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TECHNICAL REPORT

# SYNTHESIZING GOOD PRACTICES IN CLIMATE ADAPTATION ASSESSMENTS

## SUMMARY REPORT



**February 2016**

This document was produced for review by the United States Agency for International Development. It was prepared by Chemonics and Foundations of Success for the ATLAS Task Order.

This document was produced for review by the United States Agency for International Development. It was prepared by Chemonics International, Inc. and Foundations of Success for the Climate Change Adaptation, Thought Leadership and Assessments (ATLAS) Task Order No. AID-OAA-I-14-00013, under the Restoring the Environment through Prosperity, Livelihoods, and Conserving Ecosystems (REPLACE) IDIQ.

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Cover Photo: Lara Rall, USAID Resilience in the Limpopo River Basin (RESILIM) program, 2015. Students and neighbors in the Moreleta Park area of Pretoria, South Africa, count macroinvertebrates as a means of measuring the health of a nearby stream. Local monitoring can lead to improved water quality and reduced vulnerability to climate change.

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February 2016

Prepared for:

United States Agency for International Development  
Climate Change Adaptation, Thought Leadership and Assessments (ATLAS)

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# ACRONYMS

ARCC	USAID's African and Latin American Resilience to Climate Change Project
ATLAS	USAID's Climate Change Adaptation, Thought Leadership and Assessments Project
CCA	climate change adaptation
CCVA	climate change vulnerability assessment
CDCS	Country Development Cooperation Strategy
CMP	Conservation Measures Partnership
CRDF	USAID's Climate-Resilient Development Framework
DFID	United Kingdom's Department for International Development
FtF	Feed the Future
GIZ	Germany's Deutsche Gesellschaft für Internationale Zusammenarbeit
IPCC	Intergovernmental Panel on Climate Change
IUWASH	USAID's Indonesia Urban Water Sanitation and Hygiene Project
KII	key informant interview
M&E	monitoring and evaluation
PAD	Project Appraisal Document (USAID)
RDMA	USAID's Regional Development Mission for Asia
RESILIM	USAID/Southern Africa's Resilience in the Limpopo River Basin Program
TOC	theory of change
USAID	United States Agency for International Development

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# EXECUTIVE SUMMARY

Achieving successful climate change adaptation (CCA) is a top priority for the United States Agency for International Development (USAID). Efforts in recent years focused on drawing lessons from experience conducting climate change vulnerability assessments (CCVAs) and developing best practices for improving CCVA implementation and the use of CCVA results for informing CCA programming. A wide range of approaches and tools are available for conducting climate adaptation assessments.

The purpose of this document is to summarize approaches taken for a set of CCVAs completed by USAID and to identify good practices to help design CCVAs effectively, obtain useful results and assure that those results are reflected as specific CCA interventions in USAID programming. This report pulls from three interconnected activities:

- An analysis of previous USAID CCVAs that evaluates uptake of assessment results into adaptation programming.
- A review of other donors' CCA development frameworks to identify ways of improving current practices in CCVA.
- Findings from an experts' workshop held in November 2015 that discussed the results of the analysis of USAID CCVAs and the donor CCVA framework review, solicited input on both from participants, and through this consultative process identified opportunities and next steps to improve uptake from CCVAs.

## FINDINGS

### CLIMATE CHANGE VULNERABILITY ASSESSMENT UPTAKE

The authors reviewed six USAID-funded CCVAs – conducted in the Dominican Republic, Indonesia, Malawi, the Lower Mekong River Basin, the Southern Africa Limpopo River Basin and Uganda – to determine the overall effectiveness of each one in terms of uptake of CCVA results in USAID programming. We used a set of criteria to evaluate each CCVA, including CCVA adherence to the USAID Climate-Resilient Development Framework (CRDF), stakeholder perceptions of CCVA quality, and tangible evidence that CCVA results translated into specific programmatic CCA actions. Our work indicates that overall these CCVAs focused on the concept and design phases of the CRDF and that their analytical results were well-perceived by stakeholders. However, our examination also concludes that translation of analytical results into actionable CCA interventions (and implementation of those interventions in programmatic activities) has been uneven.

### DONOR CLIMATE CHANGE ADAPTATION FRAMEWORKS

The authors examined the frameworks governing CCA development for USAID, Germany's Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), the World Bank, and the United Kingdom's Department for International Development (DFID). We compared these



frameworks with one another and used the biodiversity-focused Conservation Measures Partnership (CMP) framework as a standard against which to compare the robustness of each donor framework. The CMP framework covers the full project cycle and stresses adaptive management, therefore making it a reasonable measuring stick for this exercise.

Our analysis shows that the USAID and World Bank frameworks are the most comprehensive in terms of addressing the complete project cycle (e.g., conceptualize, plan actions and monitoring, implement actions and monitoring, analyze and adapt, and communicate findings). The analysis also shows that all of the frameworks emphasized the front end conceptualization and design stages in the process and focused less on the downstream stages. An important finding consistent with this conclusion is that across the board, greater emphasis is needed to connect CCA activity *design* to CCA activity *implementation*.

## RECOMMENDATIONS

Based on the review of previous USAID CCVAs and other donor CCA frameworks, this report makes the following recommendations to effectively design adaptation assessments and provide useful information that is incorporated into climate adaptation programming. We used the stages of the CRDF as an organizing principle, but many of the recommendations should guide work throughout the stages of the framework.

### Scope

**In the scope step of the development planning process, clearly identify the intended use of the CCVA results** for the strategic development of programs and activities to ensure greater uptake into programming.

**Emphasize the use of champions during and after the CCVA process.** Identifying and ensuring the prolonged support of champions — both internal and external to USAID — before, during and after the CCVA is complete is key to improve uptake of CCVA results into development programming internal and external to USAID.

### Assess

**Enhance the conceptualization phase** of CCA interventions — for analytical, documentation and communication reasons — through the use of conceptual models/impact chains.

### Design

**Use standard evaluation tools to guide the selection of interventions.** Improve systems to identify candidate interventions and prioritize among those interventions before deciding what to fund. Furthermore, clearly articulate specific goals and objectives of selected climate change interventions.

**Use and test an explicit theory of change (TOC) to practice adaptive management and improve CCA.** The report offers an overview of several tools that can be used to better align CCVAs for uptake into programming:

- **Situation models** to help teams clarify the pathways to reduce vulnerability, identify adaptation options, develop prioritization criteria, and select the most strategic adaptation interventions.
- **TOCs** to test critical assumptions and practice adaptive management to improve CCA.
- **Graphic results chains** for measuring and evaluating the effectiveness of the intervention, learning what is and is not working, and making necessary course corrections.

### Implement and Manage

**Use flexible funding mechanisms to maximize scope for adaptive management:** Because CCA programming is still a relatively new area of development, **adaptive management** is all the more critical. New scientific findings continue to emerge and CCA practitioners are still learning about adaptation — and identifying maladaptation — as they manage projects and activities. All development projects that take climate change into consideration should be designed and implemented with flexible funding mechanisms and activity designs that allow for adaptive management. Our assessment revealed that mechanisms such as cooperative agreements and contracts that are effort-based, rather than performance-based, should provide sufficient scope to make course corrections in response to emerging information and changes in socioeconomic, ecological and climatic conditions worldwide.

### Evaluate and Adjust

**Align indicators and monitoring and evaluation (M&E) plan to TOC.** Management effectiveness M&E specifically gauges changes in intermediate results along a TOC to determine if a specific strategy, intervention or suite of interventions is achieving its intended results.

# I. BACKGROUND

The 2014 Executive Order on Climate-Resilient International Development requires U.S. government agencies to systematically factor climate resilience considerations into their international development activities. A five-year Global Climate Change and Development Strategy guides USAID's climate change work, with the goal to "enable countries to accelerate their transition to climate-resilient low emission sustainable economic development" (USAID, 2012). The three overarching strategic objectives are to: "(1) Accelerate the transition to low emission development through investments in clean energy and sustainable landscapes; (2) Increase resilience of people, places, and livelihoods through investments in adaptation; and (3) Strengthen development outcomes by integrating climate change into Agency programming, learning, policy dialogues and operations" (USAID, 2012).

In all, USAID's support for climate-smart development reaches more than 50 countries with a budget of approximately \$335 million per year. Two-thirds of it is delivered in-country by USAID Missions. The other third is delivered via regional and global mechanisms, including through the Washington, D.C.-based Office for Global Climate Change, found within the Bureau for Economic Growth, Education and Environment (E3). The three pillars of USAID's climate change activity and finance are climate change adaptation, clean energy and sustainable landscapes. In addition, USAID stresses the use and integration (i.e., uptake) of good climate change information and practice into all USAID programs (USAID, Global Climate Change Initiative).

USAID's Climate Change Adaptation, Thought Leadership and Assessments (ATLAS) project is a global program that supports USAID's commitment to climate-resilient development. ATLAS improves the quality and effectiveness of USAID's and countries' development programs to reduce climate risks through tested and harmonized approaches to assessment, thought leadership and capacity building of USAID and its partners.

CCVAs are increasingly used to identify potential impacts and identify and prioritize CCA options to reduce these impacts, moderate harm or exploit beneficial opportunities of existing and emerging climate change-related hazards and resulting stressors. Ultimately, the effectiveness of a CCVA is measured by the extent to which its results are strategically applied to CCA programming. One activity within ATLAS is to provide guidance for integrating climate change risk management and adaptation into USAID design and implementation of sectoral and cross-sectoral programming.

To ensure consistency in the terminology used throughout this report, a Glossary of Terms is available in Annex A.

## II. ANALYSIS OF UPTAKE OF CCVA RESULTS INTO ADAPTATION PROGRAMMING

The assessment team reviewed six CCVAs recently funded by USAID and assessed the extent to which the CCVAs' adherence to USAID best practices and incorporation of lessons learned led to more strategic application or "uptake" of CCVA results into CCA programming (see box for definition). Based on this uptake assessment, this report presents an initial set of recommendations for improving the strategic uptake of CCVA into CCA programming.

### DEFINING UPTAKE

Uptake is defined as the incorporation of CCVA results into CCA interventions in USAID programming at all levels, as well as the programs of USAID partners, including host country government agencies and policy makers, international development organizations and other public and private donors. Evidence of uptake includes the use of CCVA results to develop new, stand-alone CCA projects and activities or the mainstreaming (or integration) of CCVA results into new or existing projects and activities.

## METHODOLOGY

### USING A THEORY OF CHANGE FOR STRATEGIC UPTAKE OF CCVA RESULTS INTO CCA PROGRAMMING

As a first step in the assessment process, the assessment team developed a TOC to describe how a CCVA's adherence to USAID best practices and integration of lessons learned should lead to more strategic CCA programming and ultimately accomplishment of development goals. A results chain diagram was used to depict the TOC. A results chain (see box) is a box-and-arrow diagram that illustrates how an intervention and related specific actions should contribute to achieving desired results (outcomes); arrows in the results chain are used to depict "if-then" causal linkages, or assumptions, in the TOC (Figure 1).

