



## CIS Case Studies

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# Climate Information Services (CIS) for Improved Livelihood and Decision Making: A Practical Guide



## Summary

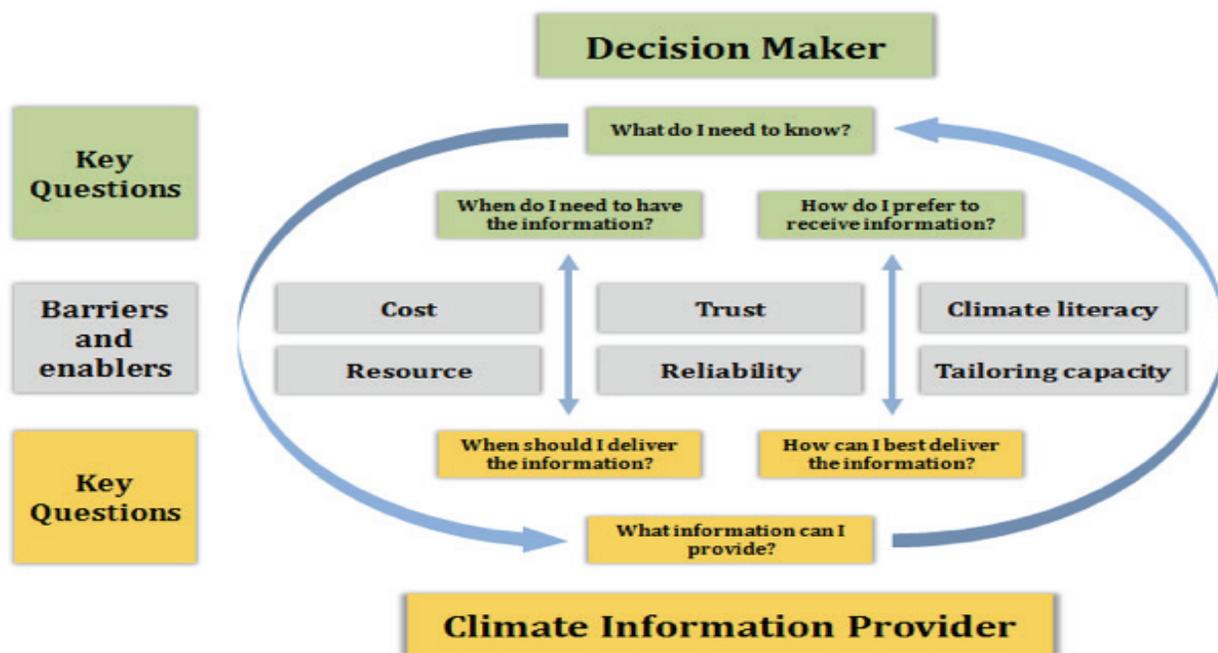
Strengthening the use of weather and climate information within decision making is essential to supporting those people whose lives and livelihoods are at risk from climate variability, extremes and change. This process often brings together organisations that have not worked together before or do not have a well-established understanding of each other's ways of working. Produced as a working draft, this practical guide seeks to build a common understanding and shared approach amongst those who are involved in or planning climate change adaptation and resilience building initiatives. It seeks to support both climate information providers and decision makers to consider how weather and climate information can support livelihood and local government decision making.

## Background

This practical guide seeks to build a common understanding and shared approach amongst the diverse group of actors whose effective collaboration is essential for climate information to better support specific decision making processes. It aims to support both 'decision makers' - those working to support farmers and pastoralists, including practitioners and policymakers within national government institutions and international and national humanitarian and development agencies, as well as 'climate information providers', including staff of national meteorological and hydrological agencies as well as regional and international climate centres.

Produced as a working draft, the guide draws on experience from the Adaptation [Ada] Consortium as well as a wide range of complementary international efforts. It uses a series of practical approaches to illustrate key steps in the process of enabling climate information to support livelihood and local government decision making.

Conceptual diagram showing key questions, primary lines of dialogue (blue arrows) and barriers/enablers to developing and using weather and climate information products and services.



