# Policy brief

## Developing a Monitoring, Evaluation and Learning framework which can support the creation of decentralised Climate Information Services:

## Learning from the WISER Western project in the Lake Victoria region of Kenya


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# Executive summary

Developing decentralised Climate Information Services (CIS) is a process entailing a wide range of actors and forms of collaboration. Monitoring, Evaluation and Learning (MEL) frameworks which can effectively track this process are essential to demonstrate the benefits and build support for the increased investment which the development of these services requires.

This policy brief identifies transferable learning about the type of MEL framework required to support the creation of decentralised CIS. It draws on experiences from WISER Western Kenya, a one-year project led by the Kenya Meteorological Department (KMD), CARE and the Met Office and focused on developing climate services in nine counties of the Lake Victoria region in Kenya, as well as a number of complementary initiatives.

The policy brief outlines the approach and principles underpinning the development of decision-relevant climate information, the project context, the MEL framework developed by the project and the changes which this framework enabled it to track, together with required next steps in the project's development. The final section identifies transferable learning in creating frameworks to measure the impact of investing in decentralised services.

The co-production and effective use of climate information is a multi-stage process requiring collaboration amongst a wide range of actors who, in many cases, have not worked together before. It entails integration of different knowledge sources, including technical expertise from across key sectors and livelihood groups, together with local knowledge, religion and cultural practises. The process involves: (1) enabling decision makers to ***access relevant climate information***, (2) establishing a ***shared understanding*** of how climate information can support specific decision-making processes, and (3) supporting ***appropriate application*** of decision-relevant information.

The project has demonstrated important learning for establishing a MEL framework which can effectively track changes within efforts to strengthen decentralised CIS. Key issues which can usefully support complementary initiatives include:

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- **Strengthening National Meteorological and Hydrological Services' (NMHS) understanding of the decision-making contexts which their climate products are seeking to support.** Such understanding can be developed through collaborating with key partners to agree on principles for the delivery of decentralised CIS, as well as strengthening the capacities of NMHS staff at central and local levels for stakeholder analysis and policy review.
- **Jointly developing a MEL framework which tracks impact across each step in the process of strengthening CIS.** This enables early identification of changes in initial steps of the process, including improvements in the relevance of climate products and increased access, while significant impact in the benefits of using strengthened services often takes longer.
- **MEL frameworks for CIS need to encompass ongoing monitoring and review across decision making levels and sectors.** To build the groundswell of support required to enable increased investment in CIS requires comprehensive assessment of the socio-economic benefits of strengthened CIS at local levels, across sectors, livelihoods and social groups. It is also vital to ensure that monitoring is coherent across national and decentralised decision making processes. The processes for review of the County Integrated Development Plans (CIDPs) and the national Climate Change Act are, for example, currently being established in Kenya. These frameworks are established at national level, while implementation and reporting takes place at local, county and national levels. Engagement with these processes offers opportunities to integrate consideration of climate risks and monitoring of decentralised climate services within county and national reporting frameworks.
- **Developing MEL approaches which enable ongoing feedback, regular review and learning.** Channels for feedback and commitment to ongoing improvement are essential. Project partners highlighted the importance of establishing at the outset communication mechanisms which support feedback, such as the Frontline SMS system and the County Climate Outlook Forum (CCOF), and developing ways of extending these to strengthen local engagement. The process also needs to build in regular opportunities to share learning and identify potential for improving services. Regular technical review

is, for example, essential to assess the relevance and skill of forecasts and ensure that these are continuously informed by both the changing needs of decision-makers and emerging scientific understanding of climate risks.

- **Clarifying responsibilities for collecting, collating and reviewing data across partnering organisations** and ensuring the required capacities and resources for undertaking these roles.
- **Embedding MEL policies, processes and capacities within the NMHS**. This requires ensuring sufficient human, technical and financial resources at both central and decentralised levels, together with the organisational commitment to bring into operation agreed policies.
- **Mainstreaming MEL for CIS within national and decentralised planning and budgeting systems.** Development of a framework for decentralised climate information services, such as the county CIS Plan, enables consideration of how monitoring of the framework can best be embedded within existing processes and networks. Enabling County Directors of Meteorological Services (CDMS) to contribute to developing KMD's National Strategic Plan would, for example, enable the national plan to be informed by CDMS' experience in developing their county CIS plans and promote appropriate budgeting of the resources required to develop effective decentralised climate information services.

The project has developed a number of materials which can support integration and scale up of MEL for CIS in Kenya and the wider region. These include:

- the project MEL framework;
- a guide for developing county (or decentralised) Climate Information Services Plans;
- a number of tools to support the establishment of baselines for decentralised CIS, including guidelines for assessing how climate risks have been and could be better integrated within cross-sectoral county (or decentralised) development planning and a set of questionnaires to scope the development of a CIS communications strategy; and
- a series of tools and methodologies to support local monitoring of CIS, including a monthly reporting template and a questionnaire to support regular seasonal review amongst key stakeholders.

The review of Kenya's CIDP in 2017, together with the establishment of the national Climate Change Act, offer extremely important opportunities to strengthen the integration and address of climate risks within Kenya's national and decentralised planning and review processes. In December 2016 KMD was invited to present the initiative to develop County CIS Plans (CCISPs) at the Ministry of Devolution and Planning's County Planning Framework and Climate Change sensitisation workshop, preparing county planners for the CIDP review. The forum recommended that the CCISP should be anchored in the next generation of CIDPs and efforts made to upscale the CCISP nationally. Building on the recognition which the project has achieved, it will be vital to ensure sustained and effective engagement by KMD and CDMS in these processes. It will also be crucial to meet the growing demand for livelihood- and sector-tailored forecasts with accompanying advisories which the project has initiated.