### DEFINING GRAPHIC RESULTS CHAINS

A graphic results chain is a tool for illustrating a TOC in greater detail, including the intermediate results needed to reduce vulnerability and achieve USAID development goals and objectives and indicators that provide a framework.

In the results chain (Figure 1), the intervention is to "strengthen development outcomes by integrating climate change adaptation (CCA) into Agency programming." This intervention includes conducting the CCVA using USAID best practices and lessons learned. If this is done, then the initial short-term result will be "CCVA adheres to USAID best practices and lessons

learned.” The next assumption in the TOC is that if the CCVA adheres to these best practices, then this will lead to positive perceptions of the CCVA information — it will be considered credible, legitimate and salient. The next assumption is that if it is considered credible, legitimate and salient, then there will be successful uptake of CCVA recommendations into CCA programming. This will include a portfolio of strategic adaptation interventions being selected and effectively communicated and these interventions being incorporated into USAID project and activity design and/or non-USAID policies and programs, which could be government, donor or another partner organization’s policies and programs. The next assumption in the TOC is that successful uptake will lead to effective CCA implementation and adaptive management (in USAID and/or partner organizations) and this will lead to a reduction in the impact of climate change on people, places and livelihoods, which will contribute to the achievement of development goals. In other words, effective CCA implementation can lead to a reduction in threats to natural resources, conservation or restoration of natural systems, which contributes to the achievement of development goals.

#### HYPOTHETICAL EXAMPLE OF THEORY OF CHANGE

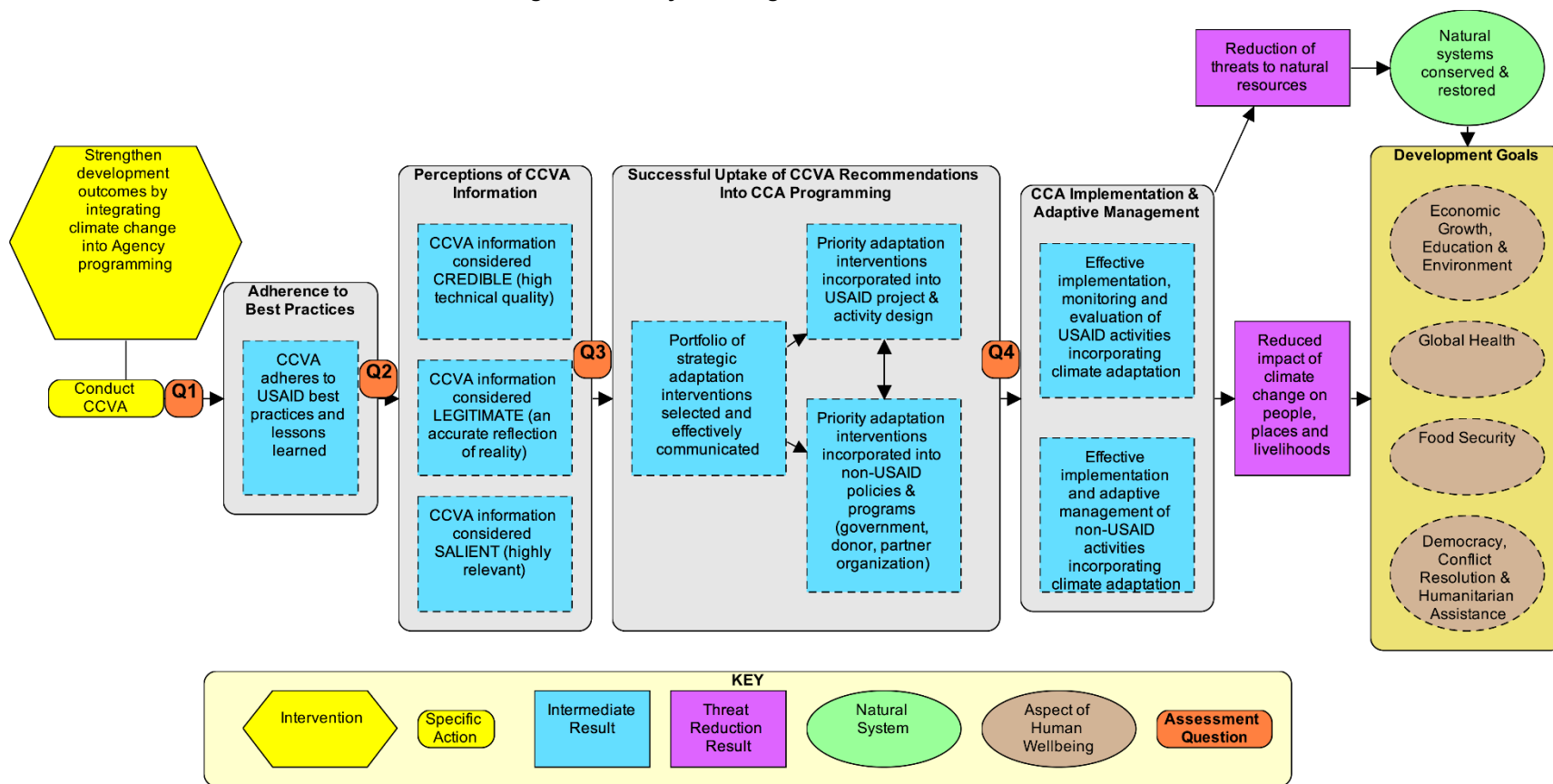
Take a hypothetical example of “success” if this TOC holds true. Assume that USAID has established a development goal to strengthen food security in a specific country and recognizes the importance of addressing climate risks in its agricultural programs. This recognition first requires conducting a CCVA to identify risks and options to address them. If a CCVA is conducted that adheres to USAID best practices and lessons learned, then USAID staff and other relevant stakeholders such as national and local government agencies will consider the CCVA results credible, legitimate and salient, which will lead to uptake of the recommendations in the CCVA.

Assume that the CCVA results show that increasing temperature and changes in seasonality of precipitation are predicted to decrease crop yields on soils that are degraded due to current poor farming practices which compromise soil moisture. The CCVA recommends a variety of climate-smart agricultural practices that reduce sensitivity to increasing temperature and seasonal changes, plus additional activities that increase the adaptive capacity of target groups to prepare for and deal with climate change.

USAID then designs and implements a climate-smart agricultural activity. USAID and the implementing partner work together to ensure that this project identifies clear, measurable vulnerability-related outcomes and indicators that track climate exposure and changes in sensitivity and adaptive capacity.

The contractor implementing the activity practices adaptive management by monitoring progress toward these outcomes and evaluating whether or not they are reaching them. For example, they may monitor farmers’ use of practices, such as crop choice. They may monitor outcomes of the practices, such as the amount of food available, household income and other relevant factors. They may also monitor context variables, such as temperature and rainfall related to erosion, soil health and crop yields. Together, these metrics are used to assess the extent to which the interventions lead to a reduction in farmers’ vulnerability and contribute to the development goal of increased food security. By following this process, the contractors and USAID learn what does and does not reduce vulnerability and improve food security.

Figure 1. Theory of Change for USAID CCVA and CCA



## DETERMINING ASSESSMENT QUESTIONS

The assessment team used the TOC to define the questions to address in this assessment. Each question tests an important assumption along the TOC. Orange boxes on the results chain show which assumption in the TOC each question is intended to test (Figure 1).

### **Question 1. To what extent has CCA programming adhered to USAID best practices and lessons learned?**

In the results chain, the yellow hexagon (far left of the results chain in Figure 1) represents USAID's climate change programming goal, to "strengthen development outcomes by integrating climate change in Agency programming." This question tests the first assumption in the TOC, which is that CCA programming will adhere to USAID best practices and incorporate lessons learned as a means to support achievement of USAID's climate change programming goal (Figure 1, first grey box on left).

### **Question 2. To what extent has adherence of the CCVA to USAID best practices and lessons learned led to perceptions of the CCVA being credible, salient and legitimate?**

This question tests the second assumption in the TOC, which is that adherence to best practices will result in positive stakeholder perceptions of their credibility, salience and legitimacy (Figure 1, second grey box on left). Credibility is defined as the perceived technical quality and adequacy of the findings; salience, the perceived relevance of the information provided; and legitimacy, the level of acceptance of the findings as an accurate reflection of reality.

### **Question 3. To what extent have perceptions of the CCVA being credible, salient and legitimate led to uptake into CCA programming?**

This question tests the assumption that if the CCVA is perceived to be credible, salient and legitimate (Figure 1, second grey box on the left), then there will be successful uptake of CCVA recommendations into CCA programming, including selection of strategic adaptation interventions and their incorporation into USAID projects and non-USAID policies and programs (Figure 1, third grey box from the left). These adaptation interventions may be developed as stand-alone projects or as part of a broader development project. This uptake can occur within the program cycle at USAID, with program and development cycles among USAID partners (for example, a government ministry) or beneficiaries (for example, a community group supporting a municipal service). Uptake within one of these groups can also influence uptake within another. For example, if a ministry or national government adopts an adaptation intervention, members of the donor community may respond by contributing resources to implementation of the intervention.

### **Question 4: To what extent has uptake of CCVA results into CCA programming led to strategic implementation of adaptation interventions to meet USAID development goals?**

This question tests the next assumption in the TOC, which is that implementation and adaptive management of CCA interventions (Figure 1, right-hand grey box) are assumed to lead to reduced vulnerability to climate change (lower purple box) of people, places and livelihoods. CCA interventions may also be aimed at reducing threats (upper purple box) to ecosystems. As

a result of reduced vulnerability of people, places and livelihoods, CCA programming ultimately helps achieve defined USAID development goals. Development goals are achieved by maintaining or enhancing human well-being under climate impacts (brown ovals). CCA programming may also be aimed at improving or maintaining ecosystems (green oval) that support development goals.

Given time, resources and information available for this assessment, the assessment team's focus was on the extent to which the CCVAs led to uptake and implementation of CCA programming aimed at achieving USAID development goals. For the case studies, the CCA programs are too young to have led to a reduction in vulnerability and achievement of USAID development goals yet. In a few years, it would be valuable to assess the ultimate desired impact of these programs (reduced vulnerability and contribution to development goals).

### **SYNTHESIZING USAID LESSONS LEARNED AND BEST PRACTICES**

Next, the team synthesized lessons learned and best practices documents developed by USAID (see Annex B for a description of each). Based on this synthesis the team developed a list of criteria (see Table 3 in Annex C) used to assess the CCA programming case studies to determine their relative effectiveness at achieving strategic uptake. The USAID lessons learned and best practices documents from which criteria were defined included the following:

- USAID's five-step Climate-Resilient Development Framework (CRDF).
- The Lessons Learned Report Findings from USAID's African and Latin American Resilience to Climate Change (ARCC) Project.
- The How-To Guide for Designing USAID Climate Change Adaptation-Funded Projects.

### **SELECTING CASE STUDIES AND REVIEWING RELEVANT DOCUMENTS**

Based on guidance from USAID and availability of written materials and key informants, the assessment team selected six case studies for initial study (Table 1). The focus was on CCA programming related to the agriculture, infrastructure, and water sectors.