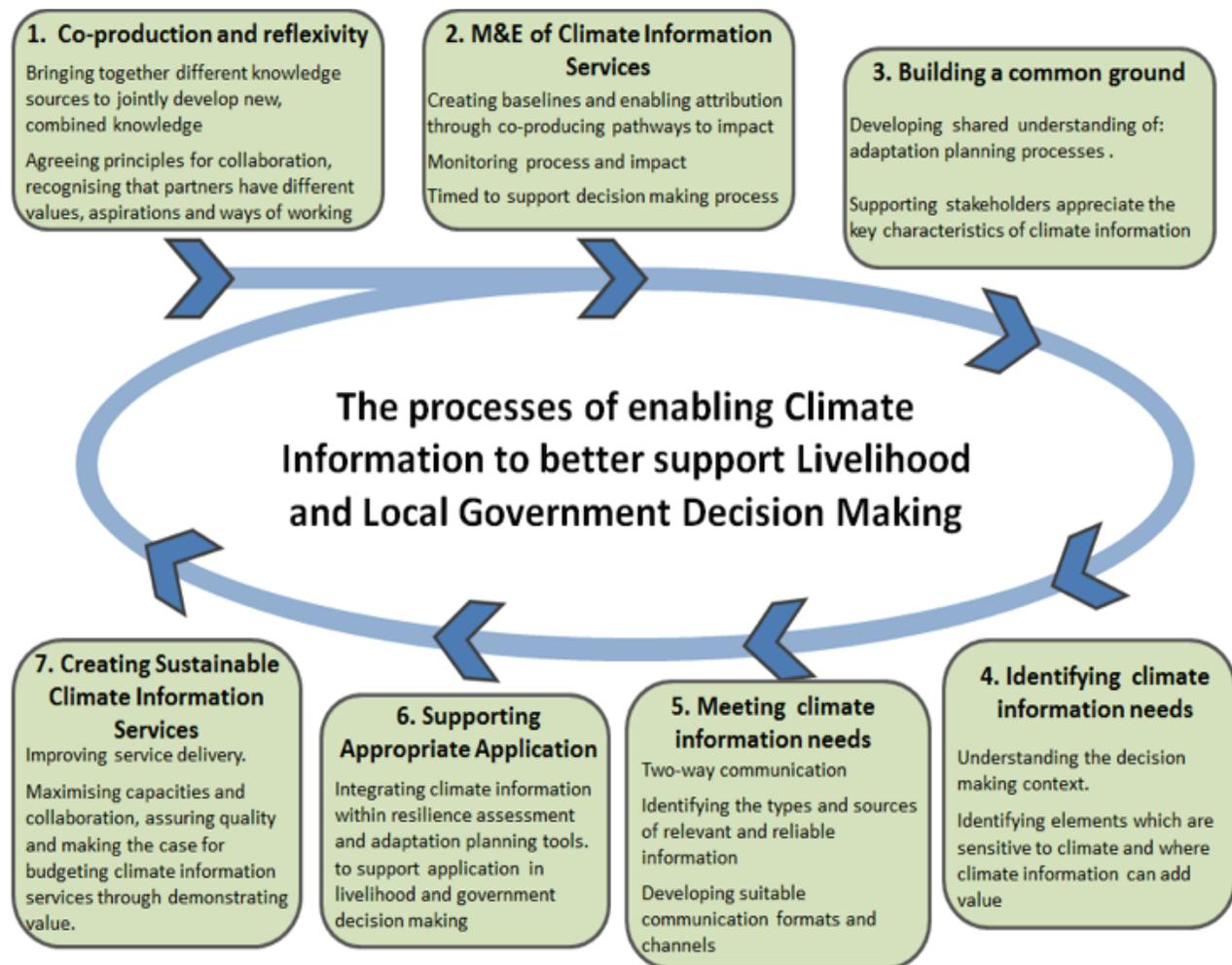
<sup>1</sup>The working guide has been developed by the Met Office with support from Kings College London and the University of Sussex and is illustrated with experience from the Adaptation Consortium in Kenya ([www.adaconsortium.org](http://www.adaconsortium.org)) and other complementary initiatives. Financed by the UK Department for International Development (DFID), the Ada Consortium [Ada] aims to introduce a 'combined approach' to adaptation in the Arid and Semi-Arid counties of Isiolo, Wajir, Garissa, Kitui and Makueni. The 'combined approach' consists of establishing County Climate Change Funds; integration of weather and climate information and resilience assessment tools into county and community planning; establishment of adaptation planning committees and a robust monitoring, evaluation and learning framework. Ada is led by the International Institute of Environment and Development (IIED) working with Christian Aid, WomanKind, ALDEF and RAP, with the Met Office and KMS leading the Climate Information Services elements with the University of Sussex. The Ada Secretariat is based in the National Drought Management Authority (NDMA).

