



# Centre for Development Impact PRACTICE PAPER

Innovation and learning in impact evaluation

## Improving Co-benefits and ‘Triple Win’ Impacts from Climate Action: The Role of Guidance Tools

**Abstract** This CDI Practice Paper by L.O. Naess<sup>a</sup>, M. Hagemann<sup>b</sup>, B. Harvey<sup>c</sup>, F. Urban<sup>d</sup>, S. Hendel-Blackford<sup>e</sup>, and N. Höhne<sup>b</sup> addresses the role of tools in supporting interventions to achieve the ‘triple wins’ of adaptation, mitigation and development. Over recent years there has been a proliferation of guidance tools to support adaptation or mitigation, increasingly in a development context, but little work on the role tools play in helping to bridge the gap between these three areas in practice. Based on a review of tools in view of ‘climate compatible development’, the paper suggests key considerations for how tools could help achieve ‘triple wins’. They include (1) the importance of understanding how tools are a way of defining and shaping a goal, not merely helping to implement actions to achieve it; (2) the value of acknowledging different starting points, and that a lot of the integration is happening – and will continue to happen – on the side of users; and (3) because tools cannot provide all the answers to complex problems they need to be complemented by analysis of actors, goals and outcomes.

### 1 Introduction<sup>1</sup>

There is a growing focus on how to plan interventions that support the climate change policy goals of mitigation<sup>2</sup> and adaptation<sup>3</sup> while simultaneously promoting development aims. Increasingly, the focus is on achieving synergies between adaptation, mitigation and development, illustrated by the increasing popularity of terms such as ‘low carbon climate-resilient development’, ‘climate compatible development’, ‘co-benefits’, and ‘triple wins’.

This paper looks at the role of guidance tools in helping to achieve such synergies. The objective is to provide development practitioners with some of the key potentials as well as the challenges in using these tools to achieve multiple climate policy objectives. Guidance tools here are understood as instruments which can help users carry out one or more steps in a climate change policy development or decision-making process. This understanding is based on Hammill and Tanner (2011: 16), who define tools as ‘documents, computer programs and websites that help people undertake all or some part of a climate risk screening and/or assessment process.’<sup>4</sup> Tools may be developed to help generate data, share information, guide planning processes, or a combination of these.

A wide range of such tools, both on mitigation and adaptation, have been developed in recent years. They come in all shapes and forms, ranging from computer-based climate models to help users to project climate patterns in particular locations, to bottom-up community-based participatory vulnerability and risk assessments. Increasingly, they are brought together in ‘portals’<sup>5</sup> that aim to provide planners from NGOs, governments and donors, with integrated information on climate change.

A number of recent assessments and stock-take exercises have focused on comparing and evaluating tools either for adaptation (Olhoff and Schaer 2010; Hammill and Tanner 2011; Trærup and Olhoff 2011; UNFCCC 2010) or mitigation (UNFCCC 2008; Clapp *et al.* 2010). The focus here is on the role of tools in meeting challenges with the aim of achieving several goals simultaneously, i.e. addressing the interface between mitigation, adaptation and development.

Adaptation and mitigation have largely developed as separate disciplines and differ in several respects, including ‘their character (how they work), their agency (who makes and implements decisions) and who benefits and who pays’ (Wilbanks and Sathaye 2007). While the implementation

Table 1 Examples of tools for climate change planning

Focus	Category	Tool Names and developers
Mitigation	Assessment of mitigation potential/resource potential	Marginal Abatement Cost Curves, MACC (McKinsey) ECN NAMAC curve GEOspatial Toolkit SWERA RREX
	GHG emissions and energy models	LEAP MARKAL/TIMES The Energy and Power Evaluation Programme (ENPEP-BALANCE) RETScreen GAINS
	Low carbon development/technology platforms or databases	Reegle HEDON Household Energy Network ClimateTech Wiki OpenEI
	Low Emission Development Strategies	Mitigation Action Plans and Scenarios (MAPS) ESMAP Low Carbon Growth Country Studies LEDS framework and toolkits
Mitigation and Adaptation	Technology Needs Assessment (TNA)	UNDP Handbook for technology needs assessments
Adaptation	Adaptation assessment and process guidance tools	CVCA (CARE) Red Cross/Red Crescent Climate Guide CEDRA GiZ Climate Proofing for Development CRISTAL
	Adaptation data and information tools	MAGICC/SCENGEN Climate Wizard PRECIS FAO CLIMPAG
	Adaptation knowledge sharing tools	Africa Adapt Adaptation Learning Mechanism (ALM) WeAdapt World Bank Climate Change Knowledge Portal

Source: Ecofys and IDS (2011).

