A bottom-up approach

Identifying national standard climate change indicators for Uganda

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Working in collaboration with partner organisations and individuals in developing countries, the Climate Change Group has been leading the field on adaptation to climate change issues.

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The Africa Climate Change Resilience Alliance — a consortium of World Vision, CARE, Oxfam, ODI and Save the Children — works to increase government, development and humanitarian actors' use of evidence in developing and implementing policies and interventions that improve poor people's adaptive capacity.

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The Climate Change Department (CCD) — under the office of the Permanent Secretary, Ministry of Water and Environment (MWE) — aims to support a climate-resilient, low-carbon and prosperous future for all stakeholders in Uganda. The department's objective is to strengthen implementation of the UNFCCC and its Kyoto Protocol.

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Globally, there is increasing recognition of the need to track climate change adaptation and disaster risk reduction progress. But the ability of countries and development partners to do this is constrained by the complex nature of adaptation and the absence of measurable outcomes or indicators to judge adaptation and its effects on a country's overall development.

This report documents and draws some lessons from the highly participatory,year-long, bottom-up process to develop climate changeindicators for inclusion in Uganda's existing local and national monitoring and evaluation tools and frameworks.

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Summary

This report summarises the highly consultative process that Uganda used to identify standard climate change indicators for integration into itsoutput budgeting tool (OBT) and local government assessment tool (LGAT). These indicators will measure climate change adaptation (CCA) and mitigation processes in the National Development Plan, sector plans and local government development plans. They will also contribute to the aggregation of climate change data under the National Climate Change Policy (NCCP)'s performance measurement framework (PMF) and implementation strategy.

The process of supporting the development of national climate change indicators was informed IIED and ACCRA's work with the Tracking Adaptation and Measuring Development (TAMD) framework in Mozambique. The Ministry of Water and Environment's Climate Change Department (CCD) led the process, with support from other key ministries. ACCRA, MWE and other stakeholders held two national consultative meetings in 2014, which recommended a scoping study on existing national monitoring systems. The study findings identified the performance measurement framework (PMF), output budgeting tool (OBT) and local government assessment tool (LGAT) as key entry points for district-level adaptation indicators to influence national-level indicators. Although these tools all focus on indicators for assessing government institutions, they had no climate change indicators.

ACCRA worked with eight ministries to collect indicators from five districts – Bulambuli, Bundibugyo, Nakasongola, Otuke and Kotido – using IIED's TAMD framework. TAMD uses a twin-track approach to evaluate adaptation success and can help assess whether whether CCA leads to effective development, and how development interventions can boost communities' capacity to adapt to climate change. Using the institutional scorecard, the data collection teams collected climate risk management information from the district technical planning committees and climate change (CC) indicators from communities to develop adaptation theories of change and indicators.

The indicators were aligned to sectors and divided into outputs and outcomes through a highly consultative process that involved ministries, departments and agencies of government, local governments, urban authorities and civil society organisations. They also developed indicators for the LGAT, detailing assessment criteria for local governments to mainstream climate change into their plans and budgets. They divided indicators into standard (compulsory) indicators – used to measure progress across all government sectors – and non–standard indicators that are peculiar to specific areas based on different livelihoods and so on, and do not apply to the whole country.

The key success factors and lessons from this process included using evidence from the bottom up and building consensus through participation. Building knowledge and skills as we moved along, coordinating and harmonising different processes and linking climate change and development indicators were also key. Having conducive country policy frameworks and the good working relationship between ACCRA with government secured cooperation throughout the process. Another important success factor was the partnership approach. The connections between ACCRA, IIED, FTF, FAO, Care International in Uganda and key government ministries made the process fully participatory, and ensured it was owned by all stakeholders at both local government and national levels. Collaborating in this way gave us a wider view and allowed us to sharethe costs of all the processes from community to national level.

This process has been one of the best examples in the region where using a bottom up approach in a coordinated manner has paid off. Ownership of the final product is shared among all stakeholders equally, as it should be for the betterment of Uganda.

CCD will continue coordinating the integration process, monitoring and reporting on CCA to ensure that the indicators are well entrenched into the systems of government and contributing to reporting on the performance of the NCCP and its implementation strategy.

Background

Uganda's NCCP outlines its aims to use adaptation to reduce its vulnerability to climate change. This section sets the context for Uganda 's process to develop standard climate change indicators. It examines Uganda's capacity to address and track progress in adaptation and manage climate-change-related disasters and risks and provides some background on the TAMD approach.

1

"Adapting to climate change is a rapidly growing challenge, particularly for developing countries. Even if greenhouse gas emissions are reduced significantly in the coming years, climate change impacts, such as gradual temporal and spatial shifts in resources as well as drought, floods, severe weather events and sea-level rise, are likely to result in food shortages, increases in vector-borne diseases, infrastructure damage and the degradation of natural resources. The poor will be affected disproportionately. Development choices today influence the adaptive capacity of people and their governments well into the future. We cannot afford to delay adaptation planning and action. However, many development policies, plans and projects currently do not take climate change into account due to a lack of awareness and clarity on how to effectively develop and integrate adaptation options." (GIZ 2011)

Globally, there is increasing recognition of the need to track climate change adaptation (CCA) and disaster risk reduction (DRR) progress. But the ability of countries and development partners to measure progress is constrained by the complex nature of adaptation and the absence of measurable outcomes or indicators by which to judge if and how adaptation is occurring and its effects on a country's overall development.

This report documents and draws some lessons from the highly participatory,year-long, bottom-up process to develop climate change (CC) indicators for inclusion in the following monitoring and evaluation tools and frameworks used by national and local government in Uganda:

- output budgeting tool (OBT):used by the Ministry of Finance, Planning and Economic Development (MoFPED) to determine national standard indicators for funding and tracking across the board
- local government assessment tool (LGAT): determines minimum performance measures and conditions for local government, and
- performance measurement framework (PMF): being developed by the Climate Change Department (CCD) to monitor and report on the performance of the National Climate Change Policy (NCCP) and its implementation strategy.

1.1 Country background

Uganda, one of East Africa's Least Developed Countries, covers an area of 241,038 square kilometres. About one-third of the country is made up of water and wetlands. The country's economy is highly dependent on natural resources, making it vulnerable to the impacts of climate change. This includes changing weather patterns and increased frequency of extreme weather events such as floods and prolonged drought.