The CCVAs undertaken for the ARCC Project activities in the Dominican Republic, Malawi, Mekong and Uganda were specifically developed to inform CCA programming within USAID. They were designed within the context of USAID development approach and goals. For the most part, ARCC programming addresses development and resilience in the sectors of food security and nutrition and ecosystem management.

As a part of its work to improve access to sanitation and clean water in Indonesia, the Indonesia Urban Water Sanitation and Hygiene (IUWASH) Project piloted a Climate Change Vulnerability Assessment and Adaptation Planning Framework. The project used this framework as a platform for systematically engaging counterpart Indonesian water utilities on climate risk reduction in Pematang Siantar (an area in North Sumatra) and Mojokerto (an area in East Java). The IUWASH team conducted CCVAs of raw water sources for selected water utilities, sharing the results with local governments and utility managers, and assisting these stakeholders in the development of action plans to address areas of concern (USAID 2014a).



**Table 1. Summary of Case Studies**

<b>CASE STUDY</b>	<b>USAID PROJECT ACRONYM</b>	<b>TARGET AUDIENCE</b>	<b>SECTOR ASSESSED (OTHER SECTORS ADDRESSED)</b>	<b>CCVA COMPLETION DATE</b>
Dominican Republic	Dominican Republic ARCC	USAID/Dominican Republic	Watersheds and Coastal Resources	2013
Indonesia	IUWASH	Indonesian water utilities (PDAMs) and local governments	Water and Sanitation	2013
Malawi	Malawi ARCC	USAID/Malawi Feed the Future	Agriculture (Fisheries, Natural Resources)	2013
Lower Mekong River Basin	Mekong ARCC	USAID/Regional Development Mission for Asia (RDMA)	Agriculture (Forests, Fisheries, Natural Resources)	2013
Southern Africa Limpopo River Basin	RESILIM	Transboundary Limpopo Watercourse Commission (LIMCOM) and national institutions that comprise it	Water (Biodiversity, Economic Development)	2014
Uganda	Uganda ARCC	USAID/Uganda Feed the Future	Agriculture	2013

The documents reviewed for each case study are listed in the References. Although not all types of written materials were available for every CCVA effort, the materials used for each included:

- Relevant USAID strategy documents guiding or resulting from the CCVA;
- CCVA inception reports;
- CCVA reports;
- Activity reports and work plans;
- Resulting Requests for Proposal or Requests for Assistance;
- Case studies of the activity; and
- Other supporting documents as available.

The desktop review of available documentation was structured to mainly address the first question for our assessment: To what extent have USAID best practices and lessons learned been integrated into CCA programming? To address this question, each CCVA and the related CCA programming documents were assessed against the criteria summarized in Table 3 in Annex C. For each CCVA and CCA program document, the available written materials were coded, compiling relevant information into a standardized survey template (Annex E).

The CCVAs provided information regarding adherence to the criteria corresponding to the scope, assessment and somewhat to the design steps of the process. Reports related to CCA programming provided some information regarding adherence to criteria corresponding to the design, implement and manage, and evaluate and adapt steps in the process. Some additional information for these steps came from the key informant interviews (KIIs) that followed.

## CONDUCTING KEY INFORMANT INTERVIEWS

After completing the desktop review of each case study, KIIs were conducted with USAID staff and implementing partners who are or were closely involved in each case. Given time and availability constraints, our target was to interview one USAID staff member and one representative implementing partner for each project. A KII summary is found in Table 2. The topic guide used for the KIIs is found in Annex F.

**Table 2. Key Informant Interviews Conducted**

CASE STUDY	KII WITH USAID STAFF	KII WITH IMPLEMENTING PARTNER
Dominican Republic	1	0
Indonesia	1	1
Limpopo River Basin	1	1
Malawi	1	0
Mekong River Basin	1	1
Uganda	1	2

## DEVELOPING SITUATION MODELS

We used information from the desktop reviews and KIIs to develop a situation model (see box for definition) to describe each case study.

### DEFINING SITUATION MODELS

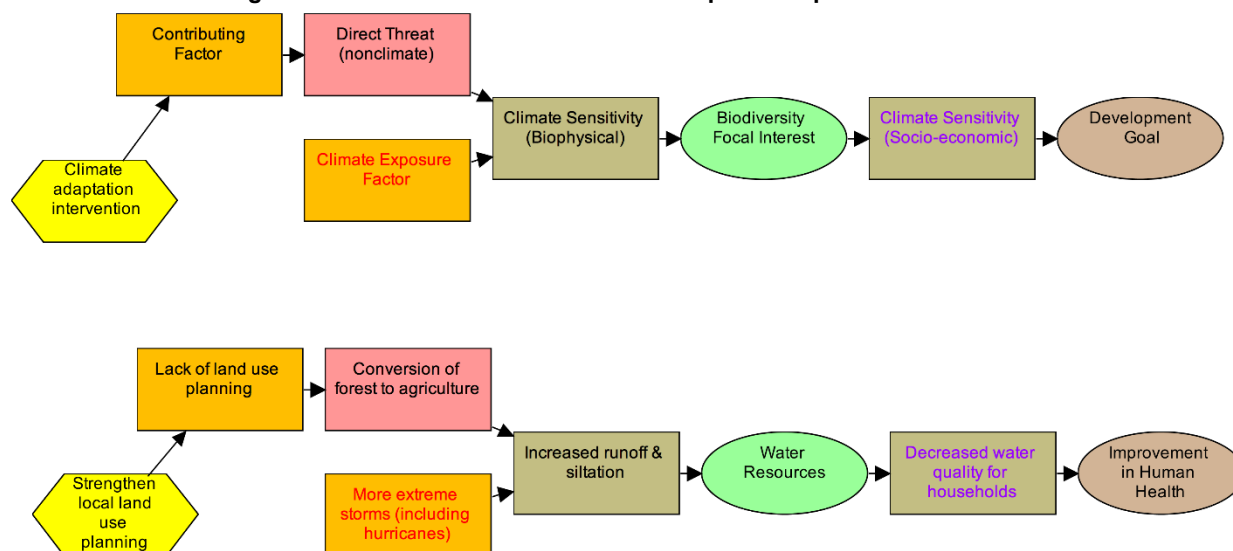
A situation model is a visual representation of the perceived connections and causal linkages between the development goals, climate and non-climate stressors affecting achievement of those goals (including the interactions between climate and non-climate stressors), and the interventions identified to reduce these stressors and barriers.

A situation model describes a team's understanding of an existing situation as part of a problem analysis. The situation models were developed to provide a visual way to better understand the relationships between CCVA results and strategic selection of adaptation interventions for CCA programming. In other words, the situation models helped us to more clearly assess if the design of CCA programming was strategically linked to CCVA results and to achievement of USAID development goals. The situation models are included in the case study descriptions in Annex C.

A generic situation model and a simple example model are included in Figure 2. In this example, a climate exposure factor (more extreme storms, including hurricanes) causes increased runoff and siltation (a biophysical sensitivity). At the same time, conversion of forest to agricultural land (deforestation), exacerbated by a lack of land use planning, also causes increased runoff and siltation. The increased runoff and siltation degrade water resources, decreasing water quality for households (causing a socioeconomic sensitivity), which affects human health (the development goal). The proposed climate adaptation intervention is to strengthen local land use planning. By strengthening local land use planning, the project team believes that it will be able to influence the factors "downstream" of this intervention: decrease deforestation (and perhaps

increase reforestation), decrease runoff and siltation, improve water resources and water quality for households, and contribute to improving human health.

**Figure 2. Generic Situation Model and Simple Example Situation Model**



## ASSUMPTIONS AND LIMITATIONS

This assessment is designed to test assumptions in the TOC about whether adhering to USAID best practices and lessons learned in the CCA programming process influences uptake and mainstreaming of CCVA results within USAID and among USAID partners and beneficiaries, leading to USAID development goals. To do so, one must assume that the written documents reviewed for the case study correctly portray the ordering of project steps, the rationale behind decisions taken, and the nature of relationships among project implementers and stakeholders. Not all of the desired types of written materials were available for every case study (see Sources Consulted for resources used for each case study). Even if all types of materials were available, they would still not tell the whole story of each case study.

Another constraint of this investigation is that internal or procurement-sensitive information such as Concept Papers or Project Appraisal Documents (PADs), which would provide clear evidence of uptake within USAID, were not available for analysis. Again, we relied on KIIs to gain insight into this internal process, but were not able to review the identified documents to verify reported information.

Therefore, the research was expanded to include KIIs with USAID staff and implementing partners. This brought a wealth of new information into the assessment but also some limitations. We did not speak with anyone outside of the project, such as government partners or beneficiaries, to gain a more nuanced perspective. We did not visit sites to verify that the information presented to us is correct. We did not review the policies and documents purported to contain information that came from the CCVAs in this study. In essence, we relied on self-reporting to build the case study.

These limitations should be considered especially when reviewing the information in Annexes C and D, which report on the information gathered from the desktop study and KIs. These tables guide the discussion and preliminary analysis. However, additional work to verify results is required before these tables can be considered definitive.

## **FINDINGS**

### **QUESTION 1. TO WHAT EXTENT HAS CCA PROGRAMMING ADHERED TO USAID BEST PRACTICES AND INTEGRATED LESSONS LEARNED?**

Using information gathered during the review of USAID guidance and frameworks (each described in Annex B), the assessment team synthesized information related to USAID best practices and lessons learned for CCA programming into a list of criteria for effective strategic uptake (Annex C). These criteria were categorized according to the five steps in the CRDF Guide: scope, assess, design, implement and manage, and evaluate and adapt.

The desk review and KIs were then used to provide evidence of whether the case studies adhered to the criteria. The team found more evidence for adherence to criteria in the first three CRDF steps of scope, assess and design than to criteria in the last two steps of implement/manage and evaluate/adapt. Most of the case studies are still too young at this time to have been fully implemented or evaluated. Additional information gathering (and more time) is needed to more completely assess CCA programming adherence to criteria for these last two steps in the CRDF.

#### **Scope**

The “scope” step involves establishing the development context and focus before conducting the vulnerability assessment. For all of the case studies, scoping was completed with ample stakeholder input and participation. All of the CCVAs identified development goals and related climate and non-climate stressors and demonstrated an understanding of the social and political context of the CCVA. In most cases, no available evidence exists of teams gathering and validating input from decision makers about their intended uses of the CCVA findings. Finally, no available evidence exists of teams conducting literature reviews to identify best practices for operating and engaging stakeholders within the given context.

#### **Assess**

Integrated expert teams that included climate change scientists, social scientists, topical experts and stakeholders conducted CCVAs. Some CCVAs were additionally subject to outside peer review. The CCVAs were also linked to USAID development goals for the sector(s). They all identified climate vulnerabilities and they communicated their findings in an accessible way. Key informants considered the CCVAs to be technically sound. A challenge in some cases was to develop and use a communications strategy to keep stakeholders informed and engaged during the assessment process. Another challenge was to release key information to coincide with important policy decisions or the relevant ministry's program cycle in the host country, or with policy, planning and procurement schedules within USAID.