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# Acronyms

| | |
|---|---|
| ADS | Anglican Development Services |
| ASDSP | Agricultural Sector Development Support Programme |
| AWS | Automatic Weather Station |
| BMU | Beach Management Unit |
| CCM | Community Climate Monitor |
| CCOF | County Climate Outlook Forum |
| CDMS | County Director of Meteorological Services |
| CIS | Climate Information Services |
| CCISP | County Climate Information Services Plan |
| COG | Council of Governors |
| CMO | County Meteorological Office |
| KMD | Kenya Meteorological Department |
| MEL | Monitoring, Evaluation and Learning |
| NMHS | National Meteorological and Hydrological Services |
| SMS | Short Messaging Service |
| WISER | Weather and Climate Information Services for Africa |
| WISER Western | WISER Decentralised Climate Information Services for Decision Making in Western Kenya |

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# 1.0 Introduction

Developing climate information which can effectively support decision makers is a process requiring collaboration amongst a wide range of actors working across sectors and decision making levels. To justify the investment required, frameworks for monitoring the impact of efforts to strengthen climate services need to be able to track changes across this process and range of actors.

This policy brief aims to identify and share transferable learning about the type of monitoring, evaluation and learning (MEL) framework required to support the creation of decentralised Climate Information Services (CIS). It draws on experiences from WISER Western Kenya, a one-year project focused on developing climate services in nine counties of the Lake Victoria region in Kenya, as well as a number of complementary initiatives[1]. The policy brief outlines: the approach and principles underpinning the development of decision-relevant climate information, the project context, the MEL framework which the project developed and the changes which this framework enabled it to track, together with required next steps for the project's further development. The final section identifies transferable learning in creating frameworks to measure the impact of investing in decentralised services.

# 1.1 Co-producing decision-relevant climate services

The co-production and effective use of climate information is a process involving a wide range of actors which in many cases have not worked together before and do not have well established understandings of each other's ways of working[2]. It is as much about strengthening climate information providers' engagement with decision makers, as it is about strengthening decision makers' understanding of and their

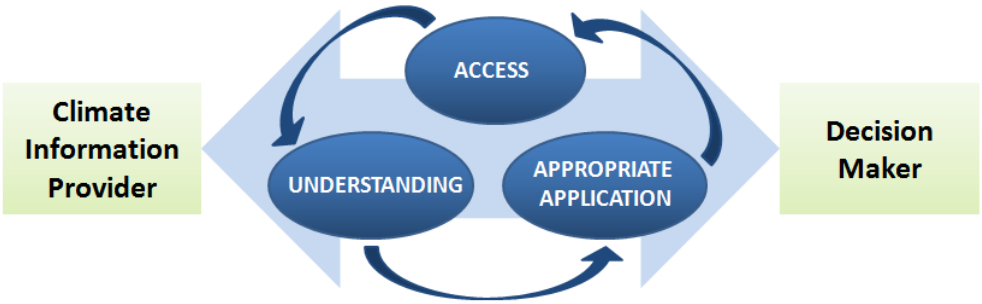
[1] The development of County CIS Plans was initiated in the DFID Kenya supported Adaptation Consortium, http://www.adaconsortium.org/. CARE's Adaptation Learning Programme (ALP) developed the Participatory Scenario Planning (PSP) approach which has been adopted across both Kenya, where it is to be recognised as the County Climate Outlook Forum (CCOF), and a number of other countries in East and West Africa, http://careclimatechange.org/case-studies/psp_kenya/

[2] Kniveton et al (2016).

capacities to effectively use emerging scientific understandings of climate risk. Co-production also entails integration of different knowledge sources or ways of framing information, including technical expertise from across key sectors and livelihood groups and local, indigenous or traditional knowledge, religion and cultural practises[3].

As outlined in Figure 1 below, co-producing climate information which is tailored to supporting specific decision making processes involves: (1) enabling decision makers to **access** relevant climate information; (2) developing a shared **understanding** of decision processes, capacities and risks and how relevant climate information can support these, and (3) supporting **appropriate application** of decision-relevant information.

**Figure 1: The process of enabling climate information to effectively support decision-making[4].** *The process of enabling relevant scientific understanding of climate risk to support resilience building includes three inter-connected stages of 'access', 'understanding' and 'appropriate application' and is dependent on the creation or identification of ongoing channels for collaborative dialogue between climate information providers and decision makers.*




[3] Visman et al (2016).
[4] Kniveton et al (2016), adapted from Visman (2014).

**Box 1: Key Terms** *(as used in this policy brief)*

***Climate Information Providers:*** *Staff of national meteorological and hydrological agencies as well as regional and international climate centres. (Kniveton et al, 2016)*

***Climate Information Services:*** *The development and delivery, with key stakeholders, of accessible, timely and relevant weather and climate-related information that can support decision making across timeframes, sectors and livelihoods. (Kniveton et al, 2016)*

***Co-production:*** *The bringing together of different knowledge sources and experiences from across different disciplines, sectors and actors to jointly develop new and combined knowledge (Visman et al, 2016)*

***County Climate Information Services Plan:*** *A framework for providing timely, relevant climate information which can support local, sub-county and county level decision making at time frames of hours, days, weeks, months, seasons and years for improved livelihoods and resilience building towards the impacts of climate variability and change. (Githungo, 2014)*

***County Climate Outlook Forum:*** *A meeting that brings together actors from different sectors, both public and private, to review the county forecast for the previous season, share the forecast for the forthcoming season and, together with technical and livelihood experts, develop advisories for each of the county's key sectors (WISER Western draft guide to developing County CIS Plan, 2016). It is based on the Participatory Scenario Planning approach developed by CARE (Ambani, 2011) and which has been upscaled by KMD throughout Kenya's counties with the support of the Agricultural Sector Development Support Programme (ASDSP).*

***Decision makers:*** *Those whose lives and livelihoods are directly impacted by weather and climate as well as policymakers within national government institutions and local, national and international social networks and humanitarian and development agencies.*

The co-production of decision-relevant information is dependent on the creation or identification of ongoing channels for collaborative dialogue, learning and feedback amongst climate information providers and decision makers[5]. Co-production requires the creation of regular spaces at the individual, organisational, project and wider levels for different types of learning, including reflexivity (critical self-assessment and review), iterative and looped-learning (which move beyond improvements to the existing system, to question aims and values), and social learning (where learning is embedded within wider social networks or communities of practice). Feedback from decision makers is essential to monitor the use and benefits of the strengthened services, and the improvements in the forecast products and channels of communication required to better support specific decision making processes.