Uganda's priority is to reduce the vulnerability of its population, environment and economy by implementing adaptation actions. These actions are outlined inthe NCCP (2015) and its implementation strategy, derived from the national constitution (1995, amended 2005 and 2015) and reflected in its Vision 2040. The NCCP priorities have been integrated in the Second National Development Plan (NDP II) 2015/16–2019/20. In the long term, Uganda intends to follow a climate-resilient, low-carbon development pathway linked to green growth and broader sustainable development goals.[1]

Like any developing country, Uganda's capacityto address CCAis low, despite the increased focus on and debate aroundCC and DRR at national, regional and international levels. In the absence of tested and proven CC monitoring and evaluation frameworks, systems and indicators,Uganda's ability to track progress in CCA and management of climate related disasters and risks has been curtailed. Past efforts to develop monitoring and evaluation (M&E) frameworks and indicators for tracking adaptation and DRR have been fragmented as different institutions pilot their own M&E frameworks with no harmonisation or consensus to set standardised indicators for tracking climate change in Uganda (Kabesiime *et al. 2015)*. This process aims to harmonise CCA indicatorsby increasing participation in the tools for measuring performance. This in turn will increase ownership and credibility of CC indicators at both the national and district levels.

1.2 What is TAMD?

TAMD uses a twin-track approach that evaluates adaptation success as a combination of how widely and how well countries or institutions manage climate risks (Track 1) and how successful adaptation interventions are, in reducing climate vulnerability and keeping development on course (Track 2). It can be used to assess whether CCA leads to effective development, and how development interventions can boost communities' capacity to adapt to climate change.[2]

[1] Uganda's Intended Nationally Determined Contribution to the UNFCCC (2015).

[2] For more information, visit www.iied.org/tracking-adaptation-measuring-development-tamd

TAMD uses score cards to measure climate risk management effectiveness under Track 1 and bottom-up adaptation/development indicators to measure development performance in Track 2. The link between Track 1 and Track 2 is measured through a theory of change, also developed in a participatory process.

1.3 Developing climate change indicators with TAMD

TAMD was piloted in five countries, with Kenya and Mozambique registering early success with the methodology. In Kenya, five communities worked with the Isiolo County government to develop theories of change and indicators for Tracks 1 and 2. They collected baselines and have continued to monitor progress in climate risk management and development progress. In Mozambique, after the successful TAMD pilot in Guija district, TAMD has been adopted as the M&E framework in national Local Adaptation Planning guidelines. These guidelines are now being rolled out to all districts.

After the success of IIED's work with ACCRA Mozambique to develop CC indicators, in March 2014 ACCRA Uganda and IIED invited the head of Uganda'sClimate Change Unit and its representative on theUnited Nations Framework Convention on Climate Change (UNFCCC) to a multi-country meeting for TAMD partners in Meru, Kenya. This meeting aimed to share experiences on national M&E frameworks with a view of introducing the same process in Uganda.

After committing to develop CC indicators in Uganda,the government held a stakeholder awareness and consultative workshop in mid-2014 with key government agencies, ministries and other CCA and DRRplayers. In this workshop, the stakeholders recognised the urgent need to put in place a framework that would enable the government to evaluate its own and its partners'CCA and DRRinvestments. Through ACCRA, the government invited IIED to pilot TAMD in Uganda, to develop a national M&E framework for climate change.

ACCRA was already a long-term partner of the Ministry of Water and Environment (MWE)'s CCD, conducting joint research and implementing the pilot National Adaptation Programme for Action (NAPA). ACCRA had documented the NAPA piloting experiences in Uganda and was well positioned to take the TAMD pilot forward.

To create awareness of TAMD and seek buy-in for the process, ACCRA convened the first national consultative meeting in August 2014, attended by representatives from government, civil society and bilateral partners. At this meeting, the Ministry of Local Government (MoLG) presented the LGAT. The ministries and other stakeholdersnoted that, although the LGAT had cross-cutting environmental indicators, they did not address CCA issues.

Methodology and study background

Our scoping study found that a number of tools and systems were already in use for collecting, processing reporting, storing and disseminating data and information, which provided an entry point to develop a framework to track DRR and CCA. ACCRA led a consultative process to select the pilot districts, training stakeholders to develop indicators at local level.

2

Stakeholders proposed commissioning a scoping study to determine existing M&E and reporting frameworks and identify entry points for influencing national-level CC and DRR planning, reporting and M&E tools.

2.1 The scoping study

In 2014, IIED carried out a scoping study on Uganda's M&E and reporting frameworks (Kabesiime *et al.* 2015) to:

- provide an overview of Uganda's CC and DRR policy context and their implementationstatus
- assess and summarise Uganda's main recent climate vulnerabilities
- summarise Uganda's main climate risks
- identify the most vulnerable districts and sectors and any potential gaps
- assess and outline existing reporting systems, including how the districts report to ministry level and how key sectors report to their line ministries
- analysethe channels being used to report against the NDP II
- identify any climate-relevant elements in existing M&E tools at national and district levels, including the national performance assessment tool for local governments and other reporting mechanisms
- identify any data sources on CC and development outcomes – including census and agricultural surveys – and how they are collected and managed, and
- identify any big government adaptation and DRR projects or interventions and how they are being monitored and evaluated.

The study concluded that Uganda's M&E policy and institutional framework could provide a viable entry point for developing a framework to track CCA and DRR, with institutional roles stipulated in the national policy for public sector M&E. Different government ministries and institutions had already developed a number of tools and systems for collecting, processing, reporting, storing and disseminating data and information, including: MoFPED's output budget tool (OBT), the Office of Prime Minister (OPM)'s score card, MoLG's LGAT, Uganda Bureau of Statistics' Management Information System and other databases.

But these tools did not adequately address DRR and CC, so many sectors – including climate-sensitive sectors – were not planning for or reporting on CCA and DRR. Instead they focused on output indicators, and did not evaluate long-term impact and outcomes. These are essential for measuring enhanced adaptive capacity and in line with the NDP II and Vision 2040.

The scoping study noted that the NCCP's first national PMF and implementation strategy – being developed by the CCD – could and should provide an entry point for developing national and sector-specific adaptation indicators, providing a direct link with the NDP II. Other recommendations included:

- National Planning Authority (NPA) involvement in developing long-term adaptation indicators would lead to an overall development M&E tracking tool rolled out in collaboration with the OPM and MoFPED, harmonising all other tools and streamlining performance indicators.
- Adopting district-level adaptation indicators in the LGAT would make all local governments accountable on CCA planning, budgeting, implementing, monitoring and reporting.
- Building government staff capacity at all levels in planning, monitoring and evaluating CCA and DRR will increase their understanding of climate change and risk reduction-related issues and how to report on progress.
- All existing CCA and DRR indicators must be harmonised to develop national standard indicators.

ACCRA convened the second national consultation meeting in November 2014 aimed to finalise the scoping study, agree the districts where the CCA indicators would be assessed, identify the ministries and individuals who would participate in the field work and agree on methodology and tools(ACCRA 2014).