## **Design**

The “design” step involves moving from identification of adaptation options based on the CCVA process to selection of the adaptation interventions to be implemented in CCA programming. There was general adherence to most of the best practices and lessons learned for the design step. Where CCVAs were very large in geographic scale and addressed multiple sectors, the initial CCVAs provided broad categories with a prioritized list of initial adaptation options. Additional steps were then taken to develop an actionable set of adaptation interventions for implementation. Where CCVAs were smaller in scale and more focused in terms of the sector addressed, adaptation options were also more focused and immediately actionable. For all studies, identifying an explicit process to prioritize adaptation options from the CCVA and select a subset of interventions was not possible. For example, was selection based on reducing highest vulnerabilities, feasibility, access to funds, ability to meet multiple needs or other criteria? Finally, where CCA is underway, some activities were clearly implementing interventions that directly addressed vulnerabilities identified in the CCVA, while for other activities, the link to CCVA vulnerabilities was not explicit.

## **Implement and Manage**

Best practices and lessons learned for the “implement and manage” step are related to building flexibility into implementation of interventions so that they can be adaptively managed. They suggest using pilot projects as a way to test interventions before scaling them. This involves developing appropriate indicators and monitoring systems to measure progress and inform adaptive management and share lessons. In general, no evidence was found for adherence to most criteria for the “implement and manage” step. This may be because some activities are just now moving into the implementation phase. In addition to the best practices and lessons learned presented in existing USAID guidance for CCA project implementation and management, key informants identified that it is important to ensure that the mechanisms used to implement CCA are flexible. This is to allow for adaptive management, be it on the part of USAID or the implementing partner. This is described in greater detail under Question 4.

## **Evaluate and Adapt**

Best practices for the “evaluate and adapt” step involve regularly monitoring and evaluating progress based on the M&E plan developed as part of implementation. No evidence was found for adherence to various criteria for this step, because of the relative newness of the CCA programming and of CCA work in general. Key informants expressed that measuring reductions in vulnerability and achievement of development goals is inherently challenging.

## **QUESTION 2. TO WHAT EXTENT HAS THE INTEGRATION OF BEST PRACTICES AND LESSONS LEARNED LED TO THE PERCEPTIONS OF THE CCVA RESULTS BEING CREDIBLE, SALIENT AND LEGITIMATE?**

This section evaluates the extent to which the CCVA results for each case study were perceived as credible, salient and legitimate, based on written materials and KIIs. Credibility is the perceived technical quality and adequacy of the findings; salience is the perceived relevance of the information provided; and legitimacy is the level of acceptance of the findings as an accurate

reflection of reality. This section summarizes the more detailed results found in Table 3 in Annex C, which links each best practice and lesson learned to credibility, salience or legitimacy and shows the level of adherence to each best practice and lesson learned.

### Credibility

Credibility measures perceptions of the CCVA's technical quality. Despite differences in the type and level of detail of CCVA undertaken, key informants reported that all CCVAs were credible in the eyes of key target audiences for uptake of CCVA results. It is clear that USAID intentionally funds CCVAs of high technical quality, engaging regional experts and using the best available data. In Uganda, the Dominican Republic and the Limpopo Basin, the CCVAs provided a quality, quantity and downscaling of data that far exceeded anything available up to that point.

#### KEY FACTORS LEADING TO CREDIBILITY OF CCVA RESULTS

- High-quality data not previously available
- Reputation of CCVA team
- Reputation of USAID as funder

Notably, several key informants identified an important nuance in how credibility was perceived by audiences who would uptake CCVA results. At the local or community level, the quality of the science and results presented was important for credibility. For example, in the case of the Indonesia IUWASH project, a regional university known to have a strong hydrology department developed the climate models. Its strong reputation contributed to uptake of the CCVA results among municipal water utilities and local community groups. However, equally if not more important were two additional factors: (1) whether or not the CCVA results reflected the reality in that place (or legitimacy, discussed below); and (2) the group's relationship to the communicator (whether the communicator was known, respected and trusted).

At provincial and national scales, important factors influencing credibility were the quality of the science (judged by the report itself, the importance of USAID having been the funder, and the reputation of the group carrying out the assessment) and the process (trustworthiness judged through transparency).

The quality of the science was also key to credibility at the international level. USAID CCVAs have been accepted and their results used to influence inputs to and position statements arising from international fora, including the 2014 World Parks Congress in Sydney, Australia, and the 2015 UN Climate Change Conference of Parties 21 in Paris, France.

### Legitimacy

Legitimacy is the level of acceptance of the findings as an accurate reflection of reality. Criteria related to legitimacy largely relate to inclusion of stakeholders in decision making. For the scoping and assessment steps, the level of legitimacy was moderate to high, but lower in the design step. For the ARCC assessments in the Dominican Republic, Malawi and Uganda, internal

#### KEY FACTORS LEADING TO LEGITIMACY OF CCVA RESULTS

- Stakeholder involvement in adaptation options and selecting interventions
- #### POTENTIAL BARRIERS
- Internal processes to identify adaptation options and select interventions
  - Hotspots approach to assessing vulnerability

USAID processes led the design process with relatively lower levels of stakeholder input. Given that these CCVAs were developed primarily to inform internal USAID programming, external stakeholders' perceptions of the legitimacy of CCVA results were less of an issue.

The RESILIM (Southern Africa's Resilience in the Limpopo River Basin Program) and IUWASH CCVAs were more stakeholder-driven throughout the process. In RESILIM's case, the use of a regional peer review group and local researchers ensured close connections to Limpopo watershed conditions. For IUWASH, CCVAs were run collaboratively with municipal water utilities, which were also the key target for uptake, ensuring that results closely matched perceptions of vulnerability and adaptive capacity.

Scaling of data and the hotspots approach may contribute to or detract from perceptions of legitimacy. When a vulnerability map is presented at any scale, it necessarily communicates an average condition that may or may not be reflected at a geography that falls within that pixel. An example comes from the RESILIM project, which used a hotspots approach to identify geographies with relatively high vulnerability. This is an effective and impartial way to target limited resources. However, as one key informant from the project described, some communities not identified as highly vulnerable were vulnerable nonetheless.

Additionally, geographies indicated as highly vulnerable may experience climate impacts in a way that is different from projections. The Mekong ARCC project overcame this through the use of secondary participatory vulnerability assessment and adaptation planning processes. In one example, a valley in Lao PDR was predicted to suffer from flooding during intense rains. When facilitators arrived to initiate the vulnerability assessment, they learned that water stress during times of drought was also an important issue for the community. As a result, the community opted to develop a water management system that mitigated both flooding and drought during different times of the year.

### **Salience**

Salience is the perceived relevance of the information provided. Salience includes three key components: the type of information produced, the way it is communicated, and the timing of delivery relevant to the needs of user groups. To quote one key informant, salience is about providing "the right information, right on time."

#### **KEY FACTORS AFFECTING SALIENCE OF CCVA RESULTS**

- CCVA is specifically directed to inform USAID sectoral strategy
- Strategic timing of results to external or internal information needs

The criteria related to achieving salience included those associated with the match between information produced and end-users' needs, both within and outside of USAID. For the first three CRDF steps, the levels of salience were high. Within USAID, CCVAs that were carried out to inform a sectoral strategy used to develop a PAD, or specified within a PAD to support project implementation, were perceived as the most salient and easily adopted. For example, the Uganda ARCC CCVA was an activity designated within the Feed the Future (FtF) PAD. Its results informed program design for the use of Global Climate Change funds and to bring CCA

into existing FtF programs. CCVAs such as RESILIM and the Mekong ARCC, which were designed with a CCA component within the assessment but fell within USAID's Environment Portfolio, have seen little uptake (yet) by other programs in regional or relevant bilateral Missions. Mekong is still early in its implementation phase, though. RDMA's Urban Development and Resilience Program is responding to some of the Mekong CCVA findings and considerations. RDMA is also collaborating with USAID–Cambodia to support integration of the CCVA results into Cambodia's FtF programming.

Timing here is critical: new information will be absorbed at critical points in the USAID Program Cycle, such as for PAD development or activity design. Information produced at other times may be absorbed and used to adapt ongoing activities, but frequently limited scope exists for course corrections based on new information.

### **QUESTION 3. TO WHAT EXTENT HAVE PERCEPTIONS OF THE CCVA RESULTS BEING CREDIBLE, SALIENT AND LEGITIMATE LED TO UPTAKE INTO CCA PROGRAMMING?**

The assessment team defined strategic uptake as evidence of CCVA results being applied to CCA programming both within USAID and among its partners. Uptake can occur within USAID in programming specifically designed to build resilience to climate change or integrated into other sector-based strategies such as those pertaining to agriculture, democracy and governance, and health. Uptake among USAID partners can occur through the integration or mainstreaming of CCA programming into host country government programs and policies or into the strategies of other donors, development organizations of all types and private businesses.

Key informants believed that perceptions of legitimacy, credibility and salience of the CCVA results all contributed to their uptake into CCA programming. Even though in ARCC assessment cases, lower stakeholder involvement in the development of the CCVAs may have led to lower perceptions of legitimacy of the results, this may not have limited uptake, given that the target audience for uptake was USAID itself. Key informants identified several additional factors that influenced uptake, including the following:

- **A defined pathway for uptake identified and funded at the outset.** Uptake appears to be greatest when there was a specific development goal identified *a priori* that would be addressed in the CCVA and then through CCA programming. For example, the RESILIM and Mekong ARCC projects are both five-year projects designed with maximum flexibility to use CCVA results to inform adaptation interventions also funded within the project. For IUWASH, the implementing team opted to conduct a CCVA specifically to contribute to improving freshwater provision in targeted areas.
- **Timing of CCVA results.** In each of the cases of uptake by groups that were not specifically identified *a priori*, the timing of CCVA results was key to uptake. For example, the Uganda CCVA was released while target districts were undergoing strategic planning. As a result, USAID implementing partners supported 22 districts to integrate climate change into their district plans. As this example shows, information can be readily absorbed during planning and budgeting but not at other times in annual or multi-annual cycles.
- **Capacity within target organizations to use climate information or implement highest priority adaptation options.** A lack of capacity could be due to several factors, including lack



of funding, insufficient human resources, or a mandate that does not allow for mainstreaming or integration of the selected information, approaches or interventions.

- **Presence of a champion who takes it upon him or herself to maintain a sustained program of communication after the report has been released.** If there is not a champion, the information can easily become forgotten or buried. This was overcome differently for different projects and at different USAID missions. In Uganda, the person was a USAID staff member. For the Mekong project, the Chief of Party took on the role. At RESILIM, this is a continuous process of going to project sites and potential partners to share information. At its essence, this is about continuously presenting the information in ways that are interesting to and appropriate for the target audience. We observed that projects with a champion for the CCVA who continues to share information in the year or two after the release of the report are more likely to see uptake among target groups and among project partners and local and international organizations.
- **Alignment with Mission and partners' strategic priorities.** Key informants from USAID Missions including RDMA, Uganda and Malawi all indicated that even if the CCVA results were to be considered legitimate, credible, and salient, competing priorities within the Mission, a lack of appropriate funding sources, or misalignment of the recommendations with USAID's strategic positioning, competitive advantage and the USAID in-country Country Development Cooperation Strategy (CDCS) could also prevent uptake into USAID-funded programming now and in the future. In the case of the Dominican Republic, Mission representatives believe that the CCVA enabled the Mission to design a program and activities (CLIMA) to respond to the climate sensitivities that the country considers highest priority: flooding and reduced water quality. The focus of the CCVA on specific watersheds limited its applicability, though. The CDCS (completed after the CCVA) covers geographic areas not included in the CCVA that are considered high priority for climate adaptation. The lack of national coverage also caused issues for national-level policy decisions or papers, such as the Dominican Republic's draft contribution to the upcoming session of the UN Framework Convention on Climate Change.

