Inception Report: Coordination Capacity Building and Knowledge Exchange Unit

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LIST OF ACRONYMS

ACCFP	African Climate Change Fellowship Programme
ACPC	African Climate Policy Centre
ACDI	African Climate and Development Initiative
Afclix	Africa Climate Exchange
AfDB	African Development Bank
AgMIP	Agricultural Model Intercomparison and Improvement Project
AIACC	Adapting to Impacts of Climate Change Programme
AMMA	African Monsoon Multidisciplinary Analysis
ARF	Applied Research Fund (of the FCFA CCKE Unit)
ATPS	African Technology Policy Studies
AUC	African Union Commission
BRACED	Building Resilience and Adaptation to Climate Extremes and Disasters
BTORs	Back-to-the-office reports
CARIAA	Collaborative Adaptation Research Initiative in Africa and Asia
CCAA	Climate Change Adaptation in Africa
CCKE	Coordination Capacity building and Knowledge Exchange Unit
CDKN	Climate and Development Knowledge Network
CIRCLE	Climate Impacts Research Capacity and Leadership Enhancement
CKB	Climate Knowledge Brokers' network
ClimDev-Africa	Climate for Development in Africa
CoP	Community of Practice
CRIDF	Climate Resilience Infrastructure Development Facility
CSAG	Climate Systems Analysis Group
CSRP	Climate Science Research Partnership
DECC	United Kingdom's Department of Energy and Climate Change
DFID	Department for International Development
DGIS	Netherlands Directorate-General for International Cooperation
DRUSSA	Development Research Uptake in Sub-Saharan Africa
ECA	United Nations Economic Commission for Africa
FCFA	Future Climate for Africa Global Framework for Climate Services
GFCS	Global Framework for Climate Services
ICF	International Climate Fund
KE&C	Knowledge Exchange and Communication
LTMS	Long Term Mitigation Scenarios
MAPS	Mitigation Action Plans and Scenarios
M&E	Monitoring and Evaluation
MOC	Management Oversight Committee
MOHC	Met Office Hadley Centre
MTR	Mid-term review
NC	Network Council
NERC	Natural Environment Research Council
ODI	Overseas Development Institute
PEC	Programme Executive Committee
PIs, Co-PIs, Co-Is	Principal Investigator, Co-Principal Investigator, Co-Investigator
PRG	Programme Review Group
RAPID	Research and Policy in Development
RED	Research and Evidence Division
RPC(s)	Research Programme Consortium(s)
SADC	Southern African Development Community
SARCOF	South African Regional Climate Outlook Forum

SCB	Scientific Capacity Building
SHEAR	Science for Humanitarian Emergencies and Resilience
SSN	SouthSouthNorth
START	Global change SysTem for Analysis, Research and Training
ToR	Terms of Reference
UpGRO	Unlocking the Potential for Groundwater for the Poor
VfM	Value for Money
WMO	World Meteorological Organisation

1. INTRODUCTION

Many Africans are already experiencing the impacts of climate change and while further climate change is inevitable in the coming decades, real economic transformation is still to take place for most of the continent. With much of the recent development gains in climate-sensitive sectors, climate change still presents risks to growth and development in Africa. Simultaneously, adaptation experience is growing in Africa. There is evidence that adaptation will bring immediate benefits and reduce the impacts of climate change. High-quality climate information is crucial for effective disaster risk management and climate adaptation; yet this is not available across many parts of sub-Saharan Africa.

The Future Climate for Africa (FCFA) research programme will increase the quality and availability of such information and build greater expertise in how to apply this in core development areas including health, disaster risk reduction, water, agriculture and food security and infrastructure planning. Its impacts will be to:

Increase the resilience of African people to weather hazards such as droughts and floods;

Safeguard economic development against climate risks over the long-term; and

Increase the effectiveness and value for money of investments in development, disaster risk management and climate change adaptation.

These impacts will each contribute to poverty alleviation through reducing the impacts of immediate climate hazards, like storms, flooding and droughts, and longer-term climate change on vulnerable people.

In realising these aims, the FCFA will push beyond pure research and actively engage the interface between research and practice. It will deliver credible, legitimate and salient information to inform decision-makers and boundary agents with interests in, and influence over, planning and investments for medium- and long-term development.

To this end, the FCFA is structured with a dedicated Coordination, Capacity Building and Knowledge Exchange Unit (CCKE Unit). Its mandate is to maximise the impact of the FCFA. It will execute this mandate through an Impact Strategy consisting of five pillars (Figure 1).

The main aim of the CCKE Unit Impact Strategy is to create enabling environments to realise a central hypothesis of the FCFA's Theory of Change, namely that improved scientific understanding of African climate variability and change with enhanced medium-term climate prediction leads to improved decision-making when coupled with strengthened user knowledge, skills and tailored climate products (Annex A).Therefore, ensuring effective uptake of research will be critical to achieving FCFA's intended impacts.

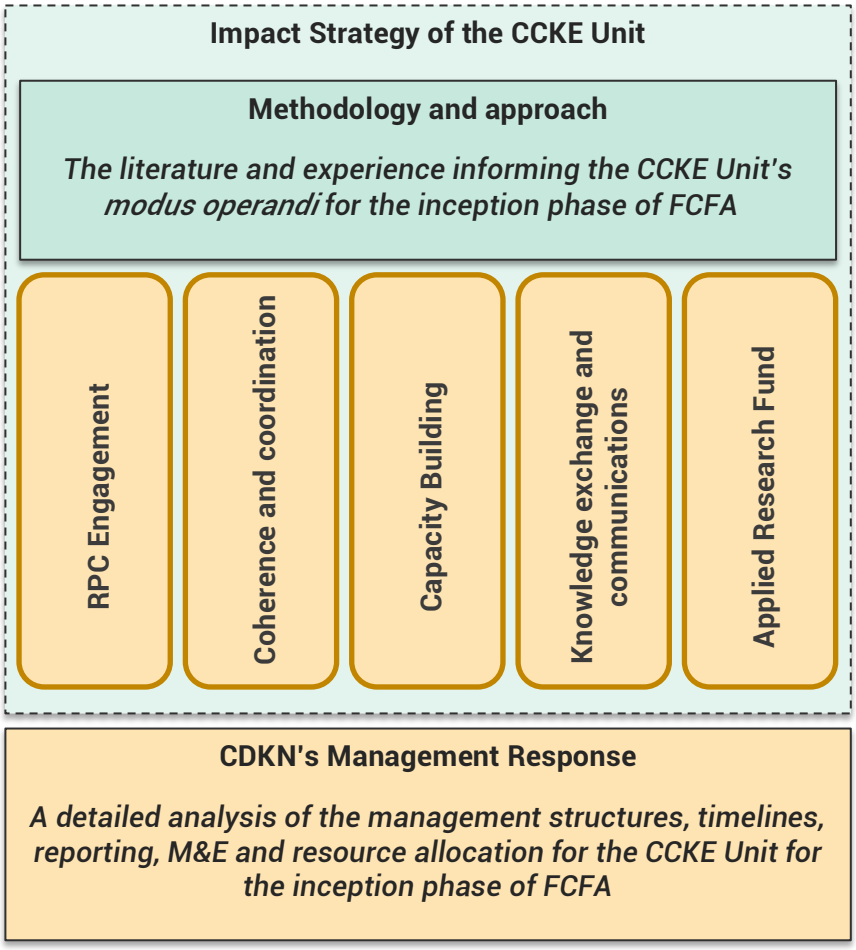

Figure 1: Summary of the FCFA CCKE Unit's Impact Strategy and Inception Report structure. Abbreviations: Climate and Development Knowledge Network (CDKN); Monitoring and Evaluation (M&E).

To this end, the CCKE Unit will undertake activities that:

- Map appropriate African institutions, networks and decision processes that have the interest and influence to act on climate information over the 5-40 year scale;
- Demonstrate the value of considering climate information over the 5-40 year scale in selected decision-making processes to influential stakeholders;
- Translate scientific information into formats that are accessible and actionable;
- Provide strategic user decision-support services; and
- Build the capacity of African scientists, decision-makers and boundary agents;
- Offer constructive challenge and support to Research Programme Consortiums (RPCs) to integrate their research agenda, pilot studies and Pathways to Impact.

The Unit is positioning itself as an African interlocutor that can be flexible and knowledgeable in navigating select research-policy-action interfaces.

In developing an Impact Strategy the Unit is drawing on lessons emerging from the FCFA scoping phase research (to be formally assessed at the end of 2014), extensive organisational experience, and good practice from relevant literature.

Many components of the Impact Strategy and management response require extensive coordination and collaboration with the selected RPCs. This Inception Report is therefore a working document that will be expanded and developed as the FCFA inception phase unfolds.

The inception phase, henceforth Year 0 (Y0) is defined as starting in April 2014, when the contract for creating the CCKE Unit was signed between the Climate and Development Knowledge Network (CDKN) and the Department for International Development (DFID), and ending in April 2015 when the full programme kicks off with RPCs beginning their work. Generally, the Unit is approaching this period as a consultation and strategy development period.

This report outlines a preliminary version of the Impact Strategy consisting of:

1. A detailed set of activities for the Unit's engagement with shortlisted and selected RPCs to inform the other pillars of the Impact Strategy;
2. Present a preliminary overview of the programmes that the CCKE Unit is considering coordinating with and an approach to identifying and prioritising key collaborations and coherence across the FCFA programme;
3. Present the Unit's approach to user capacity building and preliminary activities to co-produce a scientific capacity building strategy;
4. Present a detailed set of activities for knowledge exchange and communications for Y0;
5. Present a preliminary strategy for the management of the Unit's Applied Research Fund (ARF) as well as an initial set of proposed Y0 research topics to be commissioned; and
6. Present an adaptive management response to this Impact Strategy including components of a Monitoring and Evaluation (M&E) framework and updated budget for the Y0.

In Y0, the CCKE Unit will continue to work closely with DFID, Natural Environment Research Council (NERC) and RPCs to refine and strengthen the Impact Strategy to ensure integration between research and research uptake activities.

Research and acknowledgements

The writing of this report was informed by a series of conversations and semi-structured interviews with a wide variety of stakeholders, including researchers and practitioners from various academic institutions and climate change and development programmes over the period January to July 2014[1]. These included workshops and meetings convened as part of the

[1] ***Conversations were held with representatives from the African Technology Policy Studies (ATPS) Network, the University of Stellenbosch, The African Climate Policy Centre (ACPC ClimDev-Africa), Collaborative Adaptation Research Initiative in Africa and Asia (CARIAA), the University of Cape Town (Climate Systems Analysis Group (CSAG) and African Climate and Development Initiative (ACDI)), Aga Khan University (East African Institute), Met Office Hadley Centre (MOHC), NERC, and DFID.***

FCFA scoping phase pilot studies. Additionally, a study of peer-reviewed and grey literature informed this report, together with the practical experience of the CDKN team.

Discussions and readings focused on themes of boundary work, the science-politics interface, African scientific capacity building, user decision-support services, the political economy of specific types of long-lived decision-making contexts in Africa (e.g. infrastructure and national development plans), complementary programmes to FCFA, and coordinating consortia-based, geographically dispersed research programmes.

We would like to thank the numerous researchers and development practitioners who contributed to this report by sharing their experiences, ideas and knowledge. In our research we were particularly aware that pragmatic, context specific African perspectives needed to be adequately represented in the design of the programme.

2. IMPACT STRATEGY

2.1. Objectives

The overall impact of the FCFA programme will be:

1. Increased resilience of African people to extreme weather and climate change;
2. Economic and social development safeguarded against climate change; and,
3. Increased effectiveness and value for money of investment in development, disaster risk management and climate change adaptation through appropriate risk mitigation measures.

The central hypothesis of the FCFA's Theory of Change is that research leads to improved understanding of African climate variability and change with enhanced medium-term climate prediction. This improved understanding leads to improved decision-making when coupled with strengthened user knowledge, skills and tailored climate products.

As such, the objective of the CCKE Unit's Impact Strategy is to ensure that improved scientific understanding leads to improved decision-making.

At a more granular level, the Impact Strategy in its current form outlines the practical steps to achieve the Unit's objectives for Y0, namely:

- To ensure a consistent understanding of the value added that the CCKE Unit can bring to the FCFA programme processes so that the shortlisted RPCs are able to position the Unit effectively in their final submission to NERC;
- To develop a thorough understanding of proposed RPC research, consortia and institutional structures, in order to structure the Unit's proposed boundary work;
- Leverage the work being conducted by like-minded, Africa-focused, and DFID-funded programmes;
- Identify select institutions, decision-makers, and decision processes to which strategic decision support services can be provided around specific adaptation challenges;
- Provide an overarching high-level framework for all FCFA capacity building work;
- Establish a network of climate scientists in Africa and link to existing networks established by related programmes;
- Develop a knowledge exchange and communications strategy that will support the FCFA's research uptake, capacity building, and coordination objectives; and
- Operationalise the Unit's ARF to commission inception phase research.

The Impact Strategy will be targeted at three groups of stakeholders:

1. Decision-makers: The impact of research on decision-makers (i.e. how decisions have changed due to research recommendations being applied to real world situations);
2. RPCs: The impact of process on the scientific community (i.e. how research agendas and methodologies have changed due to involvement with end-users and boundary agents); and
3. Boundary agents: The impact of research and process on the intermediary agents that bridge the science-politics divide in various capacities (i.e. how has the capacity of boundary agents changed to effectively connect research with decision-making).

2.2. Methodology and Approach

In structuring the FCFA programme with a dedicated CCKE Unit that functions independently from the research consortia and the governance units, DFID and NERC have signalled their intention that a novel programme design should spur novel practices.

Whilst collaborative research approaches may be the only way to address the challenges posed by "wicked problems" such as climate change, their establishment and maintenance requires a different approach to traditional, single-institution research (Gonsalves 2014). Understanding the opportunities and challenges that consortium-based research presents will be key to fulfilling the Unit's mandate. A fuller account of the theory underpinning the CCKE Unit's response to the challenge is outlined in Annex C.

In brief:

- The CCKE Unit understands its role as situated within a boundary-spanning collaboration; transversing not only different academic disciplines, where trans- or multidisciplinary might adequately describe a research approach, but also diverse geographic, cultural, institutional, and epistemic contexts and practices where knowledge is constructed at the intersection of research, policy and practice.
- Part of the challenge of executing a coherent, flexible and collaborative research programme can be overcome by placing the capturing and sharing of learning at the heart of the organisational culture.
- Active boundary work is required to construct and manage effectively the interfaces among various stakeholders engaged in harnessing knowledge to promote action. The Unit is employing Clark et al.'s (2011) framework and Shaxton et al.'s (2012) K* Spectrum to structure its approach to the boundary work it may be called on to execute.
- Establishing a successful consortium-based research programme has many elements in common with establishing a successful community of practice (Gonsalves 2014). The CCKE Unit is considering selected insights from community of practice literature to ensure mutual engagement, joint enterprise and a shared repertoire of resources across the FCFA programme (Wenger 1998).
- Varying epistemic cultures between different institutions bear significant importance for how research is conducted and used. Being cognisant of different epistemic cultures (both within the FCFA and with external beneficiaries taking part in pilot case studies and CCKE Unit activities) and pre-empting any incompatibilities will be key to negotiating bridging relationships across the science-politics divide.