# Methods and Management

The guide highlights a series of seven key steps within the process of enabling climate information to better support livelihood and local government decision making. Drawing particularly on the activities of Ada partners [KMD, UK Met, University of Sussex, Christian Aid, IIED] in Kenya and other countries, the guide also seeks to integrate evolving best practice from related complementary initiatives, including those of the Red Cross Red Crescent Climate Centre and the International Federation of the Red Cross and Red Crescent Societies, CARE, Tearfund, CCAFS and others.

Each chapter focuses on one of the key steps and concludes with a summary and series of questions highlighting those issues which need to be addressed within that step. Definitions, resources and additional methodologies are provided in accompanying annexes.

Process of enabling climate information to better support livelihood and local government and decision making



The chapters outline the key steps of:

1. Establishing frameworks for collaboration and co-production: Grounding collaboration in approaches which recognize the value and knowledge systems of all partners, support co-production, reflexivity and social learning, and agreeing principles which can underpin effective collaboration.
2. Developing monitoring and evaluation systems which assess both the process and impact of efforts to provide strengthened climate information services, ensuring comprehensive baselines and enabling assessment of the production, access, understanding, use and benefits of decision-relevant information on the part of both decision makers and climate information providers.
3. Building a common ground and shared understanding of each other's ways of working. Building climate information providers' understanding of vulnerability and capacity/ resilience assessments and adaptation planning alongside strengthening decision makers' understanding of the characteristics of climate information, including the key concepts of uncertainty, probability and risk. Strengthened respective understanding provides a basis to jointly develop a shared understanding of the nature and constraints of climate information.
4. Identifying decision makers' climate information needs by understanding the decision making context, employing tailored resilience assessment tools, political economy analysis and adaptation use cases, to distinguish those elements within the process that are sensitive to weather and climate and where relevant weather and climate information can add value;
5. Meeting decision makers' climate information needs through integrating external knowledge with those sources which decision makers currently rely on and ensuring continuous two-way channels for communication between decision makers and climate information providers. Recognising that the process entails responsibilities on the part of all actors: decision makers need to appreciate the level of science development and be able to assess the reliability of different sources of climate information against this knowledge, while providers require the capacities to produce and communicate decision-relevant information using appropriate available technology.
6. Supporting appropriate application. Integration of climate information within resilience assessment exercises strengthens the tool and provides opportunities to reframe future risks and opportunities. Scenario development exercises, including participatory scenario planning, and FACT-FIT can support the development of tailored advisories and integration of climate information within the complex mix of factors which decision makers need to consider.
7. Creating sustainable weather and climate information services through improving service delivery and quality assurance, consolidating complementary efforts and maximising existing capacities, designing scalable approaches, diversifying revenue streams and demonstrating the value of strengthened climate information services to advocate for increased resourcing from within national and local government budgets.

## Historical Observations

## Future Forecasts

Historical Observations		Future Forecasts					
Climate Variability & Change	Weather	Weather			Climate Variability	Climate Change	
Long-term Past (year to decades)	Recent past (days to months)	Hours	Days	Weeks	Months	Years	Decades
<p><b>Long-term Planning:</b> Territorial planning and decide on herd composition and structure</p>	<p><b>Near-term Planning:</b> Make decisions on mobility and sale of animals</p>	<p><b>Immediate Response:</b> Inform flexible mobility away from threats and towards nutritious grasses</p>	<p><b>Strategic Decision Making:</b> Inform use of local resources and establish social relationships with groups in other areas to negotiate reciprocal access</p>				
		<p><b>Tactical Decision Making:</b> Optimize access to nutritious pastures through mobility, and inform opportunistic decision making</p>			<p><b>Long-term Planning:</b> Choosing herd composition and structures, planning water development, assessing long-term viability of local resources and making decisions on building relationships for long term transitions of community</p>		
<p>Reliability of observations</p>		<p>Skill of predictions</p>					
<p><i>Example Climate Information Services:</i> Climate Impact Assessments</p>		<p>Watches and Warnings</p>	<p>Weather Forecasts</p>	<p>Threat Assessments</p>	<p>Outlooks and Guidance</p>	<p>Scenarios</p>	

Building a shared understand of the climate information needs of specific livelihood group: illustrating the types of pastoralist decision making, information skill/reliability and example climate information services across different time scales. The blue skill/reliability line is thick to indicate that skill and reliability vary according to location and variable.