This meeting concluded that to create and adopt a strong M&E system for measuring CCA interventions, Uganda would need stronger policy reviewing processes that bring all relevant actors on board. Stakeholders agreed that assessment results should show how adaptation work translates into better livelihoods, and that this would need longer timescales than showing impact at activity and output levels. They noted the need to set clear definitions of the concepts so district and national governments would have the same understanding of climate change. Until now, adaptation work had mainly been at the micro level, making it difficult to link with national development plans. Small gains made in some sectors were being masked at national level because other sectors were not doing their part.

2.2 Selecting the pilot districts

Due to limited resources, stakeholders at the meeting agreed to cluster districts in terms of ecosystem, disaster events and regional representation. They chose five districts across Uganda, with different eco-zones and a mix of agriculture and pastoralist livelihoods. ACCRA would pilot the implementation of the TAMD methodology and fund data collection in Bundibugyo, Nakasongola, Bulambuli and Kotido. CARE International, a member of the ACCRA alliance, offered to financially support the pilot in Otuke district. These five pilot districts are representative of other districts in similar categories in terms of ecosystem, disaster events and regional representation.

Bulambuli and Bundibugyo are highland ecosystems. Their steep mountainous terrain makes them prone to severe soil erosion, which causes destructive landslides, loss of soil fertility, pollution and siltation of rivers. During heavy rains, lowlands are flooded and riverbanks burst. These environmental risks reverse the benefits of development interventions by making local communities vulnerable to food insecurity and loss of property and life.

Nakasongola, Kotido and part of Otuke are within the cattle corridor and are semi-arid, with prolonged dry spells characterised by intense heat, heavy winds and dust storms. Relief rain falls in hilly areas where moist air cools as it rises, causing frequent torrential thunder storms. These conditions damage livelihoods by destroying crops and pasture and increasing pests and diseases.

At the meeting, stakeholders agreed that the study would take place between 1–15 December 2014 to ensure data was collected in all the five districts concurrently. The first training of trainers (ToT) session would take place in Bulambuli district and include setting parameters for control groups, collecting data with the TAMD district government scorecard and designing the theory of change and indicators with communities. There would be four teams, each made up of three government staff from different ministries. ACCRA and the ministries would guide these teams to collect data from district and community levels, with one extra person to document results in each district.

2.3 Training of trainers

LTS Africa led the first ToT event, with support from ACCRA, in Bulambuli district. At the event, 35 staff from various government ministries – local government, water and environment, works and transport, gender, labour and social development, agriculture – the National Meteorology Authority and sector heads from the five pilot districts were trained in collecting M&E data using the TAMD framework. The teams did practical exercises on defining indicators, using the scorecards and developing a theory of change. They also assessed district performance as part of the learning process.

After the classroom training, participants hands-on experience collecting indicators in four communities in four sub-counties of Bulambuli district, (two highland and two lowland communities). At community level, they divided local participants into gender groups to ensure the theories of change considered the adaptation needs of women and men. This increased women's participation in the process: it is usually low when they are mixed with men, given that Uganda, like many African countries, is a patriarchal society and women sometimes lack the confidence to express themselves in such forums.

This practical exercise ensured participants had grasped the methodology of indicator development and could use the tools to collect data at district and community levels. The workshop participants were then divided into groups and sent to the other four districts where they collected data at district and community levels,using the scorecard and the theory of change.

Study results

The teams of ministry and sector staff worked with focus groups of district staff and community members, using TAMD scorecards to assess climate risk management at district level and the impact of climate change at community level. They used the data from the scorecards to develop theories of change with community groups and build a picture of district and community CCA issues.

3

3.1 District-level findings

In each district, the team assessed climate risk management by engaging the District Technical Planning Committee (DTPC), using a scorecard with a list of the eight generic parameters. They formed focus group discussions with district staff according to sector. Discussions in these groups established the extent to which each district had mainstreamed climate change in their plans and budget and the type of support they would need to do this. They assessed the district performance against the scorecard indicators, documenting whether they fully or partially met each requirement, with explanations and evidence.

Table 1 shows the DTPC capacity gaps for mainstreaming climate change into district plans, programmes and budgets.

Table 1: DTPC findings on mainstreaming climate change across the five districts

ASSESSMENT PARAMETERS	FINDINGS
Integrating climate change into planning	Low capacity to mainstream CC into local government planning processes. Inadequate knowledge of national mainstreaming guidelines, CC policy and implementation strategy.
Institutional coordination	Inadequate frameworks and funding for coordination and implementation. District committees are reactive to disaster and hazard events due to poor coordination. Lack of coordination mechanisms/forums related to CC. Climate change taken as a natural resource management issue.
Budgeting and finance	No specific budget allocations for CC interventions at local government level. Local governments are not receiving funding from the ministry.
Institutional knowledge or capacity	Limited knowledge of climate change. Lack of practical skills for mainstreaming CCA into planning process. No formal or accredited trainings for staff and other stakeholders to increase institutional capacity to address climate change.
Use of climate information	Lack ofdata on climate trends, projections to support planning and implementation. Lack of weather stations in most areas. Weather forecast information is not accessible. Poor understanding on using climate information for planning.
Planning under uncertainty	No capacity to plan under uncertainty due to insufficient long-term funding. Inadequate capacity, knowledge and tools for scenario planning. Low understanding of and little focus on adaptation and maladaptation concepts.
Participation	CC issues are not discussed during planning meetings. Planning caters for environmental issues, notclimate change. Resources for involving the most at-risk categories of the population are sometimes not available.
Awareness among stakeholders	Information flow is reactionary and not continuous. The most vulnerable – the elderly, women and children – do not easily access some communication channels, eg television and radio. Understanding of climate change is still limited.

Source: ACCRA 2015a

In response to the findings in Table 1, the DTPC recommended that the government should:

- build the capacity of CC focal persons/desk officers to proactively undertake coordination activities, share information and integrate CC priorities into planning and budgeting
- disseminate national CC policy and mainstreaming guidelines at local government levels, as these are key to informing the planning process
- ensure the NPA and CCD engages policymakers to provide financing for CC planning, budgeting and implementation to ensure that its part of district planning and that districts are reporting on this
- provide training for districts in mainstreaming climate change, as they do for other cross-cutting issues, such as the environment, gender and HIV and AIDS
- quickly develop CC indicators to be integrated into the LGAT and other national-level monitoring tools to ensure easy tracking of impact, and
- build capacity of staff at national and district levels to enable easy and effective integration of climate change into development plans, working with partners and other stakeholders.

3.2 Community-level findings

With support from the district natural resources officer, the teams selected four representative sub-counties in each district, and a representative group at parish level to develop their adaptation theories of change. They selected a focus group in each sub county, and divided these into separate groups for men and women. The teams provided guiding questions for groups to discuss the impacts of climate change and disasters experienced in the community, coping mechanisms, the future they want without these impacts and the activities they would need to implement to get there. The focus groups then prioritised these activities with up to three being developed into theories of change. Through this process, community members outlined the outputs and outcomes, resilience statements and indicators of change that the communities expected to get from their chosen adaptation interventions.