- It has been demonstrated that purposeful and strategic interaction between knowledge producers and users through iterative and collaborative processes can support the generation of credible, legitimate and salient knowledge. The Unit will draw on appropriate case studies and experience to assist RPCs in designing and executing co-productive methodologies where appropriate.

3. TECHNICAL RESPONSE

3.1. Engaging with shortlisted and selected Research Programme Consortia

Objective

This engagement process has three over-arching objectives for Y0:

1. To engage shortlisted RPCs to ensure a consistent understanding of the value add that the CCKE Unit can bring to the FCFA programme processes so that the shortlisted RPCs are able to position the Unit effectively in relation to their final submission to NERC;
2. Establish working relationships with the selected RPCs to develop a thorough understanding of their proposed research, consortium and institutional structures, in order to structure the Unit's proposed boundary work; and
3. To offer a constructive challenge to RPCs in their programme design, particularly with regards to designing strategies and processes to ensure research uptake and pilot studies impact - more about learning rather than policing. This role will have a strong internal learning FCFA learning component.

Framework and Approach

In Y0 the CCKE Unit will execute two phases of engagement with distinct objectives in mind and activities to realise these.

- Phase 1: Engaging shortlisted RPCs (September – October 2014)
- Phase 2: Engaging selected RPCs (February – April 2015)
- Phase 3: Collaboration for Year 1 (henceforth Y1, April 2015 – February 2016)

Phase 1

During Phase 1, the CCKE Unit will:

- Inform shortlisted RPCs of the Unit's expertise and capacity and the boundary work services that it can provide and how they may incorporate these services into their full proposals;
- Inform RPCs of the need for boundary work in maximising research uptake to ensure used and useful research; and
- Gain an initial sense of: a) the demand for the Unit's services, b) how the shortlisted RPCs have outlined approaches to identify appropriate users and decision-making processes in relation to pilot studies, and c) RPCs institutionally and the scope and context of their intended work, as sources, and potential recipient groups and situations in which outputs will be used.

Phase 2

During Phase 2, the CCKE Unit will ramp up engagement with the selected RPCs to lay the foundation for successful FCFA kick-off.

The CCKE Unit will establish the core elements of a successful community of practice: mutual engagement, joint enterprise, and shared repertoire (refer to Annex C for more information).

To achieve this, the Unit will facilitate a process through which all parties can jointly articulate a shared vision for the FCFA. It will establish strong relationships of trust with each of the selected RPCs prior to programme kick-off and operationalise the joint vision by collaborating with RPCs to develop aligned M&E frameworks and impact strategies for Y1.

The primary activities of this phase will be a visioning, goals and expectations workshop for key FCFA stakeholders and three short-term secondments of Unit's personnel to each RPC.

During the inception phase, the CCKE Unit will also work with RCPs to establish norms around intellectual property and organisational identity. Through the design of communication resources such as the website and document templates, the Unit will look to highlight the individual consortia partners whilst maintaining a coherent programmatic identity. The Unit will convene a discussion with all RPCs to establish a process and set of protocols on joint research generation and ownership. This will include a discussion on the costs of ensuring open-access status for all research outputs, noting that all DFID-funded research must be published in an open-access format, in line with DFID Open and Enhanced Access Policy and according to the Policy's Implementation Guide (DFID 2013a, 2013b).

Phase 3

Looking further ahead, the objectives of Phase 3 of engagement are to:

1. Coordinate cross-programmatic communication and capacity building activities;
2. Disseminate outputs from ARF Y0 work and incorporate into RPCs work;
3. Identify shared story lines and potential for producing joint outputs between RPCs;
4. Promote and manage cross-programme knowledge exchange, such as workshops and conferences;
5. Coordinate stakeholder engagement across consortia, particularly looking for opportunities to exploit synergies with other DFID programmes; and
6. Facilitate and synthesise M&E frameworks across RPCs for annual reporting to DFID and NERC.

Activities and Outputs

The above elements will be worked out in detail in the context of RPC Impact Strategies for Y1 and will be presented at the FCFA kick-off. The CCKE Unit's activities and outputs in Phase 1 and 2 are captured in Table 1.

Table 1: Activities and Outputs for engaging with Shortlisted and Selected Research Programme Consortia (RPCs).

Activities	Outputs	Date	RPC input *(number of days)*
A1.1 Pre-tender webinar with shortlisted RPCs presenting approaches to developing collaboration and coordination strategies around boundary work, capacity building, and knowledge exchange to inform final proposals	O1.1.1 Abridged introductory Powerpoint presentation	2014/09/17	
	O1.1.2 Pre-workshop guidance note to RPCs	2014/09/10	
	O1.1.3 Powerpoint presentation	2014/09/15	
	O1.1.4 Final Inception Report	2014/09/10	
	O1.1.5 Internal brief synthesising learning on shortlisted RPCs engagement	2014/10	
A1.2 FCFA kick-off meeting: Visioning, goals and expectations with PIs and CIs	O1.2.1 Workshop invite, agenda & attending/hosting	2015/03	Attendance and preparation (4)
	O1.2.2 Workshop materials	2015/03	
	O1.2.3 Workshop report	2015/04	Contribution and review (0.5)
A1.3 Three short-term secondments for members of the CCKE Unit, one to each RPC	O1.3.1 Co-produced Impact Strategies	2015/06	(2)
	O1.3.2 Three back-to-the-office reports (BTORs)	2015/06	
	O1.3.3 Updated CCKE Unit M&E framework and logframe for Y1-2 to reflect joint programme of activities / division of labour as decided between the Unit and individual consortia	2015/06	
	O1.3.4 RPC M&E frameworks that align with the Unit.	2015/06	2

3.2. Coherence and Coordination Strategy

Objectives

The objectives of the CCKE Unit's Coordination and Coherence strategy are to ensure that the FCFA is strategically positioned to:

- Leverage the work being conducted by like-minded, Africa-focused, and DFID funded programmes; and
- Influence select institutions, decision-makers, and decision processes;
- Leverage RPC presence on international scientific bodies and institutions – e.g. Global Framework for Climate Services (GFCS) and CORDEX.

Framework and Approach

The Unit's Impact Strategy needs to engage with other on-going processes of relevance to the uptake of climate science in medium-term decision-making. One of the delivery areas against which the FCFA will be evaluated is the value added through collaboration with existing relevant DFID funded projects. The Unit has created a preliminary Spheres of Influence Framework (Figure 2) that maps the on-going processes and actors that the FCFA programme should engage with in order to:

1. Share information: general knowledge exchange to stay abreast of developments in the field;
2. Coordinate and collaborate: Strategic work to collaboratively address user demand for decision-support services, or joint activities to leverage funds to provide scaled up capacity building and knowledge exchange services; and
3. Influence: A select group of specific institutions, decision-makers and/or decision-making processes that the FCFA will support through tailored services to inform well-defined adaptation problems[2].

[2] ***These actors will be identified through the ARF commission for an Intelligence Review to this end.***

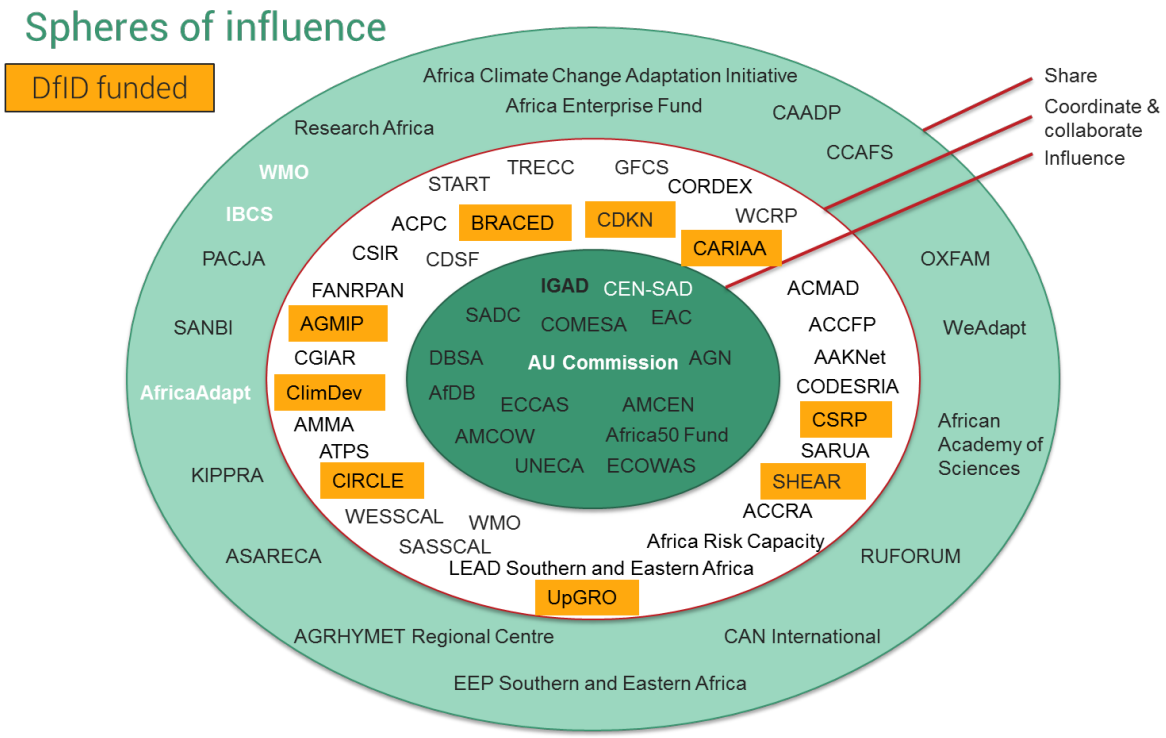

Figure 2: Preliminary Coordination and Coherence Framework. The centre circle represents stakeholders that the FCFA programme aims to Influence; the innermost secondary circle represents stakeholders that the FCFA programme aims to Coordinate and Collaborate with; and the outermost secondary circle represents stakeholders that the FCFA programme aims to Share information with.

Activities and Outputs

A key element of the Coordination and Coherence strategy is the identification and selection of DFID programmes for joint coordination and collaboration activities in Y1.

A number of DFID funded projects and programmes have been identified already:

- The Climate for Development in Africa Programme (ClimDev-Africa): ClimDev-Africa an initiative of the African Union Commission (AUC), the United Nations Economic Commission for Africa (ECA) and the African Development Bank (AfDB). The Programme was established to create a solid foundation for Africa's response to climate change.
- Collaborative Adaptation Research Initiative in Africa and Asia (CARIAA): CARIAA aims to build the resilience of vulnerable populations and their livelihoods in three African and Asian hot spots by supporting collaborative research to inform adaptation policy and practice.
- Climate Impacts Research Capacity and Leadership Enhancement (CIRCLE): This programme is aimed at developing Africa-based research capacity to enhance the understanding of local impacts of climate change and ultimately inform and influence national and regional policy responses as well as international debate.

- The Agricultural Model Intercomparison and Improvement Project (AgMIP): AgMIP is a major international initiative linking the climate, crop, and economic modelling communities with cutting-edge information technology to produce improved crop and economic models and the next generation of climate impact projections for the agricultural sector.
- Building Resilience and Adaptation to Climate Extremes and Disasters Programme (BRACED): BRACED provides funding for non-governmental organisations to build the resilience of people to extreme climate events in selected countries in the Sahel, sub-Saharan Africa and South Asia.
- Science for Humanitarian Emergencies and Resilience (SHEAR): An emerging DFID programme that will look at the evidence-based recommendations for risk assessments and early warning systems for weather-related hazards for humanitarian and development purposes across Africa, South Asia and the Caribbean.
- Unlocking the Potential for Groundwater for the Poor (UpGRO): UpGRO aims to bring together the natural, social and physical sciences in a coordinated manner to help address data gaps and learn lessons across the different disciplines to better inform groundwater management in Africa.
- Development Research Uptake in Sub-Saharan Africa (DRUSSA): Amongst other objectives, this programme looks to promote the dissemination of research beyond the academic domain, to include and build a socially interactive community of organisations and individuals working in pro-poor development in sub-Saharan Africa.
- Climate Resilience Infrastructure Development Facility (CRIDF): a water infrastructure programme for southern Africa that will look to deliver sustainable small-scale infrastructure across 11 Southern African Development Community (SADC) countries.
- Ecosystem Services and Policy Alleviation (ESPA): ESPA is a seven year, £40 million research programme funded by DFID, ESRC and NERC to provide new knowledge demonstrating how ecosystem services can reduce poverty and enhance well-being for the world's poor.

The CCKE Unit has already initiated preliminary conversations with CARIAA, ClimDev-Africa, CRIDF, and the Met Office Hadley Centre (on the Climate Science Research Partnership), and has started documenting their relevant focus areas, approaches and activities (June – July 2014). The Unit aims to develop these conversations in more detail through a series of bilateral meetings and a study of the relevant grey literature from each programme to inform an evaluation of the best opportunities, approaches and metrics for evaluation of the Unit's work as well as opportunities for coordination and collaboration with these programmes by the end of Y0. Given its limited resources, the Unit will prioritise concentrated coordination and potentially collaboration with two related DFID programmes, whilst maintaining informative communications with all relevant programmes through its general communications activities (Section 3.4).

The CCKE Unit is embedded within CDKN's work programme and specifically close to the Alliance's strategic programme within Africa and international research programme based at Overseas Development Institute (ODI). The Unit will leverage opportunities for collaboration with both the Africa work programme – managed from SouthSouthNorth NPC (SSN) and the global research and knowledge networks programme (managed from ODI).

In recent years, many other programmes have also attempted to address some of the challenges that the FCFA will be concerned with, including the World Meteorological Organisation (WMO) Global Framework for Climate Services (GFCS), the Adapting to Impacts of Climate Change Programme (AIACC), African Monsoon Multidisciplinary Analysis (AMMA), Climate Change Adaptation in Africa (CCAA) and the African Climate Change Fellowship Programme (ACCFP).

Much research uptake work in Africa has focused on seasonal forecasting and how this can shape better decision-making in the context of agriculture, water and disaster response. The Regional Climate Outlook Forums have been innovators in this regard.

The WMO's GFCS which includes a longer-term adaptation focus as a fundamental part of its vision, is running a number of African programmes where climate users engage with scientists around themes of agriculture and food security, disaster risk reduction, health and water with the aim of influencing short- and long-term planning processes. Regional programmes are running in West, East and Southern Africa and include the following initiatives that FCFA will need to engage with:

- Climate Services Adaptation and Disaster Risk Reduction in Africa is working with users in West Africa and East Africa to understand user needs, build capacity and raise awareness. Examples of user engagement include seminars for farmers in 17 West African countries to help them plan planting and harvesting for the upcoming season in order to improve yields.
- The Climate Services Adaptation Programme in Africa was launched in November 2013. The programme will facilitate workshops at local regional and national level, with climate scientists, policy makers, researchers and farmers to plan ways to provide climate services to users to improve decision-making. In-country kick off meetings have been held in Malawi and Tanzania.