[5] Visman (2014).

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# 1.2 Background on the WISER Western Kenya project, its aims and underlying principles

The Decentralised Climate Information Services for Decision Making in Western Kenya (WISER Western) project is one of the quick start projects supported by the UK Government's Department for International Development (DFID) Weather and Climate Information SERvices for Africa (WISER) programme. This one-year project, carried out in 2016 and coordinated by the Kenya Meteorological Department (KMD), CARE and the Met Office, aims to support the development of decentralised, standardised climate services within Kenya's Lake Victoria region. Originally focused on the four counties of Kisumu, Trans Nzoia, Kakamega and Siaya, from June 2016 a number of activities were extended to an additional five Lake Victoria counties, Homa Bay, Migori, Vihiga, Busia and Bungoma.

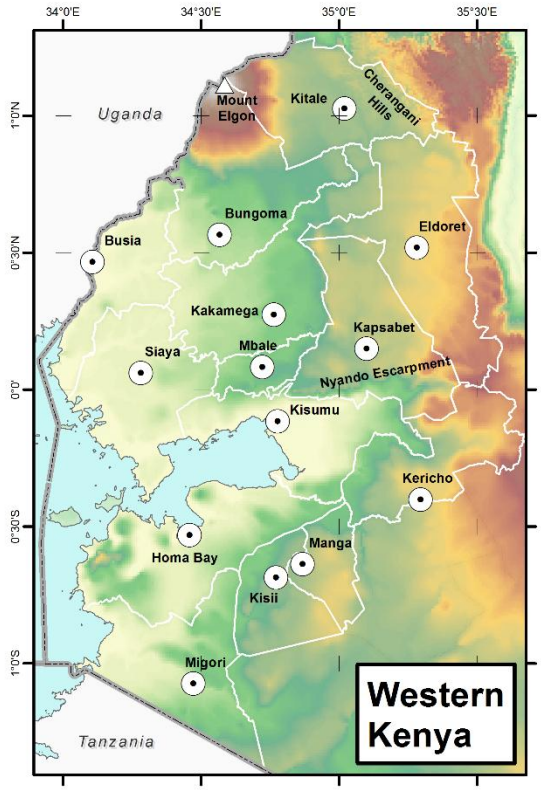



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**Figure 2: Maps of the counties participating in the WISER Western project,** with county capitals indicated in the map on the left, and the counties indicated in the map on the right. Sources: WISER Western project and GeoCurrents, www.geocurrents.info

The project sought to provide more relevant and timely weather and climate information to support preparedness, resilience building and development decision making processes amongst at risk groups, key livelihood groups and county government administrations. Activities focused around four principal areas:

- The development of a County Climate Information Services (CIS) plan (CCISP) in each of the nine participating counties;
- Improved communication, understanding and use of weather and climate information;
- Improved provision of downscaled climate information; and
- Lesson learning and MEL to inform the development of climate services in the region.

From the outset, the project acknowledged the importance of creating a MEL framework which could demonstrate the benefits of investing in strengthened decentralised services. Partners recognised the necessity of being able to track changes across the process of creating decision-relevant climate services in order to justify the resources provided, build support within the county administrations, national government and the KMD for the required increased budget allocation, and promote scaling up of the approach to additional areas within Kenya and the wider region.

> *"Before… we did not see the sense of us doing the reports and hence did not put much emphasis in reporting, now we realize that this is a chain of activities, from the forecasting we do, to the dissemination of that information, to follow up to ensure this information passes on to more people and then reporting all these".*
> *County Director of Meteorological Services (CDMS) participating in WISER Western*

Building on experience from previous and ongoing work and based on a shared understanding of the process of co-producing decision-relevant climate services, partners agreed on a series of principles underpinning the development of decentralised climate services. Partners recognised the need for climate information services to:

- **Provide reliable, probabilistic information which is explicit about the levels of confidence and uncertainty within the information provided.** Forecast templates, for example, include standardized systems for conveying the level of certainty within the County forecasts at each timeframe.
- **Be relevant to decision makers' needs, tailored to livelihoods and planning processes and gender-sensitive.** The project has sought to meet the climate information requirements of particular livelihood groups. It has initiated daily forecasts for those fishing on Lake Victoria, providing information on wind, rainfall, visibility and warnings of weather hazards. For farmers, the decentralised service provides weekly, monthly and seasonal forecasts with relevant advisories from the County Ministry of Agriculture.
- **Be accessible to all including marginalized groups**. Baseline scoping for the project identified those channels most commonly used by specific social groups. Communication plans have, for example, assessed those channels most accessible to women, recognising the particular importance of being able to reach them quickly in case of weather hazards given their role as primary carers of children and vulnerable family members. To increase accessibility to women, forecasts are provided by SMS to well-trusted individuals with extensive social networks, including religious leaders and farmers' group representatives, as well as through local and regional radio.
- **Strengthen appropriate communication and use of probabilistic and uncertain information**. CIS intermediaries have, for example, been trained in appreciating and supporting appropriate communication and use of probabilistic climate information.
- **Be developed through a framework which recognizes the knowledge and value systems of all stakeholders and builds trust through supporting ongoing, collaborative channels for communication and regular joint review**. Local forecasters are, for example, invited to present their forecasts at the County Climate Outlook Forum (CCOF) (see Box 1 on Key Terms, above) and be involved

in co-producing forecasts. The forecasts for those fishing on Lake Victoria also promote understanding through employing fishermen's existing terminology to describe wind movements.