#### **QUESTION 4. TO WHAT EXTENT HAS UPTAKE OF CCVA RESULTS INTO DEVELOPMENT PROGRAMMING LED TO STRATEGIC IMPLEMENTATION OF ADAPTATION INTERVENTIONS TO MEET USAID DEVELOPMENT GOALS?**

In the cases assessed, the selection of adaptation interventions to be implemented through CCA programming seemed to clearly align with USAID development goals. This appeared to be especially true when a pathway was defined *a priori* for uptake of CCVA results to inform CCA programming. Here, choices about what to assess, where to assess it, and what results were most critical at what time were closely guided by an overarching strategy more explicitly linked to USAID development goals. Obviously, this pathway is more easily defined when the target audience for uptake is USAID itself for its own programming, and less easily defined when the target audiences for uptake of CCVA results are external to USAID.

However, the process for selection of interventions among options identified in the CCVAs is not clear and explicit. Without a clear TOC for how interventions will ultimately reduce vulnerabilities identified in the CCVA and help achieve USAID development goals, assumptions may not be tested, lessons will be left unlearned, and adjustments to improve effectiveness will not be made.

## RECOMMENDATIONS

The following are recommendations for improving the strategic uptake of CCVA into CCA programming.

### Emphasize the use of champions during and after the CCVA process

The authors found that, in general, CCVA studies adhered well to best practices for scoping and assessment. The scoping step involved stakeholder consultations to build salience and legitimacy. Target audiences considered all CCVAs credible due to a high level of technical quality, stakeholder input and, in the case of RESILIM, peer review. Credibility was also built on the reputation of USAID as an organization that invests in scientific excellence. Our observations suggest that efforts to build credibility, legitimacy and salience are all important contributing factors to the uptake of CCVA results and recommendations.

What then contributed to the observed variability in uptake among audiences? **The presence of individuals or projects championing the use of CCVAs in the one to two years after results are released was key to uptake.** In Missions where results were strongly championed by a USAID employee, greater uptake into follow-on programming was evident. In regions where the Chief of Party of the adaptation project actively engaged outside groups and government leaders, greater uptake into government strategies and international fora was evident. Uptake was observed to be highest in projects such as USAID's Enabling Environment for Agriculture activity and the Indonesia IUWASH project, which directly and explicitly engaged local governments in the design of CCA or water management plans.

Therefore, in addition to the emphasis that USAID currently places on credibility, salience and legitimacy, it is clear that more can be done to improve uptake—both within and outside of USAID—to **identify, engage and ensure the sustained work of champions to promote use of the CCVA in the years after the analysis is completed.**

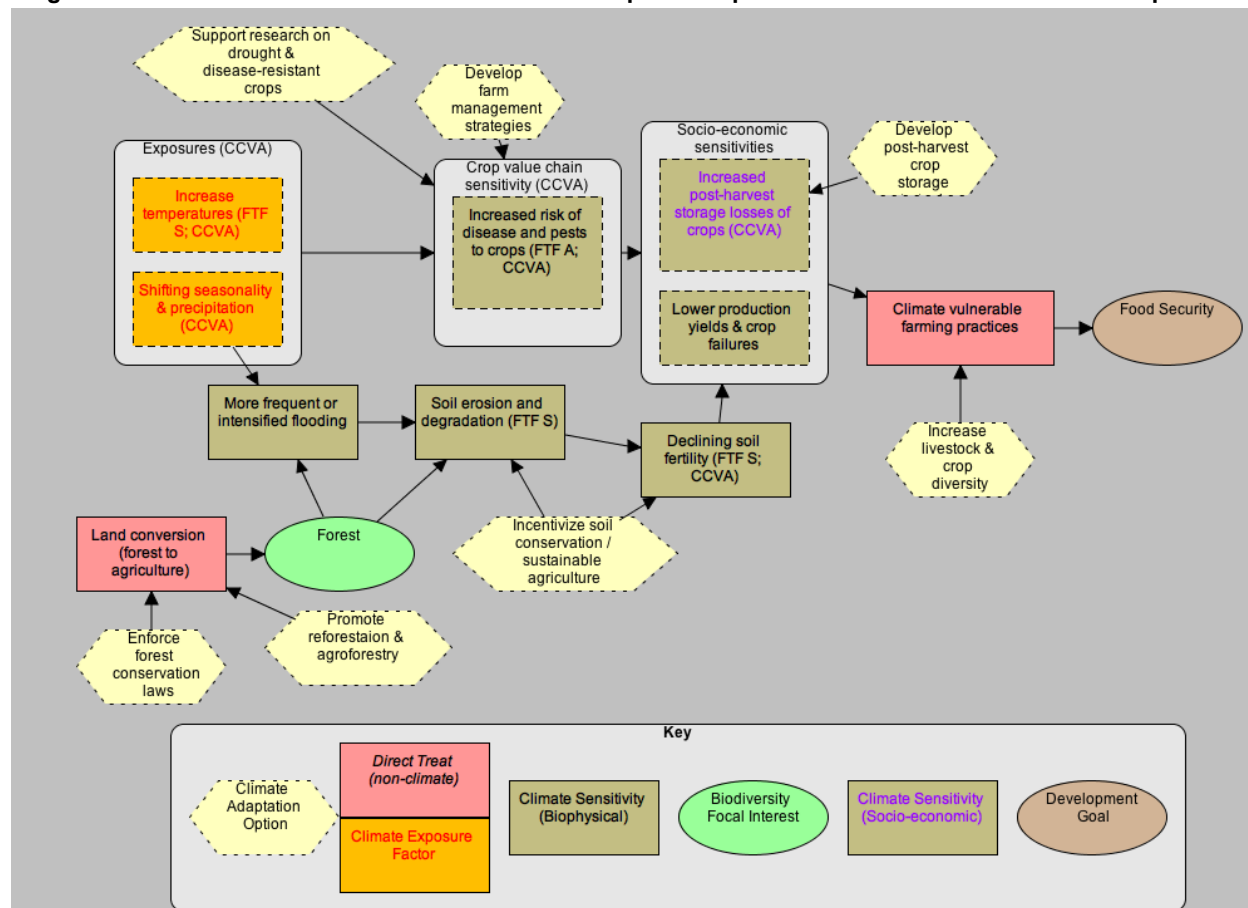
### Use standard evaluation tools to guide the selection of interventions

The development of a long list of adaptation options and the selection of climate change adaptation interventions was a process step observed by the assessment team in all six case studies. In many cases, however, it was clear that the CCVA provided initial adaptation options that were very broad and additional steps were needed to develop an actionable set of adaptation interventions for implementation. In some of the case studies, criteria were established for selection of final interventions and additional steps were taken to make recommendations actionable. For each case, our analysis using situation models identified some important contributors to vulnerability that were not addressed by the long list of adaptation options presented at the end of each CCVA. Additionally, in a few cases it was difficult to discern the linkage between interventions implemented in CCA programming and CCVA results.

We recommend that standard and transparent tools for selection of options and prioritization of interventions should be promoted. Even simple tools, such as the situation models presented in

Figure 2 and Annex D, can contribute greatly when identifying which factors contribute most to vulnerability and which adaptation interventions provide the best chance for improved resilience.

**Figure 3. Use of a Situation Model to Brainstorm Adaptation Options and Select Interventions to Implement**



**Situation models can help a team brainstorm adaptation options and select interventions to implement.** Because they summarize a lot of information in a one-page diagram, situation models can help a team analyze all of the factors contributing to climate vulnerabilities, including climate exposure factors and non-climate threats. This can help the team to think broadly about adaptation options. To see how this works, consider an example based on the Uganda case study (see Figure 3), in which climate vulnerabilities include crop failures and lower agricultural production. This is driven not only by the climate exposure factors of increased temperature and shifting seasonality of precipitation, but also by soil erosion and declining soil fertility due to land conversion (deforestation). Figure 3 includes a hypothetical brainstorm of adaptation options linked to a number of the factors in this situation model. With seven adaptation options, it is unlikely that the team can implement all of them. Seeing how these adaptation options are linked to specific factors in the situation model can help the team weigh the pros and cons of different options and choose what it believes would be the most effective interventions. Does the team want to develop post-harvest crop storage options or promote soil conservation, or both? Which would help farmers more immediately? Which would help farmers more over the

long term? Situation models can help teams explicitly link their adaptation options to vulnerabilities and justify their decision to invest in interventions A and C, rather than B, D and E.

### **Use and test an explicit TOC to practice adaptive management and improve CCA**

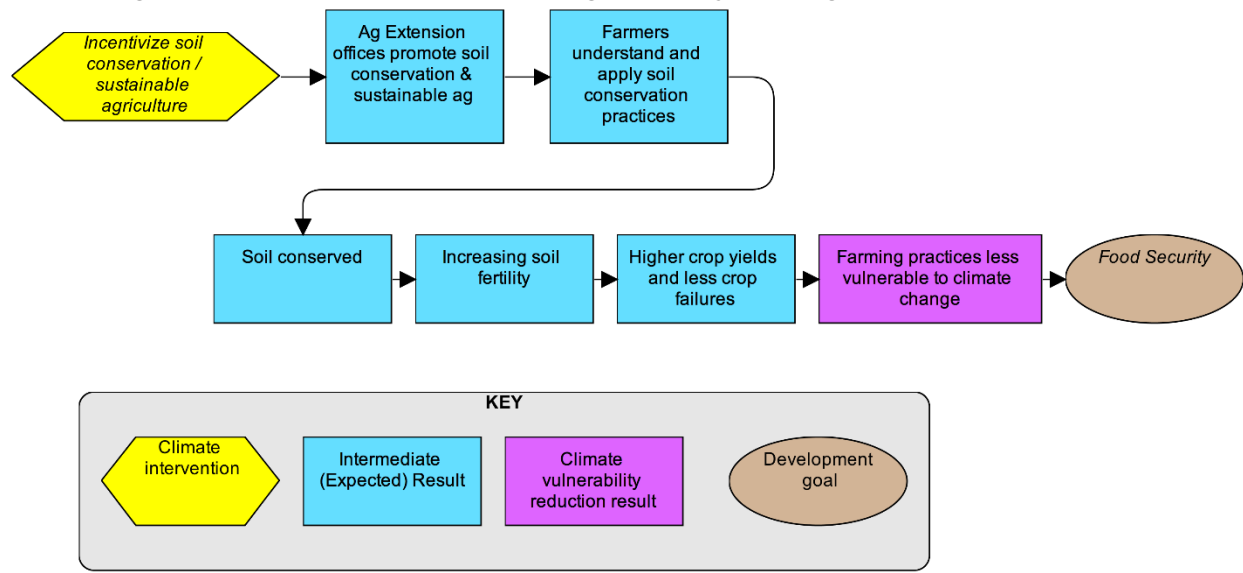
The authors observed that one final challenge for implementation of CCA activities was the lack of easy-to-use indicators to measure changes in vulnerability/risk. The Mekong and Limpopo studies both employed proxy indicators to measure intermediate steps thought to move target groups and ecosystems toward increased resilience. Although a logical framework was used to identify indicators thought to build resilience, it was not evident that these indicators could be linked to key results along a TOC.