Additional investigations into other relevant programmes/processes that are currently dedicated to the uptake of research (even if not climate specific) will be undertaken to consider the opportunities for collaboration and joint learning. Activities and outputs for the CCKE Unit's Coherence and Coordination Strategy are outlined in Table 2.

Table 2: Activities and Outputs for the Coherence and Coordination Strategy.

Activities		Outputs		Date	RPC input (number of days)
A2.1	Identify relevant DFID programmes for coordination and collaboration	O2.1	Report with meeting minutes and a summary list of DFID funded research relevant to the FCFA according to thematic subject, outputs, and geographical regions	2015/01	Respond to CKE Unit questionnaire
A2.2	Assess potential for coordination and collaboration with other DFID programmes	O2.2	Preliminary proposal for collaboration on specific projects and outputs for Y1-2	2015/06	(2)
A2.3	Assess CDKN's portfolio to determine opportunities to leverage and extend FCFA activities	O2.3	Guidance note on opportunities for the CCKE Unit to collaborate with on-going CDKN work and leverage research	2014/11	
A2.4	Identify additional programmes of strategic relevance to FCFA	O2.4	Report outlining possible synergies and collaboration opportunities for the Unit and the FCFA	2014/11	Respond to PO questionnaire
A2.5	Feed through learning from Coordination and Coherence activities to RPCs	O2.5	Final FCFA Inception Report addition on coordination and coherence strategy	2015/06	Review and respond (0.5)

3.3. Capacity Building Strategy

Objectives

In Y0 the objective is to develop a Capacity Building Strategy for the FCFA programme that will:

1. Provide an overarching high-level framework for all FCFA capacity building work;
2. Identify and prioritise scientist, user and boundary agent capacity needs that can be met at a cross-programme, scaled-up level by the CCKE Unit;
3. Outline procedures to coordinate with RPCs on the design and execution of capacity building activities;
4. For scientists, identify appropriate methodologies for delivering formal training and outline activities for delivery of formal training in Y1 – 2, including the production of learning materials;
5. For users and boundary agents, identify potential decision-support services through which capacity building interventions could occur;
6. Establish a network of climate scientists in Africa and link to existing networks established by related programmes;
7. Identify other capacity building programmes to coordinate / collaborate with and procedures for doing this;
8. Integrate with the other pillars of the Unit's Impact Strategy, such as coordination and communications;
9. Incorporate learning from FCFA scoping phase case studies, Mitigation Action Plans and Scenarios (MAPS), and CDKN on capacity gaps and capacity building methodologies; and
10. Gather and share lessons emerging from RPCs capacity building work on a regular basis to inform programmatic learning.

The capacity building strategy will be completed in coordination with RPCs. It will be presented and formally adopted at the FCFA kick-off meeting in April 2015.

Framework and Approach

The FCFA capacity building activities will target three groups of beneficiaries: researchers / scientists, boundary agents, and end-of-line decision-makers that may use climate science to inform specific long-lived planning and infrastructural decisions. The last two groups are collectively defined as "users".

Given the different requirements for successful user and scientific capacity building, the CCKE Unit's Capacity Building Strategy will be constituted by two distinct strategies with approaches outlined below.

The Unit has outlined overarching principles for FCFA's scientific and user capacity building work (Table 3) drawing on relevant DFID recommendations for good practice (DFID 2010), academic literature, and practical first-hand experience (START 2014). It will also draw on schematics for structuring capacity building work according to the boundary work frameworks outlined in Annex C.

Table 3: Overarching capacity building principles.

Overarching capacity building principles		
Ensure local ownership	*Build on existing institutions and programme structures*	*Leverage existing African expertise, to bridge knowledge and skill gaps*
Maintain strong, two-way communication with scientists and users	*Build capacity across disciplinary and institutional boundaries*	*Establish clear targets, success indicators and monitoring procedures to inform evaluation*
Produce tailored products and services to well-identified groups of scientists and decision-makers.	*Ensure open-access to research information*	*Focus on catalytic people and systems that can multiply the impact of donor investments.*

Scientific capacity building principles		User capacity building principles	
Research driven: Nationally and regionally based scientific networks with capacity to investigate complex issues	*Long-term: Decades-long process that include participation in long-term research initiatives and development of university-based learning initiatives.*	*Process driven: Capacity building embedded in well-designed, locally owned decision-making process aimed at solving particular problems*	*Leveraging influential decision-makers. Iterative and Co-exploratory.*

RPCs will deliver scientific capacity building through participation of researchers from low and lower-middle income African countries in FCFA research and secondments. They will deliver user capacity building through user participation in the pilot studies. The role of the CCKE Unit is to complement the capacity building activities of RPCs through targeted, scaled up, cross-programme activities (Table 4). Senior researchers from each RPC will be expected to contribute reasonable time to collaborate with the Unit on cross-programme capacity development activities targeting early-career researchers and select users/decision-makers. Therefore, there are two components to FCFA capacity building:

1. Capacity building requirements identified by RPCs to complete their work under Pillars 1 – 3 of the research call; and
2. Broader, cross-regional, cross-programme, activities and knowledge products aimed at thematic, skills or issue-based needs identified by the Unit. These components need to be thoroughly integrated.

Table 4 Capacity building recipients and approaches.

	RPC	CCKE Unit scaling up and out
Scientists	***Experiential learning of scientists involved in RPC research***	***Formal, targeted cross-programme training***
Users (boundary agents and decision-makers)	***Experiential learning of users involved in pilot studies***	***Strategic decision-support services to select users***

The CCKE Unit will work with RPCs to structure a coherent capacity building programme across the regional teams. The capacity building programme will contain a suite of activities that link closely with the coordination and knowledge exchange functions of the Unit, and will make up a significant part of the boundary work. As with other relevant elements of the Impact Strategy, close attention will be paid to the contexts of proposed capacity building work as per the boundary frameworks outlined in Annex C.

User capacity building

Within the context of the FCFA, user capacity building is defined as enhancing the ability of individuals, organisations and systems to understand and incorporate relevant medium term (5-40 year) climate information into long-lived decisions and decision-making processes.

To this end the Unit will follow the following steps to lay the foundation for its user capacity building activities:

1. Identify specific adaptation challenges that can be determined by improved climate information over the 5-40 year scale;
2. Take care to accurately identify select African decision-makers, processes and institutions that operate at the 5-40 year timescale;
3. Identify demand for decision-support services or manufacture demand where the actors are unaware of the impacts of climate variability on their ambitions;
4. Prioritise a select number of interventions appropriate to the FCFA's available resources;
5. Establish a relationship of trust with key users;
6. Gain mandates from users for the support services to be supplied; and
7. Integrate capacity building elements into the services agreed upon.

The value of, and need for, the approach above is highlighted by initial lessons from the FCFA scoping phase case studies.

Many of the FCFA scoping phase case studies have had limited success in:

- Focusing in on specific adaptation challenges within specific social-geographic contexts that can be assisted with improved climate information over the 5-40 year scale; and
- Identifying and engaging select, influential African decision-makers, processes and institutions that operate at the 5-40 year timescale.

Some of the suppliers, predominantly research institutions, have had limited success in establishing (1) and (2), which has so far limited the ability of their findings to inform the full FCFA programme[3]. Drawing on feedback from the case study teams and SSN's user engagement experience through the MAPS Programme and Long Term Mitigation Scenarios (LTMS) project, the CCKE Unit aims to deliver user capacity building that is:

- Process driven: Traditional user capacity building approaches tend to structure capacity building as formalised training, usually conducted within an artificial decision-making space and outside established decision-processes and institutions. Such approaches are unlikely to gain buy-in from the desired decision-makers and hence unlikely to provide much impact. Influential stakeholders are not concerned with formal training, which in practice tend to be too general or thematic, nor do they have time to attend such activities. Their informational and skill needs are narrowly focused on solving pressing, immediate, and focused challenges. The Unit therefore approaches user capacity building as an element integrated into tailored close-proximity decision-support services. It will therefore be "process driven" in that the mode of delivery and content will be determined by the decision process it is intended to support.
- Narrowly targeted: The FCFA scoping phase is underscoring past experience of the immense heterogeneity of user decision-making contexts, and hence needs, and the importance of accurately identifying and targeting focused user groups that have an interest in and are tasked with solving problems over the 5-40 time scale.
- Leveraging influential stakeholders: It is only select groups of influential stakeholders who make decisions with longer-term development implications in Africa. Engaging treasuries and planning ministries to embed adaptive forward-looking decision-making into longer-term development plans; development banks and financing institutions to embed the same approach towards large-scale infrastructure decision-making; and private sector stakeholders to inform them of climate-related risks to returns on investments will be crucial to the delivery of meaningful adaptation.
- Iterative and co-productive: Both the needs of users as well as potential and limitations of 'the science' in an active research area need to be explored by users and researchers. Good practice demonstrates that this should occur through a purposeful and strategic interaction between knowledge producers and users in an iterative, context specific, collaborative problem solving relationship.

[3] ***At the time of writing, this is based on conversations with three of the four case study teams. No formal recommendation in this regard will be made until the reports have been reviewed.***

To lay the foundation for its user capacity building strategy, an extensive intelligence review will be commissioned under the CCKE Unit's ARF (Section 3.5).

Scientific capacity building

Research capacity building is defined as "enhancing the abilities of individuals, organisations and systems to undertake and disseminate high quality research efficiently and effectively." (DFID 2010:3)

The CCKE Unit will deliver a scientific capacity building programme that is:

- Long-term: Scientific capacity building is a decades-long process that should include such actions as participation in long-term research initiatives of international science programmes, and development of strong university-based learning initiatives. The Unit's strategy will therefore seek to build on successful past and present programmes as well as ensure a hand-over so that its efforts can be built on when the programme ends.
- Research-driven: Nationally and regionally based scientific networks with strong capacities to investigate complex issues are an important underpinning of informed decision-making. The strategy will identify a combination of activities aimed at building individual as well as institutional capacity at African centres of excellence.

The Unit will also draw on the ARF to identify barriers to scientific capacity building uptake in Africa and to develop a more complete understanding of the requirements to develop capacitated, productive African scientists.

Given the CCKE Unit's responsibility to scale up experiential capacity building activities of RPCs through cross-programme formal training, the content of the Unit's scientist capacity building strategy will be largely determined by the geographic, thematic, and institutional focus of RPCs. As such, the Unit intends to co-produce the strategy with the selected RPCs in 2015.

Activities and Outputs

Table 5: Activities and Outputs for the preliminary Capacity Building Strategy. Abbreviations: Applied Research Fund (ARF); and Terms of Reference (ToR).

Activities		Outputs		Date	RPC input (number of days)
A3.1	Establish relationships with strategic capacity building programmes and projects	O3.1	Meeting minutes	2015/01	
A3.2	Assess ARF study on scientific capacity building programmes and recommendations on structuring FCFA approach to capacity building	O3.2	Synthesis report on learning and opportunities	2015/04	Input into Phase 2 of study (1)

Activities	Outputs	Date	RPC input (number of days)
A3.3 Assess ARF Intelligence Review	O3.3 Synthesis report on following through on key recommendations for Y1 – Y2	2015/06	Input into Phase 2 of study 2
A3.4 Provide overarching high-level framework for all FCFA capacity building work - Establish a network of climate scientists in Africa and link to existing networks established by related programmes - Develop and maintain a roster of experts, user groups and decision-makers utilising climate science in decision-making	O3.4. Comprehensive science and user capacity building strategy for Y1 – 2 - Database of African scientists and communication procedures - Database of African decision-makers and boundary agents of relevance to FCFA and communication procedures - TOR for scaling up CCKE Unit capacity building activities	2015/06	Collaborate in development (2)
A3.5 Outline activities for Unit's delivery of formal training to scientists in Y1 – 2, including the production of learning materials, that up-scale the capacity building activities of RPCs	O3.5 Framework for scientific training curriculum	2015/06	Assist in developing curriculum (2)
A3.6 Assist RPCs to design user engagement strategies for pilot studies	O3.6 Three RPC user engagement plans for pilot studies with common "rules of engagement" and procedures for the involvement of users in the co-production of case studies	2015/06	Develop pilot study user engagement approach (1)

3.4. Knowledge Exchange and Communications Strategy

Objective

The CCKE Unit's knowledge exchange and communication (KE&C) strategy will support the programme's research uptake, capacity building, and coordination objectives through the management of knowledge within the programme. KE&C functions will be couched within a larger context of boundary work activities, with the primary aim of translating knowledge into action.

The objective of KE&C activities in Y0 is to increase stakeholder interest, establish the brand, make sure its goals are understood, and that relevant external communities of practice see its institutional structure, thematic focus and methodological approach as credible, legitimate and salient. Generally, activities will promote awareness of the successful use of climate science in long-term decision-making, and highlight the proposed work of the FCFA in supporting collaborative initiatives to serve related decision-making processes to promote climate resilient development. The KE&C activities will also have the objective of establishing coordinating mechanisms with related DFID programmes.

The Unit will integrate the KE&C strategy across RPC Impact Strategies as well as the other pillars of the Unit's Impact Strategy.

Framework and Approach

The CCKE Unit's KE&C activities will serve three groups of stakeholders:

- Internal FCFA stakeholders: RPCs, DFID, NERC and CDKN;
- External direct stakeholders: Direct recipients of FCFA products and services, smaller, targeted groups of stakeholders for whom specific products will be tailored for well-defined contexts of use – e.g. decision-makers involved in pilot studies; and
- External indirect stakeholders: More general communities of practice that have an interest in FCFA outputs but for whom no services or products will be tailor-made and where the context of use is unknown, sometimes described as "outreach".

The content and mode of delivery of the FCFA's KE&C services will be determined by the sources and uses of knowledge within particular enlightenment, decision support, and negotiation support contexts.

To this end the CCKE Unit employs Clark et al.'s (2011) framework and ODI's K* Spectrum (Shaxson et al. 2012) to guide the mapping of KE&C activities (see Appendix C).

The Unit will also draw on the useful tools developed under the CDKN-supported Climate Knowledge Brokers' network (CKB) to ensure the FCFA's outputs enjoy wide exposure across the relevant web platforms without adding to the "portal proliferation syndrome".

Activities and Outputs

In Y0, the task of the CCKE Unit is to:

- Establish FCFA brand identity and initiate selected communication processes;
- Develop a full communications strategy; and
- Establish and promote FCFA at relevant regional, continental and international forums.

It will also develop a thorough understanding of RPCs proposed research programmes in order to identify the contexts of strategic KE&C activities for Y1 and the products and services as well as the mode of delivery that will be required for strategic user engagement.