# 2.0 Key elements of a MEL framework for decentralised CIS

Recognising the process of co-producing decision-relevant information (as outlined in Section 1.1 and Figure 1 above), the WISER Western Kenya project's MEL framework identified the need to create a baseline and monitor changes across the steps of strengthening: (1) the production of, (2) access to, (3) understanding and (4) use of CIS within each of the participating counties. The framework outlined the process of: establishing the project baseline, ongoing monitoring and end-of-project evaluation, while opportunities for ongoing learning and review were integrated throughout the process.

The key monitoring mechanism developed was the County Meteorological Office (CMO)'s monthly reporting template. As outlined in Box 2 below, other monitoring has been linked to specific activities, such as surveys and technical reviews before and after the CCOF for each principal rainy season. The project timeframe did not allow for an evaluation, although it is hoped this can be supported in 2017. Reflexive learning was supported through project partner review meetings, to which key stakeholder organisations were invited. Iterative, looped learning was supported through strengthening CCOFs and feedback mechanisms, including through the Frontline SMS system, and seeking opportunities to integrate monitoring of CIS within existing complementary initiatives, such as the ASDSP. Social learning was supported through developing a range of resources intended to support national and wider scale up (see further section 4).

From the outset it was recognised that:

- Given its short duration, the project would be able to demonstrate greater impacts regarding access to and use of new CIS developed rather than concerning resulting benefits;

- The project would differentiate between those who directly benefit from project-supported services (for example by taking part in specific trainings) and those who benefit indirectly (receiving the new range of county climate services via the radio or benefiting from more climate-sensitive local development planning); and

- Given the wide range of communication channels employed, there are difficulties in accurately assessing the numbers of people reached and a need to avoid double counting of those people who receive climate information through a range of channels[6].

[6] El Hadi (2016).

***Box 2: Summary of methodologies employed for baselining and monitoring the process of developing decision-relevant climate information services in the WISER Western project***

| Steps in the Process | Methodologies for baseline | Methodologies for ongoing monitoring |
|---|---|---|
| Establishing a MEL framework | Agreeing on collaborative principles, methodologies, clarifying MEL roles and responsibilities, MEL training for the CDMS | |
| Production | A situational assessment of current national forecasting products, processes and capacities.<br>An assessment of the observation network and existing climate services in each county. | Technical review after each principal rainy season to assess the relevance and skill of the forecasts and potential improvements to better meet decision makers' needs, as identified through user feedback channels.<br>Review of ongoing climate research. |
| Access<br>Understanding<br>Use + Benefits | Scoping the access, use and understanding of climate information amongst livelihood groups and County Administrations through: a review of secondary data, a survey, focus groups and key informant interviews.<br>A communications assessment for each county, mapping the reach of principal media and mobile providers.<br>A review of the Trans Nzoia County CIDP to assess how this integrates and addresses climate risks.<br>Findings from the reviews and assessments were combined to develop a consolidated baseline. | Monthly CDMS reporting, including on stakeholder engagement, development and communication of County CIS products across channels (including by email, whatsapp, facebook, local radio, trainings and SMS directly and via intermediary organisations and County Government Administration).<br>Pre-CCOF and CCOF meetings and surveys to review the previous season and the access, use and benefits of the forecast, with County Administration and key community and livelihood representatives. |

# 3.0 Project achievements across the process of developing decentralised CIS, remaining challenges and required next steps

Employing the MEL framework, this section tracks the project's achievements across the process of strengthening the production, access to, understanding and effective uptake of decentralised CIS. Each stage of the process identifies remaining challenges and highlights (in bold) required next steps, with a summary included in Box 3, below.

There were some difficulties in bringing the MEL framework into operation. The MEL responsibilities initiated by the project were in many cases new or more detailed than those required of KMD previously. The CDMS, for example, found the initial version of the monthly reporting template to be overly complex. Review and revision enabled agreement on an improved version, highlighting the importance of supporting regular opportunities for ongoing review and learning. Responsibilities for collating MEL data and coordinating learning activities were largely undertaken by CARE. **Roles, responsibilities and capacities for MEL have yet to be fully embedded within KMD head office and each CMO.**

The development of the County CIS Plan (CCISP) provides a framework for addressing all stages in the process of providing decentralised CIS. In preparation for the development of their CCISP, CARE supported CDMS to develop their work plans and identify the resources needed. CDMS reviewed their existing observations networks to identify additional equipment requirements. They also developed stakeholder engagement plans, mapping out the resources required for undertaking a review of the CIDP and sensitising and consulting with County Administration and other stakeholders. While drafts have been produced for all of the nine counties of project focus, **consultation, review and finalisation of the County CIS Plans requires ongoing support and is particularly timely given the review of CIDPs taking place in 2017** (see further Sections 3.3 and 3.4 below)**.**

**Engaging CDMS in the development of KMD's National Strategic Plan would enable the national plan to be informed by CDMS' experience in developing their County CIS Plans and ensure that national budgets accurately reflect the**

**resources required to develop effective decentralised climate information services.**

Recognition of the wide range of activities involved in the process of developing and supporting effective uptake of decentralised climate services highlights **the need for increased staffing levels within County Meteorological Offices (CMOs).**

While the principles for developing decision-relevant CIS recognise the importance of ensuring relevance and access to marginalised groups, including women, **there remains a need to strengthen understanding of gender and equality issues related to CIS and ensure the delivery of climate services which best meets the requirements of women, and marginalised livelihood and social groups.**