In this case, the TOC would be based on a situation model. Figure 4 includes a relatively simple results chain used to show a TOC based on the situation model included above (Figure 3). The intervention is to incentivize soil conservation and sustainable agriculture techniques. The team assumes that if it implements this intervention, then Agricultural Extension offices will promote these techniques, which will lead farmers to understand and apply the practices. If they do this, then soil will be conserved and soil fertility will increase, which will lead to higher crop yields and less crop failures, leading farming practices to be less vulnerable (or more resilient) to climate change, which will contribute to the development goal of food security.

The results chain includes a series of expected results that can be measured. For each of them, it is possible to establish an objective and one or more measurable indicators. For example, for “higher crop yields and less crop failures,” the team could establish an objective saying, “By the end of the 5-year project, corn yield has increased by an average of 20% across the project area.” The indicator would be corn yield, measured as the number of pounds produced per acre per year. The objectives and indicators provide a framework for measuring and evaluating the effectiveness of the intervention, learning what is and is not working, and making necessary course corrections. All of this is essential for adaptive management to improve the practice of CCA and ensure progress toward both resilience and ultimately development goals.

Climate change will have an increasingly profound impact on human lives, the environment and economic development. To adapt to the current impacts of climate variability and change and prepare for future ones, development agencies and governments continually evaluate and measure best practices to mainstream CCA and adaptation planning into their traditional program areas and development goals.

**Figure 4. Example Results Chain Depicting the Theory of Change for a Climate Intervention**



### Use flexible funding mechanisms to maximize scope for adaptive management

Of course, availability and type of funds are important factors in the selection of which activities will be implemented. Within USAID, the need for greater flexibility in funding sources for CCA was clearly evident. For example, a food security strategy such as FtF may focus on only a few commodities. However, CCVA results may suggest that other commodities—or an approach that is not based only on commodities—may hold more promise for overall community resilience and food security as climate changes. Global Climate Change funding can respond to newly identified needs and approaches, opening a window of opportunity to think outside the standard activity menu and try more innovative interventions.

CCA programming is new. Pilot projects, flexibility and adaptive management are critical. This is not only because implementers are still learning about adaptation—and through this process identifying maladaptive strategies in the long term—but also because the risk and impacts of climate change are evolving. All development projects that consider climate variability and change should be designed with enough flexibility to make course corrections in response to future changes in socioeconomic, ecological and climatic conditions.

# III. REVIEW OF CLIMATE CHANGE ADAPTATION FRAMEWORKS

The results of Part II of this report indicate that a more coherent and organized CCA framework could enhance CCVA uptake. Specifically, CCVA results could be better integrated into adaption programming through the use of tools that (1) make the selection of adaptation interventions based on CCVA results more strategic and (2) help focus M&E efforts on measuring the effectiveness of adaptation interventions toward achieving development goals.

In recent years, various bilateral and multilateral donors began to develop frameworks for CCA, within which CCVAs are one component used to define climate risks and suggest adaptation options to implement. CCVAs are designed to help ensure that managers understand the present and possible future risks of climate variability and change, can analyze appropriate adaptation options, and have appropriate metrics in place to measure changes in vulnerability over time.

The purpose of this chapter is to compare various donor agencies' CCA frameworks to determine what seems to have worked elsewhere and provide recommendations to strengthen and enhance USAID's efforts to improve CCVA uptake through a more robust and explicit framework for adaptive management.

The review of CCA frameworks aimed to answer the following key questions:

- Do all of the CCA frameworks include the same high-level steps (e.g., conceptualize, plan actions and monitoring, implement actions and monitoring, analyze and adapt, and communicate findings)?
- Does the CCA framework make a clear link between identification of climate vulnerabilities in the CCVA and selection and implementation of CCA interventions designed to reduce these vulnerabilities?
- Could the use of an adaptive management framework such as the Open Standards serve to support improvements in the design and implementation of CCA programming across the international CCA donor community?

The frameworks reviewed came from USAID, Germany's Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), the World Bank, and the United Kingdom's Department for International Development (DFID). These frameworks were compared to each other and to another framework increasingly used in the conservation and climate change communities: the Open Standards for the Practice of Conservation (the "Open Standards") developed by the CMP as an explicitly adaptive management framework. For each donor, we examined documents that

describe its framework for designing and implementing CCVA and CCA programming and a representative case study.

This initial study includes several important limitations. First, due to the breadth of literature available on the approaches taken by each of the four organizations assessed, we cannot be sure that the documents analyzed are the most representative of the frameworks reviewed. In addition, even within the subset of documents analyzed, we cannot completely discern the full context within which each assessment took place. Achieving this level of understanding would require significantly more in-depth study, involving additional written materials and interviews with representatives of each organization, their implementing partners and host government counterparts.

Our analysis revealed that:

- While the conceptualization phase is often strong in the frameworks reviewed, specificity varies and the opportunity for a simple and common understanding of the current situation in a given site is limited.
- Adaptation option (or intervention) selection is often weak and the mechanisms that link selected adaptation interventions to expected short-, medium- and long-term results are often poorly defined. At best, frameworks identify possible interventions and expected long-term results, leaving intermediate results vague.
- No CCA frameworks reviewed use a TOC approach to remedy this situation. While many of the frameworks rely on the development of metrics from the initial conceptualization phase, **without the use of TOCs, the metrics that are identified often lead to extensive data collection exercises that may not yield the most focused and effective indicators for adaptive management.**

## CONTEXT

The CCA literature contains more than two decades of experience and lessons from around the globe. CCVAs are a critical component of CCA programming but their use and effective integration is often challenging. The inherent challenges associated with CCA work in general and the difficulties in fully integrating CCVAs into programmatic work are well known. For example, Bours and colleagues within the SEA Change Climate Change Adaptation Community of Practice identify several important characteristics of climate change that render design and evaluation of CCA as “methodologically knotty” (Bours, McGinn, & Pringle, 2014). Their 2014 synthesis report reviews and summarizes frameworks for the M&E of CCA and resilience interventions related to international development worldwide. The authors identify several characteristics of climate change that challenge even the best and brightest specialists. These include:

- Long time frames for climate change impacts and effects.
- Uncertainty about actual climate change patterns and effects in any specific locale.
- Shifting baseline data and changing contexts.

- The required measurement of “non-events” such as climate impacts that may or may not occur during the course of study.
- A lack of universal indicators.
- The challenges of assigning contribution versus attribution to any particular intervention.
- The diversity of key definitions and terms.

In addition, in a recent (2014) OECD Working Paper, Dinshaw and colleagues from the World Resources Institute and the International Institute for Environment and Development address some of the issues cited by Bours, McGinn, & Pringle (2014). The team assessed methodological approaches that can be used to monitor and evaluate CCA at project and program levels, focusing on issues related to attribution, establishing baselines and targets, and dealing with long time horizons. They present specific methods to address each of these, including:

- The use of counterfactual scenarios to identify attribution.
- The reconstruction or use of sliding baselines to assess change.
- Adjusting monitoring approaches to identify intermediate indicators when time horizons are long.

The authors conclude that no “silver bullet” approach exists for measuring the impacts and outcomes of CCA, while emphasizing the importance of ongoing learning, evaluation and adaptive management of both interventions and monitoring their impacts over time.

Finally, USAID’s ARCC Project was a large, complex and ambitious project to measurably improve resilience to climate change in many priority areas across the globe. Its 2014 document, *A Tailored View of Successful Adaptation to Climate Change*, builds on the project’s wealth of experience to make practical, field-based recommendations about how to design and measure “transformational” adaptation. The authors recommend strong linkages between CCA and development goals to identify and measure resulting change. They conclude that although a focus on transformation should not be a guiding principle of best practice for CCA, a focus on monitoring, evaluation and adaptive management will enhance the success of adaptation interventions (USAID 2014c).

These reports and others support the recommendations made in the uptake assessment described in Part II of this report, namely that CCVA uptake could be greatly enhanced by placing it more explicitly into an adaptive management framework. Applying adaptive management (see box for definition) to CCA requires clear links between the

#### DEFINING ADAPTIVE MANAGEMENT

The Conservation Measures Partnership (CMP) defines adaptive management as “the integration of project design, management, and monitoring, to provide a framework to systematically test assumptions, promote learning, and supply timely information for management decisions.”

identification of climate vulnerabilities (based on the CCVA), selection of interventions to reduce vulnerability, M&E of the effectiveness of these interventions, and adjustment of interventions to increase their effectiveness. In particular, one recommendation in Part II was to consistently use



and test explicit TOCs to make clear links between the information provided in the CCVAs and the implementation, monitoring, evaluation and adaptation of CCA programming.

## EVALUATION OF DONOR FRAMEWORKS

For each of the frameworks, we reviewed general descriptions available from donor organizations and case study materials made available to us. We then compared these frameworks — including relevant features gleaned from the case studies — to identify gaps and opportunities and provide recommendations to enhance USAID’s efforts to improve CCA programming through a more robust and explicit adaptive management framework.

Table 3 compares the four donor frameworks with the CMP Open Standards to identify gaps and opportunities for these CCA frameworks to be more complete *adaptive management* frameworks that explicitly link elements of project design, management and monitoring to enable practitioner teams to:

- Test their assumptions about how their adaptation interventions will contribute to reducing climate vulnerabilities.
- Promote learning.
- Provide information to support management decisions and increase the effectiveness of CCA programming.

Table 3 shows that some of the CCA frameworks are missing steps, if in fact the donor intends for its framework to be an adaptive management one. It also shows that some frameworks cover a specific step more thoroughly than others.