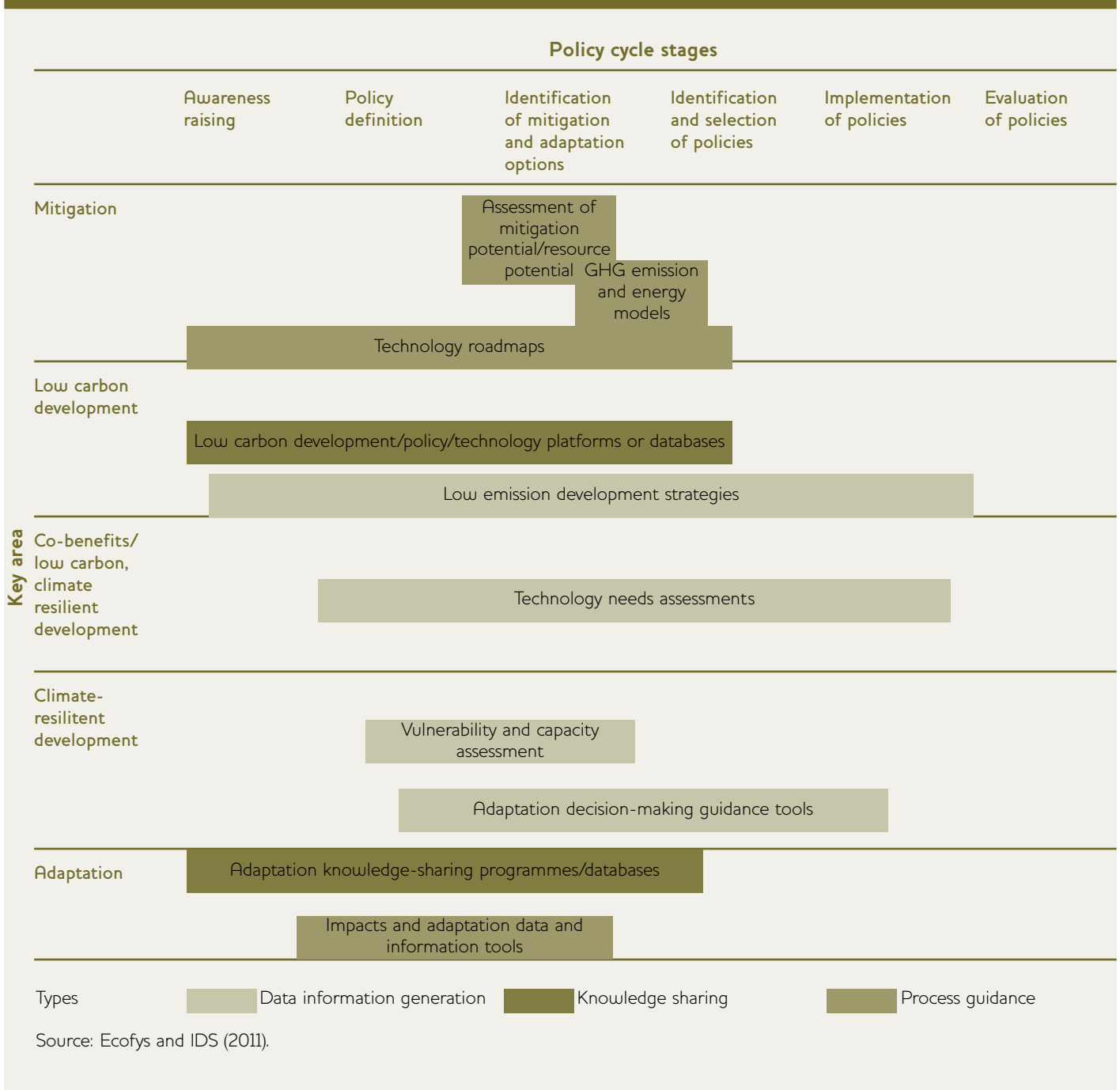
of adaptation and mitigation happens at both local and national levels, the actors addressed, the benefits achieved, and the difficulties in measuring outcomes or the timescale to measure the effects, differ considerably (Klein *et al.* 2007).