***Box 3: Using the MEL framework to track progress achieved and required next steps in supporting the development and uptake of decentralised CIS in the Lake Victoria region, Kenya***

| Process | Situation January 2016, project start up | Situation end of project, December 2016 | Required next steps |
|---|---|---|---|
| Production | Decentralised CIS limited to downscaling of national forecasts to develop seasonal forecasts for each county. These often released too late to effectively inform decision making. Identified scientific potential to provide the national seasonal forecast up to 3 weeks earlier. Extremely limited headquarters' monitoring and evaluation of the quality and impact of its services. A small number of counties providing weekly county forecasts in non-standardised formats and without relevant sectoral advisories. No counties producing county monthly forecasts (no template). No template to produce daily regional forecast. No daily forecast for | Assessment of county observation network and identification of equipment requirements. Modernisation plan identifying equipment and training required in KMD head office to improve decentralised services. Standard templates developed for producing county seasonal, monthly and weekly forecasts and daily forecasts for the region and the Lake Victoria fishing community, all with accompanying advisories. Plans for communicating all forecasts via a range of media and channels developed. CDMS producing county forecasts according to adopted standard templates. Daily regional forecasts being produced by KMD headquarters and communicated to radios via CDMS. Daily forecasts for those fishing on Lake Victoria produced and communicated via local | Develop standard policy for engaging Community Climate Observers (CCOs). Embed processes, systems and responsibilities for regular monitoring and evaluation in KMD head office and the CMOs, and upscale to all counties in Kenya. Modernisation plan to be fully implemented. CDMS training, including in risk communication, to be further developed based on comments made during the evaluation of November CDM training course. Enable CDMS to contribute their experience to developing the KMD |

| Process | Situation January 2016, project start up | Situation end of project, December 2016 | Required next steps |
|---|---|---|---|
| | those fishing on Lake Victoria. Significant differences in the standard of observations network designs in each county. None of the counties in the Lake Victoria region had a County CIS Plan or communications plan. | radio and BMUs. County CIS plans fully developed for one county, and drafted for 8 other counties. Timely OND CCOF held in the four counties of project focus and advisories communicated using adopted communication strategy. | National Strategic Plan. |
| Access | CDMS lack resources and systems to support and monitor stakeholder engagement. CCOF held in all counties but often take place too late to inform decision making, with limited feedback mechanisms at sub-state level. Limited integration of CDMS within County Government Administration planning, sectoral and technical committees. No county or regional pages on KMD website. | A MEL framework for CIS developed. Participation in the CCOF extended. 2,740 CIS intermediaries trained. Establishment of Frontline SMS accounts for the CDMS in nine counties and the CIS intermediary organisations in the four counties of project focus. County or regional pages included in the draft KMD website yet to be commissioned | Extend feedback mechanisms to include CDMS collation of photo and video stories and internet survey monkeys. Finalise establishment of county CIS webpages and train CDMs on the management and uploading of their products and information. Revise the communication model with intermediary organisations to ensure sustainability through further integration with ongoing programmes. Extend training of the media in effective communication of climate information. Develop |
| Understanding | Widespread recognition of the importance of climate issues amongst livelihood groups and County Administration. | Increased interest in County CIS Plans from County Administrations. Ministry of Devolution and Planning invited KMD to present on the CCISP initiative at it County Planning | |

| Process | Situation January 2016, project start up | Situation end of project, December 2016 | Required next steps |
|---|---|---|---|
| | | Framework and Climate Change sensitisation workshop (Dec 2016) preparing county planners for the 2017 CIDP review process. | sensitization materials for County Administration, including county-specific climate change policy briefs and trainings. Undertake a socio-economic assessment to track changes in access, understanding, use and benefits of the decentralized CIS at local, ward and county levels. Extend consultation and endorsement of the County CIS Plans, together with their integration within the CIDP review and establishment of the Climate Change Act monitoring process, both taking place in 2017. Strengthen appreciation of gender and equality issues related to CIS and how to monitor changes in decision makers' understanding of climate information. |
| Use and Benefits | Limited use of national forecasts as seen as too general. Limited integration of climate issues within County Government sectoral planning and budgeting. No tools for CDMS to assess how existing planning currently, or could better, integrate climate issues. Limited use of KMD national forecasts within those organisations supporting key livelihood groups. | Development of draft guidelines on integrating and strengthening address of climate risks within CIDPs. CDMS Trans Nzoia contributed to drafting the county maize and dairy policies. Supporting the Kenya School of Government develop a curriculum for sensitising government officers on the importance of mainstreaming climate change in planning and budgeting. | |

## 3.1 Producing decision-relevant CIS

Baseline technical assessments identified scientific potential to issue the national seasonal forecast 2-3 weeks earlier. This development would enable CMOs to, in turn, develop their county seasonal forecast earlier, and so be in a position to meet stakeholder's demands for receiving these 3-4 weeks earlier. Review of existing CIS products found that the provision of sub-seasonal forecast across counties varied significantly. There were no standardised templates for county sub-seasonal forecasts, no forecasts for the Lake Victoria region or those working on the Lake. Monitoring of forecast quality, communication and impact were limited.

The project has tracked changes in the production of climate information designed to better support decision making across the County Administration and key livelihood groups. Project achievements include:

*The development of standardised templates, processes and schedules for producing county-specific daily, weekly, monthly and seasonal forecasts, as well as daily forecasts for the region and those fishing on Lake Victoria:* Informed by feedback received during the scoping of users' need, templates were developed to standardise the content and format of county daily, weekly, monthly and seasonal and regional forecasts. This process agreed the principal climatic zones within each county for which the CMO provides forecasts. Agreement was also reached on the schedule for release of KMD national forecasts to the CMO and the subsequent release of county forecasts.

*The development of livelihood advisories to accompany all forecasts:* KMD does not have the mandate to provide livelihood advisories. This requires the engagement of technical expertise from across the Ministries of Agriculture, Livestock, Fisheries, Health and Infrastructure as well as the Kenya Agriculture and Livestock Research Institutions. This required project partners to build the capacity of the CDMs to establish and secure cross-sectoral engagement. While the CCOF provides an existing platform for developing advisories to accompany the seasonal forecast, the project has been assessing how to develop a mechanism to engage the cross-sectoral technical expertise required to develop the advisories which accompany county weekly and monthly forecasts.

*The initiation of new products tailored to support specific livelihood groups:* The project established the production of daily forecasts for those fishing on Lake Victoria. The initiation of sub-seasonal forecasts also enabled farmers to be updated by KMD's evolving understanding of the season.