Table 6: Activities and Outputs for the CCKE Unit's Knowledge Exchange & Communication (KE&C) strategy. Abbreviations: Year 0 (Y0; April 214 – March 2015) and Year 1 (Y1; April 2015 – February 2016).

Activities	Outputs	Date	RPC input (number of days)
A4.1 Establish programme identity and initiate selected communication processes: website, artwork, templates	O4.1.1 Programme logo and artwork	2014/08	
	O4.1.2 URL and landing page for website including basic project information and newsletter sign-up	2014/09	
	O4.1.3 1-2 page calling card brochure	2014/09	
	O4.1.4 Word and Powerpoint templates for Y0 publications and presentations	2014/08	
	O4.1.5 Full website	2015/04	
	O4.1.6 Introductory media: RPC PI "pitch, FCFA 101 video	2015/06	Input to video (0.5)
	O4.1.7 FCFA newsletter 1-3	2014/10, 2015/03, 2015/06	Input to newsletters (0.5)
A4.2 Develop full communications strategy	O4.2 Communications Strategy for FCFA with detailed activities and outputs for Y1-2	2015/06	Collaborate in development (1)

Activities	Outputs	Date	RPC input (number of days)
A4.3 Promote FCFA at relevant forums: Climate Change and Development in Africa (8-10 October 2014), African Climate Resilient Infrastructure Summit (17-21 November 2014), Lima COP (1-12 December 2014), South African Regional Climate Outlook Forum (SARCOF) (January 2015)	O4.3.1 Introductory presentation	2014/09	
	O4.3.2 Back to office reports on each forum	2014-15	
	O4.3.3 Updated database of key contacts	2015/03	
A4.4 Promote FCFA through news features on select online platform	O4.4 News features, Twitter handle	On-going	

3.5. Applied Research Fund (ARF)

Objective

As part of its support to the FCFA, the CCKE Unit will manage a targeted Applied Research Fund (ARF). The objective of the fund is to deliver complementary action-orientated applied research to support the Unit's Impact Strategy.

Framework and Approach

CDKN procurement systems and processes will be used to commission research. The commissioning approach will emphasise integrity and research ethics, research excellence, improving developing country research capabilities, and providing value for money.

In all cases a closed research call will be advertised to a group of potential suppliers through CDKN and FCFA Networks. The CCKE Unit and the FCFA Programme Executive Committee (PEC) will review the responses to the call and decide on the most suitable supplier to deliver on the research work. To ensure good governance of the ARF all studies will be outsourced to third party organisations.

Suppliers will be contracted via PricewaterhouseCoopers (PwC in the UK) and managed by the CCKE Unit Scientific Advisor and Project Manager. All deliverables will be reviewed by the FCFA Unit's Project Manager, Scientific Advisor, and ODI technical support. Further technical review expertise will be sourced from the CDKN pool of experts if required. The Unit Lead and PEC will sign off final deliverables.

Furthermore, the CCKE Unit is exploring synergies with CDKN's other research projects and calls in order to leverage both FCFA and CDKN research.

The list of provisional ARF topics are elaborated on below.

1. Intelligence Review: the Political Economy of long-lived, climate sensitive decisions in Africa

Problem Statement

Two key challenges that the FCFA scoping phase case studies are facing is to a) identify specific adaptation challenges for economic development planning, investment, and activities over the 5-40 year scale, and b) identifying and engaging the actors that have an interest in and influence over such activities.

There has been limited success at identifying approaches to bridging the science-policy interface in the context of medium- to long-term decisions, particularly as there have been failures in engaging influential stakeholders that act over these timescales, and have an interest and can act upon FCFA research recommendations.

Some of the scoping phase research teams have instead opted for broader approaches to more general adaptation issues. Most of the users that have been engaged with have instead had more general and short-term focused demands, have been identified as lacking the ability and/or interest to act on information over the 5-40 year scale, and have been embedded in institutional and social contexts requiring support over the short term. We do however know that economic development decisions that span the 5-40 year scale are being made – e.g. various long-lived infrastructure and national development plans.

Skeleton ToR

The Intelligence Review will provide the:

- Where and what: A schematic of the types of long-lived economic development decisions that will be most effected by 5-40 year climate variability and change in Africa, analysed by sector and geography;
- Who: Specific institutions, decision-making networks, processes, and points of leverage at which such decisions can be influenced through FCFA decision support services;
- How: Suggestions on a strategy to engage the identified actors.

A preliminary suggestion is to adopt a "follow the money" approach, the assumption being that those actors who make the big developmental investments that span the 5-40 year scale may have the biggest interest in accompanying climatic information over the same scale, and power to operationalise the information through the decisions they make.

The study should consider both economic development decisions as well as proactive adaptation decisions.

We propose a phased approach to delivering this review to allow for close coordination and collaboration with the CCKE Unit and RPCs. The research needs to be accompanied by consultative and advisory engagements between the Unit, RPCs and the supplier(s) in order to

craft a series of strategic commissioned reports supplemented by consulting services. The research methodology needs to involve the convening of high-level key informants in select areas where FCFA hopes to exercise influence. This is required in moving from a potentially wide set of opportunities to a prioritised list of potential interventions whilst ensuring a match-up between the informational demands of potential interventions and the capacity and focus of the individual RPC.

The work will directly inform the FCFA's first round of strategic engagement in Y1 with well-designated users around specific adaptation challenges to negotiate potential decision support services. We envision the study to supply a shortlist of leverage points that the Unit can pursue in order to arrive at a small set of select decision-support interventions.

This report will play a central role in informing the CCKE Unit's Impact Strategy across the pillars:

- Pillar 1: Inform the content of some of the engagements with RPCs during Y1 to design select RPC pilot studies. The review will identify specific adaptation challenges around which to design potential RPC pilot studies.
- Pillar 2: It will directly inform the set of select institutions and programmes in the "Influence" (centre) circle of the CCKE Unit Coordination and Coherence Framework (Figure 2), and thereby lay the groundwork to inform potential leverage points for strategic coordination and collaboration with related DFID-supported programmes in the second circle of the framework.
- Pillar 3: It will lay the groundwork to inform the user capacity building strategy as the Unit starts to focus in on specific adaptation challenges, institutions and user needs.

It is extremely important to identify potential suppliers that have strong African relationships and experience in working in specific sectoral, geographic and institutional contexts.

2. Scientific Capacity Building study: Analysis of barriers, opportunities and good practice in Africa

Problem statement

A central question for the FCFA in its scoping phase is "What does good practice for capacity building for consortia-based, geographically dispersed, short-term research programmes look like?"

A preliminary internal literature review of several past and existing scientific capacity building programmes in Africa as well as more general studies on the topic has highlighted two things:

- Existing literature on scientific capacity building often lack critical and systematic analysis, and instead tend to emphasise the value of the approach chosen by the particular practitioners writing the report;
- Alternatively, independent literature currently offer very general principles for good practice, but do not offer a comprehensive assessment and critical analysis of what approaches work, or fail to work, in specific contexts (disciplinary, institutional, geographic), based on feedback from the recipients and suppliers of past capacity building efforts.

Skeleton ToR

This report will:

- Execute a qualitative study of select scientific capacity building programmes in Africa
- Outline barriers to scientific capacity building uptake, and strategies to overcoming identified barriers, including case studies of good practice;
- A schematic of capacity building approaches and past work by RPCs and other related institutions and programmes on the topic; and
- Approaches to scaling up and out capacity building activities in the context of the FCFA as a consortia-based, geographically distributed research programme.

The work will adopt a phased approach. Phase 1 will address the first three bullet points above via a combination of a literature review of comparable past and present scientific capacity building programmes in Africa (including those funded by CDKN) and a social science analysis via select key-informant interviews and surveys.

Phase 2 will address the final bullet point. After establishing case and geographic specific barriers and approaches, the mode of scientific capacity building best suited to RPCs and FCFA programme as a whole can be identified and strategies to scale up and out.

This study will offer both general learning and good practice, which will be of interest to other capacity building/ research programmes, as well as specific advice to RPCs and CCKE Unit on building on past successful work and collaboration for the duration of the FCFA programme.

3. Economics and behavioural science of accounting for long-term climate in adaptation decision making today

Problem Statement:

Most adaptation decision-making is targeted at addressing near-term climate risks and building long-term capacity. In many cases, this is the best approach, particularly given the relatively high discount rates in developing countries. However, there are a few cases where there are benefits in considering long-term risks in decision making today. This includes, for example, where decisions today could lock societies into greater vulnerability in the future (e.g. urban planning) or where the added costs today are relatively small compared to the risks of maladaptation in the long-term. Despite this, barriers can often get in the way of taking adequate account of the future today (e.g. costs, capacity, behavioural factors or political economy). This study will assess the economics of accounting for the long-term today, with the aim of identifying (quantitatively) where such an approach is economically rational. It will also review the literature on the potential barriers to such a rational approach in practice. The outcome will be to prioritise what types of decisions should take a longer-term approach and to inform further research on how barriers may be overcome.

Skeleton ToR

The project will be delivered in two phases (with a break point in the contact):

- Phase 1: A rigorous literature review of the topic area, covering the following areas:
  - The economic literature on long-term decision making relevant to adaptation and development, including issues such as discount rate methodologies and economics of lock-in;
  - The academic and grey literature on the barriers to long-term decision making, including for example, behavioural sciences, political economy and risk perception;
  - Identification of any practical examples of where the economic analysis of long-term decision making has been particularly good, preferably in areas relevant to adaptation or failing this in other areas;
  - Draw conclusions on the appropriate economic frameworks for assessing long-term decision making (including appropriate discounting methodologies for example);
  - Draw preliminary conclusions on areas where the inclusion of longer-term climate in decisions today is likely to be justified in development programmes;
  - Following Phase 1 we will agree on whether to take forward phase 2 and the sector focus of this work (likely urban planning, infrastructure and one other area);

- Phase 2: Re-evaluation of 2 – 3 case examples of adaptation, demonstrating an application of the economics principles derived from the first stage. This stage would (preferably) not conduct new data collection, but would build upon data collected in past studies (e.g. the World Bank Infrastructure and Climate Change Study; DFID or World Bank development projects). Build upon the conclusions from phase 1 with this additional evidence (~50 days work, outputting a final report, policy briefing and presentation)

The team will be expected to work closely with DFID and CDKN throughout this project. This may include consideration of DFID programmes within the case studies. The team should also engage in ongoing discussions in the development community in this area (e.g. on appropriate discounting methodologies) and include these in the study.

These ideas require further development and finalisation. The Unit will leverage its technical advisors in developing the individual proposals more fully. The procurement and commissioning process will begin in September 2014.

Activities and Outputs

Table 7: Activities and Outputs for the Applied Research Fund (ARF). Abbreviations: Year 0 (Y0; April 2014 – March 2015) and Year 1 (Y1; April 2015 – February 2016).

Activities	Outputs		Date	RPC input (number of days)
A5.1. Finalise the list of Y0 inception phase research topics	O5.1	List of three topics for commissioning	2014/09	
A5.2. Commission Applied Research Y0 inception phase research topics	O5.2	Completed procurement process	2014/11	
A5.3. Collaborate with suppliers in completion of the research	O5.3	Completed inception phase publications	2015/06	Review and feedback (1)
A5.4. Collaborate with RPCs to outline potential commissions for Y1 and joint publications	O5.4	Outline of Applied Research Fund strategy for Y1	2015/06	Contribute to ARF ToR (0.5)
	O5.5	Concept note on joint CCKE Unit-RPC publications	2015/06	Develop joint ToR (0.5)

4. MANAGEMENT RESPONSE

This section of the report describes how the FCFA CCKE Unit Y0 activities, as detailed in the Technical Response above, will be delivered. It describes the Unit's team structure, project outline and budget for Y0, the CDKN interface, M&E framework and risk approach.

Given that both the FCFA programme as a whole and the Unit's function within the programme is still emergent, the Unit's management response is underpinned by an adaptive management approach. On-going coordination and collaboration with DFID, NERC and RPCs are key to establishing a successful response in the lead up to Y1 kick-off.

4.1 FCFA CCKE Unit Team Structure

The Unit's team will be led out of SSN's offices in Cape Town, South Africa and will report to CDKN structures as indicated in Figure 3. The Unit will have expertise in broad climate change issues, particularly from an adaptation perspective, programme management, knowledge management, capacity building, M&E, communications and stakeholder management. Additional expertise will be drawn, firstly from SSN and ODI, and where required from a broader network.

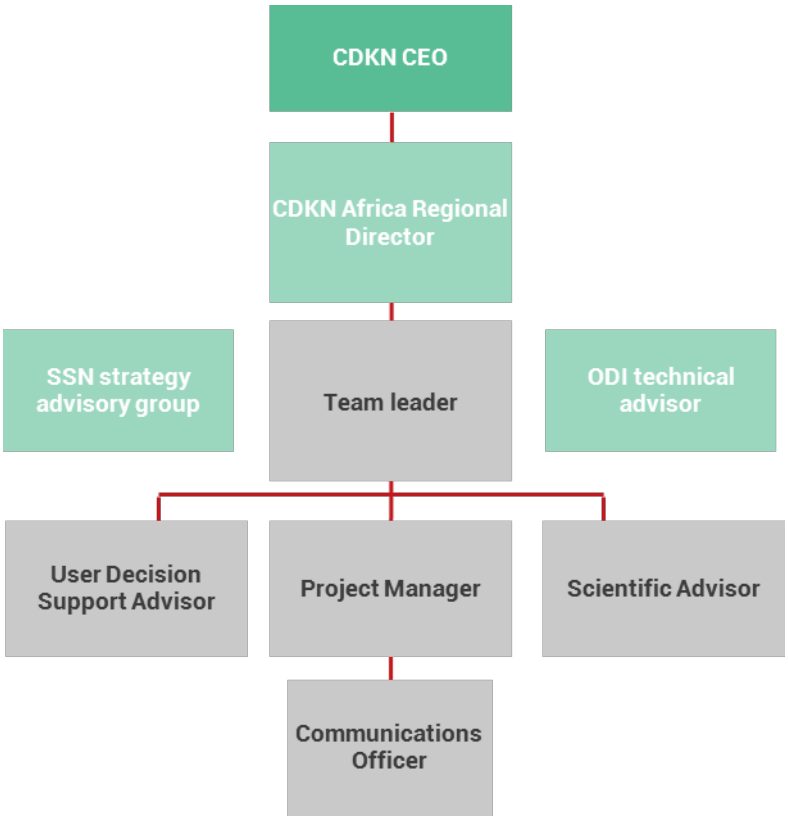

Figure 3: The FCFA CCKE Unit team structure. Abbreviations: Climate and Development Knowledge Network (CDKN); Overseas Development Institute (ODI); and SouthSouthNorth (SSN).

CCKE Unit's team role descriptions

Team Leader: This is a high-level role that will provide guidance primarily to the Unit's decision support activities with selected users. The Leader will play a role in supporting the on-going strategic direction of the Unit and will work closely with the Project Manager and User Decision Support Advisor to guide the overall impact. For the interim period, Stefan Raubenheimer will hold the position on a part-time basis. By the start of the implementation phase of the FCFA, a permanent Team Leader will be appointed.