The teams summarised responses from all sub-counties to give a representation of district CCA issues, but adopted the theory of change drawings as drawn by the communities to enable easy follow up and reference where needed (see Figure 1). They compiled an integrated district report and shared this with respective local governments, pulling out all the indicators, classifying them by sector and outlining them by output, outcome and impact. These indicators were later reviewed at different forums to provide indicators for integration into the OBT and LGAT.

Table 2 shows indicators that were common across some or all the districts. These were proposed for integration into the PMF, OBT and LGATs.

Table 3 shows district-specific indicators, which can also be used at national level in different M&E tools.

Figure 1: A community-constructed theory of change from Bunambutye sub-county

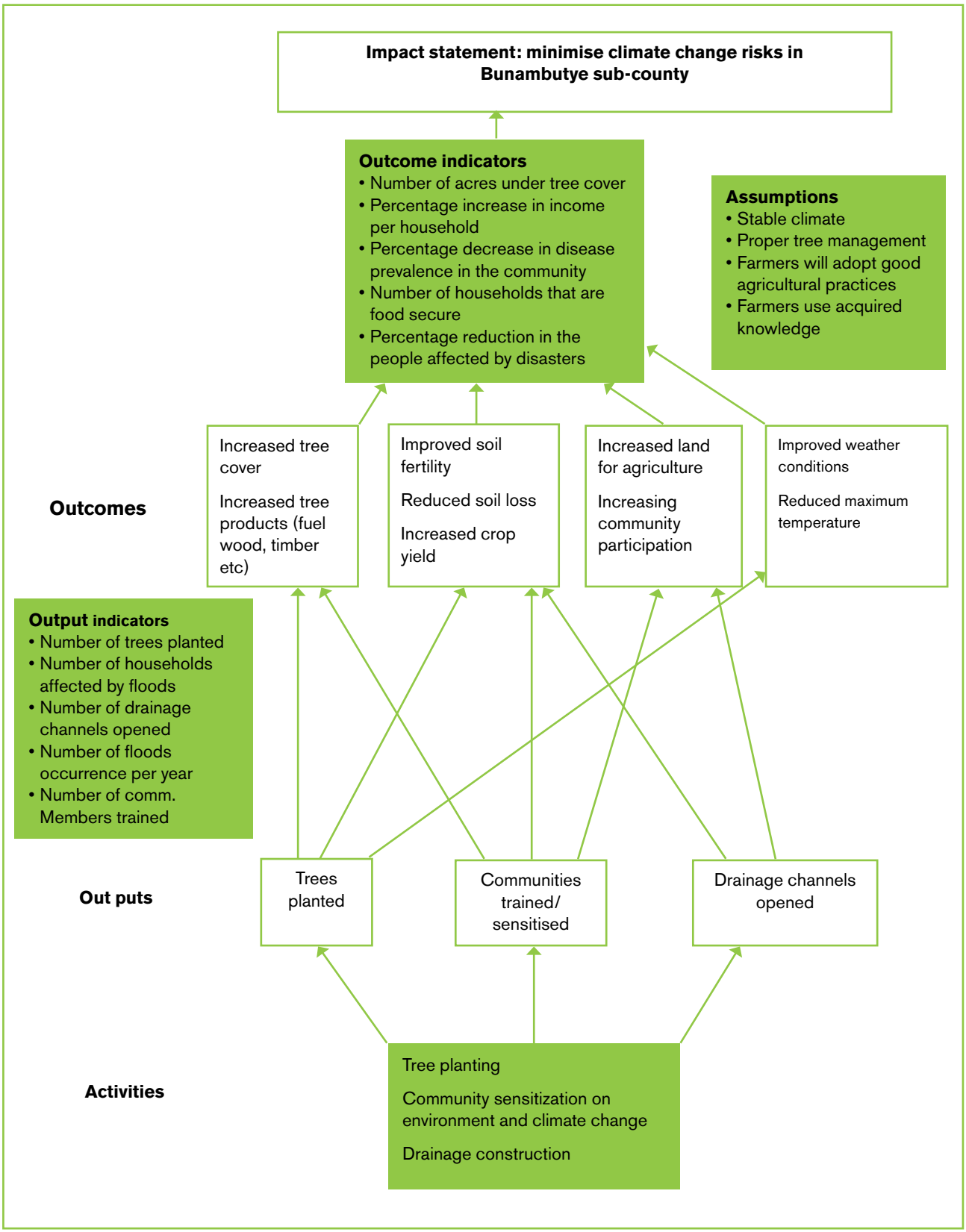

Table 2: Common CCA indicators across districts

INDICATOR (NUMBER OF, UNLESS SHOWN OTHERWISE)	DISTRICTS
Household income from agricultural production/tree products/ reduced spendingon fuelwood (USh)	Kotido, Bulambuli, Bundibugyo
Crop yield per acre/litres of milk or kilos of meat per animal	Otuke, Kotido, Nakasongola, Bulambuli
Disease incidence in humans/livestock (%)	Otuke, Kotido, Nakasongola, Bulambuli
Meals per day	Otuke, Bundibugyo
Disaster incidences	Kotido, Bulambuli, Otuke
Tree cover (%)	Bulambuli, Kotido, Bundibugyo
Food storage facilities	Otuke, Nakasongola
Households with reduced water stress	Nakasongola, Kotido
Communities applying DRR/climate information skills and knowledge	Bundibugyo, Nakasongola, Bulambuli
People/households affected by disasters	Bundibugyo, Bulambuli

Table 3: CCA indicators specific to districts

INDICATORS (NUMBER OF, UNLESS SHOWN AS %)	DISTRICT
Stable cropping seasons	Bundibugyo
Village savings associations/banks/bank accounts	Otuke
Improved shelters/houses	Otuke
Recreational facilities	Otuke
Restored wetlands and forests	Kotido
People accessing external markets	Kotido
Markets in the county	Otuke
Groups producing for the market	Bundibugyo
Animal deaths during droughts	Nakasongola
Child mortality (%)	Bulambuli
Tree products in the market	Bundibugyo
Women and girls spending less time on cooking activities	Bundibugyo
Reduction in river bank bursts in rainy season (%)	Bundibugyo

Linking community, district and national levels

In a clear example of using evidence gathered through M&E, ACCRA worked with ministry staff and district government to integrate adaptation indicators into their district development plans. District-level adaptation indicators were then integrated into in sectoral and national plans, feeding into the development of standard national indicators for climate change.