*Strengthened channels for communication and resource sharing between KMD Head Office and County Offices of Meteorology:* More systematic communication enables national forecasts to benefit from live county updates, and the county to receive regular support from head office expertise. **CDMS still require improved access to headquarters resources.** For CDMS working around Lake Victoria, for example, this includes increased access to water current measuring equipment.

*Enhanced technical capacities:* For example, CDMs required training and software to employ GIS for mapping their existing and proposed observation networks.

*Decision makers' priorities informing the focus of climate research:* The project has supported the continuation of research into the onset and cessation of rainy seasons, highlighted as a key concern by small-scale farmers. Climate scientists from KMD and the Met Office are undertaking parallel forecast verification across different seasons, to test the skill of new forecasting techniques.

*Strengthened County Observation networks:* The development of County CIS Plans requires CDMS to assess their existing observations network, develop their proposed network and the resources to attain this. This process enabled the CDMS to clearly articulate their resource requirements and County Administrations to identify the specific contributions they could make to strengthen the county observation network. In Siaya, for example, the County Government agreed to support an additional four weather stations and the Kisumu County Green Energy and Climate Change Department also agreed to support additional automatic weather stations (AWS). In Busia County, the Governor's Office supported the CDMS' request for identification of land for the installation of weather stations.

**There remains a need to regulate the observations undertaken by entities other than KMD.** Currently a range of non-meteorological agencies and research bodies and Community Climate Monitors (CCMs) are using different instruments and processes for collecting data and there is a need to standardise procedure to ensure the quality of data collated is in line with WMO Integrated Global Observation

System (WIGOS) policy. More generally there is **a need to develop a national Meteorological Service law, providing a framework for the whole process of climate services development and delivery.**

While recognising their tremendous value in extending network capacity, **KMD still need to develop standardised policy for engaging Community Climate Monitors,** including with regards to: capacity building and incentives, as well as monitoring and developing county and national climate data bases. There was insufficient time within the one-year timeframe to undertake **training of Community Climate Monitors. There also remains a need for more automatic weather stations** to reduce over-reliance on the CCMs and ensure accurate data.

## 3.2 Ensuring access to CIS

Assessments undertaken for this baseline found varying levels of access to climate information. Surveys with those already engaged with the CCOF process indicated good access. Focus group discussions with farmers and those not engaged with the CCOF found very limited access. The baseline assessment sought to identify sustainable communication channels with extensive reach to the most marginalised. It found that social media had limited reach in rural areas, while SMS on basic mobile phones was widespread and the majority of the population listen to local or regional FM radio stations.

The project developed a communications strategy to widen access to County CIS amongst the County Administration and key livelihood groups, employing a range of media including SMS, local and regional radio, strengthened CCOF and the creation of county webpages. Project activities to enhance access included:

*Strengthened CCOF:* Participation in the CCOF has been extended. Additional organisations and County Departments willing to support communication of decentralized climate services, including the BMUs, now take part. Project funding also enabled timely convening of CCOF in the four counties of project focus. In other counties, dependent on funding from the ASDSP, delays in financing meant that the forums were not held in time to inform key seasonal livelihood decision making processes. Moreover, ASDSP funding is dependent on continued donor support. **There remains a need for County Governments and/or KMD to budgetise**

**funding for CCOF to ensure that they are timely and encompass regular local and community level reviews.**

*CDMS provision of forecasts by SMS:* Some CDMS were already communicating forecasts and advisories by Whatsapp and email prior to the WISER project. The creation of Frontline accounts for CDMS has significantly supported timely communication of forecasts by SMS. The system has also strengthened monitoring and facilitated feedback from recipients. KMD has guaranteed that they can identify the resources required to sustain CDMS' Frontline accounts from within their existing county CIS communication budgets.

*Provision of forecasts by SMS via CIS intermediary organisations:* Representatives of organisations which were willing to receive, communicate and support appropriate application of county CIS were trained as CIS intermediaries. A number received Frontline SMS accounts, allowing the sending of large-scale group SMS at minimal cost. 2,740 intermediaries were trained across the nine counties where the project is working. In each county this included 40 primary, or county-level, and six secondary, or ward-level intermediaries.

**The CIS intermediary approach has achieved partial success but requires significant review.** A number of intermediary organisations have actively supported CIS communication, including the Anglican Development Services (ADS) in Kakamega and VI Agro Forestry in Trans Nzoia. However, many SMS intermediaries were not able to fully operationalise the proposed approach within the project timeframe. The representatives identified to participate in the project CIS SMS trainings were not always the principal decision makers. Most partners were operating with fixed activities and budgets and did not have the additional resources required to fully mobilize and train intermediaries. This highlighted the **need for strengthening the participatory design of CIS communication systems**, so that the CIS intermediary organisations can engage their respective donors for allocation of required resources. Strengthening communication via County Government administration mechanisms also requires further consideration.

*Communicating forecasts via local and regional radio:* A number of CDMS have engaged closely with local radio stations to support the communication of county and regional forecasts, and representatives from a number of radio stations were

included within the CIS intermediary trainings undertaken. The project has, however, had insufficient time to **complete the proposed sensitisation and training of radio and media organisations in communicating climate information.** There have, for example, been some difficulties with the timing of programmes taking place during work hours, rather than in the evening, when most stakeholders have time to listen to the radio.

*KMD website with pages for each county:* **There remains a need to establish webpages for each county on the KMD website.** The design that the project has given to a contractor to redesign KMD's website has included county and regional pages. Meantime some CDMS have established Facebook webpages.

## 3.3 Strengthening understanding of how climate information can support decision making

To establish a baseline of stakeholders' appreciation of how climate information can strengthen decision making, the project undertook an analysis of CIDPs, key informant interviews with County Government Administration and focus group discussions with key livelihood groups.