## Resources, Implementation and Future Activities

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Development of the working draft was financed by the UK Met Office's Investment Fund and opportunities to pilot and further develop the guide are welcomed. Collaborators are particularly keen to assess potential interest in employing the development of a practical guide as a framework to support the creation of a community of practice and continuously-updated resource for collating and sharing emerging learning about those approaches which are proving most effective in enabling weather and climate information to support local government and livelihood decision making.

## Lessons Learnt

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The resource underlines the importance of sharing evolving learning across regions and partners, highlighting the need for a more comprehensive guide bringing together case studies and emerging understanding from across a wider range of partners, regions and environmental contexts.

Development of the guide highlighted how integration of climate information within decision-making provides important opportunities for:

- strengthened risk management, both to reduce loss and take advantage of opportunities;
- supporting more inclusive systems of risk governance, through creating two-way frameworks for continuous communication;
- promoting shared accountability, clarifying the responsibilities on the part of both decision makers and the providers of information;
- Information providers to lay bare the underlying issues for potential development partners to find an entry point of support; and
- building anticipatory capacities, creating spaces to plan for a range of future risks including and beyond those related to climate.

**CHALLENGE # 1:** Lack of opportunities for maximizing synergies between complementary initiatives. This could be addressed through:

Collating and sharing emerging learning about those approaches which are proving most effective in enabling weather and climate information to support different levels and types of decision making through:

- Creating a shared on-line platform where actively engaged agencies can share learning on an attributable basis;
- Ensuring the capacities required to establish and continuously update this resource;
- Identifying and resourcing regular opportunities to share emerging learning from those engaged in participatory and practical efforts to integrate weather and climate information within decision making across regions, disciplines, sectors and timeframes.

**CHALLENGE #2:** Developing guidance tailored to enabling weather and climate information to support local government decision making.

## REFERENCES

[www.metoffice.gov.uk/international-development](http://www.metoffice.gov.uk/international-development)

Kniveton et al (2015). Dealing with uncertainty: integrating local and scientific knowledge of the climate and weather. Disasters Special Issue: Building resilience to disasters post-2015, 39: s35–s53

## Fact Sheet of the Project/Activity

Name of case study or project	A Practical guide on how weather and climate information can support livelihood and local government decision making: An example from the Adaptation Consortium in Kenya
Author organization	Emma Visman, King's College London and Independent Consultant
Contact person's name	Bill Leathes, UK Met Office
Contact person's email [+phone number]	<a href="mailto:bill.leathes@metoffice.gov.uk">bill.leathes@metoffice.gov.uk</a>
Providers of the service [including partners]	UK Met Office, Adaptation Consortium, University of Sussex, King's College London
Project timeframe [e.g. 2009-2011]	2015-2017
Location [region/country/village etc.]	Drawing from the experience of the Adaptation [Ada] Consortium and a wide range of international complementary initiatives in enabling weather and climate information to support local government and livelihood decision making
Primary target audience	National meteorological services, regional and international climate centres, as well as those agencies undertaking humanitarian, development, disaster risk reduction and climate change adaptation initiatives, both with local government and livelihood groups
Funding mechanism[s]	UK Met office and drawing on work funded by the UK Department for International Development (DFID) Strengthening Adaptation and Resilience to Climate Change in Kenya [Plus] [STARK+] Adaptation Consortium [Ada]

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The Adaptation [ADA] consortium is a core component of the National Drought Management Authority strategy and funded within the Strengthening Resilience and Adaptation to Climate Change in Kenya plus [STARCK+] programme. The aim of the Adaptation Consortium is to pilot climate change adaptation planning approaches to enhance climate resilience in five Arid and Semi-Arid Lands [ASALs] counties [Garissa, Isiolo, Kitui, Makueni and Wajir]. The consortium consist of Christian Aid working with ADS-Eastern in Kitui and Makueni, International Institute of Environment and Development [IIED] working with Resource Advocacy Programme [RAP] in Isiolo, WomanKind Kenya in Garissa, and Arid Lands Development Focus [ALDEF] in Wajiir, Met Office [UK] and the Kenya Meteorological Services [KMS].

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Adaptation Consortium

email: [info@adaconsortium.org](mailto:info@adaconsortium.org)

[www.adaconsortium.org](http://www.adaconsortium.org)

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