch screening process for donor programmes. The process utilises quantitative inputs climate science which are applied to the risk assessment of programmes usually at wide scales, and using directional trends rather than discrete figures. The tool utilises project documents and interviews with project staff as well as past trend in vulnerability and disaster risk. ORCHID aims to raise awareness of climate risk management and future climate change among staff, to stimulate dialogue with donor partners, to integrate disaster risk reduction and climate change adaptation policies and activities. The process makes recommendations for how programmes might enhance risk management through adaptive practices and cost benefit analysis and sector economic assessment are undertaken for areas where clear adaptation options can be discerned and where sufficient data is available.

More information: www.ids.ac.uk/climatechange

e). Integration of climate risks into country programming - UNDP

This short briefing note provides guidance to improve the capacity of UNDP country offices to incorporate climate risks into UNDP country programming. It takes staff through a set of questions to assess whether climate risk is adequately reflected during the formulation of Common Country Assessments and UN Development Assistance Frameworks.

More information: UNDP Intranet only

Other paper-based/process tools:

Guidance notes on tools for mainstreaming disaster risk reduction - ProVention Consortium

The Provention Consortium has recently published a comprehensive compendium of short briefing papers on tools and methods for mainstreaming disaster risk reduction. These approaches have much in common with climate change adaptation, particularly in their approach to tackling current variability, risk frameworks, and approaches to overcoming barriers to cross-sectoral work.

More information: <http://www.proventionconsortium.org/?pageid=32&projectid=1>

Comparison Table

Tool	<i>Audience</i>	<i>Screening level</i>	<i>Spatial scale</i>	<i>Training time</i>	<i>Application time</i>	<i>Main data type</i>	<i>Economic analysis</i>
1.a) PRECIS (UK Met Office)	all	input tool	multi-scale	varying	varying	Quantitative	No
1.b) Vulnerability assessment (ILRI et al)	donors	policy	national	unknown	2-6 months	Quant.	not at present
1.c). SERVIR (USAID, NASA)	all	various	local, regional	none	<1 month	Quant	No
1.d). SDSM (Environment Agency)	gov't, donors, other	project	multi-scale	half-day	<1 month	Quant	No
1.e). CAIT (WRI)	all	programme	national	none	<1 month	Quant	No
1.f). NAPA Platform (UNITAR)	gov't, donors, NGOs	project, programme	multi-scale	none	NA	NA	No
1.g). CIEAR (SEI)	all	various	multi-scale	varying	varying	quant	Yes in future
2.a). CRISTAL (IISD/ IUCN/SEI/Intercooperation)	all	project	local, regional	1 hour	<1 month	Qualitative	not at present
2.b). ADAPT (World Bank)	all	project	local, regional	none	<1 month	Qual	No
2.c). Adaptation Wizard (UKCIP)	all	various	multi-scale	none	<1 month	Quant and qual	Yes
2.d). UNDP Country database	Country offices	Project	National	20 minutes	<1 month	Quant and qual	No
3.a). Climate quick scans (DGIS)	donors	project, programme	multi-scale	none	<1 month	Qual	No
3.b). Preparedness for Climate Change (Red Cross/Crescent)	NGOs	programme, policy	National	none	> 6 months	Qual	No
3.c). Climate Change Adaptation Guidance Manual (USAID)	donors	policy, project	local, regional	-	2-6 months	Quant and qual	not at present
3.d). ORCHID (IDS/DFID)	donors, NGOs	programme	regional, national	none	2-6 months	Qual	Yes
3.e.) CCA/UNDAF Guidance (UNDP)	Country offices	programme	National	none	>6 months	Qual	No

Annex 1: Agenda

Sharing Climate Adaptation Tools: Improving decision-making for development Geneva Workshop, 11-12 April 2007

Aims and Objectives

The aim of this meeting is to improve decision-making at all scales to reduce risks and avail opportunities associated with climate variability and change.

The objectives are:

1. To share different screening tools and processes currently being developed and used to support adaptation to climate change;
2. To discuss databases and other shared sources of climate information for screening tools;
3. To identify options for extending, improving and linking different screening tools.