Project Manager: The Project Manager will be responsible for coordinating the efficient and effective implementation of the Impact Strategy. Jean-Pierre Roux has been appointed in this role. He will be assisted by the CDKN Africa Communications Officer, Claire Mathieson.

User Decision Support Advisor: This role is the key political advisor to the CCKE Unit and the Team Leader, particularly after Y0. Their role will be to deliver key support in the design and execution of the Unit's user decision support services. They will support selected decision-makers to take policy decisions based on the uptake of FCFA research as well as assisting other boundary agents to do the same. In the inception period, this Advisor will support the interaction of the interim Team Leader with prospective beneficiaries and work with other Unit members to ensure robust user support services and activities in the development of the Unit's Impact Strategy.

Scientific Advisor: This role is to support the Unit's interactions with RPCs and other relevant research actors. This will include collaborating with RPCs on scientific capacity building activities and the creation of boundary objects for decision support services.

Ad hoc technical and strategic support: Additional support can be drawn from CDKN's Alliance members, ODI, SSN and PwC. Furthermore, supplementary capacity may be required on an ad hoc basis. A policy advisor to work with the Team Leader and User Decision Advisor may also be required. The policy advisor would work with users to ensure the development and uptake of policy changes resulting from the application of the research uptake process.

4.2 Initial Project Outline

The project outline brings together Y0 activities from the five pillars of the Impact Strategy, including a number of activities that end in Q2 2015 (Y1), with additional management activities and outputs. The preliminary Gantt chart is depicted in Figure 4. The CCKE Unit anticipates likely changes in activity schedules and outputs as it starts to engage with the shortlisted and selected RPCs.

Management response: Y0 Activities and Outputs

Table 8: Activities and Outputs for the CCKE Unit's Management Response for Year 0 (Y0). Abbreviations: Programme Executive Committee (PEC).

Activities		Outputs		Date	RPC input (number of days)
A6.1	Establish management systems	O6.1	Project and client relations management systems, including M&E data, setup for FCFA	2014/09	
A6.2	Lead to attend PEC meetings	O6.2	Meeting minutes	On-going	
A6.3	Contribute to RPCs proposal evaluation (observer seat on panel)	O6.3	Guidance note to RPC evaluation panel	2014/10	
A6.4	Internal CCKE Unit reporting	O6.4	Annual Review	2015/04	
A6.5	Monthly CDKN management update meetings	O6.5	Meeting minutes	On-going	
A6.6	Monthly RPC-Unit update meeting	O6.6	Meeting minutes	On-going	Attend

4.3 CDKN interface

The primary interface between the CDKN and CCKE Unit will be at an operational and governance level.

Operations

Delivery of the CCKE is contracted between PwC and DFID; as a contract variation to the existing CDKN head contract.

Procurement of the Unit ARF will use the robust CDKN procurement system. Details of this are available in Annex B.

The Unit risk approach will be embedded in the CDKN system and use the existing risk management mechanisms.

Outcome and financial reporting will follow DFID requirements for the CDKN and will be done via the same processes. The CCKE Unit will be retained as a distinct Output to allow for easy visibility for DFID accounting purposes. Additionally, the Unit will report to the FCFA PEC on progress to the CCKE Unit Logframe, this will be independent of the CDKN reporting to DFID.

The CDKN Logframe has been updated to accommodate the CCKE Unit in terms of milestones, targets (now up to 2019) and input figures (see Annex F).

Governance

There will be alignment between existing CDKN governance arrangements and the CCKE Unit, where appropriate, so that the FCFA Unit benefits from the wider CDKN programme and to reduce transaction and management costs.

This alignment will include:

1. The Management Oversight Committee (MOC): The MOC is a DFID, Netherlands Directorate-General for International Cooperation (DGIS; i.e. the Dutch Government), Department of Energy and Climate Change (DECC) and CDKN board which meets quarterly to discuss work completed and upcoming, programme issues (such as finance, risks and procurement), and technical issues (such as forthcoming events, trends and reports). The MOC signs off the annual Business Plan. The MOC is chaired by DFID and often includes Research and Evidence Division (RED) representation. The RED representation will cover CCKE Unit business.

2. The Network Council (NC): The NC is a CDKN governing body composed of senior representatives of the alliance members. The NC meets approximately 3 times a year primarily to discuss strategic issues, people, and organisational issues. CDKN's chairman chairs the NC.

3. Overall integration of the CCKE Unit into the CDKN: This will be reflected in the CDKN Annual Business Plan, which will be submitted to the CDKN MOC (including RED) for

approval. Outcome and financial reporting will be integrated within CDKN reports but retained as a distinct Output that can be extracted for DFID accounting purposes.

4. The CCKE Unit Output Lead will be Carl Wesselink (CDKN Africa Director and strategic and regional overseer of CCKE Unit). He will report to CDKN CEO who will have oversight of the Unit and liaise with NERC (see *Figure 3*).

5. PwC's governance board: PwC will include the CCKE Unit in its internal governance of CDKN (this focuses primarily on risk and finance, but also covers technical highlights).

6. CDKN and CCKE Unit representation on the PEC: The CCKE Unit will be included in FCFA governance arrangements to ensure that its operations are aligned with work led by NERC and DFID. A Unit and CDKN representative will be included on the PEC.

4.4 Monitoring and Evaluation (M&E)

M&E Framework

Purpose

The CCKE's M&E framework is aimed at two primary purposes:

- ***Learning:*** The most important purpose is to learn in order to improve performance within existing and future work. The Unit will constantly assess the quality and impact of its work, and share findings to guide decision-making; and
- ***Accountability:*** The Unit is accountable to multiple stakeholders, including its main donor, DFID, and NERC. M&E will support wider accountability systems by reporting on activities carried out, immediate changes resulting – whether planned or unplanned – and longer-term change.

Whilst these are the primary purposes, the CCKE Unit recognises the need for different actors at different times to carry out M&E for a wide variety of other reasons. These may include improving communications, supervising projects and programmes, basic project and programme management, resource allocation and marketing or publicity work.

Principles

The M&E Framework is established with the following principles:

- ***Internal Ownership:*** The bulk of the work will be carried out by RPCs. The quality of M&E work is generally higher when the people responsible for carrying it out are familiar with the tools, techniques and processes they are expected to use. Ownership of the M&E system is important to ensure that a culture of analysis and learning is established.
- ***Value for Money:*** Measuring Value for Money (VfM) of the financial investment in the CCKE Unit is an important part of the M&E Framework. The M&E systems themselves are designed to provide VfM by being compatible with existing systems and methods of data gathering.
- ***Harmonisation:*** It is important to have a high level of complementarity between systems; including those of RPCs and their host institutions.
- Proportionality: M&E needs to be proportional to the work carried out. The costs of carrying out M&E must not be allowed to outweigh the benefits.

Key features

The key elements of the CCKE Unit M&E Framework are as follows:

- ***RPCs:*** Procedures will be developed in consultation with RPCs for M&E outputs and outcomes relative to objectives set for each RPC. This activity will be implemented once RPCs have been contracted and a consultative process employed to ensure buy-in from RPCs.
- ***Wider programme:*** Procedures will be developed to monitor outputs and outcomes of the Unit in delivery on its Impact Strategy, and how it relates to the wider FCFA programme and the programmatic Theory of Change as outlined in Annex A.

M&E Processes

Figure 5 is a conceptual diagram to help understand the different processes that will be used to plan, monitor, review and evaluate the Unit. The diagram is not a replacement for the CCKE Unit logical framework or a theory of change, instead it is a model for understanding how the different M&E processes relate to each other. The monitoring requires a combination of both internal and independently sourced information. The relationship between these and the delivery process is shown in Figure 6. The M&E processes covered are:

1. Internal (collected, collated and reported by the CCKE Unit)
    a. CCKE Unit Logframe
    b. On-going data collection
    c. Semi-annual reports
    d. Annual reports
    e. Programme Completion report
2. Independent (carried out by independent reviewers)
    a. Annual reviews
    b. Mid-term review (MTR)
    c. Completion review

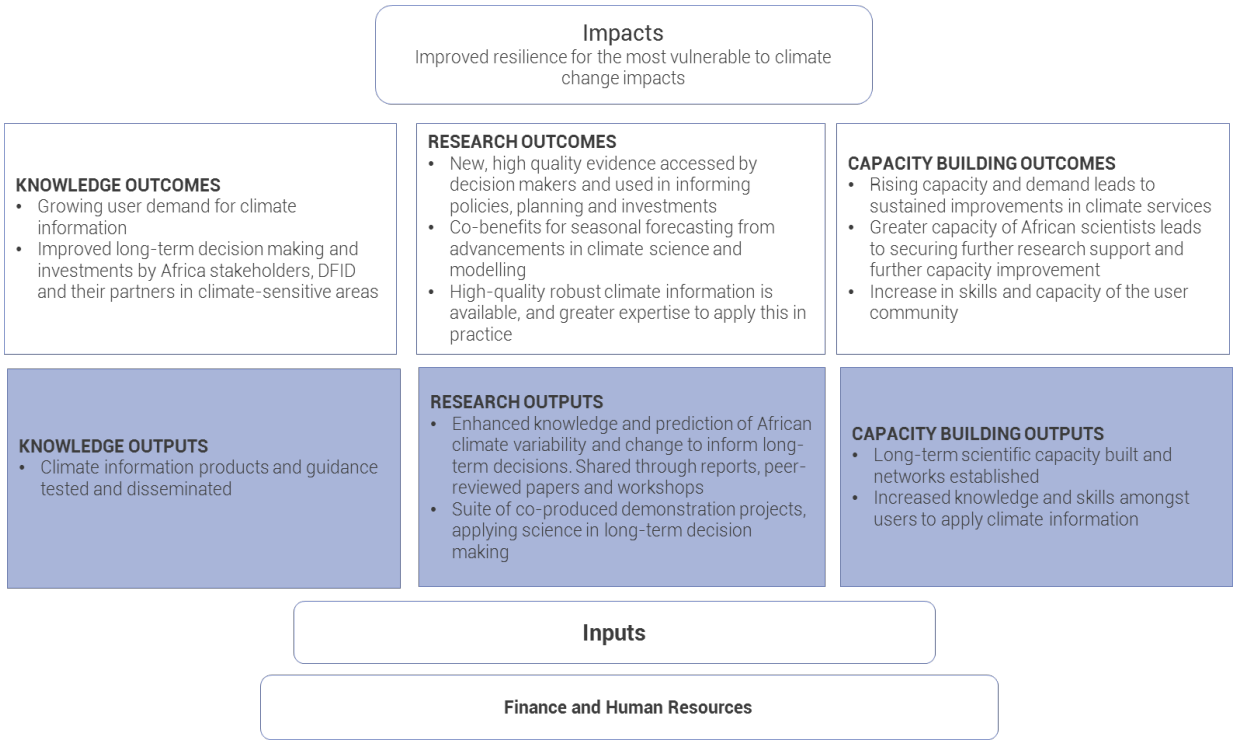

Figure 5: Conceptual representation of Monitoring and Evaluation (M&E) process for the FCFA CCKE Unit.

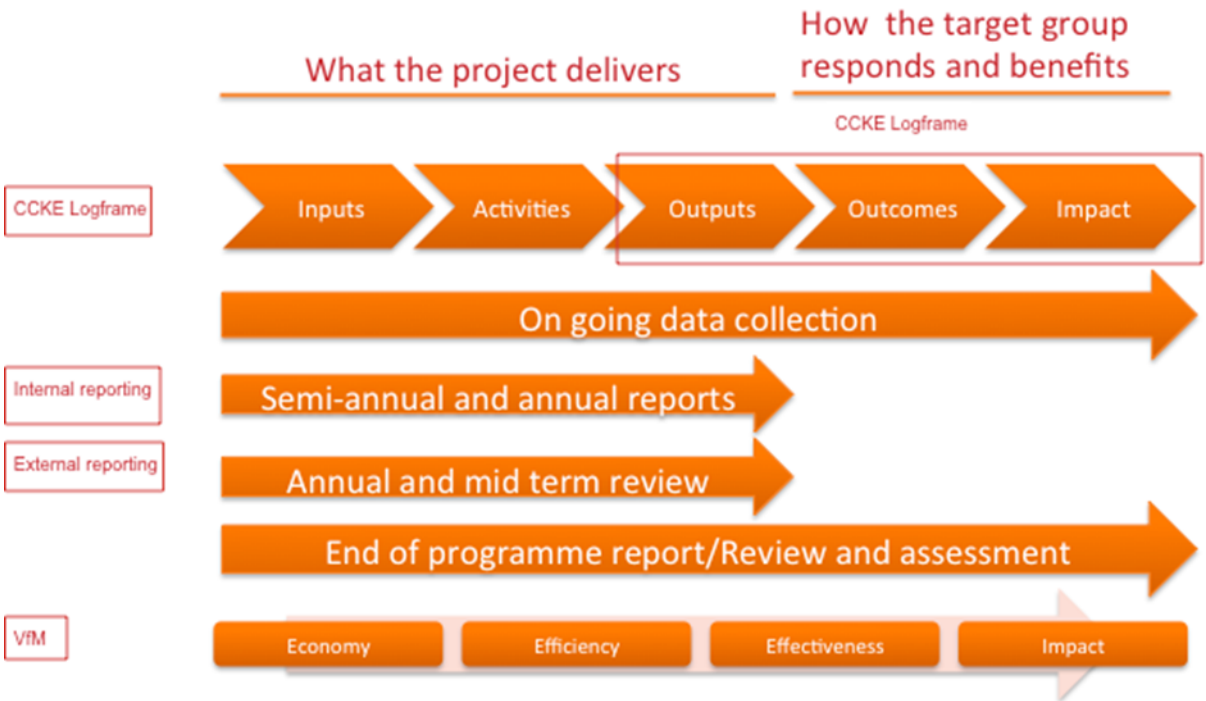

Figure 6: Relationship between Monitoring and Evaluation (M&E) and delivery for the FCFA CCKE Unit.

In relation to the internal M&E, the following is noted:

- ***The FCFA CCKE Logframe:*** An initial Logframe for Y0 has been developed based on the Impact Strategy set out in this Inception Report (see Annex E). It focuses narrowly on the impact, outcomes and outputs the Unit aims to achieve in Y0. A full logframe for the duration of FCFA will be developed over the course of the inception period and in collaboration with RPCs.

- ***On-going Data Collection:*** Systematic and regular data collection will inform all aspects of the Unit operations. The data will provide the evidence for meeting the targets in the CCKE Logframe (Annex E).

- ***Semi-Annual Report(s):*** Semi-annual financial and narrative progress reports will be prepared by both the CCKE Unit and the supported RPCs (contractual requirement). It will reflect implementation against the programme and project targets. The report will serve as an indication of whether the Unit and RPCs are operating as anticipated and is crucial in assisting with the programme management.