Baseline analysis of the CIDPs in the counties of project focus noted recognition of climate risks, but very limited integration within programmed sector activities. In project consultations, there was widespread acknowledgement across national and County Government, including the Ministry of Devolution and Planning and the Council of Governors (CoG), of the need to move beyond recognition to ensure that CIDPs integrate measures to address climate risks. The Ministry of Devolution and Planning and the CoG also welcomed the initiative to develop County CIS Plans and requested training on these for the County Executive Directors of Planning, Energy, Water, Environment and Natural Resources. The Ministry of Devolution and Planning invited representatives from the WISER Western project to present at one of the series of UNDP-supported regional County Planning Framework and Climate Change Sensitisation workshops designed to support County Administrations in preparing for the 2017 CIDP review. The project shared its analysis of how climate

issues have been addressed within the Trans Nzoia CIDP, as well as the draft CIS Plan for Trans Nzoia County.

Decision makers recognise **the need for advisories, training and technical guidance in using climate information, particularly to inform long-term planning.** Decision makers need to be able to assess the potential impacts of climate trends and change on socio-economic development, as well as the ways in which climate risks can best be addressed. There is a recognised **need for KMD to develop overviews of the historical climatology and current scientific understandings of future climate change for each county, and for CMOs to be able to provide briefings and trainings tailored to support sounty decision-making processes across sectors and timeframes.** Through the WISER Western Kenya Coordinator, the project has also been supporting a team developing a curriculum for the Kenya School of Government (KSG) to sensitise government officers on the importance of mainstreaming climate change in planning and budgeting.

Project efforts to ensure that climate information appropriately informs the development of the CIDP and the KSG curriculum have highlighted the vital importance of accurately identifying which stakeholders are involved at each stage of a specific decision-making process. While sensitisation of the County Administration can, for example, be undertaken by the CDMS in the County, the Council of Governors and the Ministry of Devolution and Planning, which establish the framework for the CIDP process, are based in Nairobi. **Efforts to ensure integration of climate information within the CIDP process need to ensure sustained engagement by KMD at all relevant decision making levels, together with effective coordination with ongoing and proposed complementary initiatives**.

Training for the CIS intermediary organisations included sessions to ensure that representatives appreciated the probabilistic nature of climate information, the value of monthly and weekly sub-seasonal updates to review planning informed by the seasonal forecast, and how forecasts can support a range of livelihood decision making processes. **CIS intermediary partners have requested the project to create a tool to assess how well people understand climate information.** While

the project MEL framework proposed possible methodologies to enable this, including a post-seasonal survey monkey and local assessments integrated within complementary initiatives such as the ASDSP, it has not been possible to pilot and develop these within the project timeframe.

## 3.4 Use and benefits of strengthened, decentralised CIS

Stakeholders across the Lake Victoria region participating in the WISER Western project have given positive feedback on the provision of county-specific forecasts. From the range of county forecasts produced, stakeholders appreciated the weekly more than the monthly forecasts. The fishermen on Lake Victoria have very much appreciated the daily forecast.

Where there was close alignment with partners' ongoing activities, the project approach was extremely well received. ADS Kakamega has, for example, very much appreciated the new county CIS. They have engaged the farmers' groups with which they work on how the climate information can inform farming activities. They have shared the approach with their counterparts in Migori, who have also taken up responsibilities for supporting the communication and use of County CIS. Likewise VI Agroforesty in Trans Nzoia has trained its extension services and is communicating

> *Box quote: "This is a very good initiative and as the Ministry of Agriculture I can use the products especially the seasonal forecast to now rework my extension services. This way, the services we provide will be specific and very user-need defined."*
> Ministry of Agriculture representative, Trans Nzoia County.

the decentralised climate services through them. The Ministry of Agriculture in Trans Nzoia County have also recognised the benefits of the initiative, appreciating both the county forecasts as well as the benefits of the Frontline Cloud SMS service which has strengthened their communication outreach.

Engaging partners in the project reflection meetings has enabled the process to receive updated feedback on the benefits and ongoing constraints of the decentralised services being piloted. Intermediary organisations have provided

guidance on strengthening the MEL framework, for example, requesting a tool to support monitoring of communication and feedback from CIS SMS.

A number of CDMS have held discussions with representatives from across county ministries of planning, livestock, environment and agriculture on both the County CIS Plan and how this could be anchored within the CIDP. Working with ASDSP, the CDMS Trans Nzoia supported the integration of climate information and adaptation measures within the county's policies for maize and dairy production. The CDMS Trans Nzoia was also nominated by the County Executive Committee on Economic Planning, Commerce and Industry to participate in the Second Africa Peer Review Mechanism. Participants in this forum appreciated CIS as a cross-cutting issue in attaining political, socio-economic and sustainable development

Moreover, the project has engaged with the Climate Change Directorate, the body responsible for developing the national Climate Change Act. Working together with the COG Monitoring and Evaluation Unit and the Ministry of Devolution and Planning, the establishment of this Act offers a mechanism to ensure that implementation of the County CIS Plans are included within the Act's proposed reporting systems at local, county and national levels, and so enable monitoring of the integration of the County CIS Plan within the CIDP.

# 4.0 Transferable learning: key issues and approaches in creating MEL frameworks to measure the impacts of strengthened, decentralised climate services

The project has demonstrated important learning for establishing a MEL framework which can effectively track changes within efforts to strengthen decentralised CIS. Key issues which can usefully support complementary initiatives include:

- **Strengthening National Meteorological and Hydrological Services (NMHS)' understanding of the decision-making contexts which their climate products are seeking to support.** Developing relevant climate information requires developing a shared understanding between climate

information providers and decision makers about how tailored information can effectively support specific decision making processes.