**Table 3. Summary and Comparison of CCA Frameworks**

CONSERVATION MEASURES PARTNERSHIP	USAID	GIZ	WORLD BANK	DFID
Open Standards for the Practice of Conservation, Version 3.0 (2013)	Climate-Resilient Development Framework (2014b)	The Vulnerability Sourcebook (2014)	Mainstreaming Adaptation to Climate Change in Agriculture and Natural Resources Management Projects (2010)	Defining Disaster Resilience: A DFID Approach Paper (2011)
<p>1. Conceptualize</p> <ul style="list-style-type: none"> <li>Define planning purpose and project team</li> <li>Define scope, vision, targets</li> <li>Identify critical threats</li> <li>Analyze the conservation situation</li> </ul> <p>Tool: conceptual model to analyze the project context</p>	<p>1. Scope</p> <ul style="list-style-type: none"> <li>Identify priority development goals</li> <li>Identify key inputs to achieving development goals</li> <li>Identify needs and opportunities</li> <li>Identify climate and non-climate stressors</li> <li>Define vulnerability assessment questions</li> </ul> <p>2. Assess</p> <ul style="list-style-type: none"> <li>Select vulnerability assessment methods</li> <li>Assess vulnerability</li> <li>Provide actionable information</li> </ul>	<p>1. Prepare the vulnerability assessment</p> <p>2. Develop impact chain</p> <p>3. Identify and select indicators</p> <p>4. Acquire and manage data</p> <p>5. Normalize indicator data</p> <p>6. Weight and aggregate indicators</p> <p>7. Aggregate vulnerability and components of vulnerability</p> <p>Tool: conceptual models to identify indicators that will serve as the baseline</p>	<p>1. Identification</p> <ul style="list-style-type: none"> <li>Stakeholder engagement <ul style="list-style-type: none"> <li>Identify and engage key national institutions</li> <li>Engage local communities</li> </ul> </li> <li>Assess climate risk</li> </ul>	<p>1. Identify and understand the context (e.g., social group, region, institution)</p> <p>2. Identify and understand the disturbance: a shock, a stress or both (e.g., natural hazard, conflict, insecurity)</p> <p>3. Assess exposure, sensitivity, adaptive capacity and the capacity to deal with the disturbance</p> <p>4. Assess the observed or predicted reaction to the disturbance (e.g., survive, cope, recover, learn, transform)</p>
<p>2. Plan actions and monitoring</p> <ul style="list-style-type: none"> <li>Develop goals, strategies, assumptions and objectives</li> <li>Develop monitoring plan</li> <li>Develop operational plan</li> </ul> <p>Tool: results chain to depict TOC and select indicators</p>	<p>3. Design</p> <ul style="list-style-type: none"> <li>Identify adaptation options</li> <li>Select evaluation criteria</li> <li>Evaluate adaptation options</li> <li>Select adaptation options or portfolio of options</li> </ul>		<p>2. Preparation</p> <ul style="list-style-type: none"> <li>Policies and institutions <ul style="list-style-type: none"> <li>Strengthen institutional capacity and the policy framework</li> <li>Promote an enabling environment</li> </ul> </li> <li>Investing in adaptation <ul style="list-style-type: none"> <li>Identify appropriate adaptation measures</li> <li>Carry out economic analysis of adaptation</li> </ul> </li> </ul>	<p>5. Identify resilience-building activities</p> <p>Tool: sustainable livelihoods 'assets pentagon'</p>
3. Implement actions and monitoring	4. Implement and manage	8. Use vulnerability indicators	3. Implementation	

CONSERVATION MEASURES PARTNERSHIP	USAID	GIZ	WORLD BANK	DFID
<ul style="list-style-type: none"> <li>• Develop work plan and timeline</li> <li>• Develop and refine budget</li> <li>• Implement plans</li> </ul>	<ul style="list-style-type: none"> <li>• Incorporate climate information into baseline values and indicators</li> <li>• Build on established implementation and management practices</li> <li>• Adopt a flexible approach to account for continuing change</li> </ul>	for M&E		
4. Analyze, use, adapt <ul style="list-style-type: none"> <li>• Prepare data for analysis</li> <li>• Analyze results</li> <li>• Adapt strategic plan</li> </ul>	5. Evaluate and adjust <ul style="list-style-type: none"> <li>• Measure performance</li> <li>• Build on established evaluation practices</li> <li>• Evaluate impacts of actions on vulnerability</li> <li>• Inform adjustment to adaptation strategies</li> </ul>		4. Supervision and evaluation <ul style="list-style-type: none"> <li>• Monitor progress and evaluate results</li> </ul>	
5. Capture and share learning <ul style="list-style-type: none"> <li>• Document learning</li> <li>• Share learning</li> <li>• Create learning environment</li> </ul>				

## FINDINGS

### RESPONSES TO KEY QUESTIONS

Our analysis yields the following responses to the key questions identified in the introduction to this chapter.

**1. Do all of the CCA frameworks include the same high-level steps (e.g., conceptualize, plan actions and monitoring, implement actions and monitoring, analyze and adapt, and communicate findings)?**

Not all of the CCA frameworks explicitly include the same steps but the USAID CRDF and World Bank frameworks come closest to covering all of the steps included in the Open Standards framework for adaptive management. Some of the CCA frameworks explicitly link to broader internal planning frameworks within which CCVA and CCA work must be incorporated. The DFID framework is a good example of this. Other frameworks, such as the USAID CRDF, allude to a broader program planning context through language such as “Build on established implementation and management practices.”

Almost all of the frameworks are weighted more heavily toward the design and conceptualization phase of project development. For example, the GIZ and DFID frameworks are found almost exclusively in this initial step.

All of the frameworks focus on the development of indicators to measure changes in vulnerability. Heavy emphasis on measurement places greater emphasis on the design and M&E sections of the frameworks.

While some significant similarities exist among the frameworks included in this review, some telling and interesting differences among these frameworks could inform future improvements in multiple approaches.

**2. Does the CCA framework make a clear link between the identification of climate vulnerabilities in the CCVA and the selection and implementation of CCA interventions designed to reduce these vulnerabilities?**

Specific links between the identification of climate vulnerabilities in the CCVA and the selection and implementation of CCA interventions are clearly lacking. The frameworks place a heavy emphasis on design/conceptualization and indicators/metrics development, skipping over the crucial step of identifying priority interventions or adaptation options. The USAID CDRF and World Bank provide the most specific guidance on the selection of adaptation options. Clearly, CCA frameworks could be enhanced by providing clear guidance for the selection and prioritization of adaptation options, assisting planners to determine which options would most likely provide the greatest return on investment given the local context.

One of the significant findings of this review is that while all of the frameworks reviewed do a relatively good job of identifying indicators that *could* be used for M&E, none of them do a good job of differentiating only those that *should* be used for M&E. Indicators that should be

monitored are those that are linked to the specific adaptation options chosen to be implemented. The analysis above distinguishes between status M&E and management effectiveness M&E (see box below). All of the frameworks reviewed focus on status monitoring when, in fact, we believe donors mean to incorporate management effectiveness M&E to determine if the investments they make — through implementation of their chosen adaptation options — lead to tangible and beneficial results. Without explicit management effectiveness M&E, attributing change to investments is challenging, especially over the long timelines of CCA programming. And without this kind of information, practicing adaptive management is next to impossible.

#### DIFFERENTIATING M&E APPROACHES

The world of M&E is often functionally divided into two categories: status M&E and management effectiveness M&E.

Status M&E is designed to detect changes in indicators that generally measure the state of something independent of specific interventions. So, for example, a donor may wish to invest in measurement of the changing vulnerability status of an important food crop even though it has not funded projects that are designed to affect that crop.

Management effectiveness M&E specifically gauges changes in intermediate results along a TOC to determine if a specific intervention/strategy or suite of interventions is achieving its intended results. In this case, a donor may invest in M&E activities designed to gauge the effectiveness of changes in crop vulnerability in a particular site that is attempting different adaption strategies using that donor's funding.

### **3. Could the use of a framework such as the Open Standards serve to support improvements in the design and implementation of CCA programming across the international donor community?**

Most of the frameworks reviewed have the potential to be adaptive management systems. By their very nature, they seek to understand complex systems and figure out how to gauge changes in conditions related to CCA. Each framework has its strengths and weaknesses and so the opportunity to learn from one another is great.

As described above, these frameworks seem to place greatest emphasis on the design phase and the development of indicators during the M&E phase. Although these are important features of an adaptive management framework such as the CMP Open Standards, they are insufficient. CCA work could benefit from many of the concepts and guidance found in the Open Standards, including:

- Specific tools for project conceptualization (including conceptual models) and articulation of TOCs that could support existing approaches in the CCA frameworks reviewed.

- Systematic approaches to identifying and prioritizing adaptation options or interventions most suited to specific local conditions.
- Guidance to streamline M&E systems based on clear TOCs, leading to identification of the most important information that should be collected to adaptively manage CCA projects.

This review demonstrates the many similarities and some of the significant differences of CCA frameworks among various donors working in CCA. It also identifies some clear opportunities to strengthen CCA work across the funding community. Finally, the review sheds light on how an explicit adaptive management framework such as the CMP Open Standards could be used to help strengthen ongoing CCA efforts.

## **GOOD PRACTICES FOR ENHANCING ADAPTIVE MANAGEMENT WITHIN CCA FRAMEWORKS**

The results from the framework analysis lead to identification of the following good practices:

### **Undertake clear conceptualization**

All of the frameworks reviewed place heavy emphasis on the conceptualization phase of CCA interventions. In fact, most of the frameworks are weighted heavily toward the conceptualization phase, as seen in Table 3. Some of the frameworks, however, more explicitly describe how this conceptualization phase is documented. Like the Open Standards, GIZ includes the use of conceptual models, also known as conceptual models and impact chains, to clearly describe key factors and assumptions found in the project or program site. Because climate impacts are generally explained as climate exposure factors that cause sensitivities affecting people, place and livelihoods and climate impacts generally interact with non-climate threats, the cause-and-effect relationships quickly become very complex and difficult to keep conceptually clear. Conceptual models can graphically summarize these relationships, as shown in Figure 17 and 18 of Annex G, and help project teams to consider a broad array of possible interventions to address the situation.

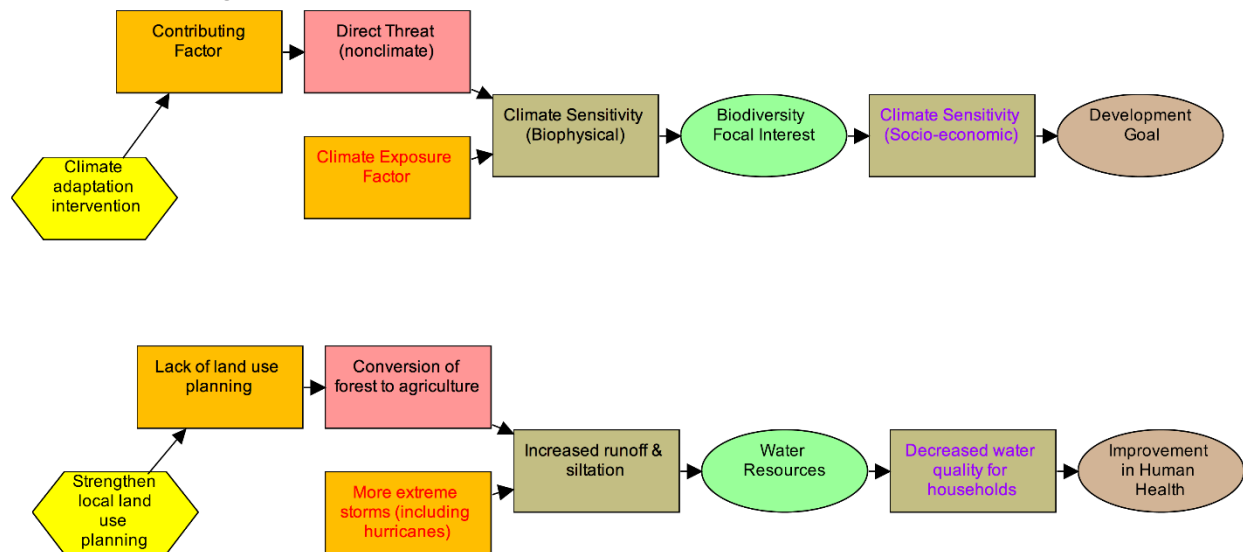
### **Identify likely best interventions**

Most of the frameworks provide guidance for selecting possible “climate options” (potential interventions) once the conceptualization phase is completed. Some provide very general guidance, while others, such as the USAID CRDF and World Bank, provide more concrete tools for thinking about and evaluating potential options. Once adaptation options have been identified, the CRDF suggests selecting criteria to evaluate the options, applying the criteria and selecting final interventions. The CRDF recommends possible criteria for evaluating options, including effectiveness, feasibility, cost and others.