4

4.1 Integrating community data into district development plans

After generating the local-level data through the TAMD process, ACCRA continued to work with MoLG, MWE and the OPM in Bulambuli district to pilot mainstreaming adaptation into their district development plan. Sub-county chiefs, district councilors and sector heads – including the chief administrative officer (CAO) and the chairman of Local Council 5 – helped to refine the new structure of the district plan. Using the data collected from the TAMD exercise during the ToT in December, they selected adaptation activities and indicators to integrate into their sectoral district plans for the next five years. This was a clear example of using evidence gathered through an M&E process to integrate adaptation activities in sectoral development plans. ACCRA will use this process to support other local governments in future.

4.2 Linking district indicators to national frameworks

ACCRA lobbied key government ministries – including the CCD, MoLG, NPA, OPM and MoFPED – to ensure that district-level adaptation indicators would be included in national planning and monitoring processes. After the publication of a briefing paper (Karani *et al.* 2015)showing the linkages between district and national planning, ACCRA's national coordinator was invited to present the district adaptation process to a meeting of 80 staff from MoFPED, MoLG, MWE and NPA and later to Members of Parliament on the natural resources working group.

Comments from these forums included:

> *"TAMD indicators are smarter and clearer than the NCCP's PMF indicators; we therefore need to review the PMF, refine our indicators or borrow some from TAMD," Aron Werikhe, research officer, NPA.*

BOX 1: FEEDBACK FROM DISTRICT INTEGRATION WORKSHOP PARTICIPANTS

Although the NPA has developed a new planning guide, the districts we worked with were not yet conversant with the new chapters on M&E (tools and indicators) and communication. They found the training at the workshop useful:

> *"I have been exposed to climate change issues, in particular, sector plans and budgets. I am now armed with guidelines for the integration of climate change and can ably sensitise others."*
> *Sibolo Geoffrey, environment officer*

> *"As a sector head, the training has improved my skills in drafting my sector plan as well as the whole development plan for the district."*
> *Sarah Madanda, district natural resources officer*

> *"The training has enabled me to identify the gaps in planning, especially in climate change issues, which have been always omitted."*
> *Nicholas Zebosi, district planner*

> *"I have learnt how to identify disasters and hazards and how to reduce their risks by mainstreaming climate change in the work plans."*
> *Gimei Charles, district education officer*

> *"The training has helped me understand the linkage between the district development plan and the national development plan in relation to monitoring, evaluation and reporting."*
> *Maziina Michael, assistant chief administrative officer*

> *"I have learnt steps and guidelines on how to formulate and produce the new development plan, especially the new chapters on M&E and communication."*
> *Wokuri Jotham, district forestry officer*

> *"The workshop has given me new insights in the new planning cycle and the need to incorporate climate change issues in our sub-county development plans and also the need to do M&E for all the activities in the development plan."*
> *Wamburu Emmanuel, town clerk, Bulegeni town council*

Source: ACCRA 2015b

"The indicators developed in the PMF to monitor NDP performance are not refined. We are interested in borrowing indicators from the TAMD process," NPA representative.

"Climate change, being a national and international concern, needs to be accorded its true position in the national assessment tool for local governments and in other government planning, budgeting and reporting frameworks, to adequately measure the achievements and address the challenges in an organised manner. This process of developing national indicators and mainstreaming them in the assessment tool presents a great opportunity. The MoLG team is committed to liaising with the CCD and other ministries to select CC indicators for inclusion in the LGAT," Assistant Commissioner Andrew Musoke.

ACCRA and the MWE met again in June 2015 to discuss the linkages between the district indicators and the PMF (ACCRA 2015c). The objectives of this meeting were to:

- enrich the national PMF for climate change that is under development with support from the French development agency ADETEF
- inform the national performance assessment tool for local governments
- enable the NPA link medium and long-term development indicators in national and district plans with CC indicators.

ACCRA asked stakeholders from different sectors to identify district-level CC indicators that they could integrate into their sectoral M&E frameworks. They selected indicators from data collected from district technical planning committee members using the scorecard methods. They discussed these together with current national assessment indicators to identify where the CCA indicators fit and what should be assessed. Stakeholders also identified that TAMD's bottom-up approach to collecting district indicators can help with reporting on PMF indicators, which are only collected at national level. These linkages are summarised in Table 4.

Table 4: How TAMD's bottom-up approach helps with national indicator reporting

PMF INDICATORS	TAMD CONTRIBUTION TO REPORTING ON PMF INDICATORS
Number of five-year development plans that contain specific CC measures consistent with the NCCP and its implementation strategy.	Providing indicators for assessing local government performance on mainstreaming climate change into their development plans. This will help in reporting on the PMF indicator nationally
Number of annual district development plans that contain specific CC measures consistent with the NCCP and its implementation strategy.	Community theory of change and indicators will inform district plans through specific community priorities addressing climate change
Number of districts that have annually distributed materials on climate change and the NCCP and its implementation strategy to the general public.	As above
Percentage of key sector budget framework papers that fully reflect integrated CC activities and associated costs consistent with NCCP and its implementation strategy.	This will happen when local governments and sectors have integrated climate change into their plans and budgets – TAMD provides indicators for this

4.3 Coordinating processes and indicators at national level

At the same time as ACCRA was working on CCA indicators using TAMD in a bottom-up process, the CCD, with support from the French Embassy, developed an overall CC PMF to track the progress of the NCCP and its implementation strategy. Although the PMF had high-level national output indicators, there was a gap between output and outcome indicators for sector specific frameworks at operational and local government levels.

An FTF Uganda Enabling Environment for Agriculture (EEA) project also worked with government institutions to strengthen their capacity to implement the NCCP. The project used a phased approach to train 23 districts on mainstreaming CCA into planning and budgeting for their district development plans. During these trainings, the DTPCs aligned OBT indicators with the district CC indicators and identified activities that did not have specific matching indicators in the OBT. The MoFPED consequently recommended that the relevant sectors and OPM work with local governments to propose new and/or modify existing indicators. The OPM would then forward agreed output indicators to MoFPED for inclusion in the OBT.

To avoid developing parallel indicators, the CCD convened a coordination meeting in June 2015with MoLG, ACCRA and FTF-EEA to harmonise the development of standard indicators for climate change The standard national CC indicators included some NDPII CC indicators and will assist in tracking progress against the NDPII targets, the TAMD indicators and the district indicators collected by the FTF project which were compiled into one document for joint review and validation. All the stakeholders agreed to validate the harmonised indicators in a consultative process that engaged local governments and other national level actors. They also agreed on the need for technical assistance to evaluate the national indicators and reports and develop a working document. This was provided by FTF-EEA, as ACCRA had provided the technical assistance at district level and together the two consultants[3] facilitated the process of validating the indicators at national level.

[3] Irene Karani from LTS Africa and Dr Julian K Bagyendera from Provide and Equip.

Review and validation of indicators

The development, review and validation of standard indicators was a highly participative and widely consultative process. A wide range of stakeholders from communities, government and civil society at local, district and national levels worked together to finalise which adaptation indicators should be integrated into existing national monitoring tools.