- ***Annual Report(s):*** An annual report will be produced by the Unit for the PEC. The annual report will focus on the outputs and outcomes achieved by RPCs. The reporting detail will be determined in consultation with RPC and will align across RPCs. The report will include progress towards outcomes and recommendations to ensure achievement of the outcomes.

- ***Completion Report:*** The Completion Report will, amongst other things, provide evidence for whether the Unit has achieved its objectives and impacts. The report will cover the same information as the annual report with attention being given to impacts and lessons learnt.

In relation to the independent/external M&E undertaken on the CCKE Unit, the following is noted:

- ***Annual Review:*** An annual review will be conducted, according to DFID requirements for major projects. DFID (or appointed consultants) and the CCKE Unit will conduct the review. The exact nature of the review will be determined by DFID, but it will typically be a management review, focusing on the outputs and outcomes.
- ***Mid-Term Review:*** The MTR will cover the full spectrum of the CCKE Unit's work with the exception of the impact level that will be out of the scope of the time-bound projects. The focus of the MTR will be on progress against the CCKE Unit Logframe and recommendations for improvements.
- ***Completion Review/Assessment:*** The Completion Review and Assessment will be undertaken by a party independent of the Unit, and will serve to report and assess on whether the Unit has met the objectives and addressed issues of VfM. Furthermore, the review is expected to provide an objective assessment of the programme's success and outline lessons learnt and provide examples of best practice.

The M&E Methodology

The M&E system is based on measurement of deliverables at different stages of the results chain as outlined in Figure 7.

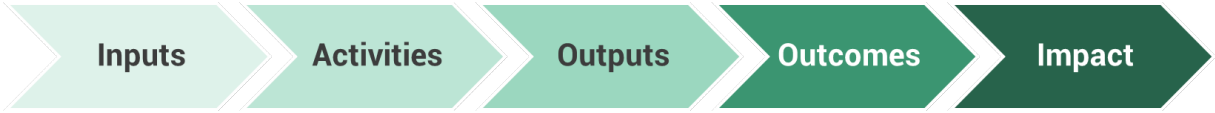

Figure 7: Five stages of the Results Chain.

The Logframe

A fully developed CCKE Unit Logframe (i.e. relevant to Y1-Y4) will be established through an iterative process of design, testing and review. This will take place once RPCs have been appointed, as their input is needed with respect to determining the indicators, milestones and targets. Although the Unit does not at this early stage include specific potential stakeholders and beneficiaries in its design, it will be important to do so in designing the logframe indictors, milestones and targets and to take on the views, perspectives and ownership of the key stakeholders.

The full logframe will be developed to ensure congruency with the International Climate Fund (ICF) and DFID indicators. A full set of indicators as well as the rationale underpinning them and the means of collection will be developed during Y0. Certain indicators will feed back into the CDKN programme logframe (see Annex F) at both the output and outcome level. These are indicators that are currently reported to in the CDKN logframe, the milestone and targets were adjusted to reflect the extension of the CDKN programme to include the Unit.

The logframe is intended to serve as an adaptive management tool and not only as a means of judging the programme level success. Figure 8 is merely an outline of aspects, and thus is an abbreviated version, that will feed into the fully developed CCKE Unit Logframe. An incomplete (since it only includes aspects covered over Y0) version of the CCKE Unit Logframe can be seen in Annex E.

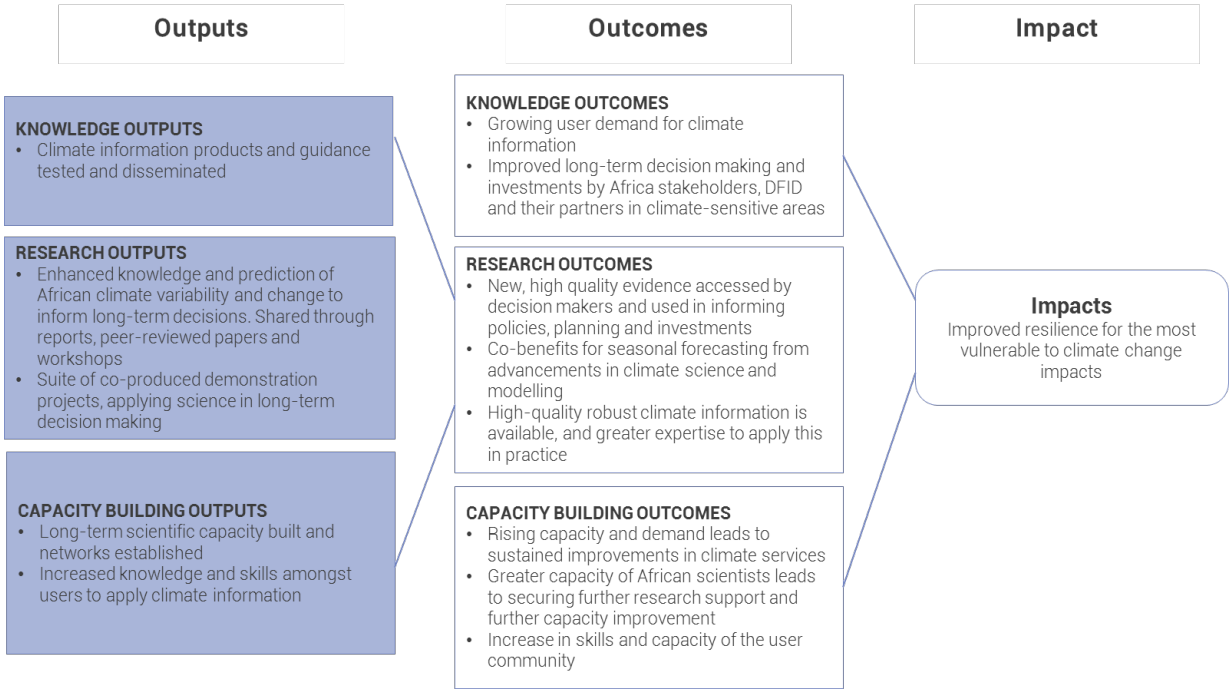

Figure 8: Outline of the FCFA CCKE Unit Logframe (Abbreviated Version)

Methodology

The M&E framework has been designed so that the results can be used at successively wider levels (i.e. from the activity to the project to the programme level). A "single collection, multiple analysis" system will avoid replication of M&E work and should aid in creating an environment where information flows freely between the CCKE Unit and RPCs. This is summarised in ***Figure*** *9.*

The CCKE Unit M&E framework will be a series of M&E systems at different levels with information and analyses flowing between them. In order to facilitate the flow of information between RPCs and the Unit there needs to be consistency between the M&E systems and the logframe. Choosing how far to standardise the M&E systems to ensure alignment with the CCKE Unit Logframe is a balancing act. If there are too many standard systems and procedures the M&E framework will become bureaucratic and not serve the needs of the programme. The Logframe will allow for an M&E framework that is responsive to the context.

The tools and methodologies used by the Unit and RPCs will evolve during the inception phase. It will be adapted as the need arises but the overall framework and logframe will be static.

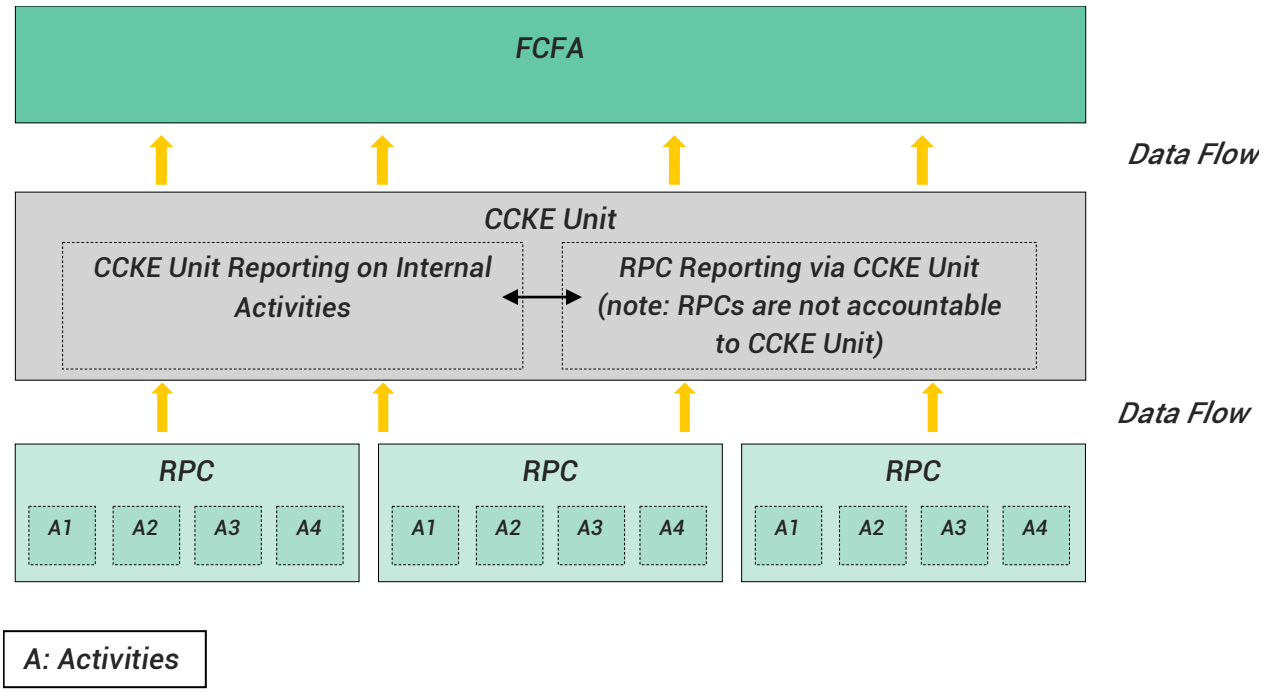

Figure 9: CCKE Unit M&E data flow.

4.5 Risk Approach

The CCKE Unit's risks will be managed through the same programme management processes as the CDKN. The CDKN's approach to risk management is in line with DFID's guidance and standards. The Unit will manage risks at a programmatic and project level. At programme level, the Unit will manage risks encountered to itself as well as risks to any projects funded by the it. The Unit needs to be able to identify, record and manage both types efficiently and effectively. The Unit will use the format developed by the CDKN to help analyse and record risks at programme and project level: programme wide risk register, output level risk registers, semi-annual report risks sections and the risk section of the MOC dashboard.

The CDKN Programme Review Group (PRG) builds on existing risk management mechanisms to provide a CDKN-wide assessment of output and outcome/programme level risks and issues. The PRG is chaired by the CDKN CEO. Members include the head of Procurement and Risk Management and the Chief Operating Officer. The PRG meet once a month, focusing on a specific programme area each time. The CCKE Unit will be included as a "specific programme" during the PRG meeting cycle.

To standardise the risk assessment procedure, a risk assessment matrix will be employed, (Figure 10). Risk rating is calculated by multiplying the probability of the risk by its impact.

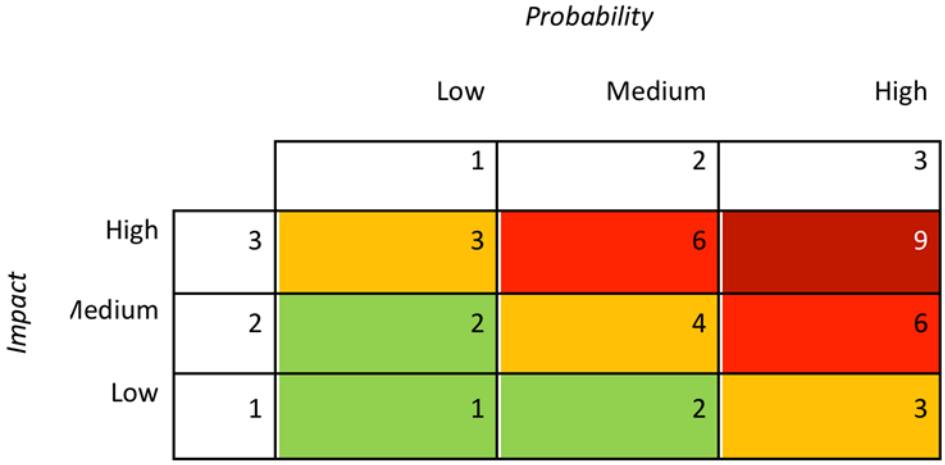

Figure 10: Standardised risk assessment matrix.

The CCKE Unit's top five risks are set out in Table 10, along with proposed risk management (mitigation) activities.

Table 10: CCKE Unit's draft programme risk registry

Risk	Rating	Probability	Impact	Response	Mitigation
Delays in finding suitable CCKE Unit team members.	High	Medium	High	Mitigate	- Interim group within CDKN to hold the responsibilities of the Unit until further appointments are made - Expedite job specifications and search
Lack of commitment / ability of identified users to act upon FCFA research findings	High	Medium	High	Mitigate	- Invest in carefully scoping user decision support service recipients - Work directly with select users in key countries / institutions -Identify options to share nationally specific work through other partners and

Risk	Rating	Probability	Impact	Response	Mitigation
					forums - Work with trusted partners and ensure strong African constituency
Deliverables not of sufficient quality, poorly reported or accounted for, or delayed (missing key influencing opportunities)	Medium	Low	High	Mitigate	- Skilled CCKE Unit staff to design and manage projects - Regular oversight of project progress and risks through PRG and reviews - Regular communications and reporting with suppliers and beneficiaries to ensure expectations are being met - Payment to suppliers only made once satisfactory deliverables have been received. - Build in-house expertise and use of external Quality Assurance Reviewers - Escalation through management line
Relationship between the CCKE Unit, NERC, and RPCs not clear leading to mismatch between research done,	High	Medium	High	Mitigate	- Ensure extensive early engagement between NERC, CCKE Unit and RPCs to build understanding and trust - Establish ways of working and decision-making (including

Risk	Rating	Probability	Impact	Response	Mitigation
reporting and expectations of African beneficiaries					governance and potentially an MoU) - Establish a dispute resolution mechanism
CCKE Unit's independence compromised due to source of funding	Low	Low	Medium	Tolerate	- Ensure African representatives in the management and oversight of the CCKE Unit - The MOC and the strategic advisory panel provide strong governance - Approval processes in place (e.g. Project Approval Group, partner sign off) to ensure objective decision-making - Intellectual independence is ensured and communicated - Strong stakeholder engagement in Africa and contract significant African constituency
Sub-contracted work is delayed, undermining ability to meet financial targets	Medium	Low	High	Mitigate	- Regular forecasting to track spend and delivery - Close working relationships with suppliers to ensure information flow on the status of work being delivered

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Annex A: FCFA Theory of Change

The FCFA theory of change is shown below. The availability of high-quality climate information is a crucial foundation for effective climate risk management and adaptation; yet such information is not available and not used across many parts of Africa (ACPC, 2011). The main challenges here are:

- A lack of climate data and poor understanding of the drivers of climate variability and change across Africa and how this links with high-impact weather, such as droughts and flooding;
- Weak capacity of African scientific institutions and NMHAs for research and climate services;
- Inaccessibility of climate information and lack of tailoring to user needs;
- Lack of knowledge, skills and capacity to apply climate information in practice; and
- Lack of resources, capacity or incentives to integrate climate information into decision-making.