The idea is that tools may help to bridge this gap and contribute to 'triple wins' by helping planners to identify synergies and so avoid trade-offs between mitigation, adaptation and development. With increasing focus on climate policy needing to not only address incremental adjustments but also transformational change, tools will also need to be judged on the basis of how they contribute to overcome broader, structural challenges. In order to do so, tools must be available and accessible to users in relevant areas, and they must be useful to organisations in planning for climate change policy goals.

Each of these aspects are explored in turn, critically reflecting on existing experiences from users and developers. Section 2 provides an overview of tools, and their potential use to support climate policy goals, then Section 3 examines experiences of applying tools from users and developers. Section 4 reflects on this experience and identifies key challenges in using tools, and Section 5 offers some conclusions on the way forward. We find that while there are indications of convergence of tools in terms of their aims and coverage, challenges still remain on how to use tools to improve outcomes and increase coherence across very different areas, as well as understanding what tools can and cannot help with.

This paper is based on an assessment of tools across adaptation, mitigation and development. Funded by the Climate and Development Knowledge Network (CDKN), the

**Figure 1 Organisation of tools into 10 categories and mapped according to their stage in the policy cycle (x-axis) and climate policy focus area (y-axis)**



aim of the exercise was to map what tools were available in these three areas, the experiences of users and developers, as well as possible ways of improving integration.<sup>6</sup>

## 2 Tools to support climate policy goals

Over the past decade, a wide range of tools have been developed by agencies working on climate change to support mitigation and adaptation planning. In this context, a tool or method can be defined as ‘an instrument which can help users cover one or more steps in a policy development or decision-making process’ (Ecofys and IDS 2011). Tools

for climate change assessments may be classified into three broad types: (1) data and information generation, which typically include models to generate energy or climate change scenarios; (2) knowledge sharing, focused on bringing together available information, such as websites and networks; and (3) process guidance, which aim to help planners go through various planning steps and to complete these (Hammill and Tanner 2011). Many tools have elements of more than one typology. Table 1 shows tools subdivided into eight categories (three on adaptation, four on mitigation, and one that spans both) and Figure 1 applies groupings of tools, further disaggregated, in relation to

their positioning on a continuum between mitigation and adaptation, as well as focus within the 'policy cycle' from awareness and problem definition to implementation and M&E (Ecofys and IDS 2011).

Tools are often included as part of technical assistance packages for climate action. The increasing recognition of the need to connect mitigation, adaptation and development in planning processes has prompted calls for tools that can cover an expanded range of issues. It is thus expected that their use will expand over coming years with increasing funding for climate change. There are signs that this convergence in the 'tool world' is starting to happen. For example, mitigation is no longer seen as incidental in traditionally adaptation-centred work, but a key part of the planning cycle. This is not only motivated by concern over carbon emissions, but also economic calculations: increasing the efficiency of fossil fuel energy use, for example, also lowers the energy bill and makes perfect economic sense. Likewise, mitigation-oriented sectors are increasingly considering impacts and adaptations as an integral part of their work; for example, making sure that mitigation options do not undermine people's ability to respond to climate shocks and stressors (see also ESMAP 2012).