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The standard CC indicators were developed in a participatory and widely consultative national process that involved brainstorming and meetings with key stakeholders including:

- community members
- local government technical planning committees and CAOs
- national-level sector representatives from the CCD, MoLG, MFPED, OPM, various ministries, departments and agencies (local government; finance; trade; gender, labour and social development;agriculture; energy;tourism and wildlife;works and transport) the NPA, Kampala City Council Authority Uganda Wild life Authority and other local governments, and
- civil society organisations.

A desk review and analysis of selected documents tracked progress on the drafting of local government CC indicators, collated and mapped out common indicators and identified gaps(GoU 2015).

5.1 Criteria for indicator selection

The indicators were collected at two consultative meetings – the first with ministries, departments and national government agencies and the second with institutions mandated to implement the climate change policy, selected ministries, local government and urban council associations.

At both these meetings, key stakeholders reviewed, improved and prioritized the CC indicators, agreeing that they would:

- be related to climate change
- be reusable over time
- be trackable across all districts
- directly contribute to tracking the achievement of NCCP objectives
- have available data sources and regular tracking mechanisms
- have related indicators in the NDP II and OBT
- be relevant to the MoLG LGAT, and
- fit the 'SMART' criteria (see Box 2).

The consultants[4] presented the refined indicators at the final national validation meeting on 30 September 2015 to more than 100 representatives from all government ministries, departments and agencies, CSOs and local government from 28 districts. This final meeting aimed to:

- create understanding of the monitoring, assessment and reporting frameworks and how they link with the PMF which tracks progress of the NCCP and its implementation strategy
- review and validate the CC standard indicators for OBT and the LGAT, and
- agree on a way to integrate these indicators in the OBT and LGAT.

BOX 2. WHAT ARE SMART INDICATORS?

Stakeholders agreed that the CC indicators they developed should be SMART. By this, they meant they should be:

Specific: capture the essence of the desired result by clearly and directly relating to the achievement of an objective and only that objective

Measurable: unambiguously specified so that all parties agree on what they cover and to ensure there are practical ways to measure them

Achievable and attributable: identify anticipated changes and whether results are realistic; linkable to changes in the targeted developmental issue.

Relevant and realistic:set performance levels that are achievable in a practical manner and that reflect the expectations of stakeholders.

Time-bound,timely, trackable and targeted: so progress can be tracked in a cost-effective way at the desired frequency for a set period, with clear identification of the particular stakeholder group(s) to be affected by the project or programme.

[4] Irene Karani from LTS Africa and Dr Julian K Bagyendera from Provide and Equip.

At this meeting, representatives from MoFPED, NPA and MoLG presented the output-based budgeting process, reporting mechanisms for the NDP II, theOBT and LGAT to ensure that stakeholders were familiar with the national-level tools that needed to be refined with new indicators.

5.2 Output budgeting tool

MoFPED noted that the government was shifting from output-oriented to performance-oriented budgeting, which would capture outcome-level results. They also announced that the relevant ministry would provide generic indicators for standard service delivery outputs, which local governments should all report on. There are other, district-specific, non-standard indicators – such as those related to fishing or pastoralism. District and sub-county governments would be responsible for reporting on those in line with their mother ministries and local plans. The TAMD work was about contributing to national standard indicators.

The primary objectives of the output-oriented budgeting (OOB) were to:

- strengthen the link between the government's budget and policy objectives
- improve the link between budget and results (outputs, in the process of shifting to outcomes)
- link the in-year resource disbursements to work plans to improve on cash management, and
- guide all government institutions, ministries and local governments in costing outputs related to their spending.

BOX 3. KEY CONCEPTS OF OUTPUT-ORIENTED BUDGETING

Vote function involves groups of related services and capital investments – such as natural resource management, pre-primary and primary education – delivered by or on behalf of a vote by another institution. For example, the Ministry of Education delegates management of primary education to local governments.

Vote function outputs are those deliverables that have the greatest impact on achieving the vote function objective. Examples include tree planting and afforestation, forestry regulation and inspection.

Activitiesare work processes that produce outputs. Examples include delivery of agriculture extension services, recruitment of teachers and consultative workshops.

Inputs are the labour, materials, equipment and buildings used in activities to produce outputs.

Stakeholders were asked to prioritise two output and two outcome indicators that could be the used either in the OBT tool or at sector level plans. Table 5 presents the list of validated indicators that will be integrated into the OBT. Those with an asterisk (*) are expected to become standard CC indicators that all districts will need to report against once the revised OBT is approved by cabinet. Different sectors can use those without an asterisk as additional indicators to measure CC mitigation and adaptation.

Table 5: Standardised and non-standardised climate change indicators for the OBT

OUTCOME INDICATORS PER SECTOR	OUTPUT INDICATORS(NUMBER OF, UNLESS OTHERWISE SPECIFIED)
Natural resources including water	
Wetland cover (% of total area)*	Wetlands surveyed and demarcated (km)*
	Hectares of wetlands restored
Forest cover (% land area)*	Hectares of forest reserves surveyed and demarcated
	Hectares of forest restored and conserved*
	Tree seedlings distributed and planted
Domestic water sources compliant with national standards (%)*	Households with water harvesting facilities*
	Physical development plans conforming to CC resilience
Agriculture/production	
Household income from the sale of agricultural produce (%)*	Agricultural income generating enterprises undertaken per household *
	Marketing/bulking groups set up to increase household income
Households thatare food secure (%)*	Farmers practicing climate-smart agriculture technologies*
	Pest, vector and disease control interventions carried out
Trade, industry and cooperatives	
Change in trade volumes per household (%)*	Cooperatives that have mainstreamed CC mitigation and adaptation in their activities
Pollution index*	Change in use of renewable energy source equipment (%)*
	Industries using renewable energy in production processes
	Industries with efficient, environmentally friendly waste management practices*
Meteorological information	
Women and men making informed decisions from climate information (%)*	Men and women accessing and using weather and climate information for planning
	New weather stations installed/opened*
Energy	
Renewable energy contribution to Uganda's energy mix (%)*	Megawattsgenerated from renewable energy sources*
Adoption and use of renewable energy technologies (RETs): improved stoves, solar panels, biogas, briquettes (%)*	Households using RETs: (%)*
	Entities (institutions, enterprises or industries) using RETs
Tourism and wildlife	
Change in wildlife conservation status (%)*	% of invasive species in wildlife protected areas*
	Human-wildlife conflict incidences (%)
	Problem animal/vermin management interventions
	Change in wildfire incidences reported in protected areas (%)*
Contribution of sector to the economy (%)*	Visitors to wildlife-protected areas