The programme intends to contribute to addressing each of these challenges by:

- Making better use of the climate data available through new innovative methods[4];
- Investment in scientific research to better understanding and predict African climate variability and change, complemented by real examples of how this information can be used in practice;
- Building African scientific capacity through their active participation in research and through targeted activities, such as training, secondments and a network of professionals;
- Generating and trialling tailored climate information products and tools, and communicating these openly through appropriate platforms, providing training and guidance materials;
- Increasing user-demand, knowledge and sharing through their active participation in demonstration studies, and targeted training and knowledge exchange activities; and
- Demonstrating the social and economic value of climate information for decision-making.

Through these outputs we hope to drive improved long-term decision-making and investments across Africa, growing user demand and sustained improvements in scientific capacity and climate services. The ultimate impact of these outcomes is to increase the resilience of African people and economies to climate variability and change, alongside safeguarding investments and development progress, and increased effectiveness and value for money of development, disaster risk management and climate change adaptation.

The main assumptions are that in the medium-term:

[4] ***The programme will not invest in improved climate monitoring as this is covered by ClimDev-Africa.***

- Improved understanding and prediction of African climate will translate into widespread enhancements in climate services for users. The programme will assist with this through leveraging other DFID programmes, such as ClimDev-Africa.
- Products are accessed by the right stakeholders, who have the capacity to use them in decision-making. The main constraints on this long-term vision are political, financial and institutional. By demonstrating the economic value of climate information and services, and ensuring good, well-targeted stakeholder engagement, the programme intends to help overcome these challenges.
- Decisions based on improved climate information translate into 'better' decisions and greater resilience to climate variability and change. As above, the main constraints on this long-term vision are political, financial and institutional. These particular challenges are tackled by complementary DFID programmes, such as BRACED and ClimDev-Africa.

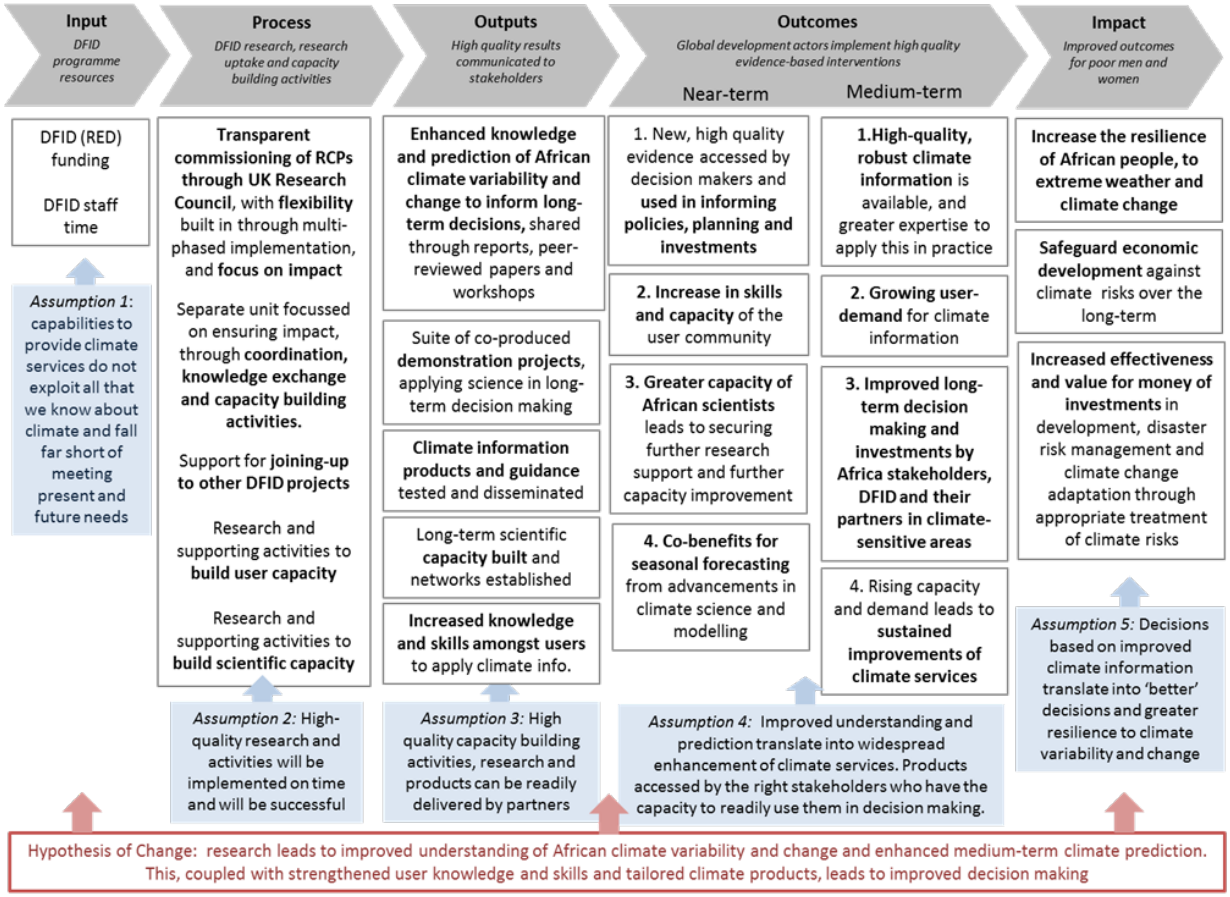

Figure 11: Future Climate for Africa (FCFA) Theory of Change.

Annex B: CDKN Procurement Process

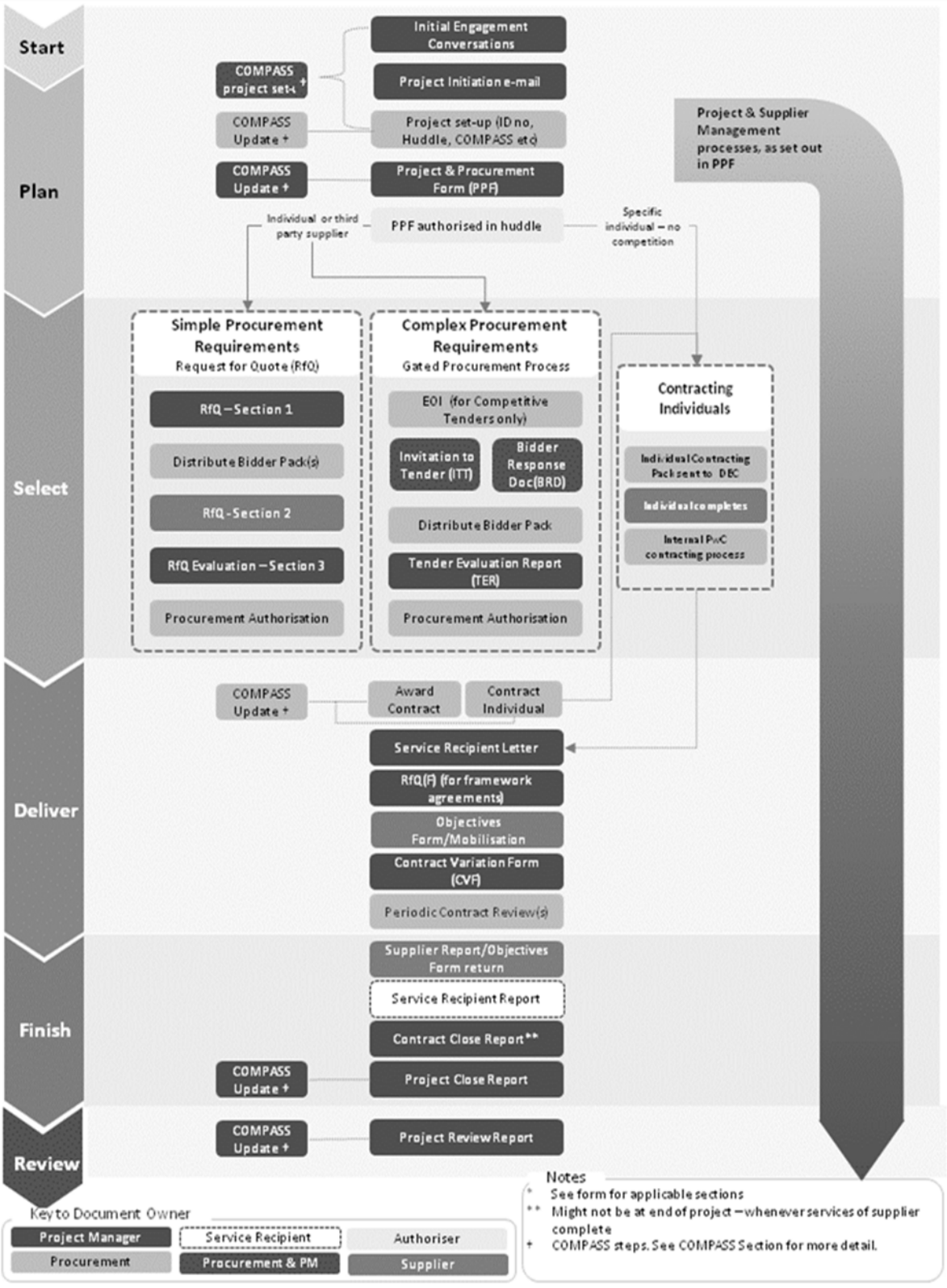

Figure 12: CDKN's procurement process.

Annex C: Theory Informing Practice

Boundary work

The CCKE Unit's boundary work will focus on three attributes essential to producing used and useful research (Clark et al. 2011):

1. Meaningful participation in agenda setting and knowledge production by stakeholders from all sides of the boundary;
2. Governance arrangements that assure accountability of the resulting boundary work to relevant stakeholders; and
3. The production of "boundary objects," defined as collaborative products such as reports, models, maps, or standards that "are both adaptable to different viewpoints and robust enough to maintain identity across them".

There is rich variety in boundary work, largely determined by the context of the boundary, particularly the sources and uses of the knowledge it engages. The Unit will employ Clark et al.'s (2011) framework to strategise more contextual approaches to its boundary work function (Figure 13).

The framework distinguishes boundary work according to three different general purposes for consumption by users, namely:

I. Enlightenment, or the advancement of general understanding that is not targeted at specific users but may influence decisions through a diffuse process (Uo);
II. Decision support of choices made by a single relatively autonomous user such as a farmer or minister (U1); and
III. Negotiation support of bargaining or other political interactions among multiple users (Um).

The framework further distinguishes between types of boundary required when knowledge is seen by users as originating within:

I. a single, relatively homogeneous community of knowledge producers sharing similar norms of evidence and argument (e.g. the discipline of soil science) (S1); or
II. multiple heterogeneous communities of knowledge producers with potentially conflicting norms (e.g. social vs. natural sciences, or laboratory vs. traditional knowledge; Sn).

Boundary Work		USE of knowledge to support….		
		Enlightenment (U_0)	**Decision** (U_1)	**Negotiation** (U_m)
SOURCE of knowledge…	**Single community of expertise** (S_1)	$S_1 \leftrightarrow U_o$ *Demarcation*	$S_i \leftrightarrow U_j$ *Expert advice*	$S_i \leftrightarrow \begin{matrix} U_k \\ \updownarrow \\ U_\ell \end{matrix}$ *Assessment*
	Multiple communities of expertise (S_n)	$\begin{matrix} S_i \\ \updownarrow \\ S_j \end{matrix} \leftrightarrow U_o$ *Integrative R&D*	$\begin{matrix} S_i \\ \updownarrow \\ S_j \end{matrix} \leftrightarrow U_j$ *Participatory R&D*	$\begin{matrix} S_i & U_k \\ \updownarrow & \leftrightarrow \updownarrow \\ S_j & U_\ell \end{matrix}$ *Political bargaining*

Figure 13: Context of boundary work as defined by sources and uses of knowledge. Source: Clark et al. (2011).

For instance, the open publication of RPC journal articles via the FCFA website can be understood as fulfilling an integrative research and development (R&D) function, where multiple knowledge producers (RPCs) share knowledge for the advancement of general understanding that is not targeted at specific users but may influence decisions through a diffuse process. On the other hand, the delivery of specific decision-support services delivered by the CCKE Unit directly to influential decision-makers may take the form of face-to-face expert advice or assessments. In these contexts, tailored briefs or visualisation objects may be employed to aid advisory services. In the context of a RPC pilot study, an engagement process will have to be co-produced between the RPC and the Unit to understand which types of boundary work activities may be required.

The CCKE Unit will combine Clark et al.'s (2011) boundary work framework with the K⋆ Spectrum (Figure 14) developed by ODI's Research and Policy in Development (RAPID) team to visualise the systematic relation between those boundary work activities that involve knowledge sharing (Shaxson et al. 2012).

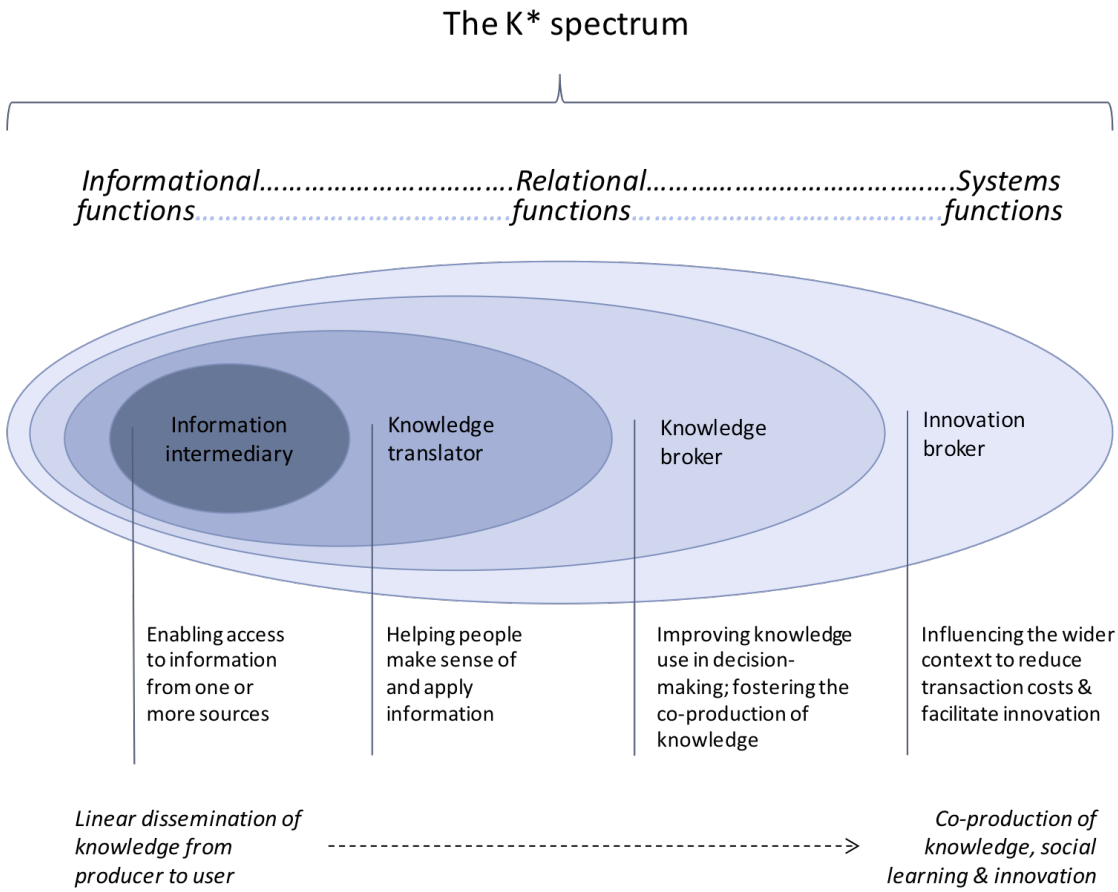

Figure 14: The K⋆ spectrum. There is a spectrum of knowledge sharing activities, which are all systemically related to each other. (Adapted from Shaxson et al. 2012).