Our mapping exercise (Ecofys and IDS 2011) identified some general characteristics of the tools 'landscape', classifying tools against climate and development areas. It discovered that only a minority of mitigation tool categories, such as energy models and tools for assessing the mitigation potential, have explicit linkages to development. Figure 1 also suggests that there is little direct overlap in the areas tools cover, and a particular lack of tools that straddle adaptation and mitigation. Furthermore, it demonstrates that very few tools are designed to support the later stages of policy and planning. Most tools support users in the planning stages, while fewer provide support to policy implementation or the M&E of impacts or outcomes of the policies. This may be about to change as an increasing number of pilot studies under international climate funds, notably on adaptation, are coming to completion (Brooks *et al.* 2011; Villanueva 2011). One could therefore expect more tools to include components of how to set up M&E systems, or integrate a function of evidence and learning.

### 3 Application of tools: some lessons

The following outlines some key lessons from users and developers of tools on mitigation and adaptation. The information is drawn from a survey of the tool developers of the 30 tools listed in Table 1, as well as interviews with users from government agencies, development agencies, academia and civil society. Respondents were asked about their experiences of developing or using tools, as well as the opportunities and challenges they had encountered. The focus was on developing countries as well as

countries in transition. The specific aim was to assess the value of tools to help in planning climate compatible development, but as it addressed concerns that are common across the area of climate change and development, we believe the findings could apply to co-benefits and 'triple wins' more broadly. This is relevant to impact evaluation because of the increasing emphasis on climate compatible development, co-benefits and similar terms as goals for funded climate change activities. Three broad areas of concern common to both groups were access and availability, gaps in technical focus of tools, and interaction between users and developers.

#### Availability and access of tools

It is clear that there is a considerable market for tools to help translate broader goals on climate change and development into practical planning. At the same time, challenges remain. One of these is the ability to access and use tools across different contexts. Typically tools have been developed in one country, and then adjusted to be used in other countries and contexts. Some users found this to be an obstacle, for example for tools applied to developing countries that were originally designed for developed country settings, while others found a way to work around it. For example, one interviewee said that their organisation had become accustomed to developing their own tools as a matter of course, taking out components of existing tools and adapting them for their own purposes.

Perhaps surprisingly, costs of purchasing tools were not seen as a major obstacle to most organisations. However, the knowledge and training requirements for using the tools may be: many considered the knowledge and skills thresholds to be high for many tools, such as knowledge about climate and energy modelling. Many tools assumed a level of computing and data availability that was beyond the reach of many developing country users. This also suggests that there are still significant bottlenecks in whether tools are sufficiently adjusted to the contexts in which they are to be used.

#### Tool focus

A second challenge concerns whether tools cover the areas that are most important for users. In the survey, perceptions varied widely. One group of users highlighted the need to cover existing gaps in terms of areas of focus, or policy stages. For example, some indicated the challenges relating to a lack of tools for M&E, and others the need for tools in specific areas, for example to quantify emissions from different investments, and tools specific to fiscal planning. For other users, it was important for tools to be flexible enough to be applied to a wide range of disciplinary and topic areas, one example being the need for national level planning tools for adaptation and mitigation that suit a wide range of government departments.

Another finding was that tools were not necessarily most useful in the areas for which they were developed. Some users pointed to the potential challenges of tools designed to give detailed recommendations at project and programme levels, and others to more generic tools covering a wide range of issues. The former tend to be more useful for practical decision-making, while the latter have advantages in awareness-raising. Of course, this may not be a problem if awareness-raising leads to action; however, it does highlight the need to understand users' priorities.

Obviously, users are not just implementers of tools, and may be both more pragmatic and proactive in advancing tools for climate compatible development than given credit for. About a third of survey respondents stated that the tools they found most useful included considerations of climate compatible developments or 'triple wins'. This contrasts with the tools mapping exercise, which identified very few tools that make these connections.

#### User-developer collaboration

The survey also revealed a mixed picture with respect to the stakeholder involvement in developing tools. While the scientific community is often heavily involved in the tool development and application, involvement of other stakeholders, such as the private sector or the local civil society, is patchier. A key challenge that has emerged from the survey and interviews is the lack of a clearly defined role for users in the development of tools, from conceptualisation to implementation. This fits with the acknowledgement within the community of knowledge-sharing tool developers that tools are often more a product of what developers *have* (in terms of data, resources, expertise, etc.), than a diagnosis of their targeted users *need* (CDKN 2011). Insights from users have so far mostly been included in the process of refining, rather than developing, the tools. Even where tools have been developed on the basis of user needs assessments, tool developers (typically based in the North) may not have the capacity to regularly review whether their tools are keeping pace with the fast-changing field of climate and development practice, or yielding the intended results.