OUTCOME INDICATORS PER SECTOR	OUTPUT INDICATORS(NUMBER OF, UNLESS OTHERWISE SPECIFIED)
Health	
Hygiene/water-borne disease occurrence reported at health centres annually (%)	People trained in hygiene and water-borne diseases*
Roads and infrastructure	
Community access roads improved to all-weather condition (%)*	Roads with secured road reserve (km)*
	Roads with properly functioning water drainage channels (km)*
Households with access to all-weather roads (%)	People using mass public transport
Gender, labour and social development	
Women and men with better livelihoods despite climate shocks (%)*	Sector development plans that integrate CC and gender*
*Proportion of farming population (%) practicing climate-smart agriculture	Men and women farmers accessing timely weather information*
MoLG/NPA	
Local governments implementing CC interventions in their district development plans*	Local governments that have mainstreamed CC interventions in their district development plans (%)*
Actual vs budgeted allocation towards CC adaptation (%)*	Local governments spending at least 10% of their budget on CC activities*
Local governments with functional environment/CC committees (%)	Quarterly environment/CC meetings held to discuss CC issues
MoFPED	
Funding allocation for climate change (%)*	
Population growth rate	
Education	
Educational institutions with water stress during drought periods (%)*	Rainwater harvesting facilities built in educational institutions*
Educational institutions implementing CC mitigation and adaptation activities*	Trees planted/maintained in school compounds *
	Educational institutions that have set up CC clubs (%)
Institutions (local government, health facilities and schools)	
Government institutions with water stress during drought periods (%)*	Rainwater harvesting facilities at institutions
Government institutions not affected by climate shocks (%)*	Facilities designed to withstand adverse weather conditions
	Trees planted at institutional premises*
Kampala Capital City Authority and municipalities	
Energy	
Use of renewable energy (%)	Households using RETs
Contribution of waste towards energy supply/use (%)	Entities using RETs

OUTCOME INDICATORS PER SECTOR	OUTPUT INDICATORS(NUMBER OF, UNLESS OTHERWISE SPECIFIED)
Transport	
Greenhouse gas emission reduction	Length of drainage improved (km)
	People using massive public transport (%)
Waste management	
Waste collected and disposed at the management facility (%)*	Waste collected and disposed at waste management facility (tonnes)*
Planning	
Degree of implementation of climate-resilient physical development plan*	Area covered by climate-resilient physical development plan (%)
	Area covered by designated green-house spaces (m^2)
	Infrastructures with good standard drainage system

5.3 Local government assessment tool

The assistant commissioner of MoLG explained that the LGAT's role is to:

- verify compliance to laws and national guidelines
- enhance the management of discretionary development funds and eligibility to access local development grants
- reward good and sanction poor performance
- identify functional capacity gaps and needs
- promote good practice in administration and service delivery by linking all central government transfers to local government performance, and
- provide downwards accountability and closer coordination and integration of development activities at local government level.

Explaining why climate change needs to be mainstreamed into the LGAT, they said that CC indicators needed to be assessed because they are the only means to ensure compliance as local governments fear sanctions and penalties. CC indicators can also be used as an incentive to determine funding for local governments. If CCis mainstreamed and not seen as stand-alone project, they can use local resources to enforce compliance and the indicators can form part of routine inspection reports. By mainstreaming climate change, the indicators will be owned by all departments rather than considered to be part of the natural resources department.

The assistant commissioner concluded by noting that, as a national and international concern, CC needs to be part of the national assessment tool and other government planning, budgeting and reporting frameworks so they can measure achievements and address challenges.

Local governments represented at the meeting adapted climate risk management indicators from the TAMD framework and prioritised indicators for inclusion in the LGAT. Table 6 shows the indicators they chose and their sources of evidence.

Table 6: Standard national climate change indicators for the LGAT

PERFORMANCE MEASURE	INDICATORS OF PERFORMANCE MEASURE	MONITORING AND VERIFICATION/ INFORMATION SOURCE, ASSESSMENT AND SCORING PROCEDURE/CRITERIA
Climate change mainstreaming ***Scoring:*** *Must score at least 7 to be eligible for a reward* *Must score at least 5 to remain static* *Any score below 5 deservesa penalty.*	Evidence of assignment of a focal point person (FPP) in charge of climate Change	From the office of the CAO/town clerk, obtain and review the assignment and acceptance letters of the FPP
	Evidence that local governments mainstream CC interventions in their development plans consistent with NCCP	From the Planning Unit, obtain and review the five-year development plan to ascertain if CC concerns were mainstreamed in various sectors consistent with NCCP
	Evidence that local government annual budgets reflect budgetary allocations for CC concerns that were raised in theirlocal development plans	From the head of finance, obtain and review the annual budget of the previous financial year to establish whether it reflects budgetary allocations to address climate change issues that were raised in local government plans
	Evidence that the LG mentored and sensitised other staff and community leaders on CC adaptation and mitigation	From HRD/FPP, obtain and review different documents like activity/training reports, circulars, proposals for sensitisation and capacity building on CC mitigation and adaptation
	Evidence that the LG implemented CC interventions raised in the LG development plan	From quarterly performance reports submitted to MFPED, establish whether issues raised in the local government plans were implemented
	Evidence that CC-specific issues were identified and analysed during the capacity building needs assessment and identified gaps addressed in their capacity building plans	From HRD, obtain and review the capacity building needs assessment report to establish evidence that climate change specific issues were identified and analysed during the capacity building needs assessment and gaps identified were included in the capacity building plans
		If there is evidence of indicators 1, 4, 5 and 6 score 2 for each or else score 0. Score 1 each if there is evidence of indicator 2 and 3

5.4 Plans for national-level integration

"Identifying entry points for integration of climate change in the national frameworks is one of steps of addressing climate change and its impacts. Therefore, inclusion of CC indicators in the OBT and LGAT opens a new chapter in Uganda's efforts in addressing climate change and its impacts."Aaron Werikhe, M&E research officer, NPA

Once the indicators are approved by the OPM, they will be included in the OBT and LGAT for regular tracking, and all districts will start reporting against them on a quarterly and annual basis.CAOs should work together with CC FPPs to ensure that CC in districts reflect on their achievements against CC indicators, limitations and priorities at their quarterly review meetings. We also recommend a national multi-sectoral annual review meeting, amid-term evaluation halfway through the five-year strategic planning period and an end of term evaluation. National CC indicators should be reviewed after every strategic planning period to sieve out any that are redundant or less critical and to reprioritise those that are essential.

The CCD will coordinate with key ministries, ACCRA and USAID's FTF project to ensure the integration of indicators is finalised by the beginning of the fiscal year 2016/2017

Lessons learnt

The process of developing national standard climate change indicators for Uganda underlined the success of using a bottom-up approach and building consensus through participation. Building and sharing knowledge and skills and working together makes the process sustainable and more effective. Adaptation is a long-term process: our experience in Uganda shows that using new approaches like TAMD will help countries develop effective long-term monitoring systems.