When reviewing case studies for the uptake assessment (Part II of this report), it was clear that while most USAID projects did evaluate a suite of climate options and select final interventions, as recommended by the CRDF, evaluation criteria were not always explicitly described and the justification for selecting interventions A, B and C rather than A, D and E was often not clear. To strengthen this step, conceptual models can be used to clearly link each climate option to one or

more specific factors (including exposure, sensitivity or adaptive capacity factors) in the model. Conceptual models enable the team to visualize which vulnerabilities are the most important and consider alternative ways to reduce the same vulnerability, before evaluating the suite of climate options. This is a critical step because in most cases thousands or even millions of dollars are spent based on its results. The uptake assessment indicated that this step requires strengthening; intervention selection seemed to be fairly arbitrary.

**Figure 5. Generic Conceptual Model and Simple Example Conceptual Model**



In the field of biodiversity conservation, the prioritization of interventions is increasingly addressed as a multi-step process, including an initial prioritization of potential interventions, development of TOCs to understand the logic of each priority intervention (see the next good practice) and then a more rigorous prioritization of each intervention with its TOC. Tools used for the more rigorous prioritization include relative and absolute ranking and structured decision making.

### **Articulate expected results along an explicit TOC (Open Standards/GIZ)**

Even if a framework describes a process through which strategies are identified and selected, no CCA frameworks require or recommend an explicit articulation of expected results along a TOC (or results chain). There appears to be either an implicit understanding that project managers know what the underlying TOC is or a belief that TOCs are not necessary. This, however, limits project managers' ability to more sensitively gauge progress toward CCA goals and objectives and respond in a timely manner if implemented interventions do not show progress toward achieving desired intermediate results. The example of a TOC (results chain) diagram provided in the previous chapter shows clearly where measurable objectives and associated performance indicators are identified for specific results along the results chain. These objectives and indicators enable the team to monitor and evaluate its progress and make necessary adjustments — essentially, to practice adaptive management.

### **Clarify goals and objectives**

None of the CCA frameworks include explicit guidance for developing specific goals and objectives along a theory of chain. The World Bank mentions very broad goals — strengthening institutional capacity and promoting an enabling environment — but these are more akin to vision statements than specific goals and objectives along an explicit TOC. The USAID CRDF mentions the need to identify priority development goals, but these too are often very general. Specific and tangible goals and objectives serve as targets by which managers can gauge progress. Without these clearly articulated aspirations, project managers are challenged to demonstrate success or failure.

### **Identify specific indicators linked to TOC**

One of the greatest strengths of all the frameworks reviewed is their focus on identifying indicators to measure change in climate change vulnerability. Some of the frameworks — GIZ's in particular — tie indicator development directly to formation of the conceptual model/impact chain. Other frameworks, such as the USAID CRDF, rely on the CCVA itself to generate candidate indicators. None of the frameworks, however, link development of indicators to specific TOCs, except for the Open Standards.

Generally speaking, status M&E is not particularly useful to donors who wish to learn and adapt quickly based on feedback from their investments. But good management effectiveness M&E cannot take place without a good TOC because that is what provides the framework for describing expected results and proper indicators to monitor to ensure programming is on track (USAID 2014d). At best, the CCA frameworks reviewed linked indicator development to conceptual models/impact chains but never to explicit TOCs. This means that while the possible pool of indicators to monitor may be good (i.e., the range of indicators) as identified by these frameworks, the specific indicators that are the most important and useful from a management effectiveness perspective are not articulated. This leads to the possibility of collecting a lot of interesting data but not focusing on what is critical, creating possible inefficiencies in program implementation attributable to lack of the right information for adaptive management.

### **Have clarity on how analysis of indicators will be used for adaptive management**

Related to the above point, the backbone of effective adaptive management is a robust and highly focused management effectiveness M&E system. Most of the systems reviewed stopped short — after identifying indicators — of describing how data and indicators should be analyzed for enhanced understanding and decision making related to CCA.

Analysis of data collected around indicators is not supposed to focus on what is interesting, but instead on what is critical to learn and understand during implementation to ensure project resources are used effectively and efficiently. Good analysis in the context of adaptive management, therefore, focuses on a limited yet highly targeted subset of indicators that are best positioned to inform managers of progress. Managers should articulate their information needs at the outset of a project, rather than waiting until all the data come in and then trying to figure out what to do with it at the end.



## RECOMMENDATIONS

Based on identified good practices, several recommendations emerge for improving the use of CCVAs to inform adaptation interventions:

1. Enhance the conceptualization phase — for analytical, documentation and communication reasons — through the use of conceptual models/impact chains.
2. Improve systems to identify candidate interventions and prioritize among those interventions before deciding what to fund.
3. Use a TOC/results chain approach to clearly articulate expected results for CCA.
4. Clearly articulate specific goals and objectives of selected climate change interventions.
5. Align indicators and M&E plan to a TOC.
6. Clarify desired analytical results of CCA interventions based on final TOCs/results chains and prioritize those analyses.

## IV. CONCLUSIONS

The CCVA uptake assessment and review of climate adaption frameworks indicate that clearer implementation pathways are needed to ensure CCVA uptake and to place CCVAs in a more explicit adaptive management framework. Some of the main obstacles to uptake include the lack of a systematic method for evaluation and prioritization of climate interventions, the lack of explicit TOCs for each intervention, and the need for a systematic way to measure results, learn and adapt. Most donor agencies, while often having broad institutional frameworks, did not explicitly insert their CCVA work into these frameworks. In many ways, USAID — at an Agency level — is emerging as a global leader in adaptive management by developing policies and producing guidance including the Program Cycle Learning Guide; Monitoring, Evaluation and Learning (MEL) Plans; Collaborating, Learning and Adapting (CLA); the Revised ADS 200 series; and the Biodiversity Policy and Code to help staff integrate learning and adaptation throughout the Agency's programs.

### RECOMMENDATIONS

Based on the review of previous USAID CCVAs and other donor CCA frameworks, this report makes the following recommendations to design adaptation assessments effectively and provide useful information that is incorporated into climate adaptation programming. The stages of the CRDF are used as an organizing principle, but many of the recommendations should guide work throughout the stages of the framework.

#### Scope

**In the scope step of the development planning process, clearly identify the intended use of CCVA results** for strategic development of programs and activities to ensure greater uptake into programming.

**Emphasize the use of champions during and after the CCVA process:** Identifying and ensuring the prolonged support of champions — both internal and external to USAID — before, during and after the CCVA is complete is key to improve uptake of CCVA results into development programming internal and external to USAID.

#### Assess

**Enhance the conceptualization phase** of CCA interventions — for analytical, documentation and communication reasons — through the use of conceptual models/impact chains.

#### Design

**Use standard evaluation tools to guide selection of interventions.** Improve systems to identify candidate interventions and prioritize among those interventions before deciding what to

fund. Furthermore, clearly articulate specific goals and objectives of selected climate change interventions.

**Use and test an explicit TOC to practice adaptive management and improve CCA:** The report offers an overview of several tools that can be used to better align CCVAs for uptake into programming:

- **Situation models** to help teams to clarify the pathways to reduce vulnerability, identify adaptation options, develop prioritization criteria, and select the most strategic adaptation interventions.
- **Theories of change** to test critical assumptions and practice adaptive management to improve CCA.
- **Graphic results chains** for measuring and evaluating the effectiveness of the intervention, learning what is and is not working, and making necessary course corrections.

### Implement and Manage

**Use flexible funding mechanisms to maximize scope for adaptive management:** Because CCA programming is still a relatively new area of development, **adaptive management** is all the more critical. New scientific findings continue to emerge and CCA practitioners are still learning about adaptation — and identifying maladaptation — as they manage projects and activities. All development projects that take climate change into consideration should be designed and implemented with flexible funding mechanisms and activity designs that allow for adaptive management. Our assessment revealed that mechanisms such as cooperative agreements and contracts that are effort-based, rather than performance-based, should provide sufficient scope to make course corrections in response to emerging information and changes in socioeconomic, ecological and climatic conditions worldwide.

### Evaluate and Adjust

**Align indicators and M&E plan to a TOC.** Management effective M&E specifically gauges changes in intermediate results along a TOC to determine if a specific intervention/strategy or suite of interventions is achieving its intended results.

## OPTIONS FOR OPERATIONALIZING NEXT STEPS

To practice good adaptive management in the context of CCVA execution and use and to stay up-to-date with current changes in USAID policy related to adaptive management (or even get ahead of the curve), pilot applications of adaptive management tools for climate adaptation programming in USAID Missions could incorporate several of the specific recommendations included in the summary of recommended next steps (Table 4 in Annex H) that emerged from the climate adaptation experts' workshop in November 2015. For example, these pilots could include the use of situation models to parse out the complex relationships, linkages and assumptions included in a CCVA, including both climate and non-climate stressors. They could apply decision tools to identify the most strategic climate interventions that respond to the highest vulnerabilities. They could also come up with “fit for purpose” recommendations for

different types of CCVAs and different approaches to improving uptake (for example, highlighting differences in design and process for successful uptake in programs like IUWASH versus the Malawi ARCC versus Mekong/RESILIM-type CCVAs). These pilots could incorporate training for Mission staff and could form the basis for developing guidance with real examples on operationalizing adaptive management within USAID.

Various bilateral and multilateral donors have begun to develop frameworks for CCA within which CCVAs are one component used to define climate risks and suggest adaptation options. USAID could convene these donors to discuss opportunities for making these climate adaptation frameworks more complete *adaptive management* frameworks that explicitly link elements of project design, management and monitoring to enable practitioner teams to test their assumptions about how their adaptation interventions will contribute to reducing climate vulnerabilities, promote cross-mechanism, cross-program, cross-office and cross-donor learning, and provide information to support management decisions and increase effectiveness of CCA programming in a timely and highly adaptive manner.

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# LIST OF ANNEXES

The second volume of this report contains the following annexes:

Annex A: Glossary of terms

Annex B: Key frameworks and guidance for integration of climate change practice into USAID programs

Annex C: Assessment of adherence to USAID best practices and lessons learned

Annex D: Case study descriptions and situation models

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Annex F: Key informant interview topic guide

Annex G: Detailed CCA framework analysis

Annex H: Summary of ATLAS climate adaptation experts' workshop

Annex I: Materials from ATLAS climate adaptation experts' workshop

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