Further activities and outputs for executing the CCKE Unit's boundary work function is outlined under each of the five pillars of the Unit's Impact Strategy for Y0. By way of example, in Y0 the Unit will take the lead in commissioning an Intelligence Review (Pillar 5) that will directly inform the FCFA's first round of strategic engagement in Y1 with well-designated influential users around specific adaptation challenges to negotiate potential decision support services. This will inform initial discussions with RPCs to guide them towards tailoring select knowledge support services to support the Unit in delivering decision support services for these interventions. It will also inform the user capacity building strategy (Pillar 3) as well as several coordination and knowledge exchange activities (Pillars 2 and 4).

To guide further work with RPCs in outlining boundary work for each of their research programmes, we propose employing the CLS criteria (Reid et al. 2008) that measures effectiveness of technical information in the policy context in terms of:

1. Credibility: Is the knowledge seen to be technically adequate in handling of evidence?
2. Legitimacy: Is the knowledge seen to be fair, unbiased, and respectful of all stakeholders?
3. Saliency: Is the knowledge seen to be relevant to decisions or policy?

Communities of Practice

A community of practice (CoP) is a group of people who share an interest in a problem, and who interact with each other to share knowledge and skills related to addressing the problem over time (Wenger 1998). CoPs tend to be organically created and can have multiple objectives and members who oscillate between different roles and tasks. Consortia are structured with clear objectives and research goals and are less organically created and free formed than CoPs (Gonsalves 2014). Establishing a successful research programme such as FCFA with its novel institutional structure and knowledge-action focus has many elements in common with establishing a successful CoP.

Wenger (1998) identifies three core elements essential to the establishment of a successful community of practice: mutual engagement, joint enterprise, and shared repertoire.

1. Mutual engagement establishes norms and builds collaborative relationships to bind a CoP together.

2. Joint enterprise involves jointly articulating a shared understanding of the goals and expectations that bind a CoP together. Establishing a clear vision and M&E framework is identified as important devices through which to ensure alignment and a joint vision.

3. Shared repertoire of resources such as tools, experiences, approaches to problem solving, and practices should be generated through different platforms and sharing mechanisms.

The CCKE Unit is considering selected lessons from CoP literature that it may apply to guide its own strategies where appropriate.

Epistemic cultures

Epistemic cultures are "sets of practices, arrangements and mechanisms bound together by necessity, affinity and historical coincidence which, in a given area of professional expertise, makes up how we know what we know" (Knorr-Cetina 2007). Epistemic cultures vary widely between different institutions and communities of practice. This bears significant importance in understanding how research is conducted (Gonsalves 2014). It is particularly relevant for the FCFA programme as it seeks to generate new knowledge on the prediction of African climate variability and change over medium-term timescales, better exploit existing knowledge, whilst working with users at various scales and across various sectors to advance better integration of such knowledge into medium-term decision-making, such as infrastructure investments, urban planning and national policy and planning.

For the FCFA programme, tracking the different epistemic cultures in play (both within the programme and with external beneficiaries taking part in pilot case studies and CCKE Unit activities), pre-empting any incompatibilities and negotiating bridging relationships is of particular importance.

The highly networked and globally distributed structure of the FCFA programme will require considerable negotiation of compatibilities and epistemic cultures within different research and decision-making settings to ensure the effective functioning of the Unit in its relationships with the different groups.

Knowledge co-production in boundary spanning research

Dilling and Lemos (2011) argue that the usability of information generated through research endeavors is a function of both how science is produced (the push side) and how it is needed (the pull side) in different decision contexts. They describe how a purposeful and strategic interaction between knowledge producers and users in an iterative co-production fashion, can teach producers about the decision-making context of users, allowing for the customisation of knowledge and often uncovering new uses for the information. A good example of this is how uncertainty in future climate impacts is articulated in a way that aids, rather discourages, decision-making. They stress that the actors in this process must own the problem of creating useable knowledge. The way to achieve this, they argue, is by fostering an iterative process. Additionally, users need to have a realistic alternative course of action to make the decision support material truly usable. The concept of knowledge co-production leads to a number of points for consideration for the CCKE Unit's methodological approach:

- Broadening reach: The structure of the FCFA challenges consortia members to develop a broader vision of the challenges of understanding medium-term climate variability and integrating this understanding into long-lived infrastructural and planning decision-making processes. It requires RPCs to connect a wider array of knowledge sets and actors involved. Making this shift towards a boundary spanning approach to climate science research both enables and requires consortia to speak to a broader base of stakeholders and end-users. This will require a collaborative relationship between each of the consortia and the Unit to identify when and how it will assist in brokering relationships as required by proposed research and pilot projects. In drawing on SSN's experience (through CDKN, MAPS and other programmes) and responding to challenges raised during the scoping phase of the FCFA programme, the Unit will also exploit its comparative advantage within the FCFA programme to lead in identifying influential decision-makers, institutions and processes that show demand for climate information over the 5-40 year scale (see Capacity Building Strategy and Applied Research Fund sections in particular). The initial terms of this boundary spanning collaboration between the CCKE Unit and each of the consortia need to be established at the outset of the FCFA and reviewed at appropriate points in the programme's development (Michaels 2009).

- Brokering understanding: Working across different communities of practice or epistemic cultures raises the risk of tensions developing around communication, methodology and evaluation. A highlighted way to deal with such tensions is brokering understanding across partnerships. At a programmatic level, the CCKE Unit sees its inception work as brokering an understanding between the governance structures of the FCFA programme, the Unit and RPCs around articulating a joint vision and matrices for evaluation and impact assessment.

- Attending to the process: Critical to the successful management of boundary-spanning research consortia is the attention paid to the process of working across disciplinary and institutional boundaries to establish stronger links between knowledge and action. Here the Unit will invest time to work with each RPC to delineate the boundaries between the envisioned research work under Pillars one and two and the boundary work required to translate the research undertaken into impactful pilot studies under Pillar 3. The CCKE Unit will also work with RPCs to outline the scope of support services they can give to strategic opportunities for user decision-support services identified by the Unit. Here the Unit envisions its work as partly concerned with brokering boundary relationships, to ensure participation from relevant

stakeholders, accountability in RCP engagement with recipients, and creating boundary objects (Clark et al. 2011), to stimulate communication and interaction across disciplinary contexts. The Unit's boundary work will therefore primarily be concerned with communication, mediation, and translation between researchers who want to prioritise doing research and potential users who want to prioritise making decisions. During the inception phase of the FCFA, particularly in working with shortlisted consortia in developing full proposals. During this inception phase work, the CCKE Unit will be engaging with RPCs to refine research goals, identifying target beneficiaries, and designing methodologies for engagement across the research-practice divide.

Annex D: Work Packages

Work Package 1 (Deadline: End of Q3, 2014)

List of Outputs

O1.1.1	PowerPoint presentation
O1.1.2	Pre-workshop guidance note to RPCs
O1.1.4	CCKE Unit Inception Report
O1.1.5	Internal brief synthesising learning
O1.2.1	FAQ helpdesk correspondence
O4.1.1	Programme logo and artwork
O4.1.2	URL and landing page for website including: basic project information, newsletter sign-up
O4.1.3	1-2 Page calling card brochure
O4.1.4	Word and PowerPoint templates for Y0 publications and presentations
O5.1	Complete list of ARF topics for commissioning
O6.1	Project and client relations management systems setup
O6.2	PEC meeting minutes
O6.6	Meeting minutes (CDKN management updates)

Work Package 2 (Deadline: End of Q4, 2014)

List of Outputs

O2.3	Guidance note on opportunities for the Unit to collaborate with on-going CDKN work and leverage research
O2.4	Guidance note outlining possible synergies and collaboration opportunities for the CCKE Unit and the FCFA with other programmes
O4.1.7	FCFA newsletter 1
O4.3.1	Introductory Presentation (for promotion at international forums)
O4.3.2	Back to office reports on international forum attended
O4.3.3	Updated database of key contacts
O5.2	Complete ARF procurement process
O6.3	Guidance note to RPC evaluation panel
O6.6	Meeting minutes (CDKN management updates)

Work Package 3 (Deadline: End of Q1, 2015)

List of Outputs

O2.1	Report with meeting minutes and a summary list of DFID funded research relevant to the FCFA according to thematic subject, outputs, and geographical regions
O3.1	Meetings minutes (Establish relationships with strategic capacity building programmes)
O4.1.5	Full website
O4.1.7	FCFA newsletter 2
O4.4	News features, regular Tweets

O6.6 Meeting minutes (CDKN management updates)

Work Package 4 (Deadline: End of Q2, 2015)

List of Outputs

O1.3.1 Kick-off workshop invite, agenda and hosting
O1.3.2 Workshop materials
O1.3.3 Kick-off workshop report with preliminary outlines for programmatic strategy
O1.4.1 Co-produced Impact Strategy for each RPC-CCKE Unit collaboration (synthesised into final Inception Report)
O1.4.2 Three back-to-office reports (BTORs) (for short term secondments)
O1.5.1 Updated CCKE Unit M&E framework and logframe for Year 1-2 to reflect joint programme of activities / division of labour between the CCKE Unit and individual consortia
O1.5.2 Updated RPC M&E frameworks that align with the Unit
O2.2.1 Preliminary proposal for collaboration on DFID funded projects and outputs for Y1-2
O2.5 Inception Report addition on coordination and coherence strategy
O3.2 Synthesis report on learning and opportunities (Assessment of ARF commission on scientific capacity building)
O3.3 Synthesis report on learning and opportunity (Assessment of RF commission on users decision support services)
O3.4 A comprehensive science and user capacity building strategy for Year 1 – 2
O3.5 Framework for scientific training curriculum
O3.6 Three RPC user engagement plans for Pillar 3 Pilot Studies with common rules of engagement and procedures for the involvement of users in the co-production of case studies
O4.1.6 Introductory media: RPC PI "pitch" to end user, FCFA 101 video (March 2015)
O4.2 Communications Strategy for FCFA with detailed activities and outputs for Y1
O5.3 Completed inception phase applied research publications
O5.4 Outline of Applied Research Fund strategy for Y1
O5.5 Concept note on joint CCKE Unit-RPC publications
O6.4 Final CCKE Unit Inception Report and Annual Report
O6.5 Independent Review Year 0
O6.6 Meeting minutes (CDKN management updates)

Annex F: Additions to CDKN Logframe

The updates to targets and input figures are provisional on coordination with RPCs and will be finalised in conjunction with developing the individual RPC and CCKE Unit Logframes. The CCKE Unit Logframe is elaborated on in the M&E framework.

Table 11: CCKE Unit's additional outputs and outcomes as reflected in the CDKN Logframe.

Outcome 3: DRM	**Comment**
Indicator 3.1. # of national and subnational governments using the latest science and social science information on changing disaster risks to shape their development investments	The milestone of # of countries in 2017 has been adjusted to reflect the additional FCFA funding. The # of countries has risen from 9 to 11 (some of the countries already included in the 9 are deep engagement countries and the FCFA will feed into on-going processes in these countries to ensure impact. The target for 2019 is 13, an increase of another 2, with contribution of FCFA funding.). Scoping of FCFA finishes in 2015 following the pilot study. This may result in a refinement of these milestones and targets.
Indicator 3.3. # (and description) of cases illustrating where international organisations and national or subnational governments have drawn on CDKN expertise, learning or research on climate-related DRM	This is a new indicator and mainly serves the capturing of more nuanced and qualitative information for accountability purposes. CDKN will produce an additional 1 case study by 2017 and another 2 case studies by 2019 for changes resulting from the FCFA component.
Output 1: Knowledge Management	
Indicator 1.3. # of stakeholders requesting and accessing particular knowledge products, disaggregated by geography, type of stakeholders, etc., disaggregated by product type: 1. CDKN e-mail newsletter subscribers 2. CDKN website unique visitors (per month) 3. Monthly visitors to CDKN sponsored online resources on partner websites	This figure is enhanced by the FCFA component, by 5,000 additional monthly visitors by 2017 and another 15,000 more by 2019.
Output 2: Research	
Indicator 2.1. # of quality controlled research publications produced annually, disaggregated by categories: 1. Academic articles 2. CDKN policy briefs 3. Policy briefs	10 more CDKN policy briefs FCFA funding by 2017, and an additional 24 for FCFA funding by 2019. 10 more policy briefs for FCFA funding by 2017, and an additional 24 for FCFA funding by 2019. 6 more academic articles by 2017; 2 jointly produced by the CCKE Unit-RPC and 4 from applied research fund commissions An additional 10 academic articles between 2017-19; 3 jointly produced by the CCKE Unit-RPC and 7 from ARF commissions

Outcome 3: DRM	Comment
Indicator 2.4. Involvement of southern suppliers in research projects as expressed by: 1. % of suppliers on all research projects that are Southern-based 2. % of projects led by Southern based organisations	With additional FCFA funding, CDKN expects to see a further 5% increase to these figures by 2017 and a further 5% increase by 2019.
Output 4: Partnerships	
Indicator 4.1. # (and description) of brokering activities / events facilitated or supported by CDKN	With FCFA component, CDKN will organise 10 more such events by 2017 and another 20 more by 2019.
Indicator 4.3. # (and description) of engagement activities in multi-stakeholder national and international fora (e.g. LEDS Global Partnership, GGBPI) in which CDKN demonstrates leadership	With the FCFA components, CDKN will see two more such instances by 2017 and another 5 by 2019.
Indicator 4.4. # and description of cases illustrating the ways in which CDKN plays a brokering and convening role, the nature of the partnerships being brokered and convened (and resulting changes) and how CDKN is helping foster leadership on CCD.	With the FCFA component, CDKN will broker two more such partnerships by 2017 and another 6 by 2019.

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