- **Jointly developing a MEL framework which tracks impact across each step in the process of strengthening CIS.** This enables the identification of changes in early steps of the process, including improvements in climate products and increased access, while significant impact in the benefits of using strengthened services often takes longer and is, to some degree, dependent on the performance of the principal rainy seasons.
- **MEL frameworks for CIS need to encompass ongoing monitoring and review across decision making levels and sectors.** To build a groundswell of support for increased investment in CIS requires comprehensive assessment of the socio-economic benefits of strengthened CIS at local levels, across sectors, livelihoods and social groups. It is also vital to ensure coherent monitoring across decision making levels. Engagement with those establishing the frameworks for review of both the CIDP and the national Climate Change Act, for example, highlighted that while the frameworks are established at national level, implementation and reporting take place at local, c ounty and national levels.
- **Developing MEL approaches which enable ongoing feedback, regular review and learning.** Channels for feedback and commitment to ongoing improvement are essential. Project partners highlighted the importance of establishing communication mechanisms which support feedback, such as the Frontline SMS system, from the outset. The process needs to build in regular opportunities for learning review both within and amongst collaborating partners. Regular review with decision-makers is vital to assess their perceptions of the skill of the forecasts and ensure that the content of climate products is meeting changing needs. Technical reviews are also required to consider how CIS can better address the issues which decision makers' raise and ensure that forecasts are continuously informed by emerging scientific understanding of climate risks.
- **Clarifying responsibilities for collecting, collating and reviewing data across partnering organisations** and ensuring the required capacities and resources for undertaking these roles.

- **Embedding MEL policies, processes and capacities within National Meteorological and Hydrological Services**. This requires ensuring sufficient human, technical and financial resources at both central and decentralised levels, together with the organisational commitment to operationalise agreed policies.
- **Mainstreaming MEL for CIS within existing national and decentralised planning, review and budgeting systems.** Development of a framework for decentralised climate information services, such as the County CIS Plan, enables identification of how monitoring of the framework can best be embedded within existing processes and network.

The project has developed a number of materials which can support the integration and scale up of MEL for CIS in Kenya and the wider region. These include:

- *the project MEL framework.* This has already been used within the DFID Kenya-supported Adaptation Consortium, to support the development of CIS Plans within Isiolo, Garissa and Wajir Counties.
- *a guide for developing County (or decentralised) Climate Information Services Plans.* This guide was mentioned in the 6th Conference on Climate Change and Development in Africa (held 17-20 October 2016 in Addis Ababa Ethiopia) and shared, especially, with the Regional Coordinator of the WMO Global Framework for Climate Services (GFCS).
- *a number of tools to support the establishment of baselines for decentralised CIS*, including guidelines for assessing how climate risks have been and could be better integrated within cross-sectoral county (or decentralised) development planning and a set of questionnaires to scope the development of a CIS communications strategy; and
- *a series of tools and methodologies to support local monitoring of CIS*, including a monthly reporting template and a questionnaire to support regular seasonal review amongst key stakeholders.

# 5.0 Conclusion

MEL frameworks which can effectively track changes across the process of developing decision-relevant climate information services are essential to demonstrate the benefits and build support for the increased investment required to develop effective, decentralised CIS.

The review of Kenya's County Integrated Development Plans in 2017, together with the establishment of the national Climate Change Act, offer extremely important opportunities to strengthen the integration and address of climate risks within decentralised planning and review processes. Building on the recognition which the project has achieved, it will be vital to ensure sustained and effective engagement by KMD and CDMS in the both these processes. It will also be crucial to meet the growing demand for livelihood- and sector-tailored forecasts with accompanying advisories which the project has initiated.

# 6.0 References

Ambani, M and Percy, F (2011) Decision-making for climate resilient livelihoods and risk reduction: A Participatory Scenario Planning approach http://www.careclimatechange.org/files/ALP_PSP_Brief.pdf

Climate Services Partnership Working Group on Climate Ethics (2015) Toward an ethical framework for climate services, http://www.climate-services.org/wp-content/uploads/2015/09/CS-Ethics-White-Paper-Oct-2015.pdf

el Hadi, Y (2016) KP1 Methodology and Achievement, Numbers of people supported by ICF programmes supported to cope with the effects of climate change, Methodological brief, Ada Consortium

Githungo, W N, Kitui County Climate Information Services Plan, Working Draft (2014)

IIED Tracking Adaptation and Measuring Development (TAMD) framework http://www.iied.org/tracking-adaptation-measuring-development-tamd-framework

IIED (2014) TAMD Step by Step guide, http://pubs.iied.org/10100IIED.html

Jones, L, Harvey, B, Godfrey-Wood (2016) The changing role of NGOs in supporting climate services. BRACED Intel Paper 4, ODI

Kniveton, D, Visman, E, Daron, J, Mead, N, Venton, R, Leathes, B (2016) A practical guide on how weather and climate information can support livelihood and local government decision making, Met Office

PROVIA (2013) The PROVIA Guidance on Assessing Vulnerability, Impacts and Adaptation to Climate Change http://www.unep.org/provia/RESOURCES/Publications/PROVIAGuidancereport/tabid/130752/Default.aspx

Ranger, N., (2013), Topic Guide: Decision making under uncertainty, Evidence on Demand, http://www.evidenceondemand.info/topic-guideadaptation-decision-making-under-uncertainty

USAID (2015) Collaborating, Learning and Adapting, USAID Learning Lab, https://usaidlearninglab.org

Visman, E, Pelling, M., Audia, C., Rigg, S., Crowley, F. and Ferdinand, T (2016) Learning to support co-production: Approaches for practical collaboration and learning between at risk groups, humanitarian and development practitioners, policymakers, scientists and academics, Learning Paper #3, for the Christian Aid-led BRACED consortia

Visman (2014). Knowledge is power: Unlocking the potential of science and technology to enhance community resilience through knowledge exchange, ODI HPN Network Paper 76, http://www.odihpn.org/hpn-resources/network-papers/knowledge-is-power-unlocking-the-potential-for-science-and-technology-to-enhance-community-resilience-through-knowledge-exchange

Van Epp and Garside (2014) Monitoring and Evaluating Social Learning: A Framework for Cross-Initiative Application Working Paper No. 98 CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS), https://cgspace.cgiar.org/bitstream/handle/10568/53096/WP98_FINAL.pdf

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