6

In this closing section, we discuss the lessons that emerged from the process of developing standard CC indicators for Uganda's OBT and LGAT.

Use evidence from the bottom up: Using grassroots CC data and information to inform national-level priorities gives credibility to the programmes or projects that the government proposes, budgets and rolls out through the different sectors and local governments.

Participation builds consensus: Although they are costly and time-consuming, participatory process enhance community buy-in and ownership of government programmes and projects. This process to incorporate CC indicators into two national government budgeting and assessment tools, involved multiple actors – from 28 local governments, communities, all governments sectors, civil society and development partners – and multiple meetings. This level of participation ensured the national validation process of the indicators went smoothly and was supported by the two targeted ministries of finance and local government.

Building knowledge and skills: Through TAMD, grassroots CCA and DRR knowledge was shared at sectoral and national levels. TAMD's rigorous processes in developing, vetting and validating the indicators enhanced the M&E capacities of various government ministries, departments and agencies, which is critical to ensure the system will continue to work beyond the ACCRA project.

Coordination and harmonisation: This process has been one of the best examples in the region where coordinating similar processes has been successful. Different actors were developing indicators at all levels independently of each other. The CCD took charge and insisted on coordination between the different entities. With MWE, ACCRA and FTF worked together to encourage more people to attend meetings, bring in more expertise and harmonise the process. As a result, ownership of the final product is shared equally among all stakeholders for the betterment of Uganda. Coordination improved the overall effectiveness of the process.

Climate change or development indicators? In a developing country like Uganda, some CC indicators are similar to development indicators. This is not necessarily a problem. The difference is that adaptation programmes and projects need to factor in CC scenarios to enhance development. Using climate trend data to determine adaptation, risk management, mitigation and development will be crucial in assessing the success of the standard national CC indicators. These included some of the NDP II CC indicators and will assist in tracking progress against NDP II targets, which contribute towards Uganda's Vision 2040 and sustainable development goal targets. The M&E framework is an opportunity to strengthen the country's readiness to access adaptation and mitigation financing. Traditional government output-oriented M&E systems are not effective in evaluating the outcomes for long-term impact, but adaptation is a long-term process. Reinforcing M&E systems with new approaches like TAMD will help countries develop the long-term monitoring systems they will need.

Conducive country policy frameworks help develop climate change M&E: Uganda already had an enabling environment for successfulCC adaptation. It had already developed the NCCP with its implementation strategy, and had integrated climate change into the NDP II. The CCD was working on the PMF, developing indicators to monitor the implementation of the NCCP. This provided clear entry points for developing local-level CCA indicators to feed into the national level processes.

A partnership approach is key to success: Partnerships between like-minded parties – including national and local government sectors, UN agencies, international and national non-governmental organisations– is important for success. In Uganda, the linkage between ACCRA, IIED, LTS Africa, FTF, FAO, CARE International and key government ministries made the process fully participatory, with high levels of ownership at both local and national levels. Sharing the costs made the process cheaper to implement, from the community to national levels.

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Appendix 1. Participating ministries, departments and agencies

SN	MINISTRY/DEPARTMENT/AGENCY
1	Directorate of Water Resource Management (DWRM)
2	Ministry of Agriculture Animal Industries and Fisheries (MAAIF)
3	Ministry of Energy and Mineral Development
4	Ministry of Finance Planning and Economic Development (MoFPED)
5	Ministry of Gender, Labour and Social Development (MGLSD)
6	Ministry of Health (MoH)
7	Ministry of Lands, Housing and Urban Development (MLHUD)
8	Ministry of Local Government
9	Ministry of Tourism, Wildlife and Antiquities (MoTWA)
10	Ministry of Trade Industry and Cooperatives (MTIC)
11	Ministry of Water and Environment (MWE)
12	Ministry of Water and Environment – Climate Change Department (CCD)
13	Ministry of Works and Transport (MOWT)
14	National Agriculture Research Organisation
15	National Forestry Authority (NFA)
16	National Planning Authority (NPA)
17	Office of the Prime Minister (OPM)
18	Uganda Bureau of Statistics (UBOS)
19	Uganda National Meteorology Authority (UNMA)
20	Uganda Wildlife Authority (UWA)
21	Ministry of Water and Environment – Water for Production Department

Appendix 2. Participating districts

	DISTRICT LOCAL GOVERNMENTS
1	Amuru
2	Bugiri
3	Bulambuli
4	Bundibugyo
5	Bushenyi
6	Dokolo
7	Gulu
8	Ibanda
9	Iganga
10	Isingiro
11	Kamuli
12	Kamwenge
13	Kapchorwa
14	Kaakwi
15	Kasese
16	Kiboga
17	Kotido
18	Lira
19	Luwero
20	Mayuge
21	Mbale
22	Mubende
23	Nakaseke
24	Nakasongola
25	Nakasongora
26	Otuke
27	Oyam
28	Pader
29	Sironko

	URBAN AUTHORITIES
30	Kampala Capital City Authority
31	Fort Portal Municipality
32	Jinja Municipality
33	Uganda Local Government Authorities Association
34	Urban Authorities Association of Uganda
35	Mbale Municipality
36	Gulu Municipality

Acronyms

ACCRA	Africa Climate Change Resilience Alliance
CAO	chief administration officer
CC	climate change
CCA	climate change adaptation
CCD	Climate Change Department (formerly Climate Change Unit)
CSO	civil society organisations
DRR	disaster risk reduction
DTPC	District Technical Planning Committee
EEA	Enabling Environment for Agriculture
FTF	Feed the Future
GoU	government of Uganda
IIED	International Institute for Environment and Development
LGAT	local government assessment tool
M&E	monitoring and evaluation
MoFPED	Ministry of Finance, Planning and Economic Development
MoLG	Ministry of Local Government
MWE	Ministry of Water and Environment
NCCP	National Climate Change Policy
NDP	National Development Plan
NPA	National Planning Authority
OBT	output budgeting tool
OOB	output oriented budgeting
OPM	Office of the Prime Minister
PMF	performance measurement framework
SDG	sustainable development goals
TAMD	Tracking Adaptation and Monitoring Development
ToT	training of trainers
UNFCCC	United Nations Framework Convention on Climate Change
USAID	United States Agency for International Development

Globally, there is increasing recognition of the need to track climate change adaptation and disaster risk reduction progress. But the ability of countries and development partners to do this is constrained by the complex nature of adaptation and the absence of measurable outcomes or indicators to judge adaptation and its effects on a country's overall development.

This report documents and draws some lessons from the highly participatory,year-long, bottom-up process to develop climate changeindicators for inclusion in Uganda's existing local and national monitoring and evaluation tools and frameworks.

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