Day 1: Wednesday 11 April 2007	
9.00 - 9.30	Welcome and introduction <ul style="list-style-type: none"> - Policy context - Introduction to screening and screening tools
9.30 -11.00 Session A	Computer Based Screening Tools Chair: John Drexhage Presentations should outline purpose, approach, target users and challenges / lessons in developing and testing these tools <ul style="list-style-type: none"> - CRiSTAL (IISD/IUCN/SEI/Intercooperation) – <i>Anne Hammill</i> - Adaptation Wizard (UKCIP) – <i>Chris West</i> - ADAPT (World Bank) – <i>Ian Noble / Michael Westphal</i> - Climate Envelopes Adaptation Risk screening platform (SEI) – <i>Tom Downing</i> Discussion
11.00 - 11.30	Tea and coffee
11.30 -13.00 Session B	Screening Frameworks and Guidelines Chair: Annie Roncerel <ul style="list-style-type: none"> - Country Database and CCAA/UNDAF Checklist (UNDP) – <i>Mihoko Kumamoto</i> - Adaptation Guidance Manual and Mapping Tool (USAID) – <i>John Furlow</i> - Climate Quick Scans (DGIS) – <i>Ian Tellam</i> - ORCHID Climate Risk Screening Process (IDS) – <i>Thomas Tanner</i> - Mainstreaming tools & Community Risk Assessment (ProVention) – <i>Margaret Arnold</i> Discussion
13.00 -14.00	Lunch
14.00 – 14.30 Session C	Climate Information Tools Chair: Lorenz Petersen <ul style="list-style-type: none"> - Regional climate information (UK Met Office) – <i>Joseph Intsiful</i> - Historic climate data and near-term forecasting (WMO) – <i>Amir Delju</i>
14.30 -15.00 Session D	Climate Vulnerability Databases Chair: Margaret Arnold <ul style="list-style-type: none"> - Disaster Risk Reduction Data and Tools for Adaptation (UNISDR) – <i>Silvia Llosa</i> - Vulnerability assessment and data (ILRI) – <i>Philip Thornton</i> - Climate Analysis Indicators Tool (WRI) – <i>Rob Bradley</i>
15.00 – 16.00 Working tea Session E	Discussion: Linkages and Gaps across Tools Chair: Philip Thornton <ul style="list-style-type: none"> - Common data requirements - Areas of overlap and complementarity - Missing areas to assist decision-making - Common software platforms?
16.00-18.00 With wine	Interactive demonstration session Practical demonstration sessions for computer-based tools

Day 2: Thursday 12 April 2007 Linking and Harmonisation	
9.00 – 9.15	Recap of Day 1 and key issues arising
9.15 – 11.00 Session F	User perspectives: Tailoring and targeting for end-use Chair: Thomas Tanner (Key policy contexts, decision-making and information needs, and challenges) <ul style="list-style-type: none"> - Community projects & stakeholders – <i>Lawrence Flint (ENDA), Carmenza Robledo (Intercooperation)</i> - Donor programmes & partners – <i>Lorenz Petersen (GTZ), Yvan Biot (DFID)</i>
11.00 – 11.30	Tea and coffee
11.30 – 13.00 Session G	Breakout Groups: Linking tools, information and user needs <ul style="list-style-type: none"> - What are the principle gaps in knowledge for decision-making at different scales? - Do available tools support user needs? What is missing? - How can climate information systems support screening tools and processes? - How can tools and processes be linked to avoid duplication?
13.00 – 14.00	Lunch
14.00 – 15.30 Session H	OECD UNFCCC World Bank Discussion: Harmonisation of Screening Processes Chair: Ian Noble <ul style="list-style-type: none"> - Developing guidelines (OECD, World Bank, UNFCCC) - Context of existing donor procedures (eg EIA, SEA, risk assessments)
15.30 – 16.00	Summary and Wrap-up Anne Hammill

Annex 2: Participants

Climate Adaptation Screening Tools: Improving decision-making for development Geneva Workshop, 11-12 April 2007

List of Participants:

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