Thus, both users and developers seem well aware of the strengths and limitations of existing tools. Both acknowledge that a large number of tools exist that are accessible free or at affordable costs, but users too often lack the capacity to access them as training requirements may be prohibitive.

## 4 How useful are guidance tools for promoting 'triple wins'?

What elements can we draw from the above for the future use of tools to guide – and evaluate – the achievement of normative goals for climate change planning? First, the challenges involved in combining

methods from a wide disciplinary background should not be underestimated. Second, there may still be some way to go before tools are suitable for practical planning purposes, and their role in awareness-raising and supporting policy change may, at least for the time being, be as important. And third, but importantly, tools are only ever part of the puzzle of promoting 'triple wins' – ultimately, actions and their outcomes are equally shaped by the way tools are interpreted and used, by different actors, and for what purpose.

#### The challenge of combining goals

As we have seen above, tools come from very different backgrounds and views on the role of the users, and the knowledge involved. It is clear that tools on mitigation – focusing on energy use, for example – may give very different planning advice from tools for adaptation, focused on strengthening livelihoods. Tools generating climate scenarios based on modelling data contrast with vulnerability assessment tools which assume that researchers are engaged in processes of knowledge co-production with local actors, whose observations, knowledge and skills are central. This presents challenges in cases where tools may diverge, for example in what climate risks are the most important, or priority areas of action.

This challenge may be resolved by either developing new tools that integrate adaptation, mitigation and development (the 'one stop' or 'supertool' solution) or by focusing on areas where there is a particular need for specific tools ('gap filling'). The first solution would require integrating goals and resolving trade-offs within tools, for example in the form of integrative tools that consider emission reductions and adaptation as part of the same process. Given the experience reported above of developers being 'supply-driven' with little connection between users and developers, the challenges of adjusting tools to new countries and contexts, and many tool developers having little capacity to maintain tools beyond funding timelines, this solution might appear too ambitious at times. Therefore a complementary strategy may be to focus on filling obvious gaps while also investing in human capacity and training to ensure the dynamics of climate compatible development and their policy implications are understood, and the relevant skills and expertise are available for using different tools for climate compatible development planning.

In some cases it might be useful to develop or enhance tools in a user- and context-driven manner. The analysis identified a number of cases where gaps of tools currently exist, including the later stages in the policy cycle, such as planning, or particular sectors such as the transport sector. However, before developing new tools, it may be useful to consider whether new tools are the best solution to fill these gaps. For instance, sometimes it might be more

applicable to foster a dialogue and learn to use better already existing tools than to develop new ones.

### Better for raising awareness than specific planning outcomes?

The notions of co-benefits, ‘triple wins’ and climate compatible development are very broad and at best under-defined for practical purposes. Angelsen and McNeill (2012) make the point that the widening of goals for REDD+, a climate change funding mechanism originally focused on forest protection but later broadened to include development, and adaptation as co-benefits, had been effective in helping to build coalitions of support for the mechanism. As outlined above, there are also many conceptual and practical obstacles for using tools in practical planning, and some developers had found that their tool – although comprising detailed step-by-step guides for planning – had in practice been better at raising awareness of the need for action in the first place.

While this could be seen as a failure of tools to achieve their intended goals, it also points to the instrumental role tools play in making clear what types of planning challenges lie ahead for development in a changing climate. Raising awareness at the level of decision-making could help in opening policy opportunities or spaces for change. The flipside of this is of course that having vague goals leaves considerable space for actors to define the goals in different ways to suit their interests, which may not be in line with development goals that focus on the poorest and most vulnerable. For example, by their nature, tools oriented at practical decision-making, like climate risk screening tools, rarely challenge existing institutional structures. Using these tools may thus reinforce existing institutions – which in many cases will be the reason people are vulnerable – rather than help to change them.

### Tools – one piece of the puzzle

This brings us to a final point, namely that of understanding what tools represent. The use of tools is motivated among other reasons by their potential for presenting complex information in a clear format that can be understood by a range of stakeholders. They are expected to contribute to gaining clarity around choices to be made, helping guide needs analysis and decision-making, supporting processes of organisational change, and helping to track the impact of policies or actions. At the same time, challenges and concerns have been raised against tool-based approaches to climate change decision-making (Ekins *et al.* 2011). It is argued that tools may hide uncertainties and obscure value judgements (e.g. Schneider 1997). Tools may appear neutral, objective and scientific, but their use can be highly political or ideological. For example, choosing to use one set of data over another can introduce biases against specific

information or developing a preferred scenario (e.g. scenarios which support fossil fuels vs renewable energy scenarios). This is a potential problem not least in view of the highly political nature of vulnerability assessments (Klein and Moehner 2011), as well as concerning decisions where investments for mitigation and adaptation should take place.

There are no easy solutions to these challenges. As highlighted above, it will be important to acknowledge the contradictions in approaches and what the guidance can provide, and use this understanding to ensure that tools contribute to the opening, not closing, of spaces for policy engagement. Also evident is the need to make values explicit in the evaluation of tools, and calls on those concerned with measuring impact and achievement of goals, such as climate compatible development or climate-resilient development, to not only understand the tools, but also know who is using them, and also to how tools are used to justify what actions, with what outcomes, and the impacts on different social groups (Hammill and Tanner 2011). Tools are only ever one piece of the puzzle.

## 5 Conclusions

This paper discusses the possible role of guidance tools in efforts to achieve the ‘triple wins’ of adaptation, mitigation and development. Using the case of climate compatible development, this examination of the extent to which current tools for climate change and development support planning and policymaking has suggested several key considerations for how tools for planning and evaluating the achievement of ‘triple wins’ should be applied, including:

- the importance of understanding how tools are a way of defining a goal, not merely helping to implement actions to achieve it;
- the value of acknowledging different starting points, and that a lot of the integration is happening – and will continue to happen – on the side of users; and
- because tools cannot provide all the answers to complex problems they need to be complemented by analysis of actors, goals and outcomes.

Guidance tools bring possibilities as well as challenges. There are no ‘silver bullets’: on the contrary, there is a need to acknowledge the contradictions in approaches and what the guidance can provide. In turn, those concerned with measuring impact and achievement of climate action would need to understand the tools but also the political economy of decision-making – who is using the tools, for what purpose, how key concepts are interpreted, and how relevant outcomes differ for different social groups.

## Notes

- a IDS, Brighton.
  - b Ecofys, Cologne.
  - c IDRC, Ottawa.
  - d SOAS, London.
- 1 This paper is based on work funded by the Climate and Development Knowledge Network (CDKN), which is gratefully acknowledged. It has also benefited significantly from comments by Barbara Befani and Michael Loevinsohn on an earlier draft. The views expressed are those of the authors and do not necessarily represent the views of CDKN or the author's affiliations. Responsibility for any remaining errors or omissions remains solely with the authors.
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- 2 Mitigation here means 'a human intervention to reduce the sources or enhance the sinks of greenhouse gases' (IPCC 2012: 561).
  - 3 Adaptation is a process of 'adjustment in ecological, social, or economic systems in response to actual or expected climatic stimuli and their effects or impacts' (Smit et al. 2001: 881).
  - 4 Tools are thus distinct from methods or methodologies, which are the frameworks, approaches and processes in which tools are used (cf. Hammill and Tanner 2011).
  - 5 Examples are the World Bank's Climate Change Knowledge Portal (<http://sdwebx.worldbank.org/climateportal/index.cfm>) and [www.climateplanning.org](http://www.climateplanning.org), developed by IDS and Ecofys for the Climate and Development Knowledge Network (CDKN).
  - 6 For details see [www.climateplanning.org](http://www.climateplanning